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Tech photo by Sidhu Banerjee
Lester C. Thurow, Gordon Y. Billard professor of management, addresses the issue of America's efforts to stay competitive with Japan during Friday afternoon's colloquium.

Thurow: America trails Japan Economist says US needs productivity growth

By Mary Condello,
Earl C. Yen
and Thomas T. Huang

The United States cannot hope to stay ahead of Japan and Western Europe in scientific research and product development, according to Lester Thurow, a prominent economist at MIT. But the United States can keep up with the other industrial nations if it substantially improves its rate of productivity growth.

Thurow, Gordon Y. Billard professor of management and economics, said the federal government's economic policies have led in part to the United States' inability to compete with Japan. He spoke at Friday's Institute Colloquium titled "Can We Keep Up with Japan? Building a

World-Class US Economy."

"The American economy died and has been replaced by a world economy," Thurow warned. "We want to be an equal among peers, not an inferior among superiors."

Macroeconomic policies led to the escalation of US interest rates

to 21 percent during 1980-81, while interest rates remained at five to six percent in Japan and West Germany. American firms were at a clear disadvantage, he explained.

Productivity — the efficiency (Please turn to page 11)

Professors analyze comparison between America and Japan

By Katie Schwarz

Can the economic success of Japan provide useful lessons for the United States? The answer is a "qualified yes," according to Richard J. Samuels, professor of political science.

Samuels, who directs the MIT-Japan Science and Technology Program, joined Professor of Economics Paul Krugman PhD '77 and about 30 students in a post-colloquium workshop entitled "Does the US-Japan comparison make sense?" at East Campus.

Samuels outlined four important points of contrast between the United States and Japan:

• **Management practices:** Japan is known for corporate paternalism and a loyal, cooperative labor force, Samuels said, but this view is oversimplified. In fact, he said, the current good relationship between management

and labor is an "artifact of high growth."

• **Industrial structure:** The oligopolistic nature of Japanese industry — it is dominated by six horizontally integrated groups — leads to great efficiency, Samuels continued. However, Americans are learning to make use of integration of industries in different fields, he added. "There is nothing uniquely Japanese about oligopoly and vertical integration."

• **Financial structure:** Japan's high savings rate, which transfers capital from households to industry, arises from a "unique set of incentives," Samuels said. He cited the Japanese practices of early retirement, lack of retirement benefits, and nontaxation of income from savings. The United States may or may not be able to create equivalent incentives, he said.

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Japan seen holding technology lead

By Anu Vedantham

"Basically, I view the Japanese challenge as a management problem. Their way of handling complexity and large-scale programs is unique. . . . Their large-scale enterprises are flexible," said Joel Moses PhD '67, head of the Department of Electrical Engineering and Computer Science.

Moses joined James Womack PhD '83, research associate at the Center for Technology, Policy and Industrial Development, and George B. Kenney '74, research associate at the Materials Processing Center, on Friday in a panel discussion at Ashdown House entitled "Are we losing the technology race?"

All three speakers agreed that the United States is losing the technology race to Japan.

Moses told the audience of 50 that Japan controls fully 50 percent of the integrated chip market, and "in consumer electronics, the Japanese have practically taken over the entire business." What the Japanese lack in creativity, even in software, they make up for by adequately and systematically handling large-scale projects, he explained.

Kenney agreed with Moses that management was the problem, but he also felt that managers need to be technically skilled in the industry they manage. In the materials field, it usually "takes a

major investment and assumption of a certain rather large risk factor to make a commitment to new technology," he said.

US firms need to capitalize on inventions

MIT researchers in 1969 invented a process for growing better silicon crystals, Kenney said. The scientists informed US companies of the invention, but no (Please turn to page 11)

Executive Committee meets students

By Ben Z. Stanger

Undergraduate Association (UA) President Bryan R. Moser '87 and Graduate Student Council (GSC) President Janine M. Nell G discussed student views on MIT's South African investment policy with the Executive Committee of the MIT Corporation Friday.

Moser and Nell believe that this meeting was the first time students have ever directly addressed the Executive Committee.

They presented the results of last month's referenda on divestment, in which over half of participating undergraduates, graduates, and faculty approved of full divestment from firms with operations in South Africa.

The meeting was an attempt by the Corporation "to show that [it is] receptive to students," Nell said.

During the meeting, the Executive Committee decided to reconvene the Corporation Joint Advisory Committee on Institute-Wide Affairs (CJAC). CJAC's

April 30 meeting will be the committee's first in a year. CJAC may schedule a public forum later this spring on the Corporation's policy of selective divestment.

Moser and Nell presented a proposal for the CJAC to become more active as a "vehicle to promote understanding . . . among students, faculty, and Corporation members."

See text of proposal, in box

Their proposal listed four objectives:

• a greater emphasis on communication between students, faculty and the Corporation;

• a public review of progress made by MIT's South Africa-related holdings;

• a public review of the positive actions taken by South Africa-related corporations; and

• consideration of other actions MIT can take to end apartheid or improve the South African condition.

Because the CJAC is not a (Please turn to page 10)

Text of Moser, Nell divestment speech

(Editor's note: The following is the text of the proposal presented by Undergraduate Association President Bryan R. Moser '87 and Graduate Student President Janine M. Nell G to the MIT Corporation Executive Committee.)

During the last few months, the MIT community has considered resolutions addressing the Institute's investment policies regarding firms doing business in South Africa. The results of these referenda indicate that a majority of the faculty, undergraduates, and graduate students who voted felt that MIT should divest of its holding in companies doing business in South Africa.

The investment policy issued by the Executive Committee of the Corporation indicated that MIT would instead "invest only in corporations which are Sullivan Principle signatories and which are making progress in the implementation of those principles." Unfortunately, a negative relationship has resulted between certain portions of the MIT community and its administrators. In some cases, communications have become limited or nonexistent. Indeed, the recent arrests of eight students seems to have resulted, in part, from a lack of open discussion within the MIT community.

As the elected representatives of students, we see the need for (Please turn to page 10)

MIT unhurt by federal overhead cuts

By Sally S. Vanerian

The federal government's Office of Management and Budget (OMB) is planning to cut research funds allocated for faculty and staff salaries and other administrative expenditures.

These reductions will not affect MIT in 1986, but they may in 1987, according to Kenneth A. Smith '58, associate provost and vice-president for research. The cuts will take effect on July 1 and are not subject to Congressional

approval.

Federal research funds pay for both direct research costs — which include equipment and materials — and indirect costs, Smith explained. Indirect costs, also known as "overhead," support services, such as libraries, physical plant and administration, which are used for both education and research.

Universities recoup their indirect costs by charging the government a fixed percentage, which is negotiated each year, of the direct costs. This percentage, the "indirect cost rate," is added to the direct expense in computing the total price tag for a research grant.

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inside

Mel King: Candidate for the 8th Congressional District seat. **Page 2.**
Singing cops chase singing robbers in the annual Tech Show. **Page 9.**
Happy birthday to Walker Memorial Basement Radio. **Page 11.**
Glenn P. Strehle '58 is MIT's newest vice president. **Page 11.**



Tech photo by Sidhu Banerjee
Brian Kimmel '87 goes for a ground ball during Saturday's lacrosse match against Nichols College. MIT defeated Nichols 11-5.

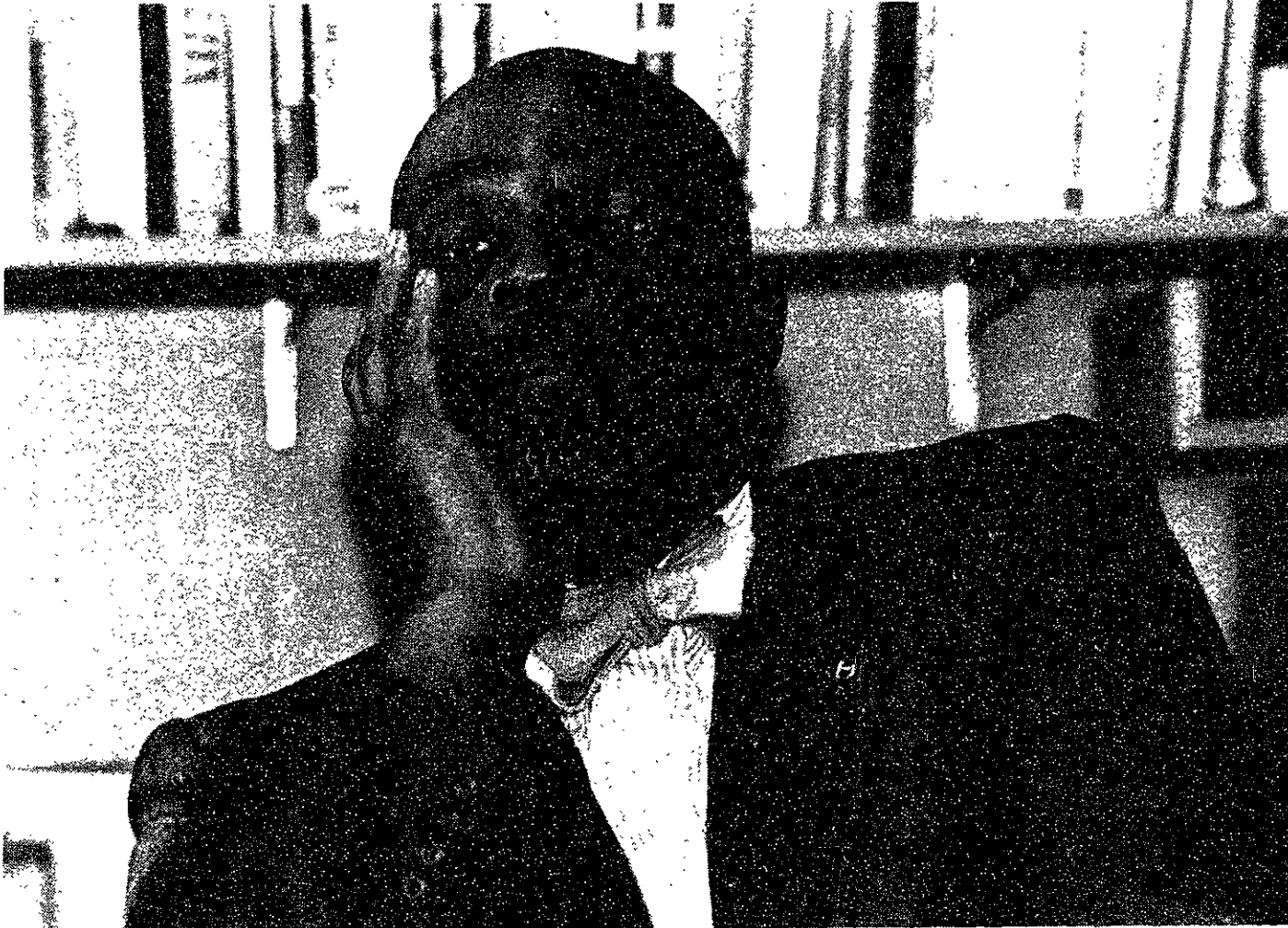
Mel King, candidate for Congress

★★★ Campaign '86 ★★★

Interview

By Julian West
Third in a series.

Melvin H. King served as state representative from Boston's South End between 1973 and 1982. Since graduating from college in the 1950s, King has devoted his time to community development programs in Boston. In 1983, he attracted national attention as the runner-up in Boston's mayoral race. King has been an MIT adjunct professor of urban studies since 1971.



Q: Let's start here at MIT. What can you tell me about your involvement here?

A: I've been here since 1971, with the Community Fellows Program, which I developed. It is designed for community action, mainly for things that help to empower people. People come for school here to work on a project or opportunity in their community and then go back and try to implement it.

Q: You were one of the people responsible for putting together the Rainbow Coalition.

A: The idea of the Rainbow Coalition is directly stated in The Book; it was a covenant between the Creator and Noah which said to put all the people, everybody together. I think that was the first rainbow coalition. And there have been attempts over the years of people to put together the diversity of people, who through coming together can effect some positive change in their lives.

So, you ask about the Rainbow Coalition, and my role is a very simple one, which is a recognition that in order to change the present conditions that exist in this country, people who are oppressed on one level or another have to band together, and it is particularly important when they are in seats of power and decision making, because through those seats of power and decision making, they can affect the policies that end the oppressive relationships.

People who want clean water, who want clean air to breathe and a toxin-free environment, are oppressed: so they're in the Rainbow Coalition. People who don't want to see the world end in nuclear destruction: they're in the Rainbow Coalition. People who are small business entrepreneurs, who are farmers who need capital and support: they're in the Rainbow Coalition. So the coalition is very broad and very encompassing. In the sense of what the challenge was to Noah by the Creator, it's our challenge: to bring all the people together because we can move to the high land.

Symbolically, the ark is what we mean when we say "we may have come on different ships, but we're all in the same boat now." And the boat we are all on is this planet.

It is going to be of real significance when the Democratic Party, the Congress and the country see that this district can elect a person who is black.

Q: The Rainbow Coalition is a term which has acquired national attention, particularly with the candidacy in 1984 of Rev. Jesse Jackson. What is the wider national significance of this campaign?

A: I think we've begun to deal with it. We have taken the ugly out of Boston, out of people's perception of Boston, and replaced it with the rainbow. There's a better climate there. Nationally, we can do the same.

What we've started here is the national Rainbow Coalition: a network of people that can be counted on to be a broad base for dealing with the issues that affect people in this country. They're working with farmers on the problems that they have. They're working with people on transportation issues. They're working with people on solid waste and toxic issues. So it's very, very broad in terms of what we will be able to accomplish.

The next thing is that we will be working with the Congressional black caucus, the most progressive group in the Congress. We will bring that to the district, as we will bring the support of the Rainbow Coalition to the district. It is a district which has a small number of people who are colored. A woman who was wearing my button was stopped by one of the administrators of Boston College, who asked about my campaign and then wondered how many black people there were in the district. His point was that he didn't think I could win because of the small number of black people in the district.

That is a sorry state of affairs, because what he was

saying was that the people in the district would not respond to the fact that I was the most experienced candidate, and that the issues that I was working on were in the interest of people in the district. What he was saying was that they're going to look at race and not be responsible in terms of the issues and the experience. I wouldn't mind if I did not believe and have faith that people would deal with me on the basis of my expertise.

Now what [would my election] do on a national scale? It is going to be of real significance when the Democratic party, the Congress and the country see that this district can elect a person who is black. That is going to say quite a bit to the Democratic Party, which has been moving to the right: "Hey, they've elected a black person, a progressive person in Massachusetts." That ought to say something about what is possible to happen, so that's going to have its impact in terms of the party and the Congress on a national basis.

Q: You called for protests against Gramm-Rudman. Could you spell out your opposition to that?

A: What has been happening under this administration has been the dismantling of the government. What they are attempting to dismantle is the tripartite system: the legislative, the judicial and the executive. They want to control the judiciary. And with Gramm-Rudman they are controlling the legislature because there will be automatic cuts made by a bureaucrat, which is far from what was the mandate of the Constitution and the declaration that the people would be the government. Gramm-Rudman in effect would be taxation without representation.

Just on the face of the attempts to end the tripartite system, one has to be opposed to the policies of this administration.

Not only does Gramm-Rudman do that, it cuts out basic services. That means that it affects all people. If you are concerned about toxic wastes in those dumps, and you need resources to get rid of them then you're not going to have the money. It's things like libraries, museums, things that enhance the quality of life.

There's been much talk about people whose incomes are low: the fact that they have malnutrition, that there's high infant mortality, that elderly people will not get their services. And that is absolutely critical for us to deal with. But this is legislation that affects everybody in an adverse way. Student loans, scholarships, programs that provide for training, those things will be down the tube with this legislation.

And the worst of it is, the Congress is supposed to make the decisions: make the cuts, raise the taxes. And they are walking away from their responsibilities.

Q: Are you taking money from political action committees?

A: As of now, I have not. The Rainbow Coalition may have a PAC. As I am a participant in helping to develop that as an organization, I share those values. I'm taking a look at the possibility that I would take money from the Rainbow PAC, but I haven't made a decision yet.

Q: Could you comment for us about South Africa, particularly about divestment.

A: I got through the legislature the strongest divestiture legislation in the country in my last term in office. In the four years Governor [Edward J.] King was in office, it was the only override of a veto. We got legislation through in the budget three years before that, that said that no new money could be invested. So I have been involved in the struggle to get us out of supporting the apartheid regime,

and I'm going to continue to do that.

We want MIT to divest. We have been working with other colleges, that they should divest. I will work in Congress to get the US to work out a policy with respect to South Africa that will help the South African government to understand that they do not have the support of the United States for apartheid.

Q: How about the situation in Central America? What should we be doing with regard to Nicaragua?

A: Obviously, the first thing we need to do is to stop supporting the *contras*. The second thing we need to do is to be willing to sit down with the Contadora peace proposals; the Nicaraguans have expressed their willingness to relate to them.

And thirdly, we need to stop supplying [El Salvador President José Napoleon] Duarte with bombs and planes to bomb the people in Central America. I think that the people in the United States have to be told about the circumstances in South America in some basic terms so that there can be some understanding that the issues are markets, the issues are the suppression of wages, and it is really not the fear of communism. People have to ask themselves: why is it that these people take up arms in order to change the government? The reason very clearly is: because of the extent of the poverty and the exploitation that have gone on.

Q: The United States and Soviet Union both have arms control proposals on the table now; neither side is accepting the other's. Do you think that any proposals that have been made are credible ones; should we be accepting theirs?

A: I am not really very interested in fine tuning the proposals; I think the essential issue is what is your attitude. Are we pursuing peace and really working at it?

It seems to me that it is in the interests of the Soviet Union, given its economic situation, to want to have something that allows for the reduction of the use of their resources for the military. So I would see their proposal as fundamentally having a serious purpose behind it. That purpose is to get the resources into the consumer area, because people want things. They have built up a kind of internal fragmentation of dissatisfaction with the government.

Q: Is that also true in the United States? Could we also use our resources more efficiently?

A: Well, absolutely. I heard [Chrysler Chairman and Chief Executive Officer Lee A.] Iacocca when he spoke at the graduation say that we have become a colony because we are buying the products from Japan and Germany. He didn't go on to say, however, that the genius here at MIT is being co-opted into working on weapons of destruction, and not resources for consumer consumption. In Japan and Germany their genius works on items for consumption; their resources aren't going to the military.

In short, what we need to take a look at, on both sides, is how do we beat swords into thinkshares? The Soviets obviously have more of a need for reducing their military goals, but we also need to. Jesse Jackson used to say the bombs go off in malnutrition and infant mortality, even though they stay in the silos. The very fact that we build them means that the resources aren't available for child care, nutrition programs, elderly health programs, and so on.



Tech photos by Stephen P. Berczuk

Q: You said in your speech announcing your candidacy that we should not be taking weapons to the stars, but rather life to the stars. What did you mean by that?

A: First, to stop any funding of "Star Wars." Second, what I'm proposing is that the technology that is there be focused on human resource development. I saw an article in a newspaper recently where they had a paraplegic, a physically challenged person, able to have some mobility because they were using electronics to increase their mobility. Well, that's taking that person to the stars, and a star that worked on it.

Solar energy; desalinization of water; how do you facilitate the deserts being turned into an oasis, whether it's here or overseas? What do we do to scrub the toxic wastes and corrosives that are coming out of chemical factories? I can go on and on. That's why the statesmen should beat their swords into plowshares: plowshares nourish people, that's high tech. And it's low tech or no tech when you make spears, bombs and things of that nature. Increasing the longevity of people and giving them the resources that they need is what going to the stars ought to be about.

news roundup

from the associated press wire

World

Israeli jets bomb Sidon

The Israeli air force struck at Palestinian guerrilla strongholds in Southern Lebanon yesterday, dropping bombs and firing rockets at several buildings, including a communications center. The Israeli military command said that all the fighters returned safely to base. Beirut radio reported two killed and 22 wounded in the attack, although Lebanese police say only six civilians were wounded.

The Israeli raid comes amid increased guerrilla activity against Israeli-backed forces in the border buffer zone between Israel and Lebanon. (AP)

Bush confers with Saudis

Vice President Bush said yesterday that he was not seeking oil production controls from Saudi Arabia but

that falling oil prices could reach a point where they threaten the security of the United States. Bush's remarks came in a speech made to the American Businessman's Group in Riyadh, Saudi Arabia, before arriving in Dharhan for an official dinner with King Fahd.

The recent sharp drop in oil prices is widely considered a consequence of Saudi Arabia's decision last fall to increase its production to about 3.9 million barrels a day, from about 2.2 million barrels, although the global oil supply far exceeded the demand. (The New York Times)

Soviet cosmonauts speak from space

Two Soviet cosmonauts spoke to reporters from an orbiting space station today, urging the United States to dispense with nuclear testing, saying the testing hampered peace efforts. Cosmonaut Leonid Kazim said the nuclear tests "cannot contribute to better understanding between peoples." The next US nuclear test is scheduled for today.

The cosmonauts also repeated assurances that their orbital research is not for military purposes. (AP)

Reagan studying possibility of military action against Libya

President Reagan is studying the possibility of a military move against Libyan strongman Moammar el-Khaddafi in retaliation for the bombings of a West German discotheque last weekend and a TWA jetliner late last week, said Richard Burt, the US ambassador to West Germany. Reagan refused to comment.

There are "very clear indications" of Libyan involvement in the bombing of the discotheque, Burt continued. There had been reports for more than a week that Libya was planning a terrorist attack in West Germany, possibly carried out from the Libyan embassy in East Berlin. American officials had brought up those concerns with the Soviets and the East Germans before the Berlin blast, and are still discussing them, Burt said.

In other developments, the United States will press its European allies to take political and economic actions against Libya, a senior Reagan official said yesterday. (AP)

Nation

Supreme Court to examine no-warrant searches

The Supreme Court today agreed to consider a case that could expand police powers to search without a warrant. The Court will decide whether prosecutors may use as evidence a stereo that was seized from the Phoenix apartment of a kidnapping and robbery suspect. (AP)

DEC introduces new computer

Digital Equipment Corporation showed off its new VAX-8500 computer today. It is the latest in a family of devices going back to 1977. The latest edition does more work while using less space. (AP)

Average college tuition increases

American colleges and universities are planning to raise tuition charges next fall by an average of seven to eight percent, about the same rate as last year.

Analysts say they believe college costs, which were increasing as much as 20 percent a year at some institutions in the early 1980s, have now stabilized. "The days of skyrocketing costs are over," said Elaine El-Khawas, vice president for research of the American Council of Education.

Nevertheless, the rise in the cost of a year at college continues to outstrip general inflation by a wide margin. The Consumer Price Index has gone up by 3.2 percent over the last year, and in the last three months the inflation rate on an annual basis was 1.2 percent. University officials cite increasing expenditures for faculty salaries, maintenance, and liability insurance as the reason for the continuing increase. (The New York Times)

GM back on top

General Motors has regained the top spot on the Fortune 500 list of the largest US industrial corporations, replacing Exxon, which slipped to number two in the latest rankings.

Exxon held the top position on Fortune's lists from 1980 through 1985. It has been the only company besides GM to attain the premier ranking the 32 years that Fortune has compiled the statistics.

For the first 20 years, GM reigned as the biggest US industrial company among the Fortune 500 and, according to Fortune, was widely regarded as the symbol of corporate America.

The latest list is based on 1985 sales. Although GM's profits sagged last year, its sales soared to a record level. (AP)

Local

Logan airport restricts smoking

Smokers passing through Logan International Airport faced restrictions on where they could light up, beginning yesterday. Non-smoking areas can be created in all gate areas and restaurants under new Massachusetts Port Authority rules. State police at Logan said there are six sit down restaurants in the terminals. Compliance with the rules will be voluntary at first, as there is no law restricting smoking in the Commonwealth. (The Boston Globe)

Kennedy poll shows King gaining

Joseph P. Kennedy still leads the pack in the 8th Congressional District, but the gap is narrowing, according to a new poll attributed to Kennedy's campaign. The latest figures give Kennedy 34 percent of the decidea vote. Melvin H. King follows with 17 percent, and State Sen. George Bachrach (D-Watertown) has 15 percent. (The Boston Globe)

Watchdog group endorses Duke

Governor Dukakis received the endorsement of the Citizens for Participation in Political Action, a statewide group of liberal activists. But the governor's opposition to

gay couples serving as foster parents cost him a first round endorsement. Meeting on Saturday in Huntington Hall at MIT, about 160 delegates gathered for the CPPAX annual convention gave Dukakis about 50 percent of the vote on the first ballot. That fell far short of the two-thirds needed for an endorsement, but on the second ballot, Dukakis did secure 71 percent of the votes.

Two candidates for lieutenant governor addressed the meeting and answered questions from the delegates. Evelyn Murphy, former economic affairs secretary to Dukakis, received 44 percent on the first ballot, and State Senator Gerard D'Amico (D-Worcester) garnered 42 percent. On the second ballot, Murphy increased her share to 57 percent to D'Amico's 36, but fell short of the 66 percent required.

Sports

Reds take National League opener

Pete Rose's Cincinnati Reds came from behind to rock Steve Carlton with the long ball and post a 7-4 victory over the Philadelphia Phillies in the traditional National League opener. The Reds' Eric Davis banged a three-run homer in the second inning while Dave Parker added a solo shot in helping to chase Carlton in the fifth inning.

The Phillies lefty gave up all seven Reds' runs on nine hits in four-plus innings. The largest regular-season crowd in the history of Riverfront Stadium — 54,960 — was on hand for the game.

In the other National League game, the Los Angeles Dodgers, with starting pitcher Fernando Valenzuela, beat the San Diego Padres 2-1.

Youngest Polgar dazzles masters at NY Chess Open

Ten year old Judit Polgar is creating a sensation at the New York Open. As she is unrated in the United States, she is playing in a section open to all unrated players, and has won her first seven games. A draw in her final game would give her overall victory among the thousand or so entrants, of whom she is the second youngest. The tournament organizer predicts that this will earn her a rating of up to 2,200, a master level rating.

Judit learned chess at age five by watching her older sisters play. Her sister Sophia, 11 years old with a 2060 rating, won six of her seven games in another bracket. And oldest sister Zsuzsa, at 16 an internationally known master rated at 2400, looks likely to earn her grandmaster norm after defeating the American Walter Browne in the grandmaster's section. Zsuzsa is tied for second place in the world women's rankings, but Judit has been upstaging her for attention this week, attracting grandmasters among her many spectators.

Judit does not attend school, but does well in her studies at home, and has little trouble at exam time. Among her other tricks is playing chess blindfolded. She has carried on up to five games simultaneously without seeing a board. (The New York Times)

NHL postseason faceoffs set

The NHL regular season came to an end Sunday night, so the second season gets under way tomorrow night. Opening round pairings for the Stanley Cup playoffs are as follows: Québec v. Hartford; Montréal v. Boston; Philadelphia v. Rangers; Washington v. Islanders; Chicago v. Toronto; Minnesota v. St. Louis; Edmonton v. Vancouver; Calgary v. Winnipeg.

Teams listed first have home-ice advantage for the best-of-five series. The first games, Wednesday and Thursday, will be played at their rinks. Series will switch venues for Saturday night games. If fourth and fifth games are necessary, they will be Sunday, Apr. 13, and Tuesday, Apr. 15.

Washington drew the tough opening-round match with four-time Cup winners New York Islanders by losing their final game in Philadelphia, 5-3. Instead, Philadelphia emerged atop the Wales Conference, securing the home-ice advantage through to the semifinals.

Sox' magic number remains 163; Cleveland in first-place tie

Kirk Gibson pounded out two homers and collected five RBI's to spark the Detroit Tigers to a 6-5 victory over the Boston Red Sox in the season opener for both teams. The Sox now need at least one Detroit loss over the Tigers' remaining 161 games to have any hopes for making the playoffs.

Gibson punched in the winning homer in the seventh inning off losing pitcher Sammy Stewart after Lou Whitaker had singled.

The Sox looked good from the beginning but could not hold the Tigers in the end. Dwight Evans got things off to the right start for the Red Sox when he drilled winning pitcher Jack Morris' first pitch of the season into the center field seats at Tiger Stadium. Jim Rice homered in the third to put the Sox up 2-0. But the Tigers came back for a run in the bottom of the third on Gibson's RBI single, and they erased Boston's 2-1 lead with three runs in the fourth.

In the other American League games, the unlikely Cleveland Indians surprised the Baltimore Orioles 6-4. The Milwaukee Brewers beat the Chicago White Sox 5-3.

Reagan throws a wild one

President Reagan threw a wild pitch today as he opened the Baltimore Orioles' season with the ceremonial first toss. The crowd roared as the first throw went over the catcher's head. Reagan managed to hurl a strike with his second pitch.

The actual first pitch of the season came about a half-hour earlier in Detroit, resulting in a home run by Dwight Evans of the Boston Red Sox. (AP)

Weather

brouhaha

A mixed bag would be the best way to describe our weather over the next two to three days. Although I do not expect much in the way of precipitation, there will be a slight cooling trend in our weather. A deep cutoff low pressure system is forming to our northwest at present. Once formed, it will remain quasi-stationary and pump cooler air into our region. This disturbance will also clutter up our skies with a few clouds over the next few days.

Tuesday: Cloudy in the morning, skies clearing by afternoon. Winds from the southwest at 5-10 mph. High 55.

Tuesday night: Slightly cloudy. Winds shifting to westerly at 10-15 mph. Low 40.

Wednesday: Partly cloudy with occasional sunny skies. High 50.

Wednesday night: Partly cloudy with a chance for showers or snow flurries. Low 40.

Thursday: Partly cloudy. High 50.

Forecast by Robert X. Black

Compiled by David P. Hamilton
Julian West
and Thomas T. Huang

opinion

Column/Simson L. Garfinkel

Athena system is too limited

A few weeks ago, a slide at an Lecture Series Committee (LSC) movie advertised a Project Athena minicourse. The audience hissed and shouted, "Project Athena sucks!" Obviously, students attending the movie did not have a very high opinion of Athena.

And how could they? When most MIT students think of Athena, images of the vastly overcrowded Student Center Athena cluster come to mind: a place where terminals are only available after 4 am, where printers rarely print and where the amount of file storage allocated to each student is less than the amount of space on an IBM PC floppy disk.

The Student Center Athena cluster is substantially overcrowded because it is the only cluster where accounts are open to all undergraduates. Accounts in other clusters are available only to students enrolled in special subjects.

When the Student Center cluster was opened last year, Steven R. Lerman '71, director of Project Athena, expressed a hope that students would use their Student Center accounts to write educational software, called "courseware," and games. Unfortunately, the Student Center accounts do not provide users with enough file space for writing programs.

The goals of Project Athena were to investigate the ways in which computers could be integrated into the undergraduate curriculum, to write "courseware," and to construct a campus-wide computational facility.

Project Athena will not be able to realize these goals until it has provided students with adequate word processing facilities. "Adequate word processing facilities" include unlimited file storage, fast response time and easy access to equipment. Athena currently has the equipment to provide such services to its users, but has not done so.

If Athena provided all students

with adequate word processing facilities, more students would obtain a familiarity and competence with the equipment. These students would then be more inclined to explore the courseware Athena hopes to offer.

Project Athena believes that students will explore the computer and use the courseware without the incentives of wordprocessing. To a large extent, this has not happened. Most students are shying away from Project Athena. This circumstance arises because most students don't believe the Athena ideology.

Students feel that they need to use computers for word processing. Students want to send electronic mail and play games. Some students want to write programs. Most students haven't given much consideration to the possibility of using the kind of "courseware" which the Project likes to think it is developing.

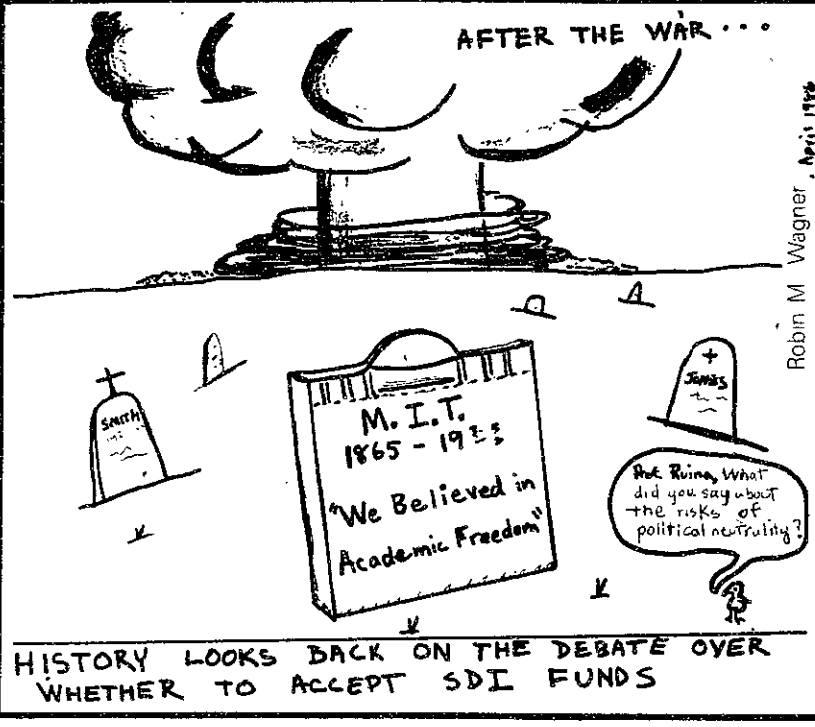
Most students I have spoken to do not welcome the intrusion of Athena into their subjects.

Learning to use the "courseware" has not been germane to learning the subject, only to solving the particular problem set that was designed to be solved with the computer.

Athena's success will be measured by student use of the system in the years to come. If students use the courseware and the computers when given the option, the Project will have succeeded. At the present time, the only students who are using Athena freely are students who are writing papers. These students are being hampered, rather than helped, in their attempts to do so.

Project Athena should offer support to those who are using the system as was originally envisioned. Athena should make a substantial effort to support student word processing. Athena must open more clusters for general student use.

(Editor's note: Simson L. Garfinkel is a member of the Student Information Processing Board.)



HISTORY LOOKS BACK ON THE DEBATE OVER WHETHER TO ACCEPT SDI FUNDS

The Tech

Volume 106, Number 17 Tuesday, April 8, 1986

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feedback

Sandinistas expelled and persecuted Jews

To the Editor:

There has been much discussion recently about the Sandinista government of Nicaragua and supposed human rights violations. I would like to set one matter completely straight. The Sandinistas are definitely anti-Semitic. During the revolution they persecuted the Jews and forced them to abandon the country.

I know. I am a Nicaraguan Jew. In 1979 my family was threatened with death by a Sandinista agent. He brandished a gun and said that if we did not leave the country we would be killed.

Slogans like "Death to the Jewish pigs" appeared on walls around Managua. The Temple

was bombed and burned. The Temple had not been abandoned; it was in use at the time and my relatives were in the building at the moment of the attack. Not only my family, but many others were forced to flee for their lives.

There is a "colony" of exiled Nicaraguan Jews in Miami where I live. Luckily, the US government has granted my family political asylum so that we can live here. Many other Nicaraguan Jews are now living in exile in Honduras and Costa Rica.

Any reports you hear that say the Sandinistas did not persecute Jews are completely false. I know. I was there.

Henry Stavisky '89



opinion

feedback

Divestment supporters demand public hearing

(Editor's note: the following is an open letter addressed to President Paul E. Gray '54.)

To the Editor:

Faced with the growing rebellion against apartheid by the people of South Africa, the racist government is increasingly isolated and weakened. But the regime continues to survive with political support from foreign governments and with capital investments and loans from foreign corporations. We therefore demand a complete divestment by MIT, and we protest MIT's use of the fraudulent Sullivan Principles to justify the Institute's current "constructive" apartheid investments.

We, the MIT Coalition Against Apartheid, request a public hearing with the Executive Committee of the MIT Corporation to discuss MIT's investments in US corporations which operate in South Africa. Your administration claims to have considered student opinion while deliberating this decision, yet the Corporation's Advisory Committee on Shareholder Responsibility (ACSR) avoided holding a public hearing set for the last week of February.

When asked why the forum was not taking place, the ACSR official stated they were not interested in holding a "debate" and that they had already forwarded

their recommendation against total divestment to the Executive Committee.

Furthermore, members of your administration have claimed that the Institute Colloquium on Apartheid last fall served to elicit student opinion. In fact the Colloquium organizers did all they could to avoid any focused discussion on MIT's investments or involvement in South African operations.

We believe the MIT community is entitled to a public discussion with the Executive Committee on the following issues:

- MIT's refusal to totally divest, MIT's destruction of the Alexandria Township shantytown and MIT's arrest of eight anti-apartheid student activists.

- The 50 percent drop in black freshmen enrollment since 1979, and the need to increase financial aid so that more poor students of all races can attend MIT.

- Job security for the food service workers.

We are well aware that if the administration continues its present policies, it will fail to act on the MIT community's majority support for divestment, yet we request this forum with the Executive Committee regardless of the bleak outlook.

Arnold Contreras '86
for the Coalition Against Apartheid

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

Dissents, marked as such and printed in a distinctive format, are the opinions of the undersigned members of the editorial board choosing to publish their disagreement with the editorial.

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

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

Freedom of speech should be available for non-leftists too

To the Editor:

I applaud the letter by Kevin Christopher '88 ["Accusation reflects paranoia," April 4] for showing the true hypocrisy of *The Student* and other left-wing groups. The "hoax of free speech" only applies to non-leftist groups; in other words, the left has denied the right of free speech to all who disagree with their views. The actions of the left at the talk on Nicaragua, the actual actions of the conservative groups and his letter will bear my point out.

On April 2, Jorge Rosales, the student leader in Nicaragua who helped depose Somoza, spoke as a representative of the *contras*. Before he or the other guest speaker could begin his talk, cries of "We aren't here to talk, we are here to denounce" and "Fascists don't have the right of free speech," amongst others, sounded throughout 3-370.

Those two slogans spoke well of the "free exchange" of ideas that the left wanted to take place. The students chanted, yelled, screamed, denounced and made irrelevant remarks like "...and what about Israeli criminals" and "Khomeini is there too" in order

to interrupt the speakers. This is a "free exchange" of ideas for leftists. The speakers could often not be heard due to this excessive noise.

This is in line with the standard leftist ideas. When they want to say something, they yell and scream at the administration. When given a chance to allow freedom of speech — that they demand for themselves — to others, they try any way they can to stop it.

Many people, including several prominent liberal students in attendance, were appalled by the behavior of these students at the discussion. The behavior of these people was a disgrace to the entire MIT community. These children have been trying to indoctrinate the MIT community for some time, and their actions have showed their intellectual capabilities.

I was often assailed by people asking why we restricted admission to MIT community members, and why we banned posters and placards from the room. The "Campus Activities Policies and Procedures" handbook, provided by the Undergraduate Association, sets rules on the running



feedback

MIT should provide opportunities

To the Editor:

I would like to make the following points concerning the letter of Karen Spencer '86 ["Not everyone is created equal," April 1]:

- One need not consider the injustices of the past to justify affirmative action programs — the injustices of the past have developed into the injustices of today.

- Affirmative action programs are no more arbitrary than any of the other methods used to admit students to MIT or any other university — as Spencer pointed out, SAT scores are not invariably a good indicator of academic performance.

- The development of a good scientist or engineer depends on two factors: talent and opportunity. Without opportunity, talent is wasted, an unacceptable outcome. Talent is obviously independent of ethnic background, but unfortunately, opportunity is still not.

To develop better scientific and engineering communities, as well as those of other professions, the talent pool from which these communities is drawn must be as large as possible; this means

making opportunities for advancement available to people from all backgrounds, including those from underprivileged ones. The point is that MIT is here mainly to provide opportunity, not to judge talent, because judging talent is not something which MIT or any other institution can do perfectly well.

Tau Epsilon Phi's party was a night for intellectual discussion and sexual equality

To the Editor:

Alice Outwater G, in her letter ["TEP fraternity's party theme is crude, obscene," March 21], has given full victory to us in our quest to bait militant feminists. We deeply regret and condemn the malicious misunderstanding of Outwater and all others who support her cause.

Had Outwater chosen to come to our gathering of March 15, she would have witnessed not only a group of people collectively enjoying the wonderful benefits of life. She would have observed and probably partaken in a fascinating discussion on the continual plight of intelligent, ambitious and well-to-do women in suburban Tallahassee.

Outwater would have enjoyed a

series of lively debates on cat slavery in Northwestern Belize, the difficulties arising from excessive coconut hoarding in Central Kuwait, benign manipulation of 22 year old imbeciles, and every other social, moral and political issue known to woman/man. She would have visually imbibed in a pleasant glimpse of delightful humanity. It was an evening of relaxation, harmonious intellectual discussion and sexual equality.

But Outwater did not attend, and it was probably for the best. It is precisely to avoid the arrival of those whose lives center around trivialities that we title our gatherings as we do.

Michah Sageev '88
Social Chairman Emeritus
Tau Epsilon Phi

Consider two people of equal talent. It is totally unjust (and undemocratic) that getting ahead should be much easier for one than for the other, just because of birth. Affirmative action is both socially justified and morally imperative.

Andrew Wells G

worst case of violence occurred. Two Harvard campus police officers had red paint thrown on them. Rosales was struck in the face with a bottle of red dye. Rosales had to be helped out of the room, and the talk had to be cancelled.

Those agitators were supported by a group of MIT students, who often demanded their admission during the talk at MIT. This kind of brutal assault is their idea of "peaceful protest."

On the subject of banning posters and placards, this was done to protect the rights of students to see the speakers in an indoor situation. Hecklers had the right to carry them before and after the talk, outside, and were allowed a question and answer period to air their views.

I was also disgusted by the misinformation that was included in Christopher's letter. Christopher's letter not only contained misinformation, but in the fine prose of *The Student*, it contained "blatant lies." First of all, to my knowledge, Richard Carreiro '89 is not a member, at the present time, of any conservative groups. Regardless of that fact, Carreiro was not making "un-

That was the basis for our limiting attendance to the MIT community. At the University of Massachusetts and at Wellesly, when the *contra* representatives spoke earlier, there were not only verbal disruptions, but also the throwing of paint at the speakers, and the talk had to be shut down. At Boston College, however, there was a restriction of admittance to students only, and the violence was not repeated.

We decided to follow this successful example. Our concern was based on the fact that a group of outside agitators had been following the speakers and were the cause of this violence. Violence would not allow a free exchange of ideas, so we decided to ban the outside group from attendance. The agitators, with their rage built up from not being able to ruin the MIT talk, went to the later talk at Harvard by the *contra* representatives. Harvard did not check student ID's, and the

founded accusations," as Christopher says. There are many witnesses, as an earlier letter by Sam Park G and Perry Lee Anthony G ["Students for Individual Freedom disturbed by close-mindedness," March 4] attests, to the destruction of conservative groups' posters. This includes a certain vocal anti-SDI physics professor.

No, the claims are not unfounded, as he suggests. His statement about the members of *The Student* and (to a lesser extent) the Coalition Against Apartheid who would not "stoop to that juvenile level" was absurd, since their behavior at the talk on Nicaragua was even more juvenile.

Some people on this campus better not only get their facts straight, but better also think about their hypocrisy. Free speech must be allowed, but it can't just be allotted to the juvenile leftist students. Freedom of speech must be allowed for all students, including non-leftists. MIT, let's stop listening to the leftists who have abandoned American rights, duties and privileges.

John P. Berlin '88
President, MIT Republican Club

American Indians have rights to land

To the Editor:

Regarding the letter by Steve Fernandez '86 ["Indian giving: treatment of Dinehs shows US hypocrisy," April 4] I strongly agree that "Americans" need to open their eyes to apartheid right here.

The land that the Hopis and Navahos must leave is the Big Mountain area. Big Mountain is the female mountain. The female mountain is extremely sacred to the Navaho since they are matriarchal. It is their sacred mother and creator of life.

Their sacred beliefs, I would expect to be protected by the Bureau of Indian Affairs (BIA). When I called the BIA last week

I realized just what the BIA stood for. I asked about Public Law 93-531. The man on the phone told me that the removal was to settle a land dispute between the Indians. When I cited the corporate interests in mineral rights, he told me it was Navaho propaganda. When I attempted to question him further he hung up on me. It became clear to me who the BIA stands to protect.

The BIA refuses to recognize the traditional Hopi and Navaho Elders. How could the BIA protect the Indians' rights if it refuses to even recognize their culture? There is of course no Indian on the BIA.

The BIA did not stop compan-

ies such as Kerr-McGee from providing uranium trailings for the Indians to use as building material, according to a 1975 Environmental Protection Agency report. Back in the 1960s they ignored the Indians' reports of being attacked by poisonous gas until some white Arizonians complained. In addition, killing an Indian in this area is not seen as a serious crime.

Clearly the reason for Public Law 93-531 is not to "settle a dispute" between Indians. The real reason is the uranium and coal. Money is the law and takes precedence over justice. But the Hopi and Navaho live by a different law. As the Hopi spiritual leader

said:

"We know we must resist the removal of these people because, if they are not there to guard this sacred land, the miners will move in and destroy everything. They will use this uranium, which poisons everything, and cause death and misery for thousands of years. We who believe in the sacred instructions of the Great Spirit must resist and protest, for the sake of all life, both present and future."

If we are to respect the principles on which this country was founded, we should not deny them to the indigenous inhabitants. This whole country was, after all, their land.

Sally Wendel G

Scrutinize radioactive dump sites

To the Editor:

On January 16, 1986, the Department of Energy (DOE) released the Area Recommendation Report for the Crystalline Repository Project. This report recommends 12 granite bodies in the Eastern United States for further study concerning the feasibility of their use as high level nuclear waste dumps.

These 12 potentially acceptable sites were selected by computer from 235 sites in 17 states on the basis of census counts and existing geologic and political data. Following a formal 90-day comment period, the DOE will release the final Area Recommendation Report and begin, with the US Geological Survey, detailed studies of the proposed site areas.

My purpose is to persuade as many people as possible to take advantage of the formal comment period and write to the DOE concerning this project. I have studied the Area Recommendation Report for the three proposed sites in the Northeastern region (one in New Hampshire and two in Maine) and have found fault in all of them.

Two are near heavily populated areas (and major usable aquifers) and may threaten the safe drinking water of city and suburb. The third site includes portions of the reservation land of the Passamoquoddy and Penobscott Indian nations. The Sebago Lake site, in southeastern Maine, has a very heavy tourist population (not considered in the computer survey) and 47 nearby or included state lands and wildlife preserves. In addition, it is located only five

kilometers from the White Mountain National Forest. The New Hampshire site seems at best unfair in a state that has no commercial nuclear installations and has made every attempt to prevent the operation of the Seabrook plant.

The DOE office in Boston has been very helpful in providing this information. I urge students to consider the following points and write to the DOE before April 16:

- Finding one or two dump sites across the nation does not mean that we can store an arbitrarily large amount of waste and does not validate the continued production of large amounts of hazardous material in nuclear power plants and defense related projects.

- Attempts to deposit waste in geologic dumps must not supersede attempts to lower the activity and quantity of hazardous material by reprocessing, by irradiation of heavy elements or by any other safe means available.

- There are major problems involved in diffusion, hydrology and rock mechanics that bear heavily on this project and may not be solved by the targeted construction time about 12 years from now. The DOE would be amiss to insist on this deadline if these processes are not adequately characterized.

- The problems demonstrated by Love Canal, the current Woburn case and many other similar problems across the nation indicate that we don't even have the ability to deal with toxins which persist for relatively short periods of time. Do we have the knowl-

edge necessary to safely dispose of waste containing radioactive isotopes which will persist for tens of thousands of years?

The DOE in Boston can be reached at 223-2525. To write, the address is

US Department of Energy
Office of Civilian Radioactive
Waste Management
Crystalline Repository Project
9800 South Cass Avenue
Argonne, Illinois 60439

The DOE will hold a public meeting tonight on the issue. It will be at 8 pm in the Gardner Auditorium at the State House in Boston.

Karl DeBisschop '87

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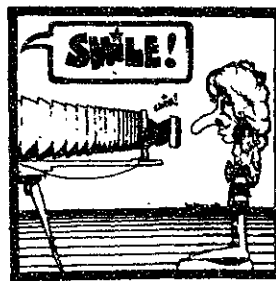
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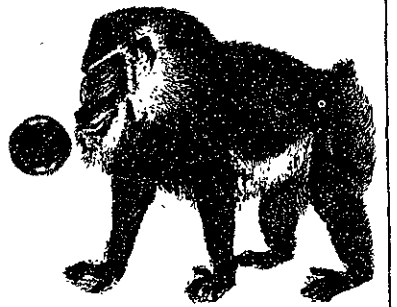
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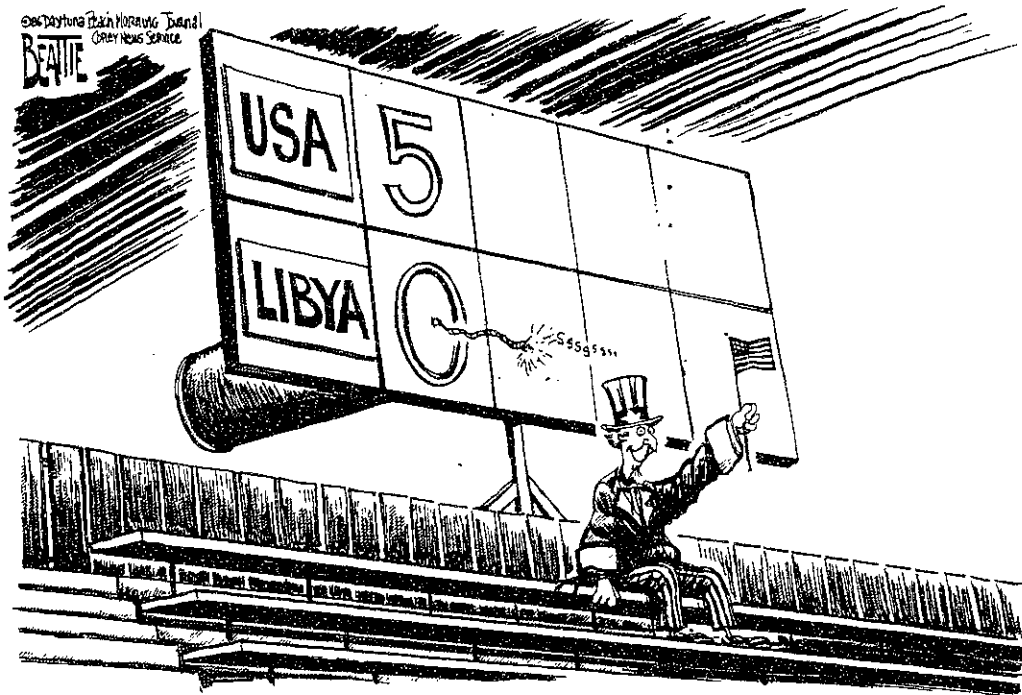
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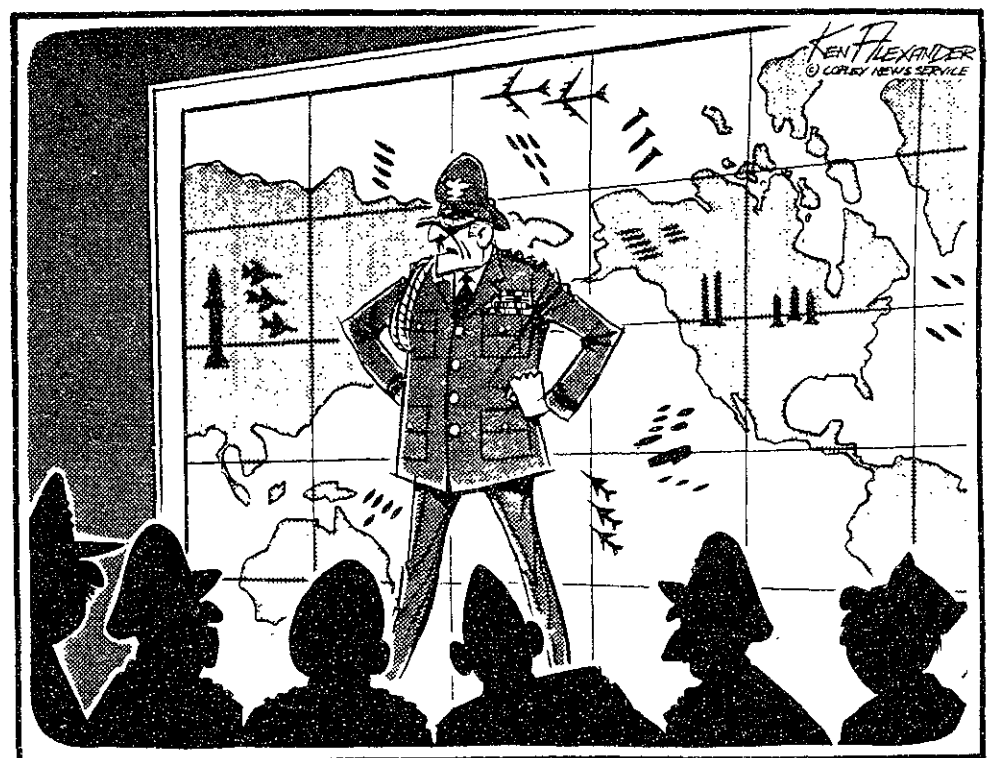
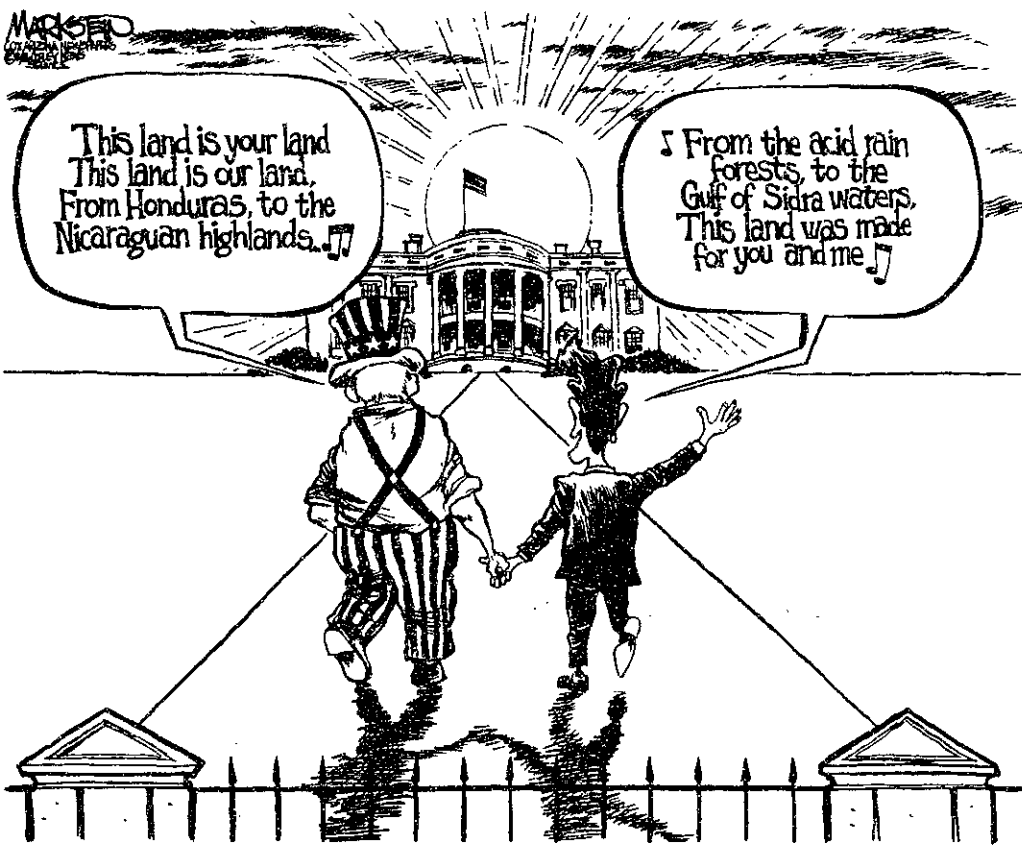


opinion



ONCE UPON A TIME THERE WAS AN ENGINEER,
CHOO CHOO CHARLIE WAS HIS NAME WE HEAR
HE WENT TO COLLEGE AT MIT
AND HIS "GOOD AND PLENTY" THEORY TELLS
THE WHOLE STORY.

CHARLIE SAYS, "IT'S GOOD BUT IT COSTS PLENTY"
CHARLIE SAYS, "COURSES NO PLACE ELSE CAN TOUCH"
CHARLIE SAYS, "IT'S GOOD BUT IT COSTS PLENTY"
DON'T KNOW ANY OTHER SCHOOL WHERE IT COSTS
SO MUCH.



"GENTLEMEN, AS OF 0400 HOURS WE OPERATE UNDER CONDITION RED... ATTACK BY GRAMM RUDMAN"



Column/Julian West

You'll never eat another sausage

Asked, "what do you think about non-human animals?" a person on the street in *The Animals Film* answers "I haven't given them a lot of thought." This surprising feature-length documentary does.

It thinks about the fur-bearing animals of all descriptions, gnawing their limbs off in leg-hold traps in the North American wilderness. It thinks about the victims of vivisection in redundant experiments and training exercises. It thinks about the beef cattle being fattened for market on a diet of cement and excrement.

This is a film to see if you have never thought about any of these subjects. If there is no other way to convince you to see this film, think of it as a supreme example of the filmmakers' craft.

The perception which is brought to bear in the movie is remarkable. Clever editing intersperses scenes of pigs at a factory farm, rooting at the metal bars of their cages, with hogs in the wild, manufacture of sausage links, and advertisements for pharmaceutical companies. The film contains everything from animation to underwater photography.

Even more interesting to consider is Schonfeld's work as an investigative journalist, ever impartial, in compiling some of the more astonishing footage. A lengthy segment on factory farming was compiled by feigning an interest in the farmers' ingenuity in "trying to breed animals without legs and chickens without feathers." What the impartial camera actually reveals is a nightmarish underside of society in which animals are converted into food machines.

The film does not preach. Underneath it all is Julie Christie's steady voice, describing the scenes which unfold before us. Some are brutal: chickens being debeaked, veal calves starved, monkeys shocked until they vomit. Others are more subtle: a McDonald's commercial featuring a "hamburger patch" denies that Bessie was slaughtered to provide our burgers.

As with humans, it is the female of most species who bears the bulk of the suffering. Sows are shown being forcibly serviced, and then confined in tiny breeding pens where they don't have room to fall over and injure their piglets. As one woman says in the film, "If I don't see it, I wouldn't mind." This film denies us all that excuse.

The film was shot over a four year period, mostly in the United States and the United Kingdom. Made for only \$300,000, it was a labor of love for everyone involved. The care that was put into it comes across on screen as in very few other films.

The makers of the film say that "It's not about them; it's about us," and this statement is very perceptive. Ultimately, the film is a terrifying journey into the dark side of humanity, an exposé of the evil which we perpetuate in the name of greed.

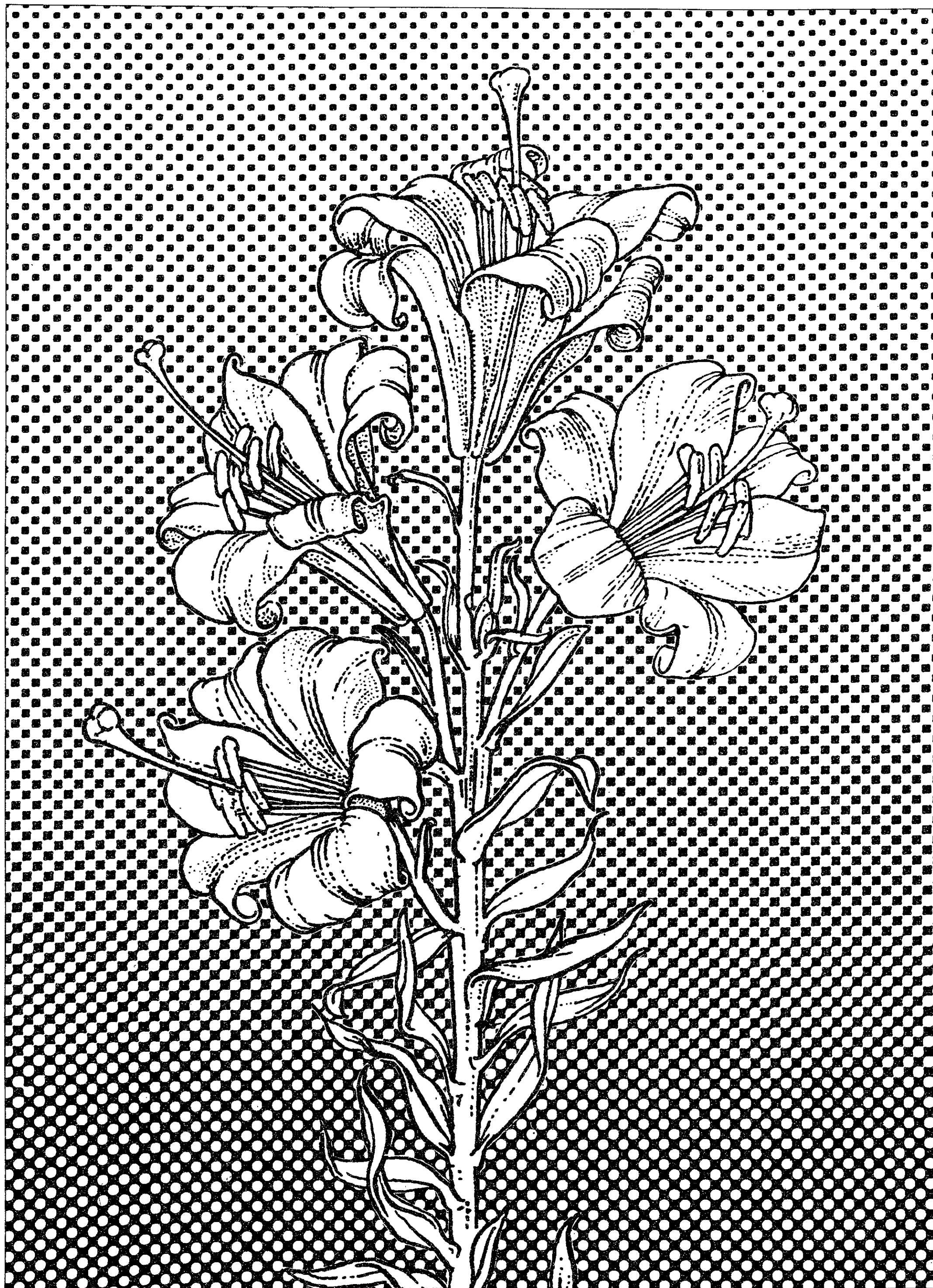
The Animals Film will be shown on campus tomorrow night. You should consider seeing it, particularly if your initial inclination is to dismiss it as so much extremist propaganda. If that is the way you feel about the subject, then you are exactly the person this film is for, if not about.

I D E A S

S P R I N G 1 9 8 6

Will that be tea or
scotch? Page 2

Going to New
York? See Page 3



SAMPLING SCOTCHES

Only the best is good enough for our jaded judges

Having last year checked out American bourbon whiskeys, The Tech's intrepid (and of-legal-age) sipping staff decided to investigate the competition from Scotland. All but the best scotch whiskeys would be far too rough to drink as distilled; consequently for purposes of smoothness and bottle-to-bottle consistency most scotches are blends of several whiskeys. Fancier "single malt" scotches are unblended and have a slightly different taste.

The price of scotch falls into two categories: expensive and very expensive. One tends to pay for both age (usually either 12 years old or unspecified) and unblended-ness (though many fine scotches are blended). Our panel of imbibers reviewed six expensive scotches (\$9 to \$12 for 750ml) and four very expensive ones (\$17 to \$22). There also exist brands which sell in excess of \$50 (and are aged for 30 or more years), but if you could afford one were we to recommend it, you could afford to try it yourself.

The Tech received 16 usable responses from a blind taste test. The scotches were slightly below room temperature and were served straight up in unwaxed paper cups.

The scotches are listed here in order of preference, with the number liking and disliking it as the first pair of numbers in the parentheses, and the number naming it best or worst as the second pair.

Glenfiddich, (9-0, 4-0), 86°, very expensive: The big winner, Glenfiddich is one of the two single malts in the survey. A number of respondents praised its smoothness and its balanced taste. "Not too strong or weak," wrote one. Glenfiddich is at its best straight up at room temperature, shared with a small number of close friends. Hide the bottle, though, lest they come back for more while you are away.

Chivas Regal, (7-2, 5-0), 86°, very expensive: The finest of the blends, Chivas lived up to its reputation as the best of the widely-known scotches. Respondents praised its strong, but excellent taste. Chivas has a slight afterburn; some liked this sensation, but the only two negative votes mentioned it as a drawback.

Cutty Sark, (4-2, 1-0), 86°, expensive: The winner of the Bang for the Buck Award, Cutty is the best choice for your second scotch, or for a party scotch. Its strong flavor will hold up well in mixed drinks and its relative smoothness makes it palatable straight up.

Johnnie Walker Red, (4-3, 0-1), 86.8°, expensive: The choice if the store is out of Cutty, Johnnie Red has a mild, slightly antiseptic flavor. "Breathy, passive taste," wrote one respondent. "Weak. Little taste. Immediate burn," wrote another. Johnnie Red's light flavor might not hold up well when mixed, and is the last of the scotches we recommend.

Ballantine, (2-2, 0-1), 86°, expensive: A nondescript scotch, Ballantine could almost come in a black and white generic label. There is no reason not to



buy it, but there is also no reason to. It has a sweet smell and flavor. Comments ranged from "pleasant," to "no taste," to "bleah bleah." Perhaps the most accurate response was one which merely said, "unobtrusive."

Teacher's, (2-3, 1-1), 86°, expensive: Another nondescript scotch, Teacher's could not get a consensus on what it tasted like. "Sumptuous flavor," wrote one respondent. "Has a severe lack of taste," wrote another. "Strongest," wrote a third. "Watery," wrote a fourth. Teacher's might make a good Christmas grab bag item; no one would know what he is really getting.

Dewar's White Label, (0-1, 0-1), 86.8°, expensive: The most nondescript of the nondescript scotches, Dewar's elicited the least reaction of any scotch. Dewar's has a smooth, shallow taste.

Glenlivet, (3-6, 2-3), 86°, very expensive: The most polarizing of the scotches, Glenlivet is the second single malt. Those who liked Glenlivet did not think much of Glenfiddich, and those who liked Glenfiddich loathed Glenlivet. One respondent who disliked all the other scotches wrote that Glenlivet was the "only one I liked." It has a strong bouquet and flavor, and a "potent aftertaste," according to another respondent. "Wonderful! Fruity, estery flavor," wrote a third. Detractors complained of a "beery" flavor and criticized it for "bitter" taste. "Attacks the tonsils," concluded a respondent.

Black & White, (2-5, 2-1), 86.8°, expensive: A bitter, mouth-numbing scotch, B&W did find favor with two respondents who liked its "sting-y" and "tangy, complex" flavor. B&W becomes drinkable when mixed with water or soda — a lot of water or soda.

Pinch, (1-6, 0-2), 86°, very expensive: The big loser, Pinch surprised the respondents. It has a biting, almost salty or smokey flavor despite its light bouquet. Pinch "ate through the cup more quickly" than the other scotches, one respondent noted.

— Robert E. Malchman

TEA

FOR YOU

What to buy, and what to do when you get it home

As a habituated coffee addict, I would prefer not waking up to anything less than a French roast. Unfortunately, the recent crop freeze in Brazil has caused coffee prices to climb by 20-30%. Fortunately, this has forced me to rediscover tea.

Tea, while it costs more per pound, cup-for-cup is a quarter to half the price of coffee. A cup of top-quality tea will cost from 6 to 15 cents per cup, while top-quality coffee costs 25 to 50 cents. Even the best tea doesn't require the expensive and sometimes finicky grinders and brewers necessary for top-notch coffee. It also comes in more distinct varieties and generally contains less caffeine. All in all, heart-warming tea is a better deal than frost-bitten coffee.

What is tea?

Tea is any vegetative matter that can be thrown into hot water to extract flavor. In fact, coffee is a tea, although few coffee drinkers would admit it. To narrow the scope of this article, we should consider tea to be those plants related to the tea trees of Asia. Herbal teas such as mint or rose hips may be tasty, but aren't the real thing.

The major tea-producing countries grow descendants and cousins of the original Chinese tea plants, *Camellia sinensis*. The tree has small, glossy

leaves, and if the young leaves were not picked to make tea, it would grow into a sturdy tree. The first leaves after the tree is pruned, the "first flush", make the best tea and command the highest price; the quality decreases with successive flushes. Man has cultivated tea for more than 2300 years. By now, it would be difficult to reconstruct the taste of the original tea the Duke of Chou enjoyed.

Tea fanciers, obsessed with tea, can detail the rise and fall of empires by the shifting patterns of the tea trade. Tea has provided a justification for revolution (ours, for example) and war. First brought to Europe only a few hundred years ago, tea quickly became an essential part of British and Russian cultures.

As one of man's oldest staples, tea links us to the past.

How to make good tea

The essential ingredients for a good cup of tea have not changed for two millennia. Fire, water and tea are the basics. Fire is easy and any stove or hot pot can be used. The water must be fresh and cold to start as hot water is deaerated; strange-tasting water will make strange-tasting tea. Tea should be from a reputable source, either in bags or loose. Loose tea is put into a basket or a teaball to keep the leaves together.

Heat the water. The water should be boiling hard, and some should be used to warm the teapot or cup. If loose tea is used, one teaspoon of tea should be used per 6 ounce cup of tea, with one extra "for the pot." Remember, tea expands and one should not over-fill the tea container. Otherwise, most tea bags will make one or two cups.

When the water is hot, pour it into the teapot or cup. Let the tea leaves steep for about 4 minutes, and then remove them. Throw them away or use them for mulch.

The tea can now be drunk. Sugar, lemon or milk can be added. It can also be cooled and served on ice.

How to make great tea

Making great tea is not much more difficult than making merely acceptable tea. The best way to improve the tea is to make sure the water is fresh and hot. Aluminum water kettles and teapots should not be used since they react with the water.

The tea can be further improved by storing your tea bags or leaves in airtight glass containers or metal tins, in a cool, dark place. Like most plant products, tea is susceptible to moisture, heat, and light, but with careful storage, tea can be kept for 6 months to a year.

These precautions may seem unneces-

sary, but they do make a difference.

What tea should be made?

Tea comes in three major varieties: black, green and oolong. The black

CONTINUED, PAGE 4

On buying tea

My favorite place to buy tea is The Coffee Connection. They have stores at Faneuil Hall, on Charles St. in Boston, and in the Garage (36 JFK St.) at Harvard Square, among other places. Part of the fun of tea-drinking is the wide variety of flavors, and the Connection has a good selection of both the old standards and special grade teas from around the world. They also sell tea samplers. While I would not buy my tea or coffee equipment from them, their prices on loose tea are competitive.

Most are \$5 to \$8 per pound (which makes 200-plus cups), and the special grades are mostly under \$15. The Square Deal advertising circular usually contains discount coupons for the Harvard Square Coffee Connection. Their tea is usually much cheaper than "gourmet" tea bags, although the mess and annoyance of wet tea leaves must be included in any purchasing decisions.

If you are buying tea in the supermarket, you will do well to purchase Bigelow or Twinings products, both high quality and available in numerous varieties, some flavored with fruits or spices. Many other manufacturers use powerful added flavors to disguise second-rate leaves. Red Rose is a good all-around tea. Store-brand and generic teas are good only for making iced tea by the gallon.

While not strictly tea, the Celestial Seasonings brand of herbal teas come in many fruity and minty varieties. Widely available and relatively inexpensive, most are caffeine-free and come only in tea bags. Best flavors appear to be Red Zinger, a tart blend of rosehips and mint, and Pelican Punch, a mix of mints and carob. Avoid Morning Thunder, which contains more caffeine than coffee. Now that they are no longer a hippie-run company, Celestial Seasonings often puts coupons in the Sunday papers.



IDEAS: SPRING 1986
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OLDIES BUT GOODIES

People tell us their favorite classic products

Although literally thousands of new products — amid much fanfare — are introduced to the market annually, the vast majority quickly disappear. At the same time, some products which have been around for years continue to sell well because of word-of-mouth rather than formal advertising. I've asked various acquaintances for their favorite obscure-but-good products and here provide a list of the best.

Graniteware, made since the Civil War, is a white-speckled black enameled cookware, advertised as "America's first non-stick cookware," and was probably used by your great-grandmother, if she lived in the States. It withstands much more abuse than does Silverstone, it doesn't react with foods as do aluminum and stainless, it heats evenly, and most importantly it's cheap. I have a \$2.99 saucepan that I've used at least three nights a week for five years and it looks as good as new. Most food just washes right off,

and really burned-on stuff can be removed with Bon Ami (never use anything harsher on enamelware). Graniteware is available in numerous forms, including roaster pans, double boilers, pots ranging from the butter-melting size to those large enough to cook lobsters for the entire summer population of Ogunquit, and best of all the quintessential "everything pot" which has various strainer and steamer inserts and can be used for an amazing range of cooking tasks. Available at discount and hardware stores.

Goof-Off, an amazing and secret combination of solvents blended in Georgia and not understood by organic chemists, has the remarkable ability to remove new things from old things. It will equally well remove rubber bumper scuffs from your car's paint, or auto paint from your rubber bumper strips. It will take graffiti off painted walls; indeed, it will even remove a new coat of paint from old paint of exactly the same type. With a little manual assistance it does a fair job on such "impossible" things as MIT parking stickers, bubble gum, and

spilled latex paint. Said to be easily available in local hardware and discount stores, but the only place I've recently seen it in stock is Dawson's Hardware on Huron Avenue in Cambridge.

Number Six, George Washington's favorite, is reputed to have been the first men's Eau de Cologne blended on this side of the Atlantic (one wonders what happened to numbers one through five!), and has been made by Caswell-Massey using the same formula since before the American Revolution. George sent a few bottles to the Marquis de Lafayette as a gift, and both Presidents Adams were later fans. Nowadays this classic scent is available in after-shave, soap, and talc forms as well. Always available at Caswell-Massey's local store in Copley Place; often available in pharmacies with good fragrance departments, as well.

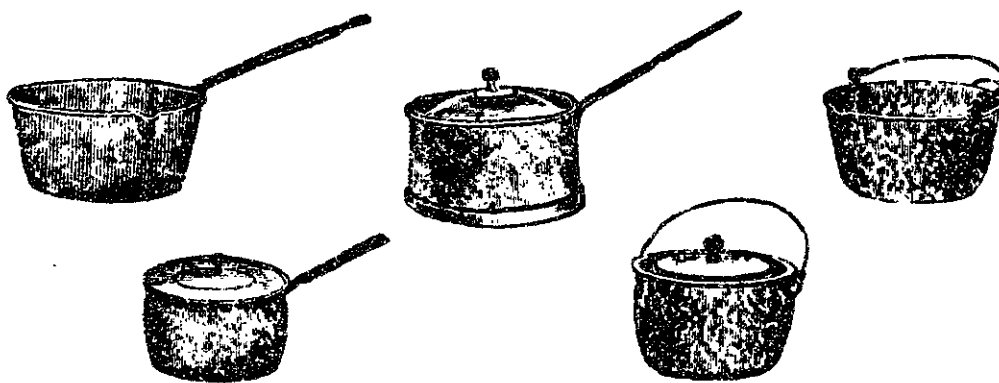
Bag Balm was originally formulated for chapped cows, but Vermont farmers — being practical folks — found it to be the best thing for chapped hands, too. Cows now see only a small por-

tion of the Bag Balm factory's output. Available at veterinary supply stores and rural pharmacies throughout Vermont, New Hampshire, and Massachusetts.

Dickies chinos have a classic baggy cut, nice wide belt loops, and indestructible pockets and zippers. They last nearly forever. They come in a wide range of colors and cost about half as much as chinos from the Lands' End or L. L. Bean catalogues (Dickies are rumored to be made out of identical material at the same factory as the latter's). The seat and waistband are doubly-sewn so that they can quickly be let out about an inch should your posterior dimensions increase before the slacks wear out. Available (and often on sale) at discount stores like Bradlees, Ann&Hope, Zayre, et al.

Moxie, the age-old, bitter, gentian-root-extract soft drink, is unquestionably an acquired taste. But what can you expect from a drink with a picture of a pharmacist on its label? The formulation is virtually unchanged since the days when the government still permitted advertising Moxie as a "brain food." (Actually, a number of years ago the manufacturer experimented with a slightly lighter, sweeter flavor but was besieged by angry protests from die-hard Moxie fans who said they actually enjoyed the characteristic acrid taste — so take that, Coca-Cola!). Rum-and-Moxie-on-the-rocks, appealing to those who also like mixed drinks containing lots of Angostura bitters, is a (admittedly minor) craze which resurfaces every few years. Available at most supermarkets.

— V. Michael Bove



FLY TO THE BIG APPLE...

Some prefer the friendly skies

New York City. For many at MIT, it or one of its suburbs is home. For others, it can be an exciting long weekend away from small-town Boston. The question that arises for both groups is, quite naturally, "How do I get between here and there?"

This native New Yorker has spent the past five years dealing with that question on a regular basis, and for the other 18 years of his life on an irregular basis. (My father's family is from Massachusetts.)

Air travel is a frequent, and often surprisingly affordable, answer to that question. It leads, though, to the next question: What airport should I fly into?

Kennedy airport is a bad choice. It is served only by large, expensive carriers. Taxis from the airport to mid-Manhattan cost under \$25. The "Train to the Plane" express takes 50 minutes on average; the regular subway take an hour and a half. Shuttle buses are probably the best bet if it is not rush hour.

LaGuardia is the best choice for people traveling to Queens, Brooklyn, Manhattan's East Side, Long Island (Suffolk County residents might consider flights to MacArthur airport), West-

chester County and Connecticut (these residents might consider White Plains airport, also.) Taxis cost under \$20 to mid-Manhattan. The subway-bus combination takes about an hour, but costs only \$2. Shuttle buses to Grand Central Station at 42nd Street and Park Avenue cost \$6.

Newark is a little-known jewel of an airport. In addition to being the airport for northern New Jersey, it most ably serves Manhattan's West Side. New Jersey Transit buses take 30-40 minutes to bring one to the Port Authority Bus Terminal on 42nd Street and Eighth Avenue. No one takes a taxi from Newark.

The most important question is, of course, what airline to fly. The schedules and fares change rapidly, so call for the latest information. I have only listed airlines with which I have personal experience, but they have proved, over time, the best deals available.

Eastern (262-3700) still has its famed shuttle service to LaGuardia every hour on the hour. Since deregulation and the air traffic controllers' strike, Eastern's policy of guaranteed seating has fallen into disrepair. The planes are cramped, but no reservations are required — or accepted — and you will eventually get where you want to go. Last Thanksgiving, Eastern was running second and third sections of its hourly flight, while the wait for a seat was about two hours.

The basic fare is \$65, but goes down to \$50 from Saturdays at 8am to Sundays at 2pm. If you're between the ages of 12 and 21, you qualify for a \$35 youth fare weekdays from 10am to 2pm and 7pm to 9pm, and from Saturdays at 8am to Sundays at 2pm. **New York Air** (569-8400) is more comfortable than Eastern, with wider seats and free munchies. The price you pay is the necessity of making reservations. Flights depart every hour on the hour to LaGuardia with a basic fare of \$65. Weekend fare is \$50. Students with valid ID can fly for \$35, and New York Air has a \$66 round-trip fare. Restrictions on the latter two apply, so check when you make your reservations.

People Express (523-0820) represents the second worst airline experience I've had. (The worst was with the Yugoslavian airline, but since it doesn't fly Boston to New York, we need not get into it.) People is usually late, crowded and inconsiderate. One time after loading us into a hot plane and keeping us sitting on the ground for over an hour, the stewards brought the drink cart around, but had the nerve

CONTINUED, PAGE 4

...OR TAKE THE TRAIN

Some prefer to go by rail

Call me old-fashioned, but I would much rather take the train from Boston to New York than fly. Over the past two years, I've traveled between Boston and New York about twenty times. Of the twenty, I've flown six times. Each time, I resolve that I will never fly again.

For the Boston-New York trip, Amtrak beats all of the airlines hands down. Amtrak costs less and has a nicer ride. The time spent on the train is more useful than the time spent on the airplane and bus. Unless you have a car parked at La Guardia airport, or friends who can pick you up, there's really no reason to put up with the hassle of flying.

The trip from South Station, Boston, to Pennsylvania Station, New York, takes from four-and-a-half to five hours. While this time doesn't compare favorably to the one-hour flying time between the cities, the door-to-door times are much closer.

To travel by train from MIT to Columbia University usually takes around five hours and twenty minutes, including the ten minute subway ride from MIT to South Station, four hours and forty-five minutes by Amtrak to New York, and twenty-five minutes from Penn Station to Columbia, again by subway. One of the nice things about taking the train is that you can get to South Station a minute before the train leaves and still make your train.

The airplane alternative takes a little less time, but the time spent enroute can't be spent productively. From MIT to the airport takes about thirty minutes on a good day, twice that during rush hour, whether you take a taxi or the subway. Airlines recommend that you arrive at the airport half an hour before the flight leaves. Most people allow an hour between leaving MIT and their flight's departure time.

Arriving New York airport (any New York airport), the traveler is faced with the problem of getting to The City. The usual way to do this is by bus, the usual cost is \$10, and the usual time is an hour. The bus stops at Grand Central Station, which is forty-

five minutes by subway from Columbia.

For the entire trip by airplane, you get a desk for about 40 minutes, versus the entire four and a half hours of the train trip. Few people can get work done during the subway and bus rides or while waiting around at the airport. Being a hard-working MIT student, I'm concerned about such things.

Besides a savings of time, there are other advantages to Amtrak:

- The view from the train of New York, Connecticut and Massachusetts far surpasses the view of clouds you see from the airplane. Be sure to sit on the side of the train facing the ocean (on your left leaving Boston, right leaving New York, if geography isn't your strong suit).

- Train food is better than airplane food. There is more variety and the snack car is almost always open. Trains also have a wider selection of drinks.

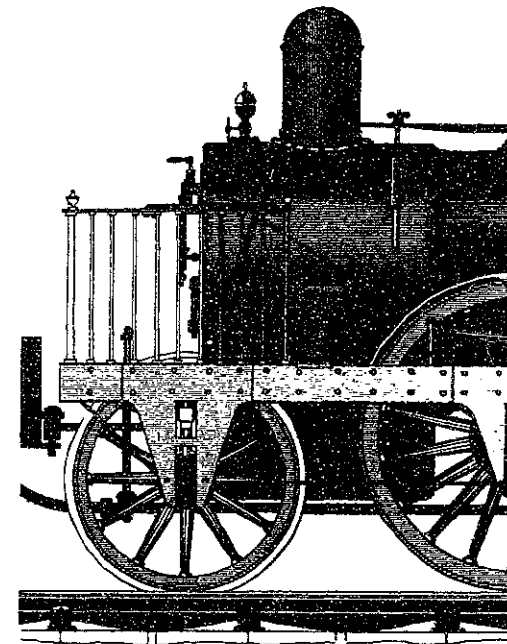
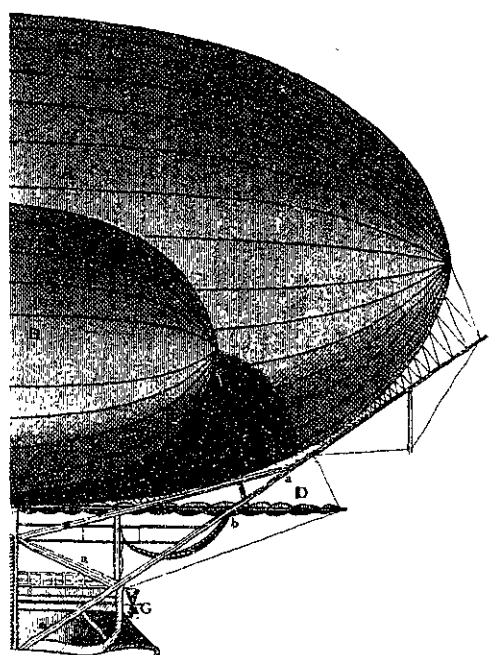
- Two 110V outlets are provided in every car, in case you need to work on your 6.004 lab kit or Macintosh computer.

- The trains leave and arrive Boston round-the-clock, while flights out after 9 pm are hard to come by.

- Trains stay to their schedules much more than airplanes do. Once I flew to New York and the airplane was over three hours late! (The airplane had sat on the ground at Logan for two hours.) These sorts of delays, rare on the railroads, are common in the "friendly skies", especially at fog-plagued airports like Logan.

- The train stations are right in the middle of Boston, New York, Philadelphia and Washington. In each of these

CONTINUED, PAGE 4



VINTAGE VINYL

Fourteen of the best revisited

In the spring of 1981, I happened to be present at a late-night flame session in which a group of Senior House residents attempted to formulate a list of rock records they felt every well-stocked collection ought to contain. Recently, while rummaging through my desk, I ran across a piece of paper on which I had noted the discs on which there had appeared to be some consensus. This is in no way a list of best-ever records, nor does it even comprehensively cover good or influential music (the absence of The White Album, Quadrophenia, Electric Ladyland, Workingman's Dead, Dark Side of the Moon, and Thick as a Brick strikes me, and at the same time I seriously doubt that every collection needs Virgin Fugs), but in the past week I've given them all a listen to see which ones have become dated and which are true classics. No warranties, expressed or implied, are provided...

The B-52's, The B-52's. Quirky, mindless dance music that was sufficiently ubiquitous five years ago to be almost forgotten now. No party tape is complete without the entire A-side of this record on it, though, including "Planet Claire," "52 Girls," and "Rock Lobster." Spray-paint a big red X on the B side so you won't accidentally put it facing up on your turntable and have to listen to an eminently unmusical version of Petula Clark's hit "Downtown."

The Rise and Fall of Ziggy Stardust and the Spiders from Mars, David Bowie. Bowie as the spacy, red-haired bisexual Ziggy Stardust belts out the all-time-great-Saturday-night-speaker-melter "Suffragette City" and sings about suicide ("Rock and Roll Suicide"), the end of the world ("Five Years"), and interstellar visitors ("Starman") as only a spacy, red-haired bisexual can.

The Kick Inside, Kate Bush. A bit dated, this one, as pianist/vocalist/dancer Kate Bush has long since made the transition from pop music to Art. Those familiar with only her current records may be a bit surprised to hear the mindless-yet-mysterious "The Man with the Child in his Eyes" and literate-but-unmistakeably-popish "Wuthering Heights."

Young, Loud and Snotty, The Dead Boys. I seem to recall there being some dispute as to whether this or *Never Mind the Bollocks* was the better representative of the late-70's punk genre. Stiv Bators does such a wonderful angry-young-punk act on the classics "Sonic Reducer" and "All This and More" that it's a shame to hear the garbage he's recording nowadays with the Lords of the New Church.

Q: Are We Not Men? A: We Are Devo!, Devo. High-tech Dadaism rears its ugly-but-silly head. Like their Dada predecessors of half a century earlier, these guys did most of their best work before anyone noticed them. Good party tunes like "Mongoloid," "Uncontrollable Urge," and a version of "(I Can't Get No) Satisfaction" that Mick Jagger once claimed to prefer to the original.

The Doors, The Doors. Eleven-and-a-half intense minutes of "The End" — the most celebrated Oedipus complex on vinyl — set off against slightly-dark-but-fun Jim Morrison pop like "Twentieth Century Fox" and "Soul Kitchen."

Ambient 1: Music for Airports, Brian Eno. In retrospect, I think that the Eno album that should have been on this list is *Here Come the Warm Jets*, in which he orchestrates lyrically-off-kilter quasi-, para- and meta-pop tunes like "Blank Frank," "Dead Finks Don't Talk," and "Baby's on Fire" (the latter containing the best guitar solo Robert Fripp will ever play) as no one else has ever had the nerve. *Airports*, on the other hand, is a protest against the insipidness of Muzak — thoughtful, intellectual background music running the gamut from processed-piano-with-litling-vocals to Baroque organ.

Virgin Fugs, The Fugs. You probably don't want this album, because of both the live-in-a-basement production quality and the rude lyrics, but it's historically interesting. Just as the dark side of the Victorian era found

expression in Aubrey Beardsley's art, the early-60's folk renaissance that brought us The Kingston Trio and Peter, Paul and Mary was also responsible for the birth of The Fugs, a band nowadays remembered mostly for advocating strange uses for products like Coca-Cola and Saran Wrap. But besides singing about sex ("My Bed is Getting Crowded"), drugs ("New Amphetamine Shriek"), and Satanism ("I Command the House of the Devil") in far more graphic terms than any heavy-metal band of today, The Fugs had some redeeming social qualities — despite their concerted effort to the contrary. "CIA Man" ("Who can train guerrillas by the dozen? Send them out to kill their untrained cousin?") sounds frighteningly current twenty-one years after its recording. The album closes with Allen Ginsburg's "Howl," the quintessential Beat poem, set to music — a cut that must set some kind of record for having the most lyrics per unit time.

Figure 14, Human Sexual Response. Local band and Student Center favorite with unfortunate name makes it big. Actually, there's not very much sex on this record, except for the cut "What Does Sex Mean to Me?" At the same time, there is a primo, danceable remake of the Capitols' "Cool Jerk" and slightly-weird-but-inspired songs like "I Want to be Jackie Onassis". By the way, in polite company one refers to this band as "The Humans".

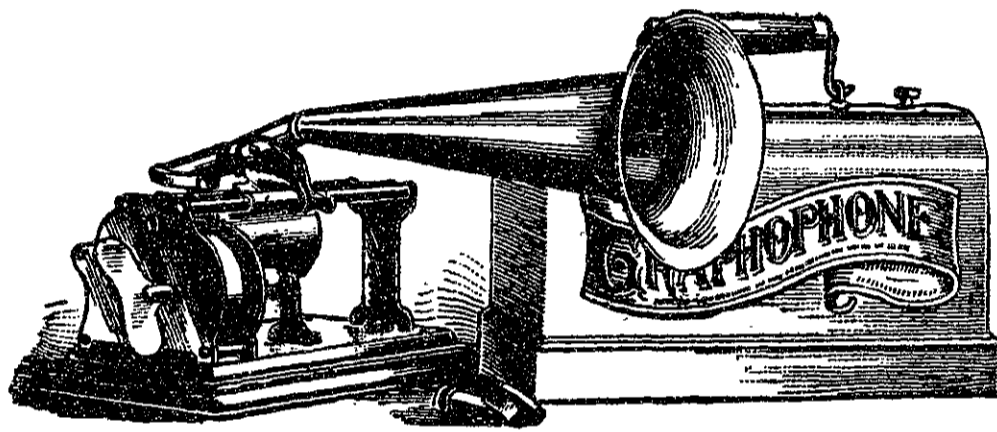
psychedelia "Somebody to Love," "Plastic Fantastic Lover," and — most of all — "White Rabbit."

In the Court of the Crimson King, King Crimson. King Crimson, Mark I. The unforgettable screaming-through-a-fuzz-pedal vocals of "Twenty-First Century Schizoid Man" immediately followed by pastoral Mellotron-driven musings like "I Talk to the Wind." Indeed, a fairly schizoid album, perhaps best listened to in small pieces.

Fresh Aire, Mannheim Steamroller. What happens when a bunch of classical musicians get together and play rock-and-roll? Sometimes, unfortunately, they end up doing a Booker T. and the MG's imitation, as the Steamroller here does on "Hot Chocolate." But it's still a good (and groundbreaking) album even if it's since been improved upon by *Fresh Aire III*.

Easter, Patti Smith. Advanced rock with a definite 60's influence. With "Space Monkey," "Ghost Dance," and "Because the Night," side one of this record gets my vote as the best album side of the 70's.

The Velvet Underground and Nico, The Velvet Underground. Produced by Andy Warhol, this album teamed up the Velvets with European film actress Nico. Art rock was not yet in vogue in the late 60's; Warhol's involvement combined with the matter-of-fact song "Heroin" assured that even the most progressive radio programmers would ignore this disc — admittedly a shame



Surrealistic Pillow, Jefferson Airplane. "If you're going to own only one 60's album, own this one," was one person's comment. The Airplane's first recording with Grace Slick, *Surrealistic Pillow* was the definitive make-love-not-war album. Contains the classic

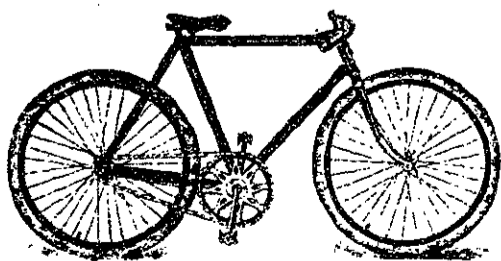
since they were also ignoring the should-have-been-classic rockers "I'm Waiting for the Man" and "There She Goes Again". You get extra points for having an original copy with the peel-off banana sticker on the cover.

— V. Michael Bove

CYCLING TIPS

Now that it's biking weather again...

- Massachusetts state law requires bicycle riders to use headlights after sunset in order to be visible to motorists. If you're not riding in traffic, a headlight will still help you avoid the potholes for which this region is famous. A large, bright battery-powered light is the best. Generator light sets are not a good idea because they chew up sidewalls if they're not adjusted properly, have little wires that get inextricably tangled up in everything, and go out when you're stopped at an intersection. Armband lights and strobes make a rider very visible to motorists, but make it difficult for them to judge distance (and besides, don't illuminate the roadway). Even if you have a very bright headlight and lots of reflectors, you should still wear light-colored — or even better, reflective — clothing and a helmet for night riding.
- Ride on the right side of the road, with traffic. Respect signs, signals, and one-way streets.
- Lock your bike up with a Citadel, Kryptonite, or similar solid-bodied



lock (expensive but worth it), and if at all possible don't leave a bike outside overnight. Remove tire pumps and other easily-detachable accessories, and take them with you.

- Registering your bike with the Campus Police increases the chance of recovery if it's stolen. The sticker costs only 25¢; be sure to bring your serial number to the CP office.
- Bikes are not permitted on MBTA buses, trolleys, or subways. Commuter trains allow bikes only if they fold or otherwise break down (if you have quick-release wheels, you can sometimes get away with removing them and bundling them together with the frame); Amtrak and long-distance buses require bikes to be boxed. Most harbor ferry lines will carry bikes for a small extra charge or for free.
- Boston's *Bikemap* (\$2.95 at most bookstores and bike shops), a topographic bicycling map of Boston and vicinity with preferred routes marked, is a wise investment.

— V. Michael Bove

TEA, CONTINUED

teas are fermented before they are dried. This modifies the tannic acids and makes the dried tea black or brown. Green teas are unfermented and more acid, while the oolong teas are only semi-fermented. The black teas are the most popular in America. Within the black tea family, the flavors vary substantially. Some teas such as Lapsang Souchong are smoked and have a tarry flavor, while others like Keemun are mellow. This article will not even attempt to describe the full range of flavors. Most tea shops will sell small containers or samplers of teas, and this is the best way to find new favorites.

Green teas are astringent and unusual to most Americans. Green teas or oo-

longs are the primary component in Chinese restaurant tea and should be drunk without sugar.

Darjeeling, Keemun or Assam are good teas for the beginner. They have distinctive, but not bizarre, flavors. Keemun is the classic Russian-style tea, while Darjeeling and Assam are more English in flavor.

Tea bags are not inherently bad, but one must be careful as inferior teas are often used in them. A word of warning: there is no tea variety named Pekoe or Orange Pekoe. These are leaf-size designations, and are a good sign the tea is a mixture of lower-quality teas. One can find good teas in bags from Twinings, Bigelow and others.

A good tea guide is *The Book of Coffee & Tea* by Joel, David and Karl Schapira (New York: Saint Martin's Press). It describes in detail which countries produce the best varieties of tea, and even which plantations or regions are best.

What are you waiting for?

Good tea is not difficult to make. With care, even the smallest dorm room or office cubicle can have tasty tea. All it takes is heat, water and tea, and a willingness to experiment with new flavors.

— Ken Meltsner

TRAINS, CONTINUED

cities, it is much easier and cheaper to get to the train stations than to the airports.

• Finally, the best reason to take the train: the cost.

The holiday rate from Boston to New York is \$39 one way. This rate applies only to the weekends before and after major holidays.

The normal Monday to Friday fare is \$29 one way. The weekend fare is \$25. There are no round-trip specials between Boston and New York.

If you are taking Amtrak to Philadelphia, the cost is \$54 one way, \$7 for the return. If you are going to Washington, the cost is \$72 down and \$7 back.

All aboard Amtrak!

— Simson L. Garfinkel

PLANES, CONTINUED

to still charge the passengers 50 cents for a soda.

People flies hourly to Newark from 6:40am to 10:40pm. It charges \$59 before 7pm and \$39 after and on weekends. Reservations are accepted, but I have never failed to get a seat when flying stand-by.

Piedmont (523-1100) is a joy to fly. Its employees at all levels are the nicest and most friendly I've encountered in my travels, a major reason that it has my frequent flyer account.

Piedmont flies to Newark at 7am, 10:40am, 3:05pm, 6:05pm and 8pm. The student fare is \$35, but not all the employees are aware of it. Ask for it when making your reservation and double check the price when you get your ticket. Other fares run from \$58 round-trip to \$73 one way; call for restrictions. There is a \$2.50 fuel surcharge out of Boston.

The Other Major Carriers are all expensive and fly infrequently from Boston. TWA (367-2800), for example, flies in the morning and early afternoon to Kennedy, and in the early morning, late afternoon and evening to Boston. The basic fare is \$129, but there is a \$64 weekend fare and a \$49 fare with restrictions attached. If you have a frequent flyer account with a major carrier, however, it is worth checking to see whether the higher prices and restrictive schedules are worth the side benefits.

— Robert E. Malchman

ARTS

Cops do it right

TECH SHOW '86

Diamonds in the Rough.
By Julio Friedmann '88.
Directed by Leslie Melcer '88.
Conducted by Louis Toth '89.
MIT Musical Theatre Guild,
Sala de Puerto Rico.
Reviewed April 4. Future performances:
April 10, 11 & 12 at 8 pm.

By JONATHAN RICHMOND

DIAMONDS IN THE ROUGH will not go down in history as one of the most memorable Tech Shows the MIT Musical Theatre Guild has ever produced. But there are enough snatches of entertainment to make it worthwhile.

The show has goodies (a bunch of students on a jaunt away from the city) and baddies (a bunch of crooks), and a bunch of bizarre policemen thrown in the middle.

Scriptwriter Julio Friedman '88 gave the best characterization — along with some of the funniest lines — to the Cops. And

Donald Kane '85 and Hoi Man Siu '87 were wonderfully goony in the roles. The befuddlement of these policemen forced through budget cuts to disguise themselves as a polar bear in the New England countryside was hilarious. Their number "We Did it Right" was animated, amusing and well sung.

The three Crooks were also well done. Scott Ramsey '89 put in the strongest performance of the show as Barry, the leader of the gang. A classic villain, he was nicely sinister and sleazy. Ramsey's acting had confidence, and his singing was clear, characterful and musical. Michele Sarin '88 made use of some pretty outrageous body movement as Tiffany, would-be seductress and accomplice to Barry. Calvin Clark '89 produced many laughs as Joe, a character somewhat short of Mensa membership eligibility requirements.

The Students were much less well played, unfortunately. The concept of a bunch of students relaxing in rustic innocence invites clichés, and there was much

that was hackneyed. They were loose as a group and never developed credible identities. Singing was generally poor, and marked by an inability to clearly enunciate words. One notable exception was Mary Claire Froelich '86 who sang "If I were Only Sure" with a pretty voice.

The orchestra was of a lower quality than MTG has produced in the past, and their music was generally unexceptionable. The exception was the Entr'acte arranged by Matthew W. Giamporcaro '85, put together — and played — with considerable wit. The sets by Donald Kane '85 and Chris Young '87 were nicely done, functional but evocative.

The Cops and Crooks will make you laugh — there's some good scripting and good acting — so despite the production's problems, you are recommended to attend MTG's traditional all-student production. It only happens once a year, and MTG's effort makes the show deserving of your support.

Bilson's Mozart — a simplicity of great complexity

EBO/BILSON

English Baroque Soloists.
Conducted by John Eliot Gardiner.
With Malcolm Bilson, fortepiano soloist
in an all-Mozart program.
Sanders Theatre, April 6.
Event in The Tech Performing Arts Series.

By JONATHAN RICHMOND

SITTING AT THE TERMINAL, the cursor blinks unrelentingly, but a tape of Mozart plays. With Malcolm Bilson at the fortepiano, one can only feel happy.

Malcolm Bilson is one of our age's most profound Mozart interpreters. The opening snatches of any of his recordings of the Mozart piano concertos are enough to realize that not only does Bilson have the key to the essence of Mozart, but that he can take you in the door with him.

Sunday night Bilson played two of the concertos he has so brilliantly recorded with the English Baroque Soloists under John Eliot Gardiner — K. 414 and K. 271. His performances made for a moving experience.

In a letter to his father in October, 1777, Mozart praised the instruments made by the Augsburg builder Johann Andreas Stein:

When I strike hard I can keep my finger on the note or raise it, but the sound ceases the moment I have produced it. In whatever way I touch the keys, the tone is always even. . . . His instruments have

this special advantage over others in that they are made with an escapement action. Only one maker in 100 bothers about this. But without an escapement it is impossible to avoid jangling and vibration after the note is struck. When you touch the keys, the hammers fall back again the moment after they have struck the strings, whether you hold down the keys or release them.

Malcolm Bilson plays on the fortepiano in an attempt to produce a sound truer to Mozart's conception than is possible on a modern concert grand. The fortepiano provides for much more efficient damping than is possible on a Steinway grand. With reduced resonance, the sound produced is much sharper, and each note can be distinctly drawn. It is this quality, perhaps, that makes the strongest case for the fortepiano, that makes its sound, though less powerful in volume, more penetrating in effect.

Sunday's Sanders Theatre concert began with Mozart's *Piano Concerto No. 12 in A*, K. 414. The precision of Bilson's playing was quickly apparent, as was his close, cooperative relationship with the English Baroque Soloists. Not only did his instrument provide a means to great clarity, but his mastery of it endowed his playing with a silky quality: though each note stood out by itself, the performance had a great sense of continuity, of order.

There was an innocence to Bilson's playing, an alluring simplicity. But it was a simplicity of great complexity, of unending

depth. Take the serenely beautiful *Andante*, a movement given with a wonderful softness. The orchestra blended with the piano so that they were one, producing a clean sound, but one generative of much introspection. The chirpy *Allegretto* then brought the concerto to a dashing conclusion, a movement of joyous renewal following paths.

John Eliot Gardiner next led the orchestra in Mozart's *Symphony No. 29*. It was a performance of both exuberance and charm, and the key to its success lay in the idyllic balance Gardiner maintained. Each orchestral voice spoke eloquently, but voices joined together magically to make a cohesive whole.

After the intermission, we heard Mozart's *Piano Concerto No. 9 in E flat*, K. 271. The first movement cadenza was miraculously played by Bilson, but as in K. 414, the slow movement made the greatest impact. It was tragically but rapturously reflective, the relationship between soloist and orchestra nowhere more sympathetic. Played on the fortepiano, one could hear every silence, and through each silence the next attack made a greater impression.

The *Allegro con spirito* did produce a few infelicities from Bilson who stumbled during some of the more demanding runs. But this was a minor matter. The bubbling playfulness, the Mozartian bliss with which the concerto ended, produced nothing but a sense of complete elation.

Student leaders talk to Executive Committee

(Continued from page 1)

policy committee, it can provide a better public forum for discussion, according to Moser. The Advisory Committee on Shareholder Responsibility (ACSR) was incapable of providing such a forum because it was intended to make policy, he continued. Moser said that he and Nell are pushing for CJAC to become a more active committee than it has been in the past.

The purpose of CJAC, according to *The MIT Corporation*, is to provide "a broadly representative group at the Institute to which the Corporation can turn for consideration and advice on special Institute-Wide matters."

CJAC has generally considered one major issue per year. Last year, it issued a report on graduate student affairs.

The primary reason for convening CJAC is to promote communication, Nell and Moser said, blaming the Mar. 14 arrest of eight apartheid protesters on "a lack of open discussion within the MIT community." Moser said the important question is: "How can both faculty and students

play a bigger part in the policy process?"

Next year's student members to be nominated

CJAC already includes student members; the undergraduate and graduate Nominations Committees are currently in the process of nominating two students each to CJAC for the upcoming academic year. Moser and Nell are *ex officio* members of the committee.

The committee's chairman is Emily V. Wade '45, and its secretary is MIT Vice President Constantine B. Simonides, secretary of the Corporation.

Nell and Moser said the committee will set its agenda at the first meeting and plan future forums, possibly to include guest speakers from Arthur D. Little, Inc., which evaluates progress made by companies which do business in South Africa.

The members of the Corporation see the problem of communication and are concerned that students understand their policy of selective divestment, Moser said. "The real work is ahead to make the committee effective."

Text of Moser, Nell divestment speech

(Continued from page 1)

students, faculty and Corporation members to work together to identify positive and constructive steps toward ending apartheid. Certainly, as voted by the students, we urge full divestment. As a first step, we view the Corporate Joint Advisory Committee (CJAC) as an excellent and currently unutilized vehicle to promote understanding and resume communications among students, faculty, and corporation members.

The objectives of the newly convened CJAC should include the following:

- provide a much needed mechanism for communication among students, faculty and the MIT Corporation;
- review and make public the "progress of specific corporations in the implementation of the Sullivan Principles," as called for in the Executive Committee Statement;
- review and make public the "positive actions initiated by companies with the goal of improving the condition of non-whites in South Africa and bringing an end to apartheid," as noted in the current policy; and
- explore additional constructive actions that MIT can pursue, such as the recently announced scholarships designed to encourage the research and educational development of black South African leaders and students.

We believe that our request to present students' concerns to the Executive Committee directly simply underscores the necessity for communication beyond currently defined channels. We see today's meeting as a signal that indeed the Executive Committee is willing to communicate. We thank you for this opportunity and look forward to working with the Executive Committee on this issue.

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Walker Hall, Room 50-007

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Two on Business Ethics

"Ethical Dilemmas of Multi-Nationals"

Thursday, April 10

4:00 p.m.

M.I.T. Room E51-306

Dr. Jim Post, Professor of Management & Public Policy
School of Management, B.U.

"Morals and Management: A Status Report"

Wednesday, April 16

4:00 p.m.

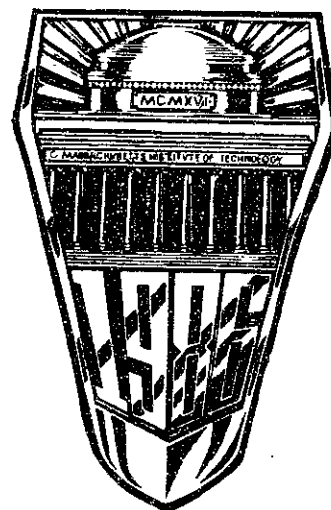
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Dr. Scott Cook, Research Associate in Business Ethics
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PLACE

Lobby 10 10:00 - 4:00



Tech photo by Kyle G. Peltonen
Glenn P. Strehle '58, named MIT vice president for resource development effective March 1.

Strehle becomes MIT vice president

By Heather M. Huber
Glenn P. Strehle '58 was named MIT vice president for resource development effective March 1. Strehle has been treasurer of the MIT Corporation since 1975 and will continue to hold that position.

Strehle succeeds Professor Samuel A. Goldblith '40, who will return to teaching and research in the Department of Applied Biological Sciences.

Resource development involves fund raising, solicitation and gift handling, Strehle explained. Before being named vice president, Strehle spent approximately 25 percent of his time on resource development; as vice president, he will now devote approximately 75 percent of his time to it.

His responsibilities will also include directing the Institute's development program. Strehle has promoted Allan S. Bufferd to deputy treasurer and director of investments to assist him in his duties as treasurer.

Strehle said he decided to accept the position of vice president because he is dedicated to resource development and believes

he can make a contribution. He is currently responsible for MIT's invested funds and endowment, which are worth over \$1 billion at market value.

MIT grows at a much faster rate than inflation, said Strehle, and its investments must also grow. The main reason for MIT's rapid growth is the great emphasis on technology, which is expensive to keep up to date, he said. Despite the large value of the invested funds and endowment, Strehle said he must work to see

that their value increases as MIT grows.

Strehle graduated from MIT in 1958 with an SB degree in industrial management and received an SM in industrial management in 1960. He has been varsity vice president of the MIT Athletic Association, vice president of the Alumni Association, chairman of the Alumni Club Advisory Board, and has held numerous other positions in the MIT and Boston community.

Samuels, Krugman talk on US-Japan parallels

(Continued from page 1)

● **Business-government relations:** Japan has a "collaborative, supportive interaction" between business and government, which "some see as not appropriate" for this country, Samuels said. But he predicted that America could undergo a "broad rethinking" of business-government relations.

in Japan failed elsewhere, he said. "We know very little about what works — there are so many factors."

The United States should not seek to slow Japan's growth simply to improve its own competitive position, Krugman warned. "Growth in the rest of the world is usually good for you," he explained.

Samuels and Krugman suggested that if Japan enters the field of military technology, its economic relationship with the United States would change drastically. Some Americans want Japan to pay for its own defense, which the United States now provides, Samuels said. Krugman said the Japanese people do not want to see a military-industrial complex in their country, but "if the floodgates do open" and Japan starts to develop and sell military equipment, the change would be irreversible.

"Japan is not monolithic," Samuels stressed, noting that the "negotiated balance or reciprocal consent" between Japanese business and government does not generally favor private interests.

Krugman, an international trade specialist, said that "there is no direct evidence that what [the Japanese] are doing has anything to do with their success."

It is extraordinarily difficult to untangle causes and effects in the real world, Krugman emphasized. Many policies that worked

WTBS's listeners had information about 15 minutes before it was broadcast over the major news networks.

WTBS's greatest triumph came when Democratic candidate Eugene McCarthy made an unexpected speech at his New Hampshire campaign headquarters, with WTBS the only network present.

The station will celebrate its birthday Thursday night with a "Silver Anniversary Retrospective" from 8 pm to 11:30 pm.

Thurrow analyzes US economic plight

(Continued from page 1)

with which technology is integrated into the economy — is basically equal among the United States, Japan and northern Europe. But the rate of manufacturing growth in the United States is two-to-four times slower than in Japan and other nations, he said.

The United States cannot gain much of an edge in scientific research, since the Japanese have copied American research and have adapted American technologies for the last 20-30 years, he said.

Other countries are guilty of copying American technologies,

as well, Thurrow pointed out. When a nation like the United States is at the forefront of technology, other nations are likely to adopt its technologies.

Moreover, keeping an edge in product development is just as hopeless, Thurrow predicted. As soon as an American product is on the market, other nations can apply reverse engineering to produce it themselves.

To solve the productivity problems which hinder its economy, the United States must outdo the Japanese in "process engineering" — improving existing products. Process engineering techniques are more difficult to copy than new products.

Yet the United States "systematically underinvests in money and talented people" for process engineering, Thurrow said. Since World War II, however, firms have been placing more emphasis on process engineering.

The US economy lags behind the Japanese economy as a result of a myriad of factors, Thurrow said.

● **Education:** "The economy depends on the troops in the trenches, not on the generals," Thurrow explained. Eight percent of the national work force is "functionally illiterate," compared to only 0.5 percent of the Japanese work force.

Approximately 73 percent of US citizens graduate from high school, while 95 percent of Japanese citizens do. American 18-year-olds perform half as well on mathematics tests as their Japanese counterparts, he added.

● **Savings:** The percentage of income saved annually by US citizens is also low compared to Japan.

● **Automation:** Japanese companies are more automated than American companies. The Japanese own five times as many robots as American companies.

● **Leadership:** Thurrow also

spotlighted differences in American and Japanese industrial leaders. While 80 percent of US companies are run by financiers and lawyers with little technological knowledge, all Japanese companies are run by executives with engineering backgrounds.

Lawyers and financiers wield economic power, but they lack the expertise needed to make investment decisions about technology. But engineers can make informed decisions about technological change.

A "self-correction" will take place in the next 15-20 years when engineers will head companies, Thurrow predicted. This may be too late, he warned.

● **Blue collar workers:** Another problem, Thurrow said, is that skilled blue collar workers have no means of training in the United States. West Germany uses apprenticeships, while Japan uses on-the-job training.

● **Trade policy:** The federal government appears unwilling to negotiate rules for trade with Japan. In the past, the United States was able to dictate the rules. But now, it is reluctant to change economic policies to accept some of Japan's rules.

"The American economy in the next twenty years will be in a very different position from the last 20-30 years," Thurrow said.

Listings

Student activities, administrative offices, academic departments and other groups — both on and off the MIT campus — can list meetings, activities, and other announcements in *The Tech's* "Notes" section. Send items of interest (typed and double spaced) via Institute mail to "News Notes, *The Tech*, room W20-483," or via US mail to "News Notes, *The Tech*, PO Box 29, MIT Branch, Cambridge, MA 02139."

WMBR celebrates its 25th birthday

Feature

By David B. Oberman

WMBR, MIT's student-run radio station, will celebrate its 25th birthday as an FM station on Thursday, April 10.

WMBR began in 1946 as WMIT, a humble AM station broadcasting to the MIT dormitories from the basement of Senior House. The station changed its name to WTBS, for Technology Broadcasting System, after discovering that the call letters WMIT were in use elsewhere.

The station wished to increase its broadcasting power in order to reach members of the MIT community living off-campus. In the 1950s, WTBS applied to the Federal Communications Commission for an FM license. On April 10, 1961, which was coincidentally the 100th anniversary of MIT's charter, WTBS first went on the air at 88.1 FM.

WTBS used a 10-watt transmitter for many years, but again wished to upgrade. In the mid-1970s, it applied to the FCC for permission to increase its power to 200 watts. At the same time, Lincoln-Sudbury High School also wanted an FM station at 88.1. After a long, costly legal battle, WTBS was allowed to up-

grade to 200 watts and Lincoln-Sudbury was permitted a 10-watt radio station.

After the legal battle, WTBS lacked the funds to buy a more powerful transmitter. Just when the situation looked hopeless, Ted Turner called WTBS and asked for the right to use its call letters for a television station in Atlanta. In exchange for a \$50,000 "donation," WTBS agreed to change its name, and, in 1979, became WMBR — Walker Memorial Basement Radio.

In its 25 years of FM broadcasting, WMBR has prided itself in playing new music that is not heard elsewhere. America's first punk rock radio show, *Demi-Monde*, premiered on WTBS in 1977, according to David Greene, WMBR music director.

Perhaps the best example of WMBR's innovative broadcasting occurred when a group of WTBS students travelled to New Hampshire in 1968 to report on the Democratic presidential primary alongside the country's major networks.

As the latest returns came in over the Associated Press wire, WTBS's announcers read them over the air while major networks fed them into sophisticated computers for analysis. As a result,

Panel: US managers blind to ideas

(Continued from page 1)

firms implemented it. In 1979, SONY used the same method to leap ahead in the marketplace, Kenney noted.

American firms should be concerned about "the rate at which we make what we know useful," he continued. "We are better at making what's unknown known . . . The rate of implementation needs to be much higher in industry."

Kenney cited another example of a ceramics project at MIT that has been in the works for eight years and is sponsored by 45 to 50 companies, but had not been implemented by a single firm until one faculty member started his own company. American managers should invest in viable new ideas more rapidly, he said.

Good managers should "play the same game that a venture capitalist plays," Kenney said. At present "you have to develop the product and take it all the way to the market" before it is accepted for production, he claimed.

Womack explained that there are two ways to run a technology race: "the daring innovator or the lightning-fast copier." The Japanese excel at copying and

they have overtaken many innovators, he said.

"We Americans tend to think of [copying] as not a very respectable thing to do," Womack said, "perhaps because we are not too good at it." US companies, especially in the auto industry, are very slow at reading the market and finding ways to put new technology in their products, he said.

The three had differing predictions for the future of the United States. Moses predicted a depression, while Womack thought that America would eventually speed up and catch up to Japan. Kenney feared that the United States

might end up like Great Britain, a shadow of its former glory.

Moses praised the closeness of workers in the Japanese system which, he felt, increased company loyalty and decreased competition between fellow employees. He approved of Japan's use of a 100 percent salary bonus based on an employee's yearly performance, and suggested that such a system should be implemented in US industry.

Kenney, however, noted that Japan has its own problems to cope with. He said, "Japan over the last 40 years is just like the US over the last 80 years — their changes are much faster."



Tech photo by Sidhu Banerjee
Lester C. Thurrow speaks at a discussion group at Baker House following Friday's colloquium.

OMB overhead cuts won't affect MIT

(Continued from page 1)

The OMB plans to set a ceiling on the indirect cost rate. The office will limit the amount it pays for indirect administrative costs to 26 percent of the direct costs in 1986 and 20 percent in 1987.

MIT currently charges a 22 percent indirect cost rate for administrative costs, Smith said. Therefore, the restriction will not affect MIT in 1986, but it could affect MIT's administrative budget for research in 1987, he estimated.

The government spent \$3.7 billion on research in 1984, according to the Feb. 12 *Federal Register*, where the cuts were announced. Universities designated \$1.7 billion, or 46 percent of this amount, to overhead allowances. The OMB estimated that its cuts will save the government \$100 million in fiscal 1987 and over \$200 million in fiscal 1988.

MIT also charges the government for other indirect costs, particularly costs of building

maintenance. Physical plant accounts for more than half of all indirect costs, according to the *Long-Range Plan* released by the Institute Planning Group. The total indirect cost rate, by which the government reimburses MIT for all indirect costs, is 61.5 percent, according to a September report on financial operations.

Physical plant costs will not be affected by the OMB cuts, according to Smith.

Cuts to affect other universities

The Harvard Medical School will be one of the hardest hit schools, Smith said. It has an administrative overhead of about 44 percent, he said.

The proposed cuts would cost the medical school \$5 million, and Harvard as a whole would lose \$7 million, according to the Feb. 26 *Harvard Crimson*. Stanford could lose \$5 million to \$13 million, according to the Feb. 13 *Stanford Daily*. The presidents of both Harvard and Stanford have written letters to the director of the OMB protesting the cuts, *The New York Times* said Mar. 20.

The OMB originally planned to carry out the reductions on April 1, 1986, but members of the House Science and Technology Committee complained that universities had not been adequately consulted about the proposal, *The Chronicle of Higher Education* reported Mar. 26.



Tech photo by Kyle G. Peltonen

MIT's freshman sailors participated in this season's first freshman regatta at Brown University on Saturday. MIT placed ninth out of 11.

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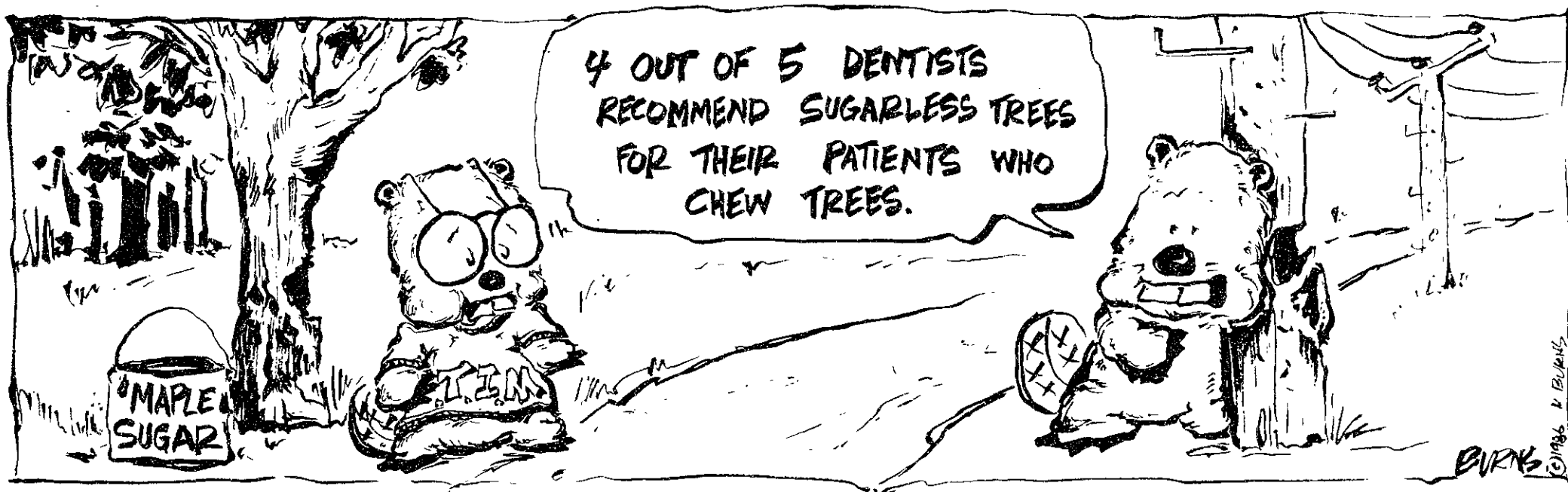
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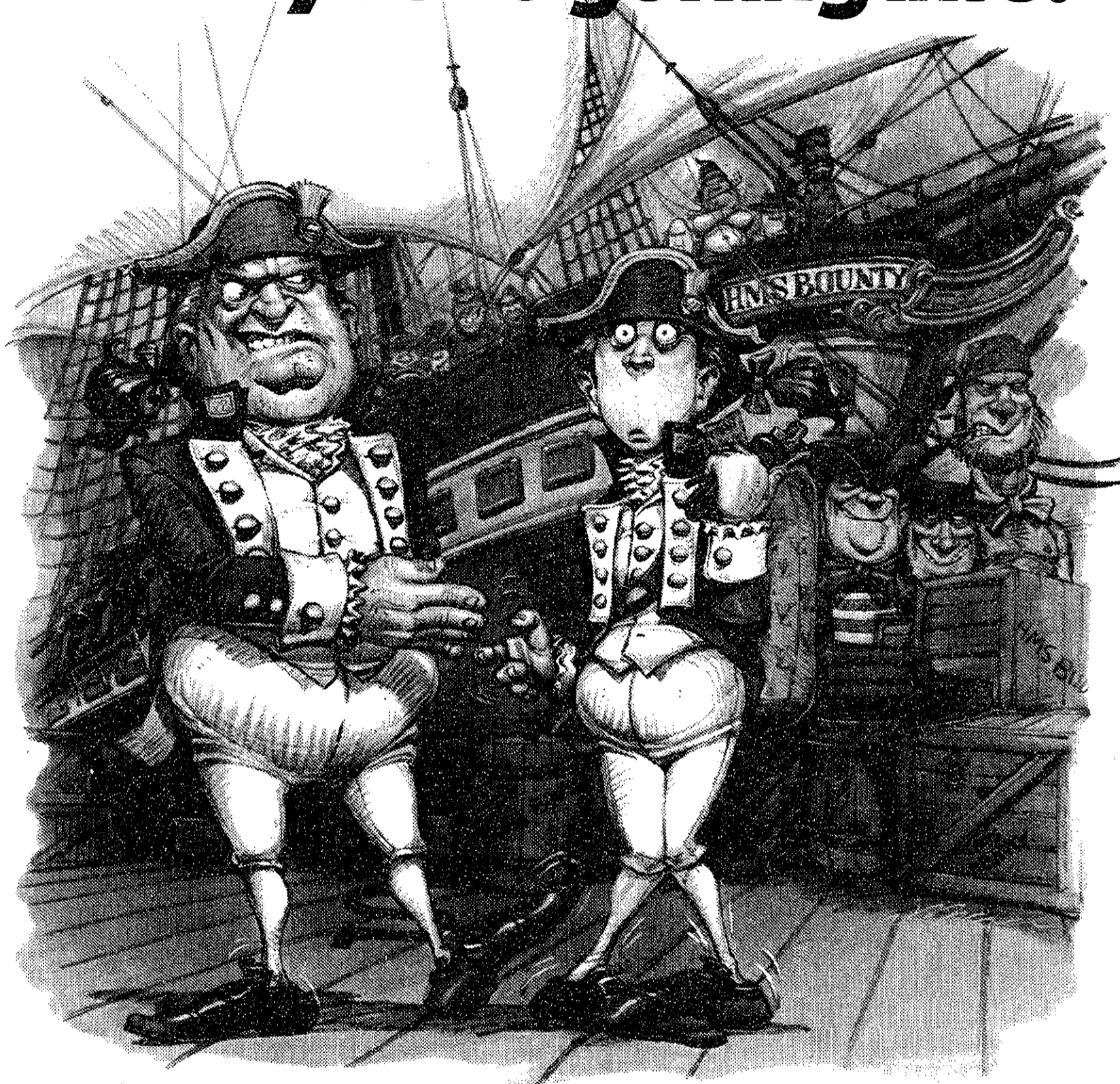
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Andy the Fish picks Birds, Reds, KC, Cubs

Tech staff baseball predictions

NAME	AMERICAN LEAGUE		NATIONAL LEAGUE		WORLD SERIES	
	EAST	WEST	EAST	WEST	WINNER	LOSER
REB	Tigers	White Sox	Cubs	Padres	Cubs	Wh. Sox
ALF	Orioles	Royals	Cubs	Reds	Reds	Orioles
MJG	Blue Jays	Angels	Mets	Padres	Blue Jays	Mets
TTH	Blue Jays	Twins	Cards	Dodgers	Blue Jays	Cards
MXK	Tigers	Royals	Mets	Dodgers	Dodgers	Tigers
REM	Tigers	Royals	Mets	Reds	Mets	Royals
PCP	Blue Jays	Angels	Mets	Braves	Mets	Blue Jays
HAS	Blue Jays	Royals	Mets	Dodgers	Blue Jays	Mets
JQW	Blue Jays	Royals	Mets	Reds	Blue Jays	Mets
EEW	Yankees	Angels	Cubs	Reds	Cubs	Yankees
ECY	Tigers	Royals	Mets	Padres	Tigers	Mets

(Editor's note: Ronald E. Becker, Andrew L. Fish, Michael J. Garrison, Thomas T. Huang, Mark X. Kantrowitz, Robert E. Malchman, Paul C. Paternoster, Harold A. Stern, Julian Q. West, Edward E. Whang and Earl C. Yen contributed their predictions.)

By Andrew L. Fish

The Baltimore Orioles will be victorious in the AL East. The pitching staff last year was plagued by inordinate number of injuries. Last year's team hit a respectable .263 and finished second in runs scored. Earl Weaver's return to the dugout for the first full year cannot be discounted.

2. The Detroit Tigers have one of the best rotations in the league led by Jack Morris, Dan Petry, and Frank Tanana. Willie Hernandez will be a great stopper if he remains injury-free. Pitching coupled with the team's bench depth makes the Tigers a tough team.

3. The Toronto Blue Jays won't be able to relive the magic that led them the division title last year, but the Jays still have a solid club. The team's 1985 roster remains pretty much intact except for manager Bobby Cox,

who left to become general manager of the Braves. It's tough to repeat in the AL East, and the Blue Jays won't be able to do it.

4. The New York Yankees will finish fourth this year. No matter how much talent the Yanks have, Steinbrenner will keep them from winning. Lou Piniella won't last through the All-Star break, and clubhouse turmoil will keep stars such as Henderson and Winfield from playing up to peak. The pitching looks tentative, so the Yankees may have trouble staying near the top.

5. The Boston Red Sox' outfield is old and slow. The defense is prone to make errors. Pitching has been a perennial weak spot, and the team has little speed. The Sox will surprise no one this year.

6. The Cleveland Indians are full of youth, and Pat Corrales can do wonders with new material. But the pitching just isn't there yet.

7. The Milwaukee Brewers will occupy the cellar of the east. The Brewers will have trouble scoring runs, unless they face the Brewers' inexperienced pitching staff.

1. The Kansas City Royals will win the AL West this year. The Royals have a strong and deep pitching staff. Although the team could use some more offensive punch, they won't have to worry about giving up many runs.

2. The Oakland A's will contend for the division title. Joa-

quin Andujar should add strength to a promising, young pitching staff. Jay Howell will recover from injury and return as the stopper. The defense is strong, and the A's should produce plenty of runs.

3. The California Angels won't finish any higher than third. The pitching staff is shaky because some key pitchers have been injured this spring. The club is old in this year of youth. Gene Mauch is a perennially mediocre manager.

4. The Chicago White Sox' pitching is shaky and Fisk is NOT an outfielder. The White Sox have a fairly poor offense, although they can hit for power. Infield positions are also weak.

5. The Minnesota Twins feature a decent starting rotation led by Bert Blyleven and Frank Viola. The Twins have some power, but they lack a balanced offense needed to win.

6. The Seattle Mariners face a typical lack of pitching. Seattle's starting lineup features such household names as Steve Yeager, Danny Tartabull, and Dave Henderson. This year spells trouble for Seattle.

7. The Texas Rangers will finish in the cellar of the West. A lot of rookies will pitch, and the team as a whole is very young. Third base is very open, and rookies may be shuffled in and out of the lineup. Give them a couple of years.

Fish squishes Mets, Dodgers

By Andrew L. Fish

The Chicago Cubs had tough luck with their pitching staff last year, but they will win big if they stay healthy. Outfielders Gary Matthews and Bob Dernier can be expected to perform better than last year. Jerry Mumphy and Thad Bosley will provide strong bench help.

2. The highly-touted New York Mets' starting pitching is solid, although Dwight Gooden will have trouble repeating his 1985 Cy Young season. But the Mets have suspect relief pitching. An injury-plagued Gary Carter and an aging George Foster could spell doom for the Mets' playoff hopes.

3. The St. Louis Cardinals' pitching is questionable, losing Joaquin Andujar. Danny Cox suffered a spring training injury. The Cards may score lots of runs, but they'll give up more.

4. The Philadelphia Phillies' offense should be much improved with the additions of Gary Redus and Milt Thompson. Steve Jeltz is having a phenomenal spring. But the Phillies do not have a

first class catcher, and they have only two sure starters in Kevin Gross and Shane Rawley.

5. The Montreal Expos will finish fifth this year. No starting pitching, little hitting, and a questionable defense will drop the Expos.

6. The Pittsburgh Pirates have nowhere to go but up. They pay no salaries, get no fans, and win no games. These guys will just sit in the cellar.

1. The Cincinnati Reds' acquisition of John Denny, Bo Diaz, and Buddy Bell reinforce last year's young team. Pete Rose is quickly becoming one of the best managers in the game. The Reds came close last year. This year the division will be theirs.

2. Pedro Guerrero's three-month injury will seriously harm the Los Angeles Dodgers' run-scoring potential. He could make the difference between a first and second place finish.

3. The Atlanta Braves had a phenomenal spring, and the addition of Chuck Tanner will help the club. They have had the talent. Now it will be put to use.

4. The removal of Manager Dick Williams has weakened the San Diego Padres. Greg Nettles' old age might lead to platooning at third base with Carmello Martinez. Leon Roberts has battled against last year's tandem of Tim Flannery and Jerry Royster for the starting second-base job. The Padres lack the ability to run and score runs.

5. Nolan Ryan's fastball is slowing with age, and Mike Scott and Bob Knepper are the only other proven starters on the Houston Astros. Relief pitching is very weak. Dickie Thon is attempting to come back from a severe eye injury and first baseman Glenn Davis is the only infielder who can hit. Few runs equals few wins for Houston.

6. The San Francisco Giants' relief staff, led by Mark Davis, should be adequate, but the starting rotation is 1%&@. Chris Brown, Will Clark, Jose Uribe, and Rob Thompson comprise an infield that has less than three years in the majors. Give this team a couple of years and they might be decent.

Lightweight men's crew crushes WPI opponents

(Continued from page 16)

course caused slow times for all crews. The varsity (1-1) cruised to victory in a time of 7:15.4, 20 seconds ahead of WPI.

"I thought we showed great character by pulling hard throughout the race," said captain Greg Frazier '86. "There's a tendency to let up when you're ahead. The race was good preparation for some tougher races coming up."

The second varsity won with a time of 7:56, 30 seconds ahead of WPI.

The first and second freshmen boats rowed three 1000-meter races against the WPI frosh. Both boats won all their pieces.

The lightweights will hold a home meet against perennially tough Harvard and Dartmouth next weekend. "We've been working hard all year for this race," said coxswain Mike Fox '88. "We raced Dartmouth twice in the fall and split our races. We've improved a lot since the fall, and this race is going to be an indicator of the rest of the spring season."

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sports

Heavyweight crew rows past Columbia in opener

By William Hou

The men's heavyweight varsity crew came from behind to defeat Columbia University in its season-opening meet Saturday on the Charles River. The race was the tenth running of the MIT — Columbia Alumni Cup and the second consecutive year MIT has retained the trophy.

The entire 2000-meter race was very close from the start. MIT jumped off to a quick two-seat lead, but Columbia pulled even after 500 meters.

Columbia gained a six-seat advantage at the 800-meter point when an MIT oarsman caught a crab (was unable to remove his oar from the water properly at the end of a stroke). MIT recovered nicely and responded with a power-20 (20 very intense strokes). With 500 meters to go, the varsity crew was only two seats down.

Both crews then began to increase their cadence (strokes per minute) for the final sprint to the finish line.

With 200 meters to go, the MIT boat pulled even and then rowed through Columbia. The Engineers finished the race with a two-seat advantage and a time of 6:07.5, less than a second ahead of Columbia's 6:08.2.

The winning boat consisted of

bow Bill Van Doorne '87, Rick Wessel '88, Alex Jessiman '88, Bill Malecki '88, Bob Smith '87, Geoff Kelsh '87, Jim Nugent '86, stroke Rob Biedenharn '87 and coxswain Stu Schmill '86.

The other MIT heavyweight crews did not fare as well against Columbia. The second varsity race was won by Columbia with a time of 6:23.5. The MIT junior varsity boat finished in 6:45.3.

Columbia's first freshmen boat edged out MIT by three seats. As in the varsity race, MIT caught a crab after 900 meters and fell behind by four seats. MIT eventually pulled even after 1500 meters, but Columbia won the final sprint with a time of 6:16.5. MIT's time was 6:17.7.

The second freshmen boat raced in horrendous river conditions and lost by a length.

The heavyweights' next race will be this Saturday against Coast Guard on the Charles River.

Lightweights Sweep WPI

All the men's lightweight crews defeated their Worcester Polytechnic Institute opponents last Saturday on the Charles River. None of the MIT boats were ever behind in their races.

A strong headwind on the race (Please turn to page 15)



Tech photos by Stephen P. Berczuk
Coach Fran O'Brien (16) talks to his pitcher during Friday's 14-9 loss to Dartmouth (top). Dartmouth runner attempts to beat out a throw to first (bottom).

Men's bowling team has best season ever

By Paul Paternoster

Robert Davidsen '86, captain of MIT's men's bowling team, set some very high goals for his team at the beginning of the season. While the team fell short of reaching these heights, the 1985-86 season brought unprecedented success for MIT bowlers.

Davidsen had gone out on a limb last year, predicting that MIT would reach the national tournament. MIT fell only two tournaments short of reaching that goal. For the first time in the six-year history of the men's squad, MIT took first place in the Massachusetts Conference, an impressive improvement over last season's fifth place finish.

In addition, the Institute dominated its opponents in the Association of College Unions International (ACUI) Tournament. Previous MIT bowling teams had never finished higher than second place.

It was an exciting season for

MIT bowlers, the captain said. "Up to the tenth frame of the final game, the conference was up for grabs." Arch-rivals MIT and Lowell University battled all season long to earn the top spot in the Massachusetts Conference. But when all the pins had settled, it was MIT who had pulled from behind to earn the title.

The highlights of season competition in the Tri-State League for MIT seemed to focus on Lowell. Back in November, MIT defeated Lowell 15-12. In that tournament Tim Shirley '87 rolled a 707 series, an MIT record. Davidsen also added a 630 series, his career high. The team as a whole scored a 2816 series for the day to earn a second place trophy.

Ironically, MIT rolled a 2815 series on March 1, to win the conference. They had entered that tournament trailing Lowell by 5.5 points, and even the ever-confident Davidsen admitted he

had his doubts. "We had to bowl West Point in the morning, and they're a tough team. Lowell had to bowl Coast Guard, who finished last in the league."

It turned out that MIT fell only a couple more points behind Lowell after the morning competition. This still meant that they would have to take 18 out of 27 points in head to head competition against Lowell to win the title.

"We were tense, but psyched. We even had a big crowd," recalled Davidsen. The pressure did not faze the team; in fact, it fueled them on. Craig Gilchrist '89 hit nine strikes in a row over the span of the second and third games to pace the team. Davidsen added three 200-plus games, and MIT defeated Lowell 19-8.

January was also a busy time for the bowlers. MIT was invited to the Las Vegas Invitational Tournament, where they showed the rest of the nation how good

they were. By averaging 192.4 in the team event, MIT finished 29th in the nation.

Shirley had his best tournament, averaging 210.3 over 11 games — an MIT record. Jeff Arenberg '86 came very close to bowling a perfect game, entering the tenth frame without a miss. He ended up with a 279 game. Dan Margolis '87 converted a 7-10 split. The estimated odds of a professional making this split are 5000-1.

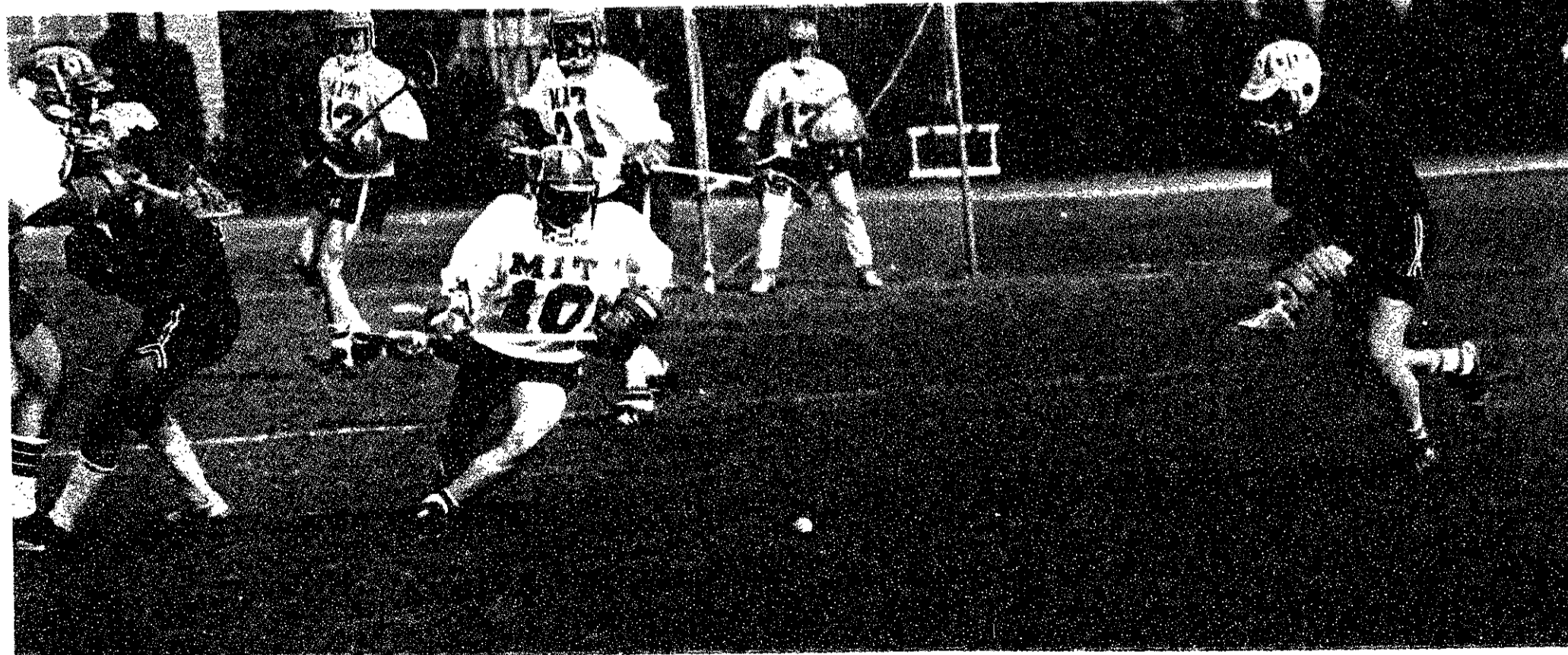
The ACUI tourney also added to MIT's highlight list. Tim Shirley took high game with a 254. Davidsen missed qualifying for the national individual tournament by 20 pins, finishing with 1747 points over nine games. The team also took high game with 1034 for the five-man competition.

By winning the ACUI and by placing first in the conference, MIT earned a spot in the sectional tournament. MIT bowlers did

not fare as well as they had wanted to in this meet. Although the squad averaged 179, it was far below the 193 average which won the match. Tim Shirley averaged 197.4 and rolled a 267 in a stellar performance, while Bob Davidsen reached his high game of the year, 236.

The outlook for next year's team is positive. Shirley, Gilchrist and Rich Berg '87 (21-21 on the season) will be back. Rumor also has it that one of the top high school bowlers in the nation has been accepted to MIT.

The women's bowling team completed its first season in the league. Audrey Ching '88, Erica Shane '86, Lisa Shane '89 and Cynara Wu '89 gave it their best shot in establishing themselves in the Tri-State league. While they had a tough season, they showed signs of improvement towards the latter part of the schedule. Considering that the team is a young one, they can only get better.



Robert Park '87 (10) in Saturday's lacrosse match with Nichols College. MIT won 11-5.

Tech photo by Sidhu Banerjee