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FIVE CENTS



Photos by David Tenenbaum



McGovern supporters wait for election results Tuesday night at campaign headquarters at the Biltmore Hotel in New York City.

McGovern loses election

By Norman D. Sandler

After almost two full years of facing discouraging polls and frustrating campaign obstacles, the race for the White House ended Tuesday for Senator George Stanley McGovern with a record landslide victory by President Richard M. Nixon.

True, the victory had been predicted for quite some time by Gallup, Harris, Yankelovich, Sindlinger and all the other pollsters whose weekly releases sent the McGovern camps into quick denials that the campaign was losing ground, and campaign workers were assured that momentum was being gained and the gap between the South Dakota senator and Mr. Nixon was closing.

As it turns out, that gap did close, though insignificantly as far as the actual election was concerned, as Nixon took 49 states for a total of 521 electoral votes (out of 538; 270 needed to win). McGovern managed to capture only predominantly black Washington, D.C. and Massachusetts, which only three weeks earlier was almost being given to Nixon.

The loss was not only disappointing for McGovern, but also for the Democratic Party, as

poll watchers early Tuesday expressed their feelings that a great deal of split ticket voting was going on, and the Party saw massive defections by various groups which in the past have voted consistently along strict party lines. This was most evident in New York (city and state), which was considered as the crucial state for McGovern with its 41 electoral votes, somehow an indication of how the northern industrial states would swing.

In New York, the Democratic presidential ticket did not pick up the support of the usual Democratic constituency in the area, as Jews, Italians, and Irish Catholics deserted the Party to vote for the Nixon-Agnew ticket, while still casting their ballots for Democrats in local and state Congressional races.

Congress

The Democrats did, however, manage to gain in the Senate, and also retained control of the House, although giving up twelve seats to the Republicans. Several of these came from the South, where some evidence of a possible coattails effect corresponding to the Nixon sweep was apparent.

The Democrats had a net gain

of two seats in the Senate, scoring several upsets over Republican incumbents, including one in Maine, where senior Senator Margaret Chase Smith was defeated in her bid for a fifth senate term by Democrat Rep. William D. Hathaway. The liberal Hathaway scored the upset against Maine's leading vote-getter for three decades with a well-financed, massive campaign effort, while Smith preferred a more low-profile campaign of the type which had won her re-election three times in the past.

Other significant upsets in Senate races occurred in Virginia, where Democratoc Sen. William Spong was defeated in a close race by Republican William Scott; in Rhode Island, where Democratic Sen. Claiborne Pell won re-election against former Secretary of the Navy John Chafee; in Delaware, where Republican incumbent Sen. Caleb Boggs was edged out by 29-year old Democrat Joseph Biden, Jr., and in Iowa where Republican Sen. Jack Miller lost to Democrat Richard Clark.

In the House, GOP Congressmen held 178 seats, and picked up an additional 12 in balloting

(Please turn to page 5)

Eisenberg appoints new counseling dean

By Mike McNamee

In accordance with a new plan designed to improve liason between the faculty and the dean's office, Professor Robert Halfman of Course XVI has been appointed as a "part-time" assistant dean for counseling for a two year term. He will replace Dean David W. Yohn, who resigned last spring.

Halfman, who is one of the founders of ESG and has served as associate chairman of the faculty and faculty representative to student government, is to be the first of a series of "Visiting Associate Deans;" he will spend approximately half his time serving as a dean for counseling, while continuing his academic work. The new plan, designed by

Dean Carola Eisenberg, is set up to rotate the post among the faculty on a biennial basis.

The appointment was made by Eisenberg, in consultation with students who had worked with Halfman in ESG and other activities. When contacted by *The Tech*, Eisenberg stated her ideas about the new post: "We thought it would be helpful to have more contact between the dean's office and the faculty, and to involve the faculty in the problems of student counseling. Professor Halfman has been interested in such counseling for some time; we feel he's an excellent person for the position."

Halfman said that he wants to get involved with students during his term as dean.

Gray details Ashdown closing

By Storm Kauffman

The rationale for closing the Ashdown dining facility is not, in the main, a hope to balance the overall budget but rather the shutting down of an individually big loser.

As announced, the Ashdown dining hall will cease operations on December 20 of this year. *The Tech* questioned Chancellor Paul Gray on the reasons for the action.

Gray explained that a number of factors were involved in the decision. First, Ashdown has been losing money constantly over the past years. Two years ago, the administration made a

similar decision, and the result was a flood of protest including a petition signed by more than a thousand individuals.

Deficit grows

A decision was made to keep the facility open and fund its deficit on a year-to-year basis in the hopes that the sales volume would increase. However, this did not occur and the deficit has been growing since then. Gray estimated that the hall would finish \$10,000 in the hole for its operations this term, giving a prognosticated loss of approximately \$30,000 if Ashdown were to remain open. Last year, the losses were put at around \$20,000 on a volume of some \$240,000.

Gray noted that the decision was not made summarily. The action was recommended by Associate Dean for Student Affairs Richard A. Sorenson and H. Eugene Brammer, Director of Housing and Food Services. Philip A. Stoddard, the Vice-president for Operations, who has jurisdiction over the hall, and Gray concurred with the suggestion. They then met with the executive committee of Ashdown to investigate the student opinions. The administration's conclusion was to close Ashdown.

Decision protested

Another petition has been circulated to protest the latest announcement of closing. However, it has been pointed out that, if everyone who signed the petition of two years ago had actually eaten at Ashdown, it would not only be making money but also be absolutely packed. For this reason, the administration felt that even a sincere expression of sentiment would not affect the financial outlook to a sufficient extent.

Ashdown suffers most of its losses at breakfast and dinner. Gray estimated that about 100 use the hall for these meals with

a high of 400 at lunch. This increase is due to the utilization of the facility by Institute employees and if it could be kept at this level it would be possible to break even. Apparently, most of the residents do not use the hall, since there are only about 40 commons contracts in the dorm.

There seems to be a consensus that Ashdown is popular due to its atmosphere and usually short lines. If the hall was being used sufficiently, it is likely these two features would lose some of their attractiveness, resulting in a decline in volume again.

Plant problems

Gray also indicated the physical plant problems involved. The kitchen is in a poor state and it is estimated that it would take a minimum of \$25,000 to bring it up to a reasonable standard and more like \$60,000 to effectively modernize it.

The forthcoming remodeling of the dormitory will accentuate the problems. Plans call for a two-stage reconstruction over a two year period, meaning that the hall would have only half its residents during this time. It is likely that under these conditions the dining hall would fare even more poorly financially.

The administration has promised to offer some alternative form of food service for Ashdown after the remodeling. The renovation also calls for the installation of several suite kitchens in response to a request of the residents. To take up the breakfast and dinner load, it is likely that Lobdell will be opened for three meals a day after Ashdown closes.

Gray said that a long term trend of fewer and fewer services has been noted by the administration. Dining halls seem to be going the way of maid service as students economize on their already expensive educational experience.

Union fights for benefits

By Robert Nilsson

The Research, Development, and Technical Employees' Union and the Institute Personnel Officers have completed 23 negotiation sessions in an attempt to work out a mutually suitable contract. As of the 23rd session, they have not reached a settlement. While a strike may not be in the future, a swift settlement may not be either.

Health cost rises

According to the Union President, Ben Alexander of the Lincoln Laboratory, the problem is that the Institute wants to raise the cost of Blue Cross-Blue Shield to \$1.64 in October and be allowed to raise the cost every year if they feel they have to. The union feels that this is unfair because the Social Security base is going up, prices in general are rising, and the increase in cost of Blue Cross-Blue Shield would be an effective cut in their salary.

The Institute is, at the same time, according to Alexander, refusing to give the union members educational benefits and the same pension as other staff

members receive. While the Lincoln Labs do 90% Department of Defense work and the Draper Labs do 55-60% DOD work, the employees do not have anything like the government workers' pension plan.

Five of six sign

According to Mr. R. Davis of the Institute Personnel Office, there were six bargaining units whose contracts came up this year. All six were given the same proposal and five signed while the RDTE union did not. Davis feels the Institute's proposal is fair and that no greater benefits will be offered. Alexander claims that the members of the other unions that accepted their contracts did not really know what they were voting for. Most of them thought that the cost of BC-BS was only going up \$.80 while it is actually rising \$1.60.

The union claims that MIT can afford to give its members educational benefits. Davis responds to this by noting that there is no set amount allocated by MIT for employees' salaries. In a corporation of MIT's size reallocation occurs depending on

the expenses of each department. It is not a question of what can be afforded, but what is fair.

Strike unlikely

Alexander sees the possibility of a strike remote because of the Phase II set up. If a strike were to occur now the government labor board could step in and end it. Alexander also noted that the strike in 1962 did not receive all the publicity that could have been hoped for and as a result was not so successful.

At each of the 23 negotiations, Alexander says, some progress has been made. The pension plan has been improved by \$25 a month and the wages are acceptable. The union does not want the Institute to set the precedent for raising BC-BS every year which would happen if the present contract were accepted. With this extra burden on the union members in addition to the Social Security increase, rising local and federal taxes, and set wages, they feel they could not keep up with the economy.

NOTES

* Wellesley/MIT Bus: All MIT users, who are not cross-registered, must present MIT identification to the bus operator. The proposed system of special passes, effective November 20, will not be used.

* Application may be made to the Activities Development Board to obtain funds for capital expenditures and for minor space renovation. Recognized MIT community activities are eligible. Application forms may be obtained in room 7-101. Applications submitted by November 16 will be acted upon by the end of the month.

* Education Division Colloquium - Tuesday, November 21; "Problems in the Emergence of Universal Higher Education," Martin A. Trow, Professor of Sociology from the Graduate School of Public Policy of the University of California at Berkeley. 12 noon, room 9-150. Open to the public.

* The MIT Automobile Club is having its first meeting Wednesday, November 15 in the West Lounge of the Student Center. Begins 7-7:30. If you're interested in anything to do with cars or auto competition (ice racing, autocrossing, road racing, anything) come.

* Finance Board meeting November 13 at 7:30 pm. Any interested undergraduates welcome. One new member will be elected, November 27. Please come if you are interested.

* Ashdown House is having a FREE party for all MIT Grad students and faculty and college women, Invitation Only, Saturday, November 18, 1972 at 8 pm. Pick up invitations at Ashdown desk and GSC Office in Walker. Call x3-2195 for more information. Door Prizes - 1st Prize Round Trip to Hong Kong.

* Meeting of the Student Committee on Educational Policy to discuss IAP for November 15, 7:30 pm in W20-407 (Student Center). All interested students are welcome.

* The MIT Scuba Club will have an open meeting Wednesday, November 15 at 8 pm in 20E-017. Bob Mulcahy, a sky-diver and scuba enthusiast, will present "para scuba" and show slides. Everyone is invited. Come early. There will be refreshments. For more information, call Brian Moore 864-0780.

* Mechanical Engineering seminar - "Nuclear Artificial Hearts" by Fred Huffman, Special Projects Staff, Thermo Electron Corp., Waltham, MA. Room 3-270, Friday, November 10 at 3 pm. Coffee will be served in room 1-114 afterwards.

* Education Division Colloquium: Friday, November 17; "Effects of Experience on Brain and Behavior," Professor Mark Rosenzweig of the Department of Psychology of the University of California at Berkeley. 12 noon, room 9-150. Open to the public.

* The following is a list of recent UROP opportunities available to undergraduates, check with the bulletin board and the UROP office, 20C-231, x3-5049 or x3-4849 for details.

American Science and Engineering, Cambridge; Urban Systems and Engineering, Inc., Cambridge; MIT Medical Department; An ESG freshman has a pollution problem and is seeking other undergraduates and faculty members interested in pollution; A social science faculty member involved in the assessment of the totally implantable artificial heart is seeking a nuclear engineering undergraduate to join the assessment effort; and UROP has some equipment available on a full-use basis for the undergraduate author(s) of a suitable project proposal.

* If you would like to share Thanksgiving Day dinner with an MIT family we would be happy to arrange it. Please call us by November 17 (Thanksgiving is November 23) so that we can have time to accomplish this. For American students call Mrs. George Petievich at 969-1596; for Foreign students call Mrs. Edward Fredkink, 787-4455. Or call the Technology Matrons Office, x3-3656.

Bomb blows near EC; some damage done

By Paul Schindler

At about 1:26 am Tuesday morning, an explosive device went off near Walcott 404 and 405 in East Campus, blowing in windows and awakening residents.

Complaints about the noise were received from as far away as Kendall Square and West Campus. MIT Campus Patrol responded to MIT calls; three cars from the Cambridge Police department responded to citizen complaints. State and city fire officials were on campus Wednesday, questioning students in a low-level investigation.

Witnesses to the damage have reported to *The Tech* that personal injury would almost certainly resulted had people been in the rooms where windows were broken.

Other sources described the recent history of explosive devices near East Campus in an exclusive interview with *The Tech*. Apparently, at some point last spring, cherry bomb explosions in the area between the Green Building and East Campus became so common as to pose a problem. Campus Patrol increased patrol frequency, discouraging nocturnal blasters.

Then, within the last few months, a new kind of explosion began occurring, more powerful, apparently, than the cherry bomb, and much harder to prevent. Officers reported appearing at explosion sites almost immediately upon detonation but being unable to find anyone in the area.

The method used in the explosions, apparently, is to attach an explosive and a weight to a weather balloon at the top of the Green Building. The weight

causes the balloon to drop straight down; the explosive is fused, and thus goes off in mid-air. It is impossible to trace. The persons involved can disappear into the tunnels minutes before the explosion occurs.

On Tuesday, either the wind or the weight was seemingly misjudged, and the resultant drift to the Ames Street side of East Campus threatened both students and passers-by.

Finboard: where the bread is

By Rob Hunter

The Finance Board of the Undergraduate Association (UA) is an appointive body of ten members who between them share the responsibility for the equitable distribution of money allocated by the Dean for Student Affairs for the financial support of student activities. As required by the UA constitution, six members of the board are nominated by the previous year's board, two members are chosen at open hearings of Nominations Committee, and two are elected by the Association of Student Activities (ASA).

This year's Dean's Office allocation is \$69,800. Out of this sum, Finboard supports the UA operations expenses, underwrites the debts of activities which find themselves temporarily insolvent, and provides operating money for the ASA. The remaining, unallocated money is distributed on a request basis to the member groups of the ASA.

Finboard has several requirements which an activity must meet in order to qualify for consideration. First, an activity

must be chartered by the ASA. This involves the following procedure: the activity must have at least five members, one of whom must be designated head of the group; a statement to this effect may be filed, along with the names of the members, with the UA-ASA secretary in room W20-403. An activity constitution should also be filed at this time. When this application is filed, the ASA executive board will review and (probably) approve it. It is also a good idea to get in touch with Bob Dwyer, ASA president, when the application is filed, since there are occasional delays in the secretary's office.

In addition to this, requests must contain specific information as to the expected use of the money; a request for five hundred dollars to start an organization is unlikely to receive much consideration unless it includes some fairly specific details on the planned expenditures. Finance Board will provide money to new activities if they can demonstrate community interest and a defined list of organizational objectives.

Finboard has four basic classifications in their budgeting process: Capital equipment fund, Bad Debt reserve, Competition fund, and Unallocated reserve. Activity requests will be financed from one of these areas, with the following restrictions: capital equipment includes most of the small operating materials generally required by an activity. A general operating rule for requests is, "bigger than a paperweight, smaller than a typewriter." Larger requests are handled by the Activities Development Board, a standing Institute committee which considers large capital expenditures (for example, LSC's new press is being financed in conjunction with the ADB).

The Bad Debt reserve is self-explanatory; in recent years, it has been drawn against rather heavily, but this is hopefully a decreasing trend.

The competition fund is the source of funding for the activities such as Debate Society and the Tiddlywinks Club, who participate in competitions outside the Institute. These activities (Please turn to page 6)

Kats blows the whistle on Spiro

By Lee Giguere

MIT anti-war activist George Katsiaticas '70, once a prominent member of Rosa Luxemburg SDS, made the news in San Diego, California while protesting the appearance of Vice President Spiro Agnew.

According to a story carried by UPI, Agnew "beset by whistle-blowing demonstrators, shouted at them that they were 'ideological fanatics' and compared them to Nazis and animals."

Katsiaticas, described in the report as the leader of the demonstration, was punched in the face by an Agnew rooter and arrested for disturbing the peace. While his assailant, "a burly, middle aged man," was allowed to remain in his seat, Katsiaticas was led away by security officers and charged with disturbing the peace and unlawful assembly. The UPI reported that he was released on \$150 bail.

In a related development, Frank Mankiewicz, Senator George McGovern's political director, charged that Agnew had "deliberately staged an incident in which he was heckled by long-haired people," according to UPI. Reports have tied the Mankiewicz charge to the incident in which Katsiaticas was involved.

CBS television interviewed both Katsiaticas and his assailant after the incident, and reported that Katsiaticas was a registered Republican, while his assailant was a registered Democrat. *The Tech* contacted Pete Bohmer, Katsiaticas' roommate in San Diego, who confirmed the registration, but denied that anyone had hired Katsiaticas to disrupt

Agnew. "He did it on his own," Bohmer stated, adding, "George has invited the guy over for dinner so they can have a rational discussion of their differences."

Bohmer explained Katsiaticas' Republican registration by saying that "George feels it increases his chances of being selected for jury duty."

While at MIT, Katsiaticas had studied at Sloan School. Involved in the Interfraternity Conference (IFC), he was elected chairman in the spring of 1969.

Katsiaticas did not become seriously involved in anti-war activities until the fall of '69. His turn to activism has often been attributed to his term as a member of the Pounds Panel on the Special Laboratories. (The Panel recommended the de-emphasis of military work at the Labs and the establishment of a Standing Committee to review all contracts that the Laboratories [Lincoln and Draper] proposed to undertake.)

In a personal statement attached to the Pounds Report Katsiaticas wrote: "The establishment of national priorities in the United States has placed

militaristic concerns above all others. In light of the ecological and social problems existing today, a redefinition of national goals is necessary so that our society can cope with the exigencies confronting us." He also added: "I therefore call for total conversion of the special laboratories to socially productive uses."

During the fall of '69, Katsiaticas was involved in a number of demonstrations against the Vietnam war and alleged war research at MIT. The most prominent of these was the November Actions, climaxing in an obstructive picket of the Draper Lab building on the corner of Massachusetts Avenue and Albany

Street.

In January of '70, Katsiaticas was involved in the occupation of then-President Howard Johnson's offices. In an attempt to win support for the action, he and Pete Bohmer G visited several classes and attempted to speak with students about the occupation. In two of those classes, Professor of Metallurgy John Wulf's 3.091 lecture and Professor of Nutrition and Food Science Edwin Bransome's Systematic Physiology, the instructor viewed their entry as a "disruption." Both Katsiaticas and Bohmer were tried and found guilty of disruption of classes and served two-month jail terms during the summer.

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Kendall area development remains in question

By Walter T. Middlebrook
As reported in the *Cambridge Chronicle*, NASA has withdrawn all its land interests in the Kendall Square area.

This news was actually reported in December of 1969. Since that time, however, nothing has been done towards the development of this land. It has also been one year since US Transportation Secretary John Volpe agreed to allow the city to proceed with private development of the eleven acres of so-called "surplus NASA land." Yet, nothing has been done.

City officials of Cambridge consider it one of Cambridge's top priorities to begin development in that area.

So far they've received many suggestions from community groups and the Cambridge Chamber of Commerce. On the other hand, they've only received two formal proposals. These came from the Cambridge Redevelopment Authority (CRA) and the city planning board, for uses of the eleven acres, also known as the quadrangle - west of Sixth Street.

The plans of both groups conflict, though. The CRA's plans call for development of the quadrangle and the adjoining 13 acre "Golden Triangle" (south of Broadway and north of Main Street) to produce more tax revenue for the city. The planning board's plans call for the development of low and moderate income housing for families, with ownership potential as a key ingredient. The plans also call for a recreation area there. The board also admits that these plans would mean a tax loss.

The problem which has arisen now is that ever since Kendall Square was declared an urban renewal area in 1964 to make way for NASA, the CRA has had the responsibility for drawing up plans. The planning board must approve the plans, however. The inability of the two agencies to reconcile differences is part of the reason for the delay in development of the area.

Not only has the disagreement between the two agencies caused a delay in the development of Kendall Square but it has also caused a fair amount of hostility between the two. Members of the CRA say its project plans were drawn on the basis of previous planning board guidelines and approvals, that the planning and development department initially approved its plans, and that the change of heart of the board was a surprise.

In reference to these statements, the board has its own ideas. According to Arthur C. Parris, board chairman, the CRA wants to initiate a "get the old residents out" program. He went on to say, "We want to develop housing for people who live here now."

When contacted about the issue at hand, City Planning and Development Director Robert

Bowyer said, "The board and CRA are aiming at different community objectives. The CRA wants to expand the tax base. The planning board wants to provide family housing as its top priority. You can't compare the two."

The CRA plans for the development of the area are the product of 18-months of work and are based mostly on recommendations made by consultants commissioned by the Authority. These consultants, Gladstone Associates, Inc., completed their study in the fall of 1971. They carried out their study on the assumption the Quadrangle and the Triangle would be developed simultaneously.

The CRA's recommendations for the Triangle are:

- a motor hotel with 400 units, varying in height up to about 40 stories.
- a retail complex of 184,900 square feet in area.
- general office space of 706,000 square feet in area.
- technical office space of about 340,000 square feet in area.
- 400 units of high rise, market rate apartments.

- 3140 parking spaces, 740 of which would be underground. (The CRA wants an advanced committee for parking spaces from the city but recommends the spaces be built gradually over a period of time.)

Recommendations for the Quadrangle are:

- 13,300 square feet of retail space.
- 31,000 square feet of general office space.
- 900 units of high rise (34 stories) apartments, 400 units of mid-rise apartments (six and a half stories high) and 50 units of townhouse apartments (two and a half to three and a half stories high), all rented at market rates.
- 1350 underground parking spaces.

The CRA says that if its plans are implemented the city would net \$1.7 million in tax revenues.

In a letter to the CRA, Board Chairman Parris pointed out that the board was in "substantial agreement" on the development of the Triangle, but disagreed on the development of the Quadrangle.

Parris said that since the Quadrangle was originally to be used by NASA before it decided to move out in 1969, it was not supposed to be developed for tax objectives like the Triangle

was. He now feels its availability "presents the opportunity to achieve other equally valid public objectives."

The board seems to favor "low density housing... providing home ownership opportunities for Cambridge families, with generous provision of open space and recreational facilities to serve not only Kendall Square but also nearby residential neighborhoods which are sorely deficient in such amenities."

A planning department study of family housing needs showed a potential demand of nearly 5000 low and moderate income families in need of housing assistance. Parris said the Quadrangle possessed the two ingredients necessary for the development of publicly assisted family housing "rarely available in Cambridge: vacant land and federal subsidy of land costs to make the acquisition price reasonable."

The CRA has received what it called general confirmation of the feasibility of its plans. This conclusion was drawn after showing the plans to various community groups and city

agencies, including city councilors on an individual basis, and the Chamber of Commerce, considered a key group in the city.

With this in mind, the CRA had Gladstone analyze the effect the planning board's proposal would have on the tax producing potential of the Kendall development.

In his report Gladstone also listed two alternatives which would satisfy both agencies. One would be to use tax money from the quadrangle to establish an enlarged rent supplement program in other areas of the city.

The other would be to use the tax surplus to fund a city development corporation to construct new low and moderate income housing and rehabilitate and conserve existing housing.

The controversy goes on as Planning Director Bowyer answers these proposals with "where could new housing be built?"

Nevertheless, and with a lack of direction from city hall, it seems that it will be a long time before any development at all gets underway in Kendall Square.

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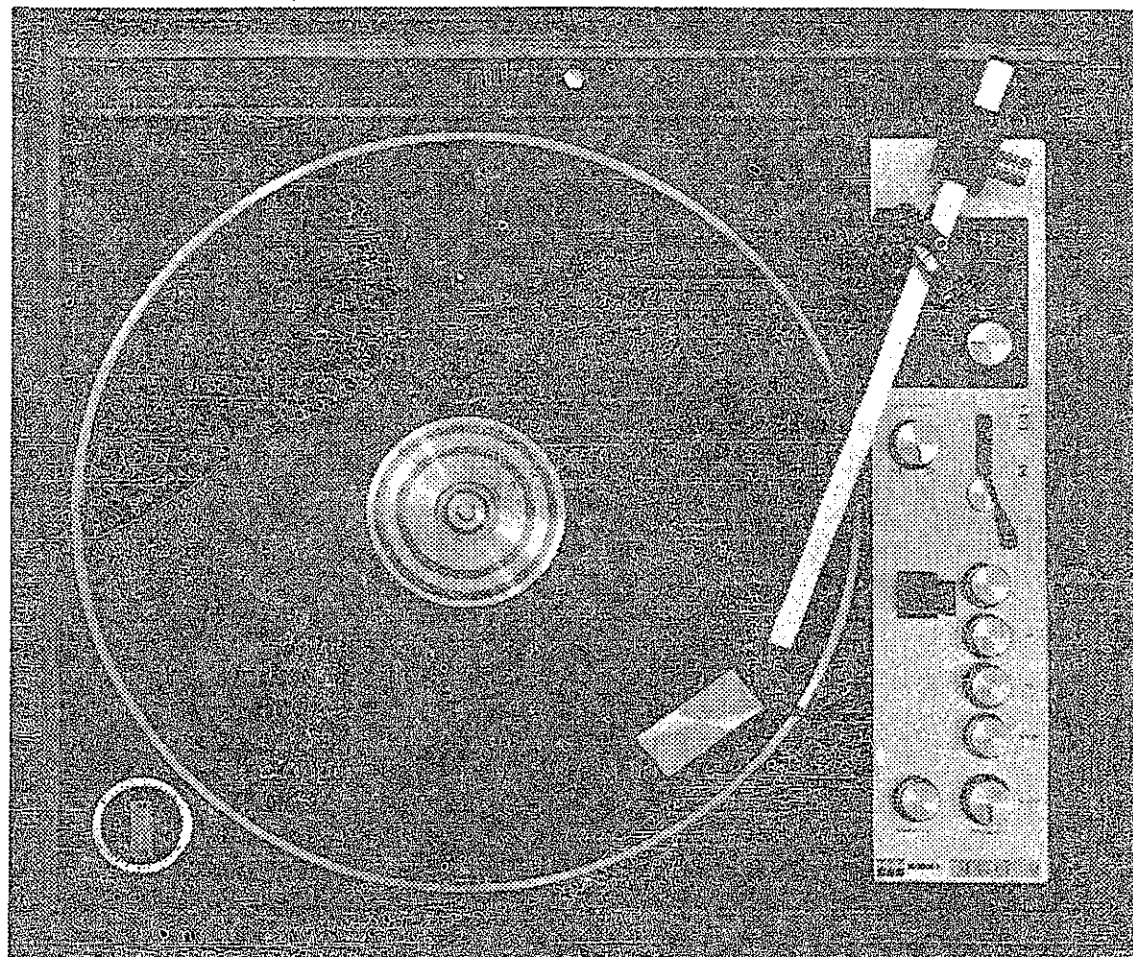
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One more replay... and a prognosis

By Peter Peckarsky

What can you say about an honorable man who waged a valiant fight, dreamed an impossible dream, and went down to an ignominious defeat?

Nice guys finish last.

McGovern was too considerate last July when Senator Thomas F. Eagleton (D-Mo.) revealed that he had lied to McGovern's aides about his past history when queried prior to his being given the nod for the Democratic Vice-Presidential nomination. The first thought in McGovern's mind was what the revelation would do to Eagleton and not what it would do to the ticket's chances. Instead of backing Eagleton 1000%, the proper response would have been: "I know nothing about Senator Eagleton's past medical history except what he told me a few moments ago. Until such time as I have given this matter careful consideration and had the opportunity to consult with medical experts concerning his ability to be President should the need arise, I shall have no further comment."

Assuming that McGovern had a chance to win in the first place, Eagleton did an admirable job of destroying that chance and placing McGovern in a no-win situation. If Eagleton had been kept on the ticket, the main issue of the campaign would have been Eagleton's health. One can imagine the daily press conference: "Are you tired, Senator? Have you been pacing yourself?"

McGovern was too nice a guy to straighten out his campaign organization after the convention. A loose structure succeeded in the primaries, but a unified campaign with one person clearly in charge was required for the general election. Not until early September was there some semblance of order in McGovern's organization.

Coming out of the Democratic Convention, McGovern had momentum, which counts for a lot in American politics. He also had a carefully orchestrated campaign schedule to close the then-extant ten point gap in the polls between him and Richard Nixon. This all went aglimmering as a full month was wasted on the trauma of the Eagleton affair.

Could McGovern have won? There are no replays, instant or otherwise, in life.

Why did he lose? He did not receive

enough votes. But beyond the obvious explanation lie several ancillary questions.

Were McGovern's stands on the issues on the fringes of American public opinion or was the electorate's perception of McGovern's position incorrect?

On the whole McGovern's answers to most of the problems facing America are in consonance with the feelings of many Americans. One of the overwhelming impressions I obtained during the course of this long election campaign was that people really did not realize where McGovern stood. In many conversations, voters told this observer that McGovern took a given stand on a given issue. In fact, the people I interviewed did not know where the South Dakotan stood on the issues. McGovern had a massive communication problem which was not aided in the least by the always helping hand, sometimes overt and other times covert, of the Nixon campaigners. That McGovern failed to educate the country as to what his views were is his fault and no one else's. A debate between the principals would have been useful to delineate the issues, but Nixon realized that this would be a losing proposition.

McGovern was portrayed as being radical and/or indecisive by Nixon, and he did not have the resources, both in time and money, to erase that stigma.

Was Nixon's resounding personal triumph more anti-McGovern than pro-Nixon or pro-Republican?

The curious landslide won by Richard Nixon at the end of his last campaign was remarkable in many ways.

In eighteen states Nixon's percentage of the vote was within two points of the total of the percentages won by Alabama Governor George C. Wallace and Mr. Nixon in 1968. (At this writing, the returns are not yet complete and thus a final analysis must await the official vote tabulation.)

Typically, a candidate who wins a Presidential election by a landslide (over 55% of the vote) will have lengthy coattails on the strength of which fellow party members can be elected. Nixon's coattails were close to non-existent.

In the Senate races, the Democrats gained two seats. The party split in the 93rd Congress, which will convene on January 3, 1973, will be 57 Democrats and 43 Republicans. More importantly

for the faction which McGovern represented, the ideological balance of the Senate will be shifted approximately five votes in favor of the liberals. Freshmen Democratic senators Abourezk (S.D.), Biden (Del.), Clark (Iowa), Haskell (Col.), Hathaway (Me.), and Huddleston (Ky.) are noticeably more liberal than the Senators they replace. Freshman Republican senator Bartlett of Oklahoma will probably be more conservative than retiring Senator Fred Harris.

In the Johnson landslide of 1964, the Democrats gained 37 seats in the House of Representatives. As of now, the Republicans have gained only thirteen seats in the House. It seems possible that with the infusion of much new blood into the House this body will also be more liberal during the 93rd Congress.

The Democrats consolidated their hold on the state houses by capturing an additional seat. The new breakdown will be 31 Democrats and 19 Republicans.

Mr. Nixon deliberately waged a low key campaign and disassociated himself as much as possible from the Republican Party. It was thus understandable that he won while stalwart Republicans were being defeated in many areas. Nixon made campaign trips late in October in an effort to help Republican Senatorial candidates in Kentucky, North Carolina, Oklahoma, and Rhode Island. This effort was only fifty percent successful as Helms (N.C.) and Bartlett (Okla.) won while Nunn (Ky.) and Chafee (R.I.) lost.

McGovern won Massachusetts and, until early Wednesday morning, was close in the Minnesota race. McGovern's victory in the District of Columbia was due to the 70% black population; he probably carried Massachusetts due to the superior intelligence of all those students. On the other hand, it is just within the realm of probability that the two to one Democratic registration edge, as well as the state's senior Senator, had something to do with McGovern's Bay State victory.

It's going to be four more years, and now that Richard Nixon will never again have to face his employers, what lies ahead?

In the short-term, there will be a well-publicized investigation of the Nixon-organized and controlled political espionage-sabotage squads. The investigation will be conducted by the Senate

Judiciary Committee's Subcommittee on Administrative Practice and Procedure under the chairmanship of Senator Edward M. Kennedy (D-Mass.). This will probably break the record for the longest running show in town set earlier this year by the ITT scandal.

There will also be investigations of the wheat and milk deals as well as a trial to force the release of the names of the pre-April 7 contributors to the Nixon campaign coffers.

In Vietnam, Nixon's supporters said it all this fall — **FOUR MORE YEARS!**

The dim outlines of a Kennedy-Mondale (Senator Walter F. —Minn.) ticket penetrate the haze of 1976. Mondale almost carried McGovern on his coattails in Minnesota; he's a new face from a state with a strong Democratic party.

As for Richard Nixon, he has often said that he is a student of history. For the final effect of Vietnam on this country, consult Thucydides' History of the Peloponnesian War. Prior to Richard Nixon's victory on Tuesday, the three highest percentages of the vote won by presidential candidates in this century went to Warren Harding in 1920, Herbert Hoover in 1928, and Lyndon Johnson in 1964. Within two years, each man was in deep trouble. The signs are all there for a similar final chapter to the history of the Nixon years.

There is only so much dirt one can sweep under a rug before tripping on it.

Continuous News Service

The Tech

Since 1881

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Letters to *The Tech*

To the Editor:

I am writing to inform people at MIT about MIT's withholding of my B.Sc. degree. Following last spring's ROTC sit-in, the degrees of four participants were withheld, pending Disciplinary Committee action; this despite the fact that we had completed our academic requirements and financial obligations. Furthermore over 1000 MIT students, workers and faculty had signed a petition against any punishment and supporting the sit-in. Also, MIT had filed "criminal" trespass charges. The degrees have been granted now, but how this came to be is both significant and interesting.

Last May, the four seniors were each given the option by the Discipline Committee of having our hearings expedited, leading to the possibility that we could receive our degrees on time. On the other hand, of course, the Committee could have decided lickety-split to permanently deny us our degrees (especially seeing that everyone at MIT had gone home for the summer!). Two of the seniors (who were not on MIT's political unwanted list), accepted the option and received their degrees. The two of us (myself and Neil Goldstein) who were on the list (both members of SDS) told the Committee that we had already earned our degrees according to the rules of the Faculty, and that they should be granted. The Committee never responded.

It is not unusual for MIT to trample on people's rights. Just witness their vicious rent gouging in Cambridge, and the weapons and counter-insurgency research carried on here to the tune of \$100,000,000 per year. MIT employees often face intensive speed-up; and in past years Black students have been harassed by campus patrolmen, and subjected to false arrest. In general, the laws and the

courts protect MIT's "right" to do these things.

However, it so happens that MIT does not have legal grounds for withholding our earned degrees. The issue was finally forced this past month by two things: 1) extensive publicity about the sit-in and the various trials — leafletting, posterage, and telephoning were done by SDS members and defendants; 2) I sought the advice of a lawyer.

Together, the lawyer and I discussed and researched the situation, and he wrote a letter to President Wiesner, in which he said: "It is our [office's] opinion that you and the MIT have no legal justifiable grounds for withholding Mr. Wolman's degree. We do not feel that yours or the University's disagreement with Mr. Wolman's political stance should be a factor in the University's decision whether or not to award degrees. . . . If he is made to suffer [financially] due to [the withholding] of his degree, you and the MIT should be held fully accountable for any damages. . . ."

Following this letter, the faculty meeting on October 18 voted that my degree be given immediately. I am not saying that I got my degree solely because an attorney wrote to MIT, but I am pointing out the advantages of fighting back with the help of others. Two days later, Vice President Wadleigh (yes, the very same Mr. Wadleigh who had said "there is no war research at MIT"), wrote to my lawyer. Among other things, he said: "We take issue with the contention in your letter that Mr. Wolman's political stance or any political convictions he may have held was a factor in withholding of his degree." (Who's he kidding?!?!?) Mr. Wadleigh also referred to the "option" we were given to have our disciplinary hearings early; but, just as a thief has no right to offer the option "Your money or your

life," MIT has no legal right to decide "in what style" my degree should be withheld.

I hope this letter has set the record straight on the issue of withholding earned degrees. Neil Goldstein (who is in Seattle, Washington) feels the same way I do on this issue. His degree has now been granted also, but if he has suffered any financial damages, we believe that MIT is fully responsible.

In its letter to the defendants, the Discipline Committee accuses us of being violent, and of hindering the free flow of ideas, etc. But it's the administration, not the people, who are violent and dishonest; for example, MIT has never given straight answers to many questions:

Why does MIT continue weapons and counter-insurgency work despite the wishes of the MIT community?

Why did MIT try to severely punish people in the ROTC sit-in case despite the petition signed by over 1000 people?

Why does MIT allow racism to be taught in the classrooms (e.g. Professor Robert Rotberg in the Political Science Department teaches that people in Haiti prefer "strong and brutal dictatorship," and that African people may rebel due to Oedipal complexes; the Psychology Department invited Professor Bronfenbrenner of Cornell to speak at MIT — he claims that Black people are "biologically inferior to whites" (*Child Development*, vol. 38, 1967, p. 913).

Why are rents in MIT-owned apartments rising so quickly?

And so on. MIT won't give straight answers because the truth is that MIT operates as Big Business to protect its financial and political interests, despite the effect on people in Cambridge or the rest of the world. We shouldn't let them get away with that.

Don Wolman

Democrats hold congress despite landslide

Tuesday, including seats in the south. Republicans were elected to the House from Mississippi and Louisiana, where it now appears that the formerly one-party, Democratic, southern political system is being replaced with two parties for the first time since just after the Civil War.

The House has not been as much of a burden to the Nixon administration as has the Senate, though Republicans were hoping

that the Nixon coattails in a landslide of record-breaking proportions would be sufficient to elect the Republican majority, which would have taken 29 more seats than the Republicans were able to grasp.

Massachusetts

Perhaps the biggest story in the Massachusetts congressional races throughout the state's twelve congressional districts was in the race in the ninth, where Independent candidate John J. Moakley halted Rep.

Louise Day Hick's bid for reelection by slightly over 3000 votes.

In other races which before the election were considered to be extremely close, Father Robert F. Drinan (D) won reelection in the fourth district by defeating liberal Republican Martin Linsky by 10,000 votes; John Kerry, of the Vietnam Veterans Against the War, lost his bid for election in the fifth district by being edged out by conservative Republican Paul Cronin.

In one of the closest congressional races, the twelfth district will be sending Democrat Gerry

Studds to the House late this fall, after he narrowly defeated Republican William Weeks. Races in the sixth and seventh congressional districts gave Democratic incumbents Rep. Michael J. Harrington and Rep. Torbert MacDonald easy victories over their Republican opponents.

Five Massachusetts congressmen went into Tuesday's elections unopposed. They were Silvio Conte (R) in the first district, Edward P. Boland (D) in the second, Harold D. Donahue (D) in the third, Margaret M. Heckler (R) in the tenth, and James A. Burke (D) in the eleventh.

In the eight district, which includes Cambridge, Rep. Thomas P. O'Neill (D) readily defeated John E. Powers of the Socialist Workers Party, and now may be in line to succeed missing Rep. Hale Boggs (D-La.) as House Majority Whip.

In the only Senate race in the state, Edward Brooke, the Republican incumbent, easily defeated Middlesex District Attorney John Droney for a second term.

NSF backs feedback; equipment is available

By David Weiman

Professor of Mechanical Engineering Thomas Sheridan and Mechanical Engineering Research Assistant Dr. William Rouse are demonstrating to groups all over MIT a role that can be played by simple computation in community feedback.

The project is sponsored by the National Science Foundation RANN (Research Applied to National Needs) program, and is attempting to exploit electronic technology to aid group meetings of people of various socio-economic positions and geographical locations to reach consensus on particular questions. It has found several experimental uses in group meetings here at the Institute, and Sheridan makes himself and his equipment available to groups on request.

The format of the group meetings consists of questions and answers, along with free discussion. Each participant in the discussion is given a small switch box to use in relaying his decision. A statement is made, or a question is asked, and each member registers his opinion, or categorically objects to the available question or answers. After calculating and displaying the response profile of the group to everyone, the coordinator or another participant can immediately refine the question, or query an available computer data base. Eventually, though, through open discussion of participant responses, revealed data, and revision of the questions, one can discover the underlying factors that have caused divisiveness among the participants. This process provides for an immediate and anonymous response from each individual member, and allows for complete participation.

Sheridan's project is a continuation of a pilot experiment that he engaged in during the summer of 1972 along with members of the MIT Operations Research Center. Under contract by the Massachusetts Department of Education, Sheridan and a student travelled throughout the state, questioning groups of parents, teachers, and school administrators of various communities by using this technique. With continuing research and development, Sheridan and Rouse plan to apply their technique to diversified fields. Public education, health care planning and

transportation planning represent three major areas of interest to which group feedback can be applied. Also, several television stations and the National Council of Churches have shown interest in the application of group feedback to their projects.



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"We need a local salesman"

Bldg 7 will be showplace of special events

By Larry Appleman

The lobby in Building Seven is going to be utilized at closer to its full potential, due mainly to the efforts of Suzanne Weinberg, lobby manager, and Les Kline of the Architecture Department.

Weinberg, who can be reached through the Office of the

Dean for Student Affairs, Room 7-133, is in charge of events and exhibitions in the lobby. Kline is in charge of architecture class 4.17, "Architectural Design, Special Problems," which is set up to deal with problems in the lobby and come up with new things to do with it.

Students in 4.17 work on

setting up a physical framework for things to happen in. They receive design credit for designing the structures that are used, and they are paid wages for working on their construction. The type of things being planned are an Independent Activities Period information booth, an information station as part of

the Information Office, and an improvement of the coffee stand.

The Lamson-Litchfield-Rohsenow jazz trio will play songs from the '20s and '30s here starting at 12:15 pm Monday. The group is composed of Professor Roy Lamson of the Department of Humanities on clarinet, Arthur Litchfield of the Purchasing Department on drums, and Professor Warren

Rohsenow of the Department of Mechanical Engineering on piano.

The lobby of Building 7 is a central and important area. Displays and events have taken place in the lobby before, but not on a regular basis. For example, recently there has been a demonstration of pottery making and a strobe display. Weinberg plans to have chamber concerts in the lobby every Wednesday at noon.

Finboard: where the bread is

may be compared by analogy to intercollegiate athletic teams, and Finboard is currently the only sponsoring body for these extra-MIT expenses.

Finally, the unallocated reserve is the catch-all for requests which don't fit in the above categories. Most activities' operating expenses come under this fund. There is one important exception to the general funding policy here: Finance Board does not fund operating expenses of exclusionary groups. Finboard will fund expenses for events which are open to the entire MIT community (i.e., the Black Student Union's concert program) but it does not fund the office or other operating expenses of groups which are not open to the entire community.

This year's budget is based on activity requests and budget proposals made last spring. Copies of the allocations made then are available in the Finance Board Office, room W20-405. There is still a substantial sum of money available to activities who make requests. Activities who plan to

make requests should indicate this by calling extension 3-3680, or by stopping in at the office and leaving word with the chairman, Natalie Parks. The next meeting of the Board is Monday, November 13 at 7:30 pm.

Current members of the board are:

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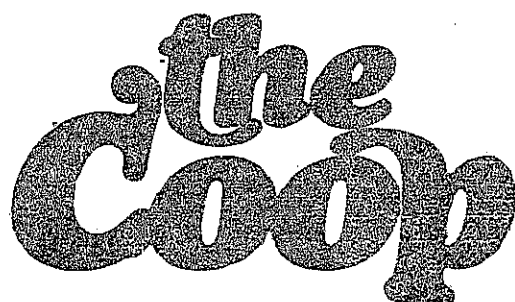
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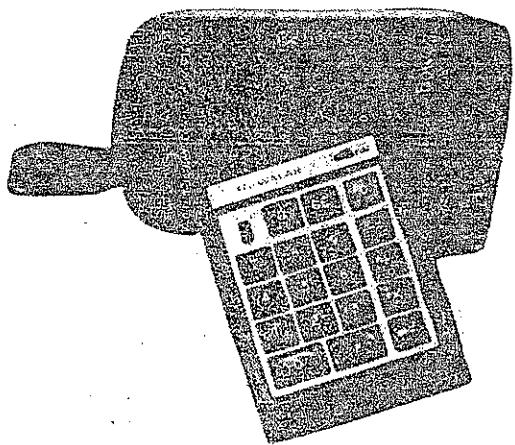
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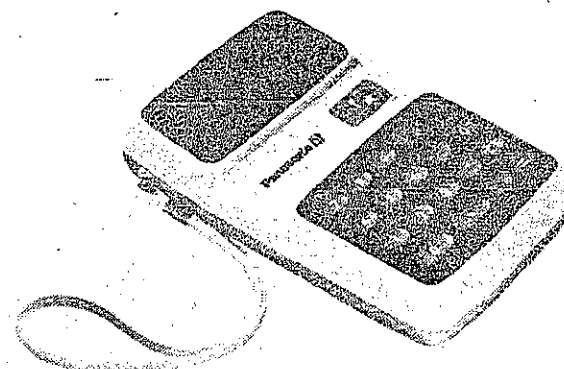


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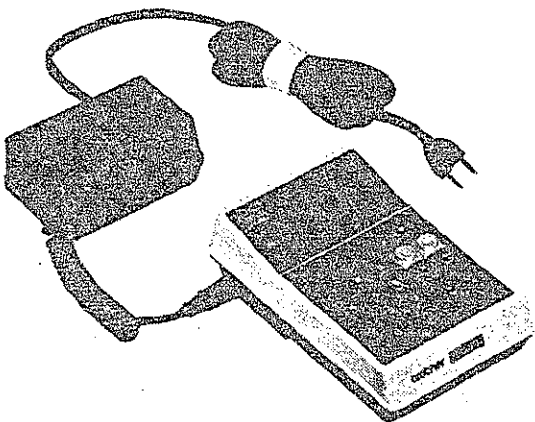


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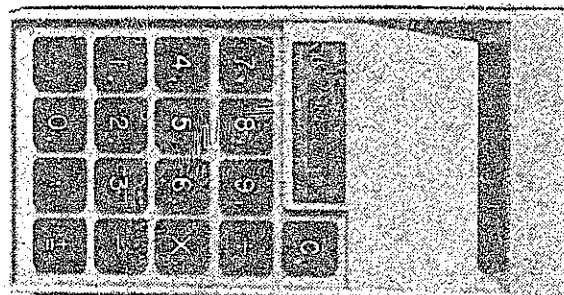


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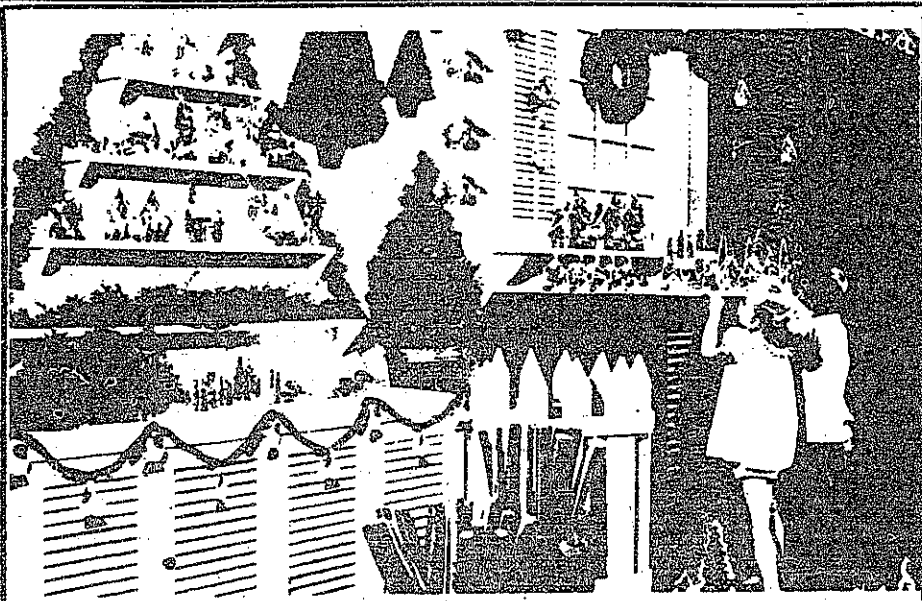


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Five vow to win UMOC

By Ken Davis

Many distinctions can come upon a person in his years at MIT.

He can be first in his class, he can achieve office in a powerful campus organization, he can take over the ROTC building, or

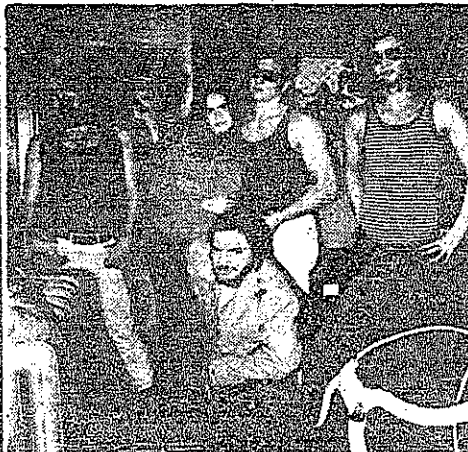
occurred in 1966, and a UMOC has been elected annually since then. The amount of money raised has increased from approximately \$400 in 1966 to over \$2000 the last two years.

The ugliest man on campus need not be a man. In 1968, the winner was Cynthia Helgerson, who ran on the slogans, "Who's the ugly guy with the funny looking chest?" and "Would you like your son to look like me?" Cynthia, now in an administrative capacity in the MIT Admissions Office, narrowly edged out Al Tuna for the title. Al came back to take the honors as Mr. Ugly the following year, with a victory total of \$536.

The 1970 UMOC campaign

with \$514.83 and *The Tech* received 22 votes as a write-in candidate. Overall, last year's UMOC contest raised \$3,083.83, which was given to CARE.

The Tech contacted this year's slate of uglies for their comments on the race.



he can be elected Ugliest Man On Campus. The last is possibly the highest honor one can achieve, to be selected the ugliest by one's own classmates.

The rather farcical proceedings known as the Ugliest Man on Campus (UMOC) contest are, in reality, a charity drive conducted by Alpha Phi Omega. The candidates who campaign for the title of UMOC get not votes, but contributions. The winner is the student who



Curtis Reeves in his inauguration speech, April 17, 1914: "My mother does not love my face!"

Daniel Dern: "You all know what I look like. These are my boys. They'll be mighty annoyed if I don't win."

Six feet tall and face of goo; super-revolting and obnoxious, too; that is the ugliest ugly: Steve Zeitzau.

Attostrated Man won the office of President of the Neander-



collects the most, all proceeds going to a charity selected by APO.

The UMOC contest was originally begun in 1958. It lasted until 1962 when it was discontinued. However, a revival

was marked by a plethora of candidates. The eight man field included Don "Deja Vu" Garvett, Matt "The Beast" Beasley, David S. Gromala, Rowf Knopf, David Faktor, Kenneth "Grin" Skier, Matthew Lieff, and the perennial Hermann Quincy Witherspoon, who is annually represented by a picture of a brick wall. Deja Vu, the winner with \$749.40, was shown in his campaign posters as a baby alligator.

The 1971 campaign achieved a new level of tension when The Great Court Jester edged out *Tech*-backed candidate Dave DeBronkart, \$605.54 to \$563.17, on a last-minute \$100 contribution by Phi Beta Epsilon. Ugleon finished third



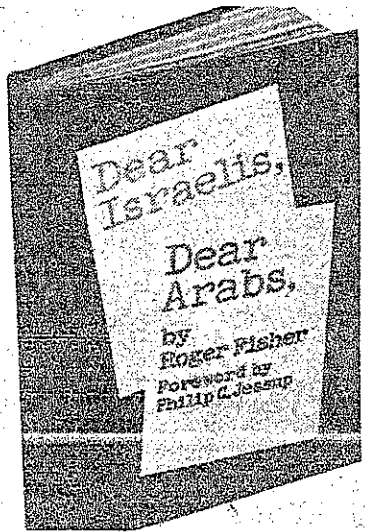
Photos by Sheldon Lowenthal

thal Man's Ugliest Man in the Universe Society by breaking endless mirrors.

The fifth candidate, Laura Lee Downs, could not be contacted for comment.

Dear Israelis, Dear Arabs

A Working Approach to Peace by Roger Fisher, Department of Law, Harvard University

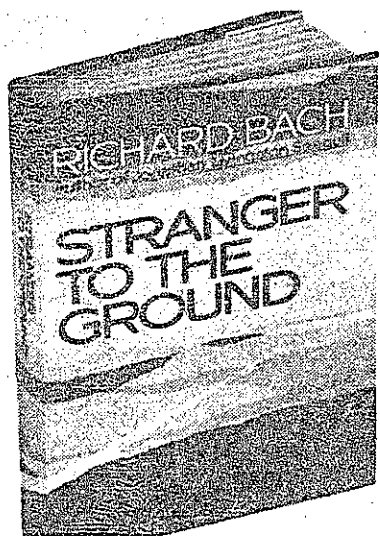


This searching, highly readable book consists of the author's correspondence and meetings with Hussein, Goida Meir, Abba Eban, and Riad. The letters contain operational documents illustrating in specific terms how particular ideas might be put into action, to bring peace to this strife-torn area. Indexed and illustrated with maps.

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Benjamin Franklin

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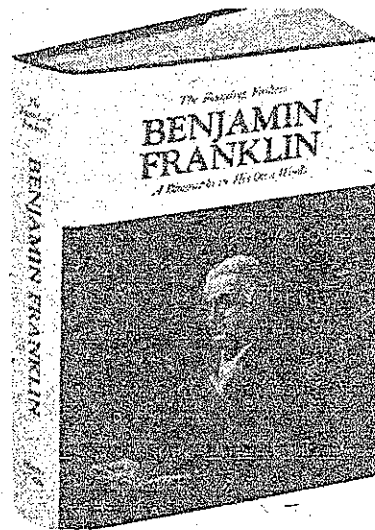


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Chess

By Daniel Reinharth

Why does one hear of the "center" so often in chess games? As it has a finite playing area the chessboard is composed of flanks and a central area. All other things being equal, a piece watches more squares when it is situated in the center than when it is situated on a flank. Thus, he who controls the center can usually apply a "bind" on his opponent.

The key word of the last sentence is controls. How does one control the center? The most obvious way is to occupy it. There are disadvantages inherent in occupation, however, and the hypermodern school of the early twentieth century, spearheaded by Richard Reti and Aaron Nimzovich, demonstrated them. Occupiers of the center are also fixed targets and may be attacked at will, usually by undermining from behind or from the sides. Therefore, the openings popularized by the hypermodern school are characterized by inducing the opponent's pawns to advance, thereby (hopefully) rendering them weak. An idea which flows logically from the above is that the center need not be controlled by occupation; it may also be controlled by pieces watching

from afar, e.g., fianchettoed bishops.

Keeping this in mind, consider today's game, played in 1954 by David Bronstein, a grandmaster never afraid to flout revered principles, whether classical or hypermodern. White: Bronstein. Black: Rojahn. Moscow Olympiad. 1 P-K4 P-K4; 2 N-KB3 N-QB3; 3 B-B4 N-B3; 4 N-N5 This is the old way of treating the Two Knight's Defense. White is not naive enough to hope to win by an immediate direct attack; rather he hopes to induce weakening moves by tactical moves.

4... P-Q4; 5 PxP N-QR4; 6 P-Q3 P-KR3; 7 N-KB3 P-K5 These moves have been played thousands of times. Now Bronstein plays a startling innovation. 8 Pxp! This move emphasizes the fact that chess is a struggle between two people. While in the long run the piece sacrifice is probably unsound, the element of surprise and the actual problems it does pose give the sacrificer tremendous advantages.

8... NxB; 9 Q-Q4 N-N3; 10 P-B4 P-B4 (inferior); 11 Q-Q3 B-N5; 12 QN-Q2 B-K2; 13 O-O O-O; 14 N-K5 B-R4; 15 P-QN3 N/N3-Q2; 16 B-N2. The opening is over; both sides have castled

and completed their development. Who is winning? Black is ahead in material but White's center pawn gives him a terrific control of space. He is also slightly ahead in time for Black has not had time to undermine White's center. And yet, is it enough?

16... NxN; 17 BxN N-Q2; 18 B-B3 B-B3; 19 QR-K1 BxB: 20 QxB Q-B3. Black has managed to trade off several pieces (always a good method for forestalling an attack) but White has now mobilized all his forces.

21 P-K5 Q-B4; 22 P-B4 B-N3; 23 N-K4 QR-B3 B-R2. White was threatening to trap Black's queen. 25P-KN4 Q-N3; 26P-B5 Q-N3; 27 Q-N3 P-B3; 28 P-K6. Look at all the space White controls behind his incredible pawn structure. 28... N-K4; 29 P-KR4 K-R1; 30 P-N5 R/N1-B1; 31 K-R1 Q-Q1.

White could now have won with 32 NxKBP!! PxN; 33 RxN! PxR; 34 Oxpch, obtaining four advanced, connected, protected passed pawns, but instead chose: 32 P-N6 Bxp; 33 PxB (how prosaic - White has regained his piece and is now ahead in material, as well) P-N4; 34 P-Q6 Q-N3; 35 P-Q7 NxP; 36 PxN R/QB1; 37 NxKBP Q-B3ch; 38 Q-N2 and Black forfeited on time. White would otherwise have won with 38... QxQch; 38 KxQ PxN; 40 R-K7, threatening the unanswerable 41 P-N7.

been hoping they would be allowed to vote in Cambridge this year. In spite of this temporary setback, though, the effort in the courts will continue, until the day when perhaps Cambridge students will be able to register as freely as other Cambridge residents.

In this game Bronstein not only occupied the center with advanced pawns, but even gave up material to do so. Recall, however, that Black never had time to undermine White's pawns, and that White's ever-increasing control of space eventually throttled his opponent.

MIT dentistry is more than 'just fixing teeth'

With the mounting unabated interest in careers in the health sciences it is noteworthy that very few MIT students turn their eyes toward "dentistry."

Perhaps this is due to the unfortunate misconception that all a dentist can do is "fix teeth." In fact, the dental practitioner today is trained in the area of dental medicine - involving the art and science of preventive health and healing concerned with the entire oral cavity, its various structures and tissues including the teeth.

"Fixing teeth" comprises but a small portion of the obligation of dental medicine to the health of the nation. Oral medicine is more accurately descriptive of this profession and to those in the vanguard oral medicine is appropriately considered as a specialty area of general medicine.


The unusual training that MIT has provided to students who have gone into medicine has made it possible for many to make substantial contributions to the profession - at the teaching, research and practitioner level. MIT-trained students are in an equally good position to bring their talents to bear on the field of oral medicine where the opportunities in research, teaching and practice are wide open and the profession is clamoring for them.

The progressive schools of dental medicine are anxious to

attract qualified students from MIT for the regular dental programs and in some cases for combined medical-dental programs leading to the MD-DMD degree and dental-research programs leading to the DSc-DMD degree.

Dr. Henry M. Goldman, Associate Director of the Boston University Medical Center and Dean of the BU Graduate School of Dental Medicine will be at MIT on Tuesday, November 14 at 4 pm in Room 7-102. He will describe the combined programs offered at BU. All interested are urged to attend. Further information can be obtained from the Pre-professional Advising and Education Office (10-186, x3-4158).

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Court delays decision in registration dispute

By Bert Halstead

The status of students attempting to register and vote in Cambridge is still uncertain.

Many who tried to register earlier this fall were turned away, and filed appeals to be heard by the full Cambridge Election Commission.

Many of the appeals were also rejected, however, so the Civil Liberties Union of Massachusetts began court proceedings which would, it was hoped, result in a general decision allowing Cambridge students to register. Hearings were held last Friday, November 3, and Monday, November 6, before the Massachusetts Superior Court judge in Somerville, but the judge felt that the case demanded a more complete examination of the evidence than was possible at that time. He ordered that the four students directly involved in the court suit be given ballots, which would then be placed in escrow until the final disposition of the case.

Unfortunately, all the other students whose appeals had been turned down by the Election Commission were left without a franchise on Election Day. ACLU lawyer John Reinstein was unhappy about the turn of events. "It didn't give us a decision which would be generally applicable to students," who had

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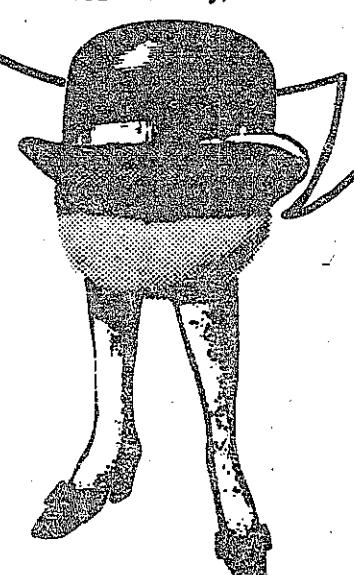
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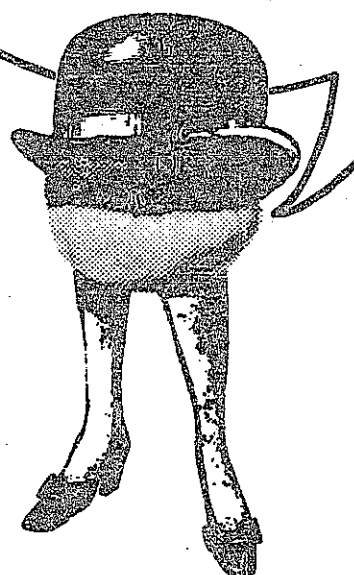
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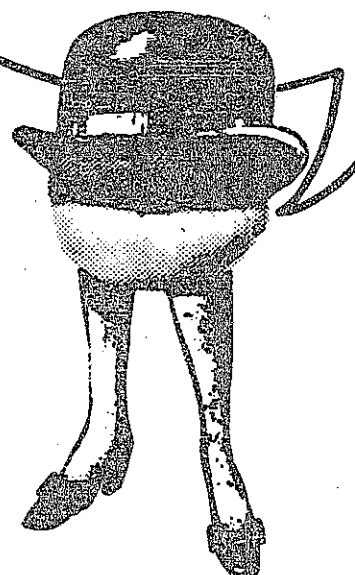
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Freshmen get chance for different education

By Bert Halstead

The room is silent. "A novel will be published in England next year. Write a review of it" the blackboard suggests. A smiling Professor L. Lawrence Bucciarelli strides to the door and explains, "This is Concourse!"

Indeed it was Concourse, and the occasion was a "Techniques of Disciplines" session, a weekly feature of this novel program, which serves as an alternative to the traditional MIT freshman curriculum. Freshmen who opt for Concourse take few, if any, other courses during their first year at the Institute, and consequently are able to devote their full time to the Concourse academic work. There are three or four organized three-hour sessions a week, with an occasional all-day meeting. The sessions are of two types: General Meetings and "Techniques of Disciplines" sessions. In addition, there is the Concourse Forum, held on Wednesdays from 3 to 5.

One of the central ideas of Concourse is the concept of theme-based learning, in which some particular theme is explored from a variety of viewpoints, both scientific and humanistic. The main embodiment of this approach is in the General Meetings, held two or three times a week. They consist of "lectures, discussions, seminars, debates, dramatizations, in a varying format - whatever seems appropriate to the subject matter for a given day." The general theme for this semester is "Sources and Contexts of Modern Scientific Thought." The goal of the General Meetings will be "to illuminate the historical, social, and cultural dimensions of science as an intellectual and practical activity." A recent session focused on the idea of atomism (the existence of atoms), first from the chemical and physical viewpoint, then switching to a study of early Greek philosophy, including the work of the first atomists.

The Techniques of Disciplines sessions are the closest things Concourse has to traditional classes, but there is a difference here, too. An entire three-hour (sometimes all-day) meeting will be devoted exclusively to acquiring skills in a single discipline, such as mathematics, physics, chemistry, or writing. For example, an all-day session on integral calculus was held on Halloween (!).

The Concourse Forum is a formal presentation by a guest speaker or member(s) of Concourse. It is open to the MIT community. The Forum's theme this term is the social responsibility of scientists. From nuclear science and an examination of the development of the first atomic bomb, the Forum will proceed to examine the issues facing biologists today, in an attempt to see if any of the lessons learned in the previous experience can be applied now. Another goal of the Forum is to introduce Concourse freshmen to "the reality of the MIT faculty and resources." One Wednesday, the Forum consisted of a play ("In the Matter of J. Robert Oppenheimer") staged by Concourse personnel themselves. Speakers at previous Forums have included Institute Professors

Emeriti Harold E. Edgerton and Jerrold R. Zacharias, and MIT President Jerome B. Wiesner. Attendance at the Forums has been good, and many previous speakers have come back to attend the Forum in subsequent weeks.

Concourse can give credit for Institute requirements such as 18.01-18.03, 8.01-8.02, 5.41, and 21.011-21.012. If students wish to explore other areas or do more advanced work, they may take an extra course outside of Concourse each term. For example, students who have advanced placement for 18.01 may take 18.02 or 18.002 during the fall term if they wish. In addition, students get a substantial amount of general elective credit for each term they are in Concourse. Credit for Institute requirements is awarded by means of a point system. Each assignment is worth a specific number of points, and may be turned in at any time after it has been assigned. Assignments are graded pass/no credit. Passing an assignment entitles a student to the specified number of points, while if no credit is given, the assignment may be resubmitted. One hundred points entitles a student to credit in a subject, while typically 150-200 points worth of work will be assigned in each area each term. Quizzes are also given, but on the same basis as assignments, i.e., the quiz may be re-done and resubmitted for credit at a later date. Still, the freshmen are exposed to "the quiz experience."

Naturally, Concourse has many more dimensions than these. A letter sent to all incoming freshmen stated, "The rest is up to you. Concourse will offer optional activities. You may par-

ticipate in them individually or in groups, as much or as little as you choose. Concourse will run a photography workshop, a writing workshop, and other activities centered on areas of mutual student-faculty interest. In addition, research opportunities exist with Concourse and with other MIT faculty under the UROP program."

Concourse was first conceived in the fall of 1969, in some informal discussions between Professor Bucciarelli and Professor David Oliver. It was further developed during the following summer by a group of several faculty and two graduate students, and the group offered a freshman seminar the following fall to test its ideas. The seminar, "From Earth to Moon: Fact, Fiction, and Fantasy," embodied the three principal elements the group had found to be important: theme-centered learning, discipline-based learning, and project-based experiences. The theme-centered learning consisted of individual group members presenting relevant material from their areas of expertise, somewhat in the style of this year's Techniques of Disciplines meetings. After about three weeks of this sort of learning, the seminar split into four groups, each undertaking a project such as a feasibility study of colonizing the moon, or a group-authored science fiction novel.

The report that emerged from that experience became the blueprint for Concourse. "We are a group... from widely differing professional specialties... We propose to carry out a pro-

gram... characterized by small size... and intense, continuous interaction of ideas and techniques from engineering, science, social science, and humanities... We have begun, and wish to continue, the development of a teaching community, in which we learn from each other and teach undergraduates collectively.

"We seek collaborative teaching, not 'turn' teaching, and a natural synthesis and contrast of humane and technical disciplines. In pursuing these goals we as faculty are frequently put in the role of students, a circumstance we find healthy. We want to foster students' abilities to set problems for themselves as well as solve them, and to choose problems intelligently, rather than accepting passively what they have been told to do."

The program was to consist of

two elements: General Meetings, much as they are this year, and "Working Groups, in which small student groups will choose and carry out major projects with final discretion over their own resources." The Working Groups were to provide the project-based experience which the Concourse staff felt would be so beneficial.

The proposed experiment received approval from the Institute Administration and the Committee on Educational Policy in the spring of 1971. The group was granted permission to enroll up to 35 freshmen for the 1971-1972 academic year, but was only able to attract fourteen. Nevertheless, the program went on as planned. Other problems developed, as the results of the Working Groups were in general disappointing, whether due to

(Please turn to page 11)

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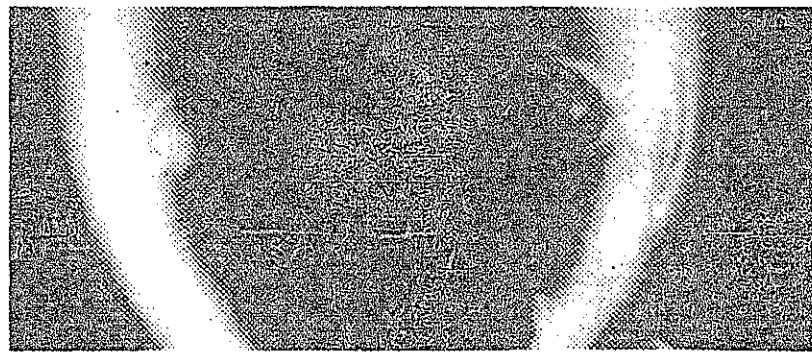
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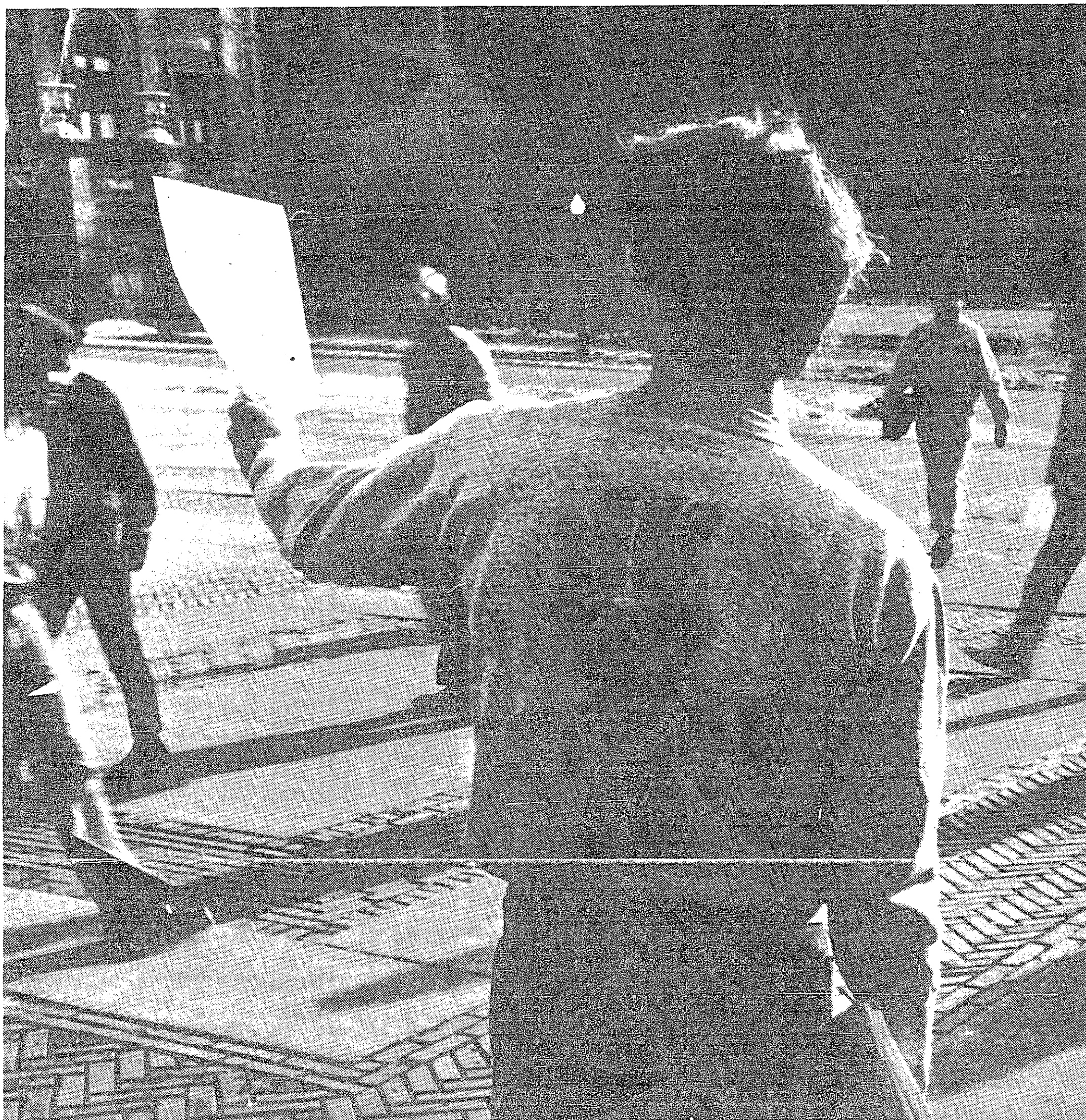
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And that's good. After all, our business depends on society. So we care what happens to it.



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Concourse offers alternative freshman year

(Continued from page 9)
 apathy, stubbornness, or panic on the part of the students. At one point student enrollment dropped to a low of twelve, but then several additional freshmen joined the program halfway through the year.

This year, due in part to the eager recruiting efforts of many of last year's Concourse students, there are 46 freshmen enrolled in Concourse, and the number has held steady ever since the first couple of weeks of the term. The Working Groups are no longer a required part of Concourse, although many such groups exist for interested students. Techniques of Disciplines sessions have been introduced to allow the General Meetings to be more exclusively dedicated to thematic material. The point system has been introduced to regularize the process of granting credit for Institute requirements.

Other things have been added this year. The Concourse Forum is new, of course, but there has also been a retreat in which members of Concourse went north for a weekend. More retreats are planned for the future.

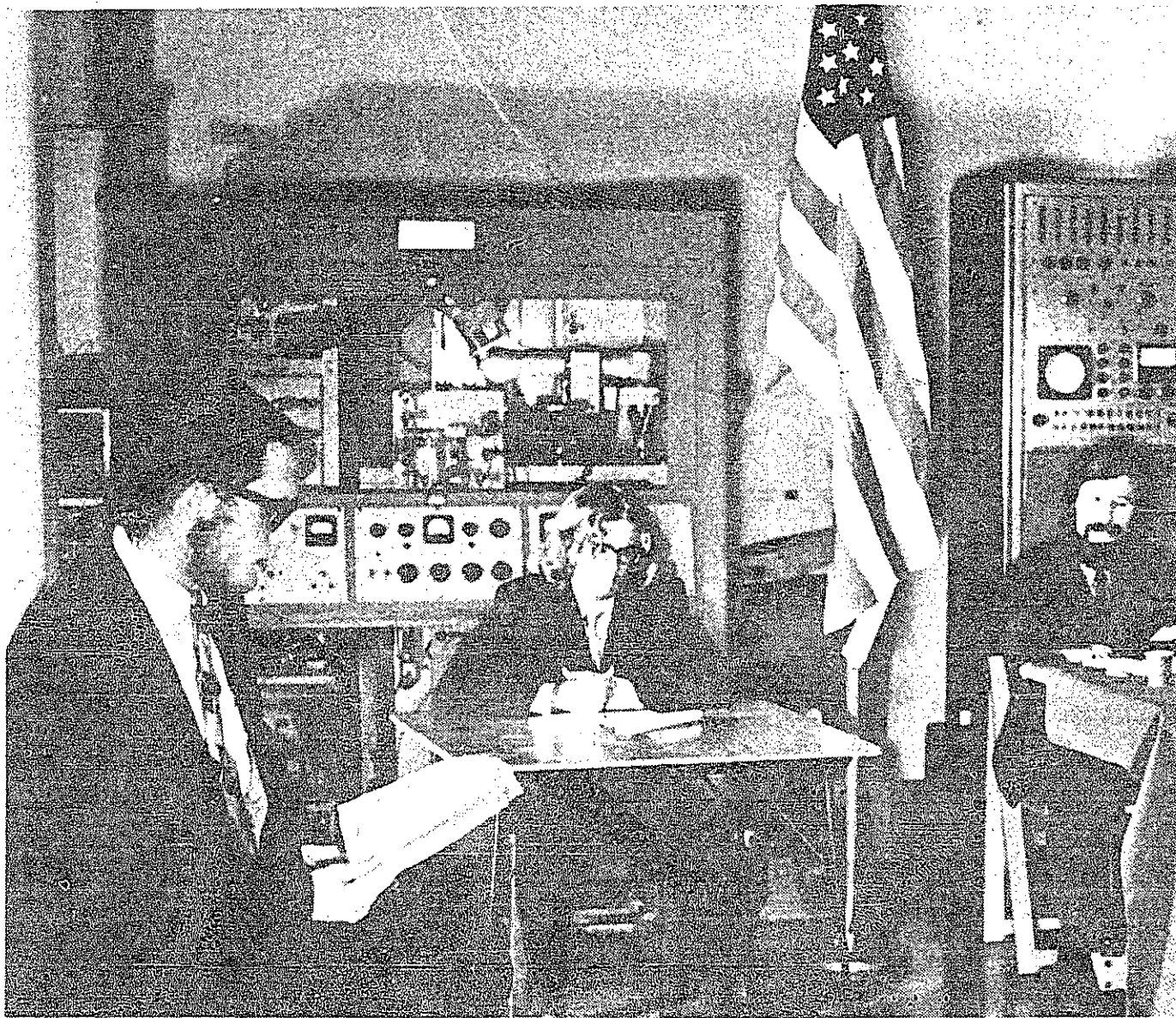
Social activities such as this are another important part of Concourse. In the course of the year there will be several organized or informal get-togethers including students and staff. "Students and faculty are coming to know each other well. Artificial barriers of age difference and 'professional' distance have been pretty effectively struck away... We believe that an atmosphere of friendliness and enjoyment-in-learning is crucial to our purpose, and that its relation to our particular educational strategy is not at all accidental." Naturally some students are more involved in these non-academic affairs than others. Says Bucciarelli, "Some treat Concourse just as an educational program. They come and they go. Others make it the center of their whole college experience."

A crucial question, of course, is how does Concourse stack up against the traditional freshman curriculum? How well does it prepare students for the remainder of their years at MIT? What is the nature of the education that it imparts? Part of the answer to

this question is not known, as there are no Concourse alumni who are juniors or seniors, and only a handful who are sophomores. The consensus of this year's Concourse freshmen seems to be that Concourse is a lot of work involving a lot of reading. There is some feeling that "I'm not learning as much physics as my roommate," or at least "I'm not spending as much time on physics as my roommate," but all seem to agree that they like Concourse better than the standard curriculum, and doubt that having chosen Concourse will work against them in the long run. There is also much enthusiasm for Concourse's thematic nature.

Keeping up with the math and science part of the traditional freshman curriculum is a problem that has faced Concourse since its inception. Humanities come into Concourse on an equal footing with science, or as Professor Nancy Dworsky says, "not just equal but integral." This means that if freshmen were assigned the usual physics and calculus problem sets in addition to the extra humanities work, their time might be severely overloaded. Says Bucciarelli, "What material is in a course is really a value judgment on the part of the instructor." He feels that students may see their roommates spending long hours on physics problem sets and conclude that their roommates are learning more than they are, but it is the opinion of the Concourse staff that in the long run, their way of teaching science will work out at least as well as the standard Institute way.

Part of the idea of Concourse is that, instead of just mindlessly doing problem sets, students will sit up and look around for problems they find educational. Professor Brian Schwartz says they would like students to "see the whole Institute as a library" where "you can map out your own education." Concourse does not occupy a student every minute of the day, and definitely does not mean "just sitting in a corner." Students are encouraged to find out what the Institute has to offer, and consequently, according to Schwartz, "a lot of



Concourse students and staff read excerpts from the Francis Bitter National Magnet Laboratory and "In the Matter of J. Robert Oppenheimer." The esoteric equipment in the background belongs to the play.

Photo by Chris Cullen

students are into things they weren't into before."

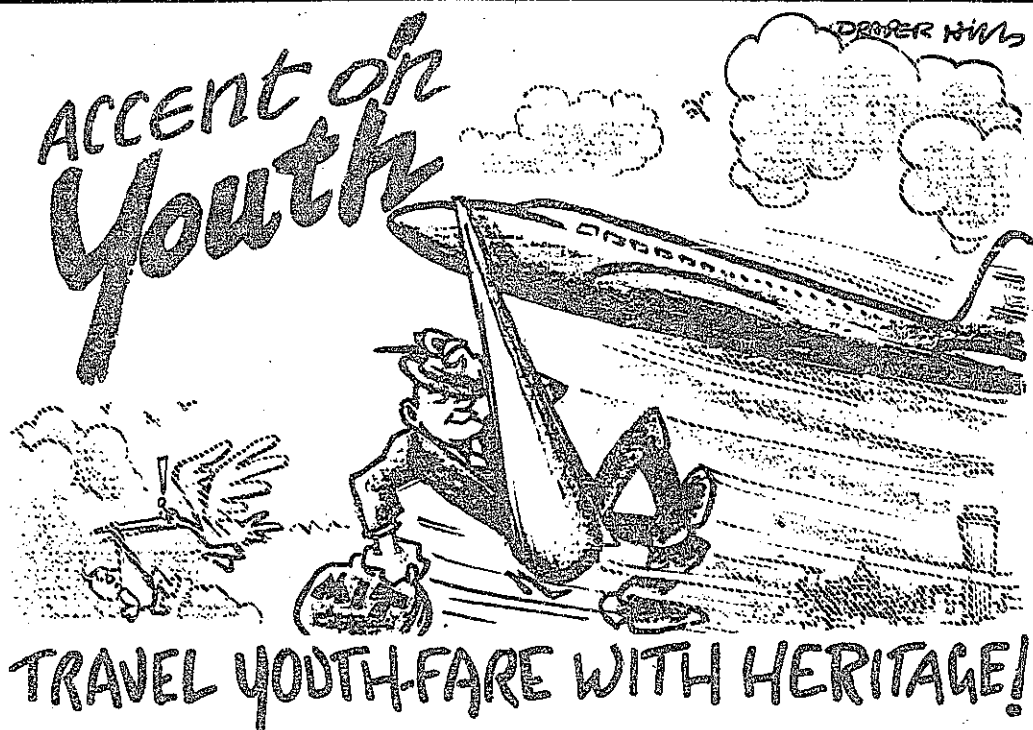
The staff agrees, however, that Concourse is not for everyone. In particular, it is not for those who come to MIT specifically interested in some profession, who want to start taking courses in that field immediately, and it is not for those who believe that humanities should not be an integral part of the curriculum.

For the faculty, Concourse is a totally new experience. "The program offers to faculty members a kind of teaching and intellectual experience I know I have never experienced before," says Professor Travis Merritt. "Unfortunately, so far, we haven't found enough ways of making informative contact with dozens of faculty members who would probably

be interested in doing the same sort of thing." The program seems to attract faculty who come into contact with it and the staff hope that there will some day be more than one Concourse. They are eager to offer their program as a model and themselves as consultants to any like-minded group of faculty. The staff, most of whom are young professors, are especially interested in attracting more senior faculty members. Hopefully Con-

course would evolve into something that could be joined by a faculty member on a half-time basis for two or three years, and then left again, if the faculty member wished.

What is to become of Concourse in the future? Well, in the final analysis, faculty and students "vote with their feet, by joining it." Professor Schwartz feels that "the only criticism of viability is that it survives and grows." So far Concourse has done both.



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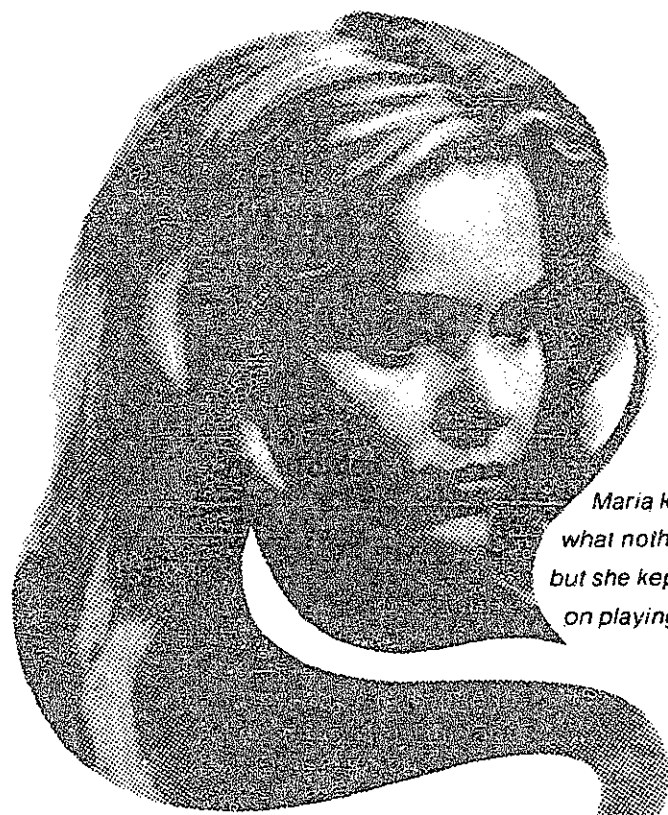
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Rothenberg considers educational creativity

By Jim Moody

Dr. Albert Rothenberg, Associate Professor of Psychiatry at Yale Medical School, spoke October 31 at the MIT Education Division Colloquium on "Is Creativity a Proper Goal for Education?" He discussed some of his current research on creativity, as well as people's general notions about the subject.

Rothenberg began by pointing out that "We live in an age of the smashing of idols," meaning that "the value-laden aura" of such terms as "creativity" impedes scientific discussion. He stated that creativity is a proper goal for education, but that this involves some redefinition of what is meant by creativity.

Educational psychologists began to do creativity research in the early '50s, in search of educational applications. This research effort was given a big boost by the launching of the Russian Sputnik, producing concern over America's seeming lag of scientific progress. A good deal of government money was poured into basic creativity research.

One of the leading creativity researchers, E. Paul Taurence, found surprisingly that high scores on tests designed to measure creativity in primary school children were positively correlated with high scores on scientific and other achievement tests. Creativity scores agreed better with achievement than the more traditional I.Q. scores.

Other experimental evidence was being amassed during the early '60s showing that creativity and intelligence were separate and discrete qualities. These findings, combined with the already-existing interest in creativity among primary and secondary school educators, spurred the development of creativity, a more malleable capacity than innate intelligence, as an important goal.

Another important sidelight of these studies of creativity and intelligence was that they depended on a distinction between creativity and the traditional concept of genius. The present notion of creativity can trace other implicit values and assumptions back to the educational upheaval of the 1930's. "Progressive" education, with its emphasis on freedom and spontaneity in class, was developed at this time. Creativity replaced progressivism as an acceptable goal, but the emphasis remained on freedom and spontaneity.

Rothenberg then pointed out that in spite of the large amount of interest in the subject of creativity, not much concrete knowledge is known about the role of creativity in education. Aside from the previous experimental findings, the only other principal contribution by educational psychologists has been to point out that unusual children may also be creative. This is important because, in education, conformity is often rewarded for its own sake, and unusual behavior is not tolerated at all. This is still not enough, however, because "unusual behavior by itself can not possibly be the key to creativity."

He then outlined implicit assumptions about creativity. First, creativity is not totally an innate capacity. "Poets are to some degree made, not born." Second, creativity is not necessarily a capacity of geniuses.

Anyone interested in considering creativity as a proper goal for education must ask about the concept of creativity he is employing and what he considers the essential function of education to be. For example, many who speak of creativity are often referring to productivity, the capacity to produce large amounts of research or ideas.

Rothenberg insisted that crea-

tivity and productivity are very distinct capacities. Creative people may produce only one or two works in an entire lifetime, whereas productive people may produce much research of a very common nature.

As another example, Rothenberg's own research has shown that there is no correlation between spontaneity in the expression of one's own feelings and creativity. Yet, the application of this notion, as a method for increasing creativity, has resulted in pre-school movements, T-groups, and the tendency for some university classes to focus on talking about themselves rather than subject matter.

A final example of the misconception of creativity is that, in Russia, the idea of applying science to creativity meant the training of artists and other talents through Pavlovian conditioning.

Thus, the question of whether or not creativity is a proper goal for education depends on what the concept of creativity is, and on the function of education. Rothenberg then explained his limitations on his "yes" answer to the above question by discussing his own research.

He focused on the thought processes of proven creators, actively engaged in the creative process. He did not assume in advance that creativity, as in great works of art, is necessarily continuous with that of the general population. Therefore, his findings do not apply to some general notion of creativity, to simple productivity, unusual behavior, or the ability to find alternate solutions to problems, but to proven creativity and genius.

One of the thought processes he found to be operating in creative thought, Rothenberg called "Janusian thinking," after the Roman god, Janus, whose many faces were turned in different directions. Janusian thinking is "the capacity to conceive and utilize two or more opposite or contradictory concepts, images, or ideas, simultaneously."

"The possibility that two or more opposites of contradictions can exist side by side, or be equally true at the same time is actively postulated in the creator's mind, and leads to inte-

grated concepts, images, and creations." This type of thinking plays a constant role in the creative process, and seems to be unique to creative people. Examples of human creations involving integrated contradictions are: Yin and Yang (Eastern philosophy), Nirvana and Sansara, God and the Devil, Dionysian and Apollonian, and the dual instinct theory of sex and aggression.

Rothenberg cited two examples of this Janusian thinking in scientific creation. The first of these was the discovery by Watson of the double helix structure for DNA. Watson's description of the discovery makes clear that the actual breakthrough consisted of conceiving simultaneously identical but spatially opposed forms. This breakthrough was not the complete answer, and a whole set of reactions had to be worked out to give it validity, but it was the creation that enabled the final concept.

Another example was Einstein's general theory of relativity. His Janusian concept was outlined in a 1919 letter. He conceived of an object in a gravitational field as both falling and being at rest, depending on the relative position of the observer.

This process of Janusian thinking is not similar to any previous concept of creativity, for it is the active and simultaneous conception of contradictory thoughts, rather than the association of unrelated entities. "It is the result of directed thought and not merely the coming together of associations." "It is a logical postulating of what on the surface seems illogical." "It results in a leap of thought... and is seldom the result of any chance or haphazard process of thought, but requires the creator's direct intention to create something."

Another creative thought process, identified by Rothenberg, is "homospacial thinking," and results in the integration of the simultaneously held contradictions. It is the process of "conceiving two or more discrete entities occupying the same space." This leads to the formulation of new identities, by superimposing such things as

tables, chairs, human faces, and written words in the mind's eye.

This is a rapid conception, and quickly breaks down into components, but these components are aspects of the newly created entity. A metaphor is a prime example of the functioning of this process. In the phrase, "The road is a river of moonlight," for example, three visual examples are superimposed in the mind. Homospacial thinking integrates the Janusian concepts.

This type of thinking is another new concept in creativity, and is different from both analogical thinking and the process of achieving a new gestalt, two types of thought previously considered to be important in creative thinking.

Rothenberg is not at all sure that the general population is capable of Janusian and homospacial thought, because all of his subjects were proven creators, geniuses. He concluded that we must design our educational system so that students with these capacities will flourish. These processes of thought can be used as models for education, and their respective emphasis on structure will certainly result in good problem-solving technique. Another aspect of these processes is their emotional nature, which again should not be overlooked in education.

Consequently, a focus on structure in education provides a way to make creativity a goal, as well as satisfying broader emotional purposes. Also, educational procedures that encourage personal involvement, and do not discourage the emotional aspect of thinking, encourage problem solving, as well as creativity.

A focus on structure "involves a rigorous, disciplined approach to the subject matter of a field... in order to understand the underlying patterns of thought." It also involves examining basic assumptions. Rothenberg has taught highly successful courses at Yale which have emphasized these two factors.

In closing, he stressed that the basic approach toward facilitating creativity, productivity, or good problem solving, is "not at all a free-wheeling, loose, tolerance-for-everything atmosphere." There should be some tolerance for some unusual thinking, or approaches to problems, as well as emotional involvement, but "rigor, intellectual discipline, and hard work are vitally important for the creative person, the potentially creative student, and the good problem solver."

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