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California Tech

Associated Students of the California Institute of Technology

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Volume LXX

Pasadena, California, Thursday, November 7, 1968

Number 7

GIRLS COMING TO TECH!



Coeds are sure to get a very warm welcome at Caltech. But will there be enough to go around. Don't fight boys!

Board of Trustees Vote Coeds For 1970

The Board of Trustees has now approved girls, in principle. President Lee A. DuBridge announced Monday the approval of a proposal to admit women to the undergraduate school, for fall 1970 at the earliest.

At a Board of Trustees meeting last weekend, a proposal voted by the faculty last year was finally approved, effective pending "a definitive plan for its administration and implementation," according to Dr. DuBridge. He estimated that not more than five per cent of the incoming

freshman class would be female, a number about equal to the percentage of coeds in the M.I.T. undergraduate school.

Not More Than 5%

The women will be enrolled both as freshman and as upper-class transfers, on the same academic qualifications that apply to male students. There are still fairly few women interested in pursuing a course of study in science and engineering, Dr. DuBridge stated, but many are "extremely able and will easily compete with the men."

"The action of our trustees will open up opportunities to women of exceptional ability who can profit by a Caltech educational experience, and will encourage more women to seek careers in science and engineering.

"We feel that in this action Caltech is responding to a national trend toward coeducation at the college level," the educator continued. "Over the past year 18 American colleges that formerly were all male and 35 that formerly were all female have become coeducational."

Increasing Rate

This trend is due to the fact that women are playing an increasingly important role in business and industry, Dr. DuBridge pointed out, adding that broader educational opportunities should be made available to them so that they may better fit themselves for this role in what has become a coeducational society.

"The presence of women graduate students on campus since 1953," he noted, "has confirmed the expectation that women can add much to the intellectual life of Caltech. Forty-five of the 762 graduate students enrolled this year are women."

Action Unanimous

"The unanimous action of the trustees follows the recommendations of both the faculty and student body for Caltech to break from its tradition of being a monastic type of institution and to become coeducational," Dr. DuBridge said. "A recent Princeton University study shows that more than 80 per cent of the high school men who rank in the upper two-fifths scholastically feel that coeducation increases the attractiveness of a college.

"Plans are now being prepared to build a new dormitory for women on the Caltech campus, with the hope that it will be ready by the fall of 1970. It is expected that such a dormitory will require funds approximately in the amount of \$650,000."

Move To Push For Minority Enrollees

by Berto Kaufman

This year there are no black freshmen. In an undergraduate enrollment of 700, CIT has only five Negroes. Not that there has been discrimination in admissions against qualified minority applicants—quite the contrary. Clearly, however, the policy of the past has not been strong enough to deal with the problem, so major new policy changes are being considered.

In its report of June 24, 1968, to the Faculty Committee on Relations to the Community, the Sub-committee on Admission of the Culturally Deprived set forth a goal of increasing the proportion of disadvantaged students to at least ten per cent within the next six years. There has been some action, of late, to implement their proposed methods of

achieving this goal, as well as other suggestions.

No Interest

One basic problem is the apparent lack of interest in scientific and engineering careers, among well-qualified minority students. When letters of encouragement stressing the availability of financial aid (in number about 100) were sent to secondary schools specially selected for high minority enrollment and quality of the school, in order to maximize the probability of success, only three minority students responded by making application for entrance, according to Dr. Jerome Pine, a member of the Admissions committee. None of these, as it turned out, were Negro. According to Peter Szolovitz, student member of the Admissions Committee, all three of the applicants were admitted, but both he and Dr. Pine characterized the project as an unqualified failure. Both feel something more vigorous is needed.

Recruiting, in particular, has been suggested. According to Institute President Lee A. DuBridge, active recruiting has never been done. Dr. Peter Miller, Director of Admissions, sees it as necessary, although agreeing with Dr. DuBridge's opinion that even the most intensive program may not show great results alone.

According to Dr. Robert Huttenback, a member of the Admissions Committee, that body has voted unanimously that the Institute acquire an officer in the admissions office to recruit. Starting in the Pasadena-Los Angeles area, his duties would consist of talking with counselors, teachers, and, most important, bright underprivileged students with the purpose of encouraging their interest in science or engineering and interesting them in CIT specifically. This officer would be backed up by a faculty committee on the matter. As Dr. Pine stressed, there would be considerable overlap between those who recruit a student and those who consider his admission. More manpower than is currently

Women Trigger Reactions

BOD

Anyone objecting to the plans for admitting coeds disagrees with the B.O.D.

Joe Rhodes believes that "obviously it's good," but sees no reason why transfer students cannot enter next year, since housing is not a major concern — private accommodations are easily arranged.

Mike Garet concurs that "obviously it's great," but dislikes segregating the women in a separate dormitory; he suggests incorporating them into present houses if possible. An exchange program with other colleges may work better than a total transfer system.

Let's keep those women coming!

Faculty

Most of the faculty supported the admission of undergraduate women at Caltech and are happy that the Board of Trustees has given its approval. Dr. Jurg Waser, professor of chemistry, said "It's a good step forward" and that, although any departure from practices used for a long time create some problems, these problems can be solved. Dr. Kenneth Eells, institute psychologist, said it would bring a very considerable improvement in student life here.

Dr. David Wood, acting associate dean of students, said he is very happy with the approval. There should be a problem getting there shouldn't be a problem getting

(Continued on page 5)

Dabney Endorses Interdigitation

Caltech Welcomes First Lady RA

by John Healy

Can a marriage survive in a student house? How would you like a woman RA (resident associate)? Situated high atop everything in Dabney house, John and Sandy Webb are giving the answers.

Caltech first interested John Webb when he was an undergraduate in Sydney, Australia. He applied to M.I.T. also, but Tech responded in a more friendly manner and let him enter last March, corresponding with the end of the Aussie school year.

Webb met his wife in Sydney, where she was a house mother for 120 coeds. Their arrival in March allowed the newly married couple to settle down; Webb did some leisurely research.

When he heard about the offer for a married student to be RA, Webb thought it would be a good opportunity to meet undergrads. As an ordinary grad, he might rarely meet or have anything to do with the famous Techers. The idea of being the first mar-

ried couple living on campus was also appealing.

Time to Be Alone

The only hesitation was caused by the fact that they had only been married a short time, and perhaps such a situation would leave little time to themselves. But the Institute remodeled the old house rooms into an apartment, in which they can be autonomous if they so desire. This arrangement looks great; they are near students, but still have the privacy necessary to preserve the getting-used-to-being-married period.

Webb is doing research in the chemistry department on inorganic proteins; he is taking Ch125 and Bi270 and T.A.-ing Ch41. Mrs. Webb is a technician in the biology department. Webb enjoys the freedom in lab work and faculty contact.

Yeah, Yeah, Yeah

Noise is bothersome sometimes late at night, but otherwise the Webbs enjoy their stay in Dabney house. The students do not

seem to act differently when they are around. Any "softening" effect caused by a woman's presence has yet to be noticed. Webb says the "groups are a bit tighter" here than in more cosmopolitan Sydney. Mrs. Webb likes "the fact that the house is student governed." She doesn't have to enforce a set of rules or solve discipline problems, which she had in her former position. It is easier to relax and converse as equals under liberal control.

In regards to food, Webb comments that it's the "best institution food I've had," but it remains institute food. Eating is a passive experience — the food appears; you eat the feed. Their kitchen comes in handy to break this routine. Mrs. Webb enjoys the much reduced cooking chores.

Student Reaction

Some examples of Dabney house reaction are: Stephen Horner - "certainly makes life around here different; I think she's a good influence;" Jon Lut-ton - "I think she's pretty neat;"

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Errata

An article in last week's issue stated that \$4000 in "seed funding" was required of ASCIT for the Ford Foundation grant to the ASCIT Research Project. In point of fact, only \$3000 were required, so the \$1000 asked of the YMCA is not part of this required amount. The quote attributed to Joe Feng is incorrect.

There is an official Institute policy which prohibits undergraduate from withdrawing from ASCIT. This policy is based on the fact that all students agreed implicitly to remain a member of ASCIT when they first entered Caltech. All undergrad students must pay their ASCIT dues for their four years at Tech.

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Editorial

Heterogeneity Needed

The cross-section of undergraduates on this campus, though narrowed by the nature of the Institute is narrower than it could be by two under-represented groups: girls and ethnic minorities.

Last weekend the Board of Trustees acted intelligently in agreeing to the admission of women undergraduates in the near future. This action brought joyous shouts to the lips of many undergraduates, especially among the two lower classes. We applaud this decision, but regret that the Trustees do not see the likelihood of significant sexual desegregation of this campus before 1970. Why cannot upperclass transfer students be accepted for next year, and live off-campus?

We hope that publicity concerning this decision is passed on to schools around the country so that potential freshmen will be thinking about Caltech as a possible place to attend. Moreover, we urge the Institute to go even further and involve itself in a campaign to actively recruit women as undergraduates. Otherwise, the ruling will be meaningless, just a statement of principle without substance.

Along with women, ethnic minorities, especially Blacks and Chicanos (Mexican-Americans) are grossly underrepresented at the Institute. In the past, nothing was done about this situation, but we have heard that this year the problem is being seriously considered. The Institute should not be afraid of taking a few "risks" to attempt to correct the situation. If it seems that special programs have to be set up to attract these people, such as intensive tutoring in the summer before their freshman year, and permitting students admitted under such a program to hold an Institute scholarship for five years, these programs should be instituted.

One of the first steps in setting up a program of recruiting students from so-called "culturally deprived" situations would be the appointment of a permanent Coordinator of Special Admissions, preferably a Black man. We hope that the Institute will consider this, and our other suggestions when action is taken.

Dave Lewin
Alan Stein
Jim Cooper

Give!

In a few days, your house president will be receiving pledge cards from the Caltech YMCA. Shortly thereafter, you, the reader, will be asked to make a contribution to the Y. At this point, many students will say, "Why should I bother to contribute an insignificant part of the Y budget, when they don't really need my money?" This attitude would be quite valid if the Y was able to act totally independent of student support. Unfortunately, this is not the case. The Y is dependent upon your contributions. A five dollar contribution from each student amounts to \$3500 dollars. There exist a group of faculty members known as the friends of the Y. Each member of this organization contributes \$75 to the Y. And each member looks to the student body to see if they support the Y. There are numerous other groups which contribute to the Y on a matching or proportional basis. Without your support much of this money might be lost. Remember that the Y works on an annual budget of around \$60,000, but that most of this money goes to pay set costs such as staff salaries. Certainly, the Y can get by without your five dollars but that will be five less dollars to go towards a sensitivity program, or a student film group, or a guest lecturer series (the Y brought you Sen. McCarthy—no one else did). Your contribution is needed. Let's demonstrate our appreciation of the Y by supporting it.

Dave Lewin
Alan Stein
Jim Cooper



Dear Fanny

Dear Fanny,

Several times in the past few months I have met a girl and started to date her, only to find out in a few weeks that she feels that I'm like a brother, but she still wants to be friends. I am fairly good looking and this bothers me. Is this because of me,

or do girls do this often? How can I avoid this? T.T.N.

Dear TTN,

Difficult to answer when I don't know what you are like as a lover. No. Girls do NOT do this often. Maybe if you noticed the way SHE looks instead of the way YOU look you'd be better off.

Letters

Feng Will Not Be A Public BOD Critic

Dear Sirs:

I was very unhappy to see that one of your reporters had made the following statement:

"... the \$2,000 ASCIT 'seed' funding has come under criticism on the grounds, as expressed by Joe Feng, BOD treasurer (sic), that ASCIT money is thus being used for projects not directly benefiting (sic) the student body at large..."

Whatever my feelings about this matter, I have never publicly criticized or condemned this expenditure, and I certainly would not have taken this position in an interview with a reporter of your newspaper.

In spite of my actions third term last year, now, if I felt strongly against any policy estab-

lished by the Board, I would not publicly criticize the policy, but would work to redirect the emphasis of the Board. Furthermore, I would not allow any such disagreement to impair the effectiveness of the office of the ASCIT Treasurer within either the Board of Directors or any of its subsidiary establishments.

I feel that the above quotation from the *California Tech* is irresponsible and probably based on an extrapolation of last year's events rather than any position I have currently taken.

Sincerely,
Joseph Feng
ASCIT Treasurer

Cooper's Ed. Note: Mr. Feng's statement that he would not publicly criticize the BOD, let alone make such a statement in this newspaper, is sickening beyond belief to us. It seems that Mr. Feng has at last come to a decision that it is easier not to speak out if you disagree with something—that unless you go along with the majority of people, you can get yourself in trouble.

There are changes which need to be made in this institution, the student body, and the student government; but unless people are willing to speak their minds and tell what they think is wrong with things, nothing will ever be accomplished, one way or the other.

Although Mr. Feng tells us that he would work to redirect the emphasis of the board, we fail to understand how he can honestly expect to do this unless he is willing to discuss his opinions publicly. Perhaps he has found that it is indeed easier for him to keep out of trouble if he keeps his mouth shut. Again, we are disgusted.

Stop Lethargy: See Lithographs

Thirty-five artists whose lithographs are products of the famous Tamarind Lithography Workshop in Hollywood, will display some of them in Dabney Hall. The exhibit is free, and hours of showing are 9:30 a.m. to 5 p.m. Monday through Saturday, November 4 through 9, and on Tuesday and Thursday evenings from 7 to 9 p.m.

Some famous contemporary artists will be represented in the exhibition. There will be lithographs by Jacques Lipchitz, James Strombotne, Sam Francis, John Paul Jones, Rufino Tamayo, Gego, Jacob Landau, Maryan, Ernst van Leyden and many others. June Wayne, founder and director of the Tamarind Workshop, will also be represented with her lithographs entitled "At last 1000II."

Lithographs have been collected and prized for centuries. Etchings by Rembrandt were prized by his contemporaries as much as were his oils. Lithographs by famous painters like Picasso are constantly sought after. Daumier, for instance, is known almost exclusively as a lithographer.

The Tamarind Workshop's craftsmanship target for excellence coupled with the artists' talent have resulted in some of the world's finest lithographs. The Ford Foundation-financed Tamarind Workshop printers combined talents with fine art lithographers to produce these enduring works of art.

Festoons By Kieffer Not Liked

Dear Sirs:

The doors and walls of Caltech are becoming festooned with announcements. This is extremely unsightly and encourages a real nuisance, such as bulletins being glued to the walls as they were last year. Statistically, the source of most of these announcements has been undergraduate organizations, of which the Alpine club is perhaps the worst offender. The number of dittos seems to be inversely related to the size of the group. Cannot these groups find some less presumptuous way of telling their thing? If there is a need for more or better placed bulletin boards, their acquisition should be the solution, not a half dozen papers taped on the buildings every hundred feet.

Hugh Kieffer

Gandhi Essay Contest Planned

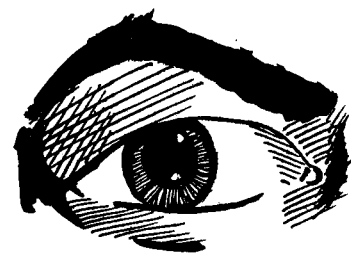
The Sub-Committee formed in India for the celebration of the Gandhi Centenary abroad will conduct an Essay Competition during the Centenary celebrations.

The subject of the Essay is GANDHI AND THE EMANCIPATION OF MAN. The competition is open only to foreign nationals and not to Indians. Terms and conditions for the competition are given below:

One economy class return air fare for a month's trip to India in October 1969 will be offered as a prize. The entire expenditure during stay and travel in India will be met by the Sub-Committee for the Celebration of the Gandhi Centenary Abroad.

The essay will be written in English, French, Spanish, Russian, or Arabic. The length of the essay should not exceed 8,000 words. The last date for receipt of entries is January 31, 1969. Names of prize winners will be announced on August 15, 1969.

Competitors must send their entries in a sealed cover to Miss K. Nair, First Secretary (Education), Embassy of India, 2107 Massachusetts Avenue, N.W., Washington, D.C. 20008.



Towering Eyeful

by Jim Cooper

Through the talents of one man, Caltech's Beckman Auditorium was transformed last Friday night into a Spanish Gypsy camp, seemingly complete with the clicking heels and castinets of Flamenco dancers.

The auditorium was not host to a Spanish dance troupe, however, nor was even a single castinet clicked. There was only one man and his instrument. But when that man is Carlos Montoya and the instrument is a guitar, that is all one needs to create the atmosphere.

Playing before a standing-room-only crowd, Montoya demonstrated why he is considered by many to be THE Master Flamenco guitar player.

No Coughing

With the skill and polish of the professional artist he is, Montoya held his audience spellbound through one piece after another. Indeed, even coughs were virtually absent while he performed.

Undoubtedly, part of the audience's attentiveness was a result of awe on their part that any one could move his fingers as rapidly and with the surety that Montoya did. In short, his ability was really snowy.

Not only did Montoya use both hands on both ends of the guitar to produce the Flamenco sound, but the guitar's body itself was made to serve as a percussion

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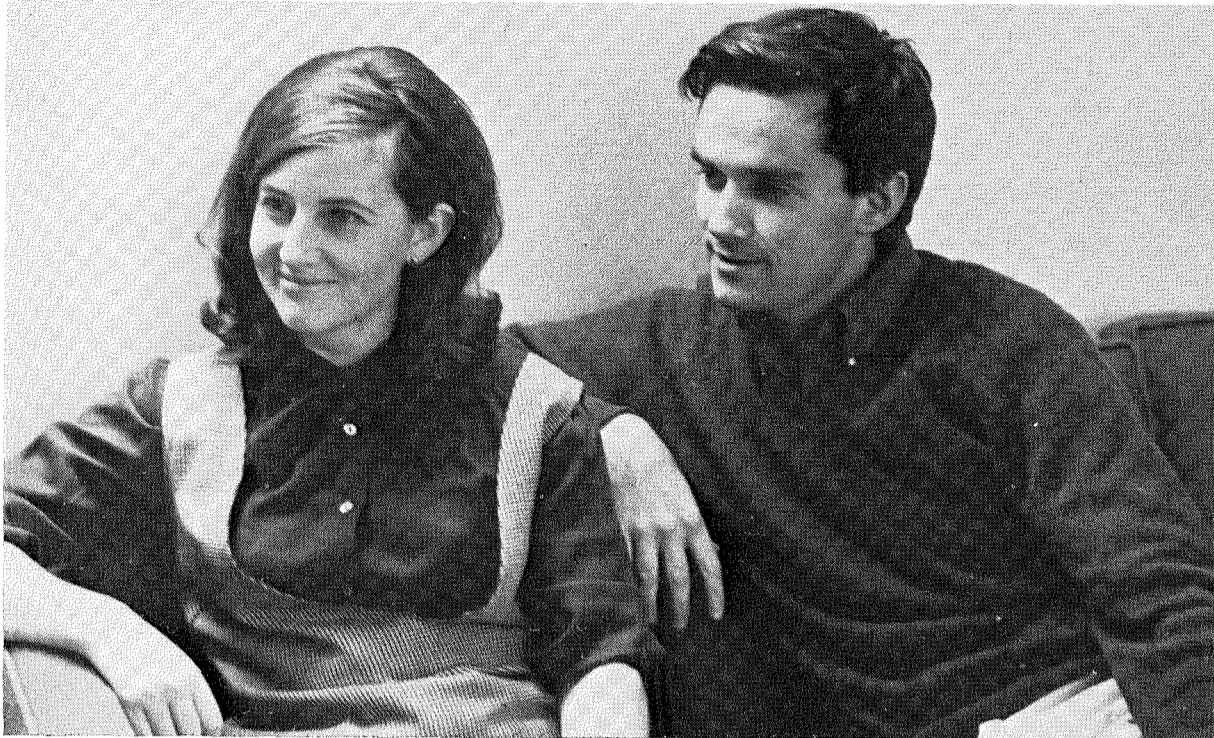


photo by Link

The First Family of Dabney House is living proof that coed dorms might not be all that bad.

First Lady

(Continued from page 1)

Bob Frisbee - "they seem to be pretty nice people;" Bob Goddard "she makes the U.C.C. meetings more interesting."

Alpha and Omega

Suggestions for introducing a married couple into student life have been around for years, but it was not until last year that the idea gained enough momentum, largely due to Dr. Huttenback's direction. Huttenback commented that the "extremely monastic" atmosphere at Tech calls for things which "soften life" here. There is "something a married couple can give that a single RA can't."

Last year the Faculty Committee on Student Houses (on which there were some students) approved the idea, set aside funds and decided design changes; but actual refurbishing did not begin until Mr. and Mrs. Webb had been interviewed.

Huttenback pointed out that the whole idea might not have been accepted several years ago (as it happened, there were no real objections from the Faculty Committee). But attitudes have changed; signs of this are the women SRA's and plans for ad-

stage the first time during "Toad" but returned to their seats when told that Cream would not continue until they sat down.

They remained for only a short time however and returned in greater numbers on "Spoonful." This was almost twice the length of the recorded version and perhaps the best number of the evening. Clapton's and Bruce's guitars seemed to be at the same time fighting each other and blending into a fantastic rhythmic and tonal scheme while Baker's drums merged with the two. The crowd's reaction was literally uncontrollable and eventually cut the number short when Clapton, Baker, and Bruce had to make a hasty escape to avoid being attacked on the stage.

The performance was of amazingly high quality considering the size of the auditorium and the fact that the crowd continually screamed and called out requests and finally rushed the stage twice. Cream is not a group likely to be forgotten, and certainly their last Los Angeles appearance did not hurt their reputation or appeal.

mission of coeds in a couple years. Huttenback regards the situation as an informal experiment because he really doesn't know what to expect. If the idea proves successful, other houses may have married RA's in the future.

Mount Olympus

Dabney house was chosen to be first because it contains a private entrance to the rooms. The remodeling changes are worth examining. Several walls were moved, wardrobe and storage compartments added, new lighting fixtures installed, wall-to-wall carpeting laid, and new furniture supplied. The outstanding change is the kitchen — it contains a full-size refrigerator, stove and self-cleaning oven, attractive counter facilities, and new cabinets. The only obvious remnant of past utilities is the archaic steam radiator. The porch is provided with new lights and patio furniture.

Sock It To Me

Comfortable living quarters may not make life in a student house great for a married couple, but with no commuting difficulties, convenient food service, and unpredictable students around, John and Sandy Webb certainly avoid a routine domestic experience.

ASCIT Plans 3c Musical

Once again talented and enthusiastic Caltech students will have an opportunity to exhibit their skills before the public in the form of the Fourth ASCIT Musical. Now well on its way to becoming a Caltech tradition, the Musical has, since 1965, provided students with an opportunity to participate in a rewarding project, work closely with other people (including girls) and sharpen non-science skills and interests. This year's production, Brecht's satiric *The Threepenny Opera*, is perhaps the most challenging yet undertaken. Plans for the Musical, which will be presented in May, are already being made and preliminary production work is under way.

The ASCIT Musical was first conceived in 1965. Every year since then a group of Caltech students, and a number of pretty girls supplied by PCC, have organized and produced a Musical Show for Beckman Auditorium stage. At first little more than a talent show, the Musical has matured steadily. Last year's original production, *The Castle*, was a complete musical play in every aspect.

Ambition

This year's play promises to be even more ambitious. *The Threepenny Opera* will be the first professionally written musical that Caltech has attempted. Producer Larry Shirley is confident that the experience of previous years, coupled with new talent on campus, will make the production of a professional musical a less difficult task.

The first steps are now being taken to begin the actual production of *The Threepenny Opera*. Anyone interested in doing production work should attend the organizational meeting of the production staff, to be held next Tuesday at 10 p.m. in the Lloyd House conference room, or contact the producer, Larry Shirley, in Ruddock. Production Work includes publicity, set design and construction, costuming, directing, assisting the producer, playing in the orchestra, and other related jobs. Try-outs for parts will be held during second term, but working on production does not preclude acting in the play.

Spoonful of Cream Sweet

by James Blasi

Cream made their final West Coast appearance at a weekend stand recently at the Forum. Their unquestionable musical ability combined with the fact that this was their last appearance sold out all 20,000 seats both nights.

All the songs were from their three albums despite Clapton's statement that the group would be recording for a new album on the tour. The first two songs,

"White Room" and "Politician," were almost identical to the recorded version, and the first departure came on Capton's solo in "I'm So Glad." The solo was longer and more complicated than that on the record, and brilliantly performed. The group seemed to be more unified during this number than any other, with the exception of "Spoonful."

"I'm So Glad" was followed by "Sunshine of Your Love" from the second album and "Crossroads" from the live section of the third. Clapton's voice seemed to be the smoothest of the three Friday night, as he demonstrated on "Crossroads," despite difficulty with one of the lines. "Traintime" featuring Jack Bruce on the harmonica and Ginger Baker's "Toad" followed with applause and screams from the crowd throughout both numbers. Baker's extended solo on "Toad" was ample proof that he is one of the best drummers in rock today. The audience rushed the

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Towering Eyeful Towers On

(Continued from page 2)
instrument in true Flamenco style.

All Amazed

As one of his three encores, Montoya demonstrated — to the amazement of all — how even the strings of the guitar could be made to sound exactly like a snare drum. The music was that used during funeral wakes in Seville, and Montoya's guitar trumpet calls and "snare drum" made it one of the most melodious selections of the evening. It was the one piece which most impressed this reviewer.

Other exciting numbers during the evening worth mentioning are "Fandango" and "Guajiras," both of which gave Montoya ample opportunity to demonstrate his ability to create or improvise as he went along, part of the Flamenco tradition.

A Strong Urge

If ever Montoya again appears in the area, I would most strongly urge that one attempt to hear him play, especially those who do not believe that the guitar can be a solo instrument.

And if you ever need a Spanish scene, don't hire a troupe of Spanish dancers. All you need is Carlos Montoya and his guitar. His artistry and the imagination of those who hear him will do the rest.

by Dave Linker

Cinematech has done it again! The program of last Saturday was superb. It was a tasteful combination of humor, pathos and tragedy.

First was the comedy: Charlie Chaplin's *The Tramp*. A tramp (Charlie) manages, by straddling the fence of right and wrong, to wend his way into the household of a wealthy farmer, and to win the favors of his daughter. The girl's beau arrives on the scene, however, and Charlie goes

Yellow U-Boat First Voyage

by Dave Dixon

The Beatles have again come up with an impressive contribution to the entertainment industry with the "Yellow Submarine." This 90-minute cartoon was inspired by the Beatles and was written by four writers including a Yale English professor. The Beatles also wrote four new songs for the movie and they have included some old standards, "Nowhere Man," "Eleanor Rigby," "All You Need Is Love," and the song which inspired it — the "Yellow Submarine."

This cartoon differs from the other Beatle T.V. cartoons in that the songs and story are interrelated and it is well put together. In fact, the story gives added interpretations to these songs. My two favorites are "Eleanor Rigby," which is set against views of city factory life, and "Nowhere Man," where Jeremy Boob—a genius who knows ev-

(Continued on page 5)

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off into the the cruel world to find his way again, alone.

The second film, *Nuit Brouillard* was excellent beyond expression. Taken in 1955 under the direction of Alain Resnais, is a story of the German concentration camps. He has captured what no other film-maker has been able to, the insanity of people being killed. He catches the absurdity of bodies being bulldozed into a ditch, and the pathos of a man carrying the grinning, half-naked body of his wife home on his back. This movie is a must for every thinking person.

The feature film was *The Silence*, by Ingmar Bergman. He uses his usual, obscure method to explore the area of lesbianism. The acting and Bergman's tech-

nique make a very realistic presentation. The philosophical impression of life presented ("a series of erections and secretions") is novel, but dismal.

One bad habit of Bergman's, however, is to have people involve themselves in deeply philosophical discussions at unlikely times. An example is a discussion between two sisters about their personal relationship, interrupting her sister, who was busy playing her trade as a prostitute. Otherwise, this was Bergman at his best.

Free refreshments were served as usual. Seat pads would be helpful. The next film will be *Relativity* by Ed Emshwiller on November 9. Plan to see it if you enjoy good art films.

Notices

TUESDAY . . . THURSDAY
TUESDAY . . . THURSDAY
TUESDAY

Lunch-time gatherings at the Y . . . drop by and see what's happening:

Thursday, Nov. 7, **Stefano Baragato**—who served a year and a day in a federal penitentiary as a conscientious objector during the Korean war, lived 9 years with the "Society of Brothers" in Paraguay and now is with the American Friends Service Committee in southern California.

Tuesday, Nov. 12, **President Lee A. DuBridge**—to discuss "Directions Caltech Might Take in the Next Few Years."

Bring your lunch . . . we've got coffee and the gathering to go with it. See you?

WHAT'S IN THE OLD OAKEN BUCKET?

Stick your head down there and look around. **TOTEM** meets Monday, November 11, at 9:30 p.m. in the Coffeehouse, 1101 E. San Pasqual. We're in the midst of selecting material for our first issue, so keep those postcards coming, folks! See Jack Falk (Dab), Bill Hocker (B1), or Dr. John Zeigel (Gates).

MATE FOR PRIZES

CHESS TOURNAMENT coming soon. Watch next week's Tech for details. Open to all. Prizes!! For

more information now, contact John Santarius, 131 Lloyd.

CALTECH YAF

A chapter of the Young Americans for Freedom, a nation-wide conservative youth organization, will be formed on campus shortly after midterms. Present members and all interested students should contact Jeff Ochsner in 225 Ruddock or leave a note in the Ruddock "N-O" mailbox.

EARTHQUAKE!

"The Impact of Earthquakes on Industrial Development" will be the topic of a lecture by Dr. George W. Housner, professor of Civil Engineering and Applied Mechanics at Caltech. The lecture will be held on Monday, November 11, at 8:30 p.m. at Beckman Auditorium.


SEE BEAVER ART FLICKS

Sat., Nov. 6 in Culbertson at 8 p.m. the Caltech film group will show the complete works of Ed Emshwiller. These eight experimental films include the famous *Relativity*, made on a Ford Foundation grant. Cost: \$1 or a group card.

ASCIT EXCOMM

The ASCIT ExComm meets on Thursday evenings at 10 in the Lloyd Conference Room. All wanting minutes of ExComm meetings should send a note to Roger Goodman in Blacker.

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"Fourth?"

by Robert Geller

One of the distinguishing characteristics of expert defense is knowing which tricks to take quickly. If declarer, given the time, can take enough tricks to make his contract, the defenders must try to cash the setting tricks immediately. If, on the other hand, declarer is unable to take enough tricks, the defenders sit back and wait for declarer to lead to them. These styles of defense are called respectively, active and passive.

North (D)

S 10 5 3 2
H Q 7 6
D 9 6
C K Q J 8

West

S A Q 8
H 9 3
D A K Q 10 5
C 6 5 2

East

S K J 9 7 6 4
H 4 2
D J 7 3
C 9 4

South

S —
H A K J 10 8 5
D 8 4 2
C A 10 7 3

North-South Vulnerable

North	East	South	West
Pass	Pass	4 H	Pass
Pass	Pass		

West led the king of diamonds.

When today's hand was played in a team-of-four match scored by international match points, West led the king of diamonds against the opponents' contract of four hearts. After looking at dummy, West realized that it was necessary to take the setting tricks quickly. For his bidding, South almost certainly had the ace of clubs. Therefore, if the contract was to be set, the defense had to take two spades and two diamonds. These tricks had to be taken quickly, since otherwise South would have been able to discard at least one of his four hypothetical losers on the board's clubs. To make such a high opening bid, South probably had the king of spades, which meant that it would be possible to take two spade tricks only if East led spades.

Underleads Ace

Since South, in accordance with West's hypothesis, had first round control of hearts and clubs, the only suit East could win a trick in was diamonds. West therefore underled his ace and queen of diamonds, hoping that East had the jack. West's hopes were fulfilled when East won the jack. At this point it was obvious to East that West's reason for underleading his diamond honors was that he wanted a spade return. So East returned a spade, which South ruffed, putting an abrupt end to the defender's hopes of setting the contract. At the other table, declarer also made five hearts, after the prosaic lead of ace, king, and another diamond. Although West's superior defense did not produce any gain for his team, it did give him a hand which he could tell his friends about.

Knockout Team Of Four

The Caltech bridge club is staging a knockout team of four tournament, to be held during the remainder of first term. This event is open to faculty, students, all other Institute staff members, and their guests. All matches will be twenty-eight boards long and will be scored by international match points. Each team will play only one match per week, with the time and place to be at the convenience of the contesting teams. All necessary equipment will be supplied by the Caltech bridge club. Teams

(Continued on page 7)

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Research Climbs Minority Recruitment Seen Possible

-So Do Executives

by Marc Aaronson

This week, members of the Research Project Executive Board were appointed by the ASCIT BOD. The Board's purpose will be to coordinate the efforts of the various task groups working on the smog problem, to execute the goals of the project, and to decide where, exactly, plans for the future should be headed. The RPEB will be directly responsible to ASCIT for all of its policies and actions.

Dave Perasso, executive director of the Board, sees as one of its main goals the creation of a group atmosphere and sense of unity throughout the Project. During summer a community feeling pervaded the research and a member of the project could go to any other member for help. Perasso hopes the Board will be a body which will draw the different researchers closer together.

er.

New Researchers

According to Perasso, "Our immediate plans are to involve people and to try discovering new areas of investigation. One of our most important responsibilities will be to draw up a new proposal for next summer's research scheme and to then present it to organizations like HEW with the hope of attaining more funds."

Other Board members include Pete Szolovitz, who is chairman of the Fiscal Policies Committee. His job will be to keep track of the Project's funds and to see that the budget is not overspent. Flora Boyar will act as secretary for the Board. Terry Moore, Jeff Ross, and Marc Aaronson are delegates from the Car Pool, Computer-Correlations, and Public Relations group respectively. Duncan Agnew, Lee Britton,

(Continued from page 1) available would surely be needed.

Different Feeling

Dr. DuBridge, on the other hand, feels that if a major recruiting plan is to be inaugurated it will amount to the establishment of a separate recruiting office, which should then be general in nature rather than confined to the underprivileged. The question may well come up, he points out, in connection with admission of women. Both Dr. Huttenback and Dr. Pine disagree with the alleged necessity for a special recruiting office.

Dr. DuBridge also feels that an obstacle to effective recruitment will very likely come from counselors, some of whom, he states,

Steve Gabriel, Saralee Larson, and Con E. Staisey are representatives-at-large. Any of these people would be most happy to discuss ideas presented to them about the smog project.

turn away recruiters but have welcomed CIT representatives, who have not, in the past, sought out individuals to recruit but have acted as "career advisors," to the students en masse. This situation is aggravated by the large number of recruiters seeking the qualified minority applicant at this time. Dr. Miller does not see this as a serious problem, however, although he grants that some counselors may feel this way. Dr. DuBridge does feel that students can make personal contact without arousing counselors' antagonism.

When in Doubt, Doubt

The greatest problem is as Dr. Pine put it, "You have to know what you're recruiting." Dr. Miller feels that teachers can best supply information on which students to seek, but recognition is admittedly a serious problem. According to Dr. Pine, recruitment, in order to be effective, must start earlier than the senior year, and to interest a high school freshman or sophomore in science or engineering is no harder than finding the brightest ones. The conventional tests, he claims, —and Dr. Miller includes the CEEB Exams in this statement— are written with a middle-class bias, making them ineffectual tools in the environment of virtually all underprivileged students. How then to find the brightest ones? Teachers, as Dr. Miller points out, can help, but much learning on this point is needed to develop better methods, according to Dr. Pine.

Dr. Pine also feels this will require that admission standards change, adapting to new information sources without lowering standards. At first, as Dr. Huttenback points out, there will be much risk and perhaps a higher percentage of failure.

Some programs have evolved to deal with this problem. These involve tutoring, less rigid program requirements, or perhaps a 5 or 6-year program. As to this last, Dr. Miller has expressed some doubts, considering it as an offer the well-qualified minority applicant could compare to that of another school. Dr. DuBridge cites the very serious change in curriculum policy it would entail. One proposal, that remedial preparation through

tutoring would be difficult unless the student is just below the admissions cutoff edge. There are already many opportunities for those far below the present Caltech freshman level.

Long Hot Summer

A summer of tutoring just before matriculation and/or the summer between junior and senior high school years are much favored, in particular by Drs. Pine and Huttenback. "Summer Institute" programs, as Dr. DuBridge remarks, are extremely expensive undertakings, and the faculty, who are paid for the summer anyway, are working on research projects. Drs. Pine and Huttenback feel, along with the aforementioned Subcommittee, that perhaps a quarter free for research, would help induce faculty members to participate. According to Dr. Miller, Claremont has such a viable structure involving faculty wives and even townspeople not otherwise related to the college. All agree that students can make a great contribution to teaching and tutoring in such a program. As to the cost, Federal funding may well be available, according to Dr. Miller.

Some, including Dr. DuBridge, have noted the strides other schools, notably USC and UCLA, have made in such programs, and some question the additional contribution Caltech could make. On the other hand, Dr. Pine feels that Caltech can offer a substantially different opportunity in mathematics, for example, which he describes as "the major hang-up" for many minority students. Dr. Huttenback feels that social or even political pressures could eventually necessitate such a program anyway, so that it had might as well be initiated immediately to do the most good.

All agree that the ASCIT Research Project, the Research Center, and the students at large can be extremely helpful in motivating, teaching, and recruiting minority students.

Dr. Pine has pointed out that no one solution will suffice, but a complex of the above, together with ideas not yet developed, is necessary to solve the problem.

Sighted U-Boat

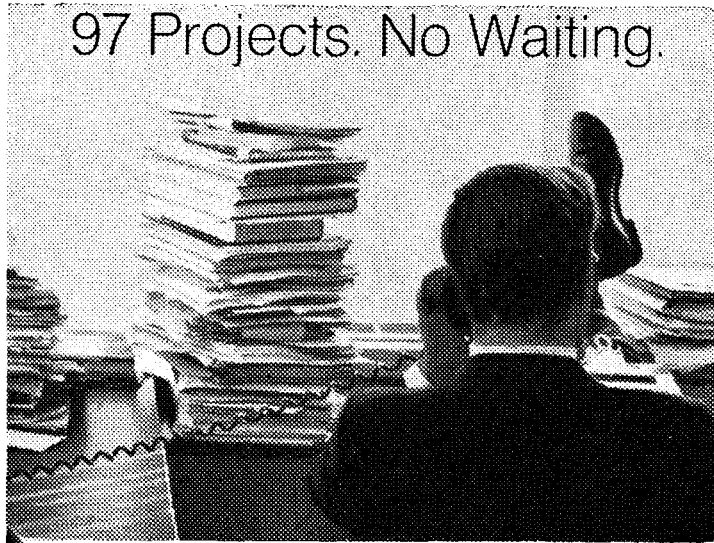
(Continued from page 4)

everything but doesn't apply it—is introduced. He is one of the more memorable characters from the film and is, with the chief of the Blue Meanies, one of the two most unforgettable characters.

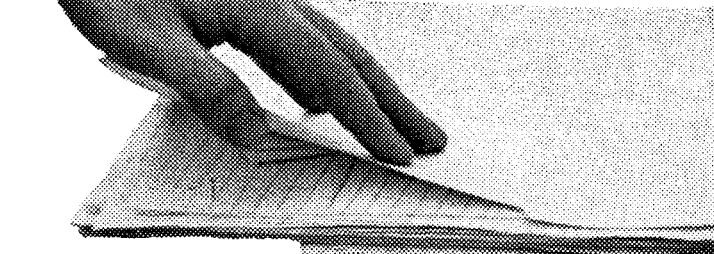
The plot is simple: Pepperland—a land of joy and happiness—is overrun by the Blue Meanies, evil monsters, who come in a great variety of shapes and sizes. The Lord Mayor sends Fred, a white-haired band leader, to get help. The help comes in the form of the Beatles whom he finally finds with Ringo's help. Then the Beatles climb aboard the Yellow Submarine and are off on a series of incredible adventures. These adventures and the cartoon characters that inhabit them could revolutionize the cartoon industry. They are products of the deep subconscious of the cartoonist.

The Beatles succeed in passing the test and arrive in Pepperland where they revive the population with music and drive off the Meanies. However, the Meanies are converted to Pepper tastes and become part of Pepperland. The film ends with the film's message, "All You Need Is Love."

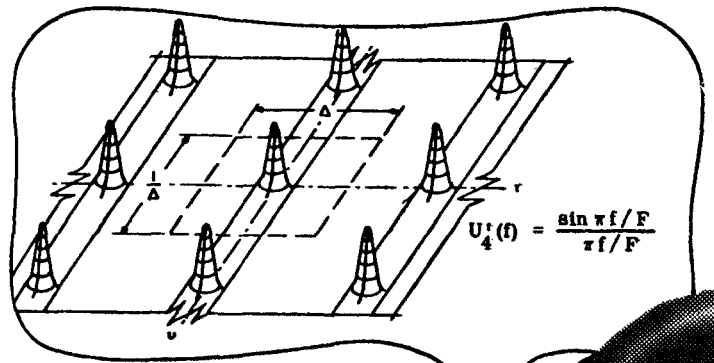
This is an enjoyable movie and is one of the better satires that I have seen. It is great fun.



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Undergrad Coeds

(Continued from page 1)

ting enough women to apply to make the student body more than 5 percent women. Dean of Students Paul Eaton supports the change and feels that the Trustees were going to approve.

Dr. Robert Sharp, professor of geology, said, "I'm glad the Trustees acted favorably." YMCA Director Wes Hershey commented that the move was the greatest thing that happened to Caltech. "It is only 40 years overdue, because it was 40 years ago that Caltech ceased admitting women." He added that the Y would do everything it could to help undergraduate women feel at home.

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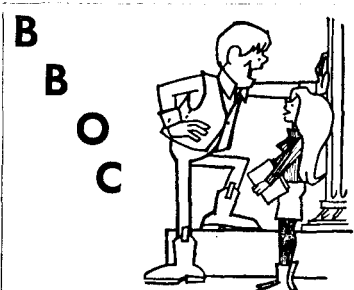
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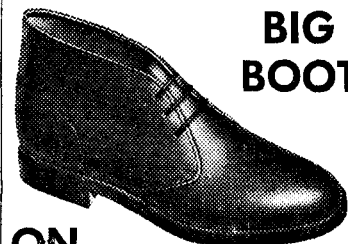
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Cranston V. Rafferty

by Schroeder

Last Friday the California Senatorial contest invaded an unsuspecting Caltech campus, as the Caltech YMCA hosted Ben Laurie speaking for Republican Max Rafferty, and Michael Cutler from Democrat Alan Cranston's headquarters, for a noon-time lunch-and-chat session. The two men engaged in general discussion among themselves, Y officials, and the half dozen Teachers who showed up.

Pat Davis of the Y kicked things off by asking the two men about their candidates' views on education in general. Laurie replied that Rafferty was basically a 'traditionalist.' Cutler said that Cranston felt that the state should let the professional educators run the universities, an obvious comment on California's Regents system, which he dismissed as the product of political appointments. He wondered what a university was for, if not for the education of the students enrolled there, and felt that it was necessary for the university to provide a system whereby dissatisfied students could be heard.

Too Far, Too Fast

After some general discussion, Laurie said that, at this point in American history, some people were trying to move too far too fast, and that many people were becoming afraid of this and overreacting. He said that both Rafferty and Cranston agreed that the state universities should keep Eldridge Cleaver out of their classrooms. Cutler responded that it was his personal opinion that Cleaver should be allowed to speak, on campus or off it. When asked whether Cleaver had the right to be heard, Laurie said that he certainly did, but not on the campus. It is necessary, he said, to draw the line between competent instructors and paranoids who would only endanger society. Laurie was asked who should have the power to determine where the line was to be drawn, but never responded to the satisfaction of his listeners, who seemed to feel that if today's students' ties to contemporary society are so weak that they can be shattered by

the impact of a Cleaver, that perhaps there is something wrong with the society deeper than a Cleaver.

Alienation Growing

Cutler then took a few minutes to discuss what he thought was the key issue of this campaign, what must be done about the increasing alienation of today's Americans, young and old, left and right, with the 'system.' He said that the system is no longer responsive to the will of the people. Some good men have conquered the system to come to power, such as John F. Kennedy, but they have had to reach outside the people running the system to obtain the talent necessary to run the government. He added that the present trend toward more than two parties is very destructive, that a multi-party system is a totally unworkable method of running a country. He felt that the most pressing problem to be faced in this election was how to bring the Americans who are in the far Left and the far Right back into the same, workable system. Laurie countered by stating that the real issue this year, and every year, was the situation of the poverty-stricken people of the world. Neither man made it clear how a vote for his candidate would further elimination of these problems.

The rest of the meeting generally consisted of debate between Laurie and the Teachers and Y staff present on the previously covered topics, with additional monologue from Laurie on the subject of Laurie. The arguments ended in a draw, as Laurie seemed unwilling to listen to anyone younger than himself, and his listeners seemed unable to follow his points.

Honest View

Eventually Laurie had to depart, but before the meeting broke up entirely, Cutler added a few extra points. He said that in his opinion Alan Cranston was not the greatest candidate imaginable, but Rafferty was an ass, and so Cranston must be preferable. This opinion is, of course, shared by many Californians, but Cutler's honesty in stating his

AaaHHH?



photo by Link

Two mystified Teachers stare in awe at a monolith which appeared on the Tech campus last week emitting strange sounds. Rumors that the monolith was, in reality, Spiro T. Agnew have not yet been substantiated.

opinion, even though he is a worker for Cranston, seemed to impress his audience. Although it is unlikely that anyone present altered their opinions any considerable extent, the discussion did produce some dialogue among the people present, and if future Y lunch meetings are as provocative as this one, they will be deserving of more student interest than this one received.

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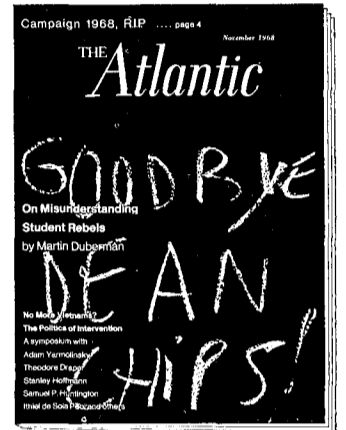
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More on the War Against the Young: Martin Duberman says those in power in our universities are blind to student principles. James Dickey on Allan Seager and Theodore Roethke. No More Vietnams? Is it even realistic to insist on this? ... Where does the Vietnam experience leave us in our relations with the U.S.S.R. and China? (The first of two excerpts from a conference at the Adlai Stevenson Institute in Chicago.)

Money For Hire

by Schroeder

Have you got a creative idea for improving something about Caltech that requires some money? Do you feel that you aren't getting anything for your student dues? Do you have an idea for a way-out social event? Perhaps your chance has come. The Associated Students, your student organization, has between five hundred and a thousand dollars of extra money at the moment (primarily from sources other than student dues) and has earmarked this surplus for use in 'special' programs to benefit all or part of the student body, through suggestions coming from the bulk of Teachers not deeply involved in ASCIT projects.

ASCIT President Joe Rhodes said that some students have suggested ideas such as refurbishing a storage closet into an alley lounge in a new house, an expanded house sensitivity program, and a new, non-official social event. He urged that anyone who had an idea get in touch with him or an ASCIT BOD member. A lot of Teachers have said that ASCIT does nothing for them — here is their chance to do something about it.

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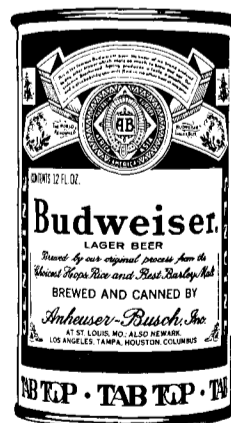
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Ducks Take Three

The Caltech Water Polo team proved its ability to snatch victory from the jaws of defeat this week by narrowly defeating a surprisingly strong Citrus J.C. and Redlands.

Traveling to Citrus Wednesday, the Techers were thrown off balance by the strange pool. Passing accuracy dropped and the scoring threat never materialized. However, ball control and swimming ability enabled the Techers to pull out a 6-5 victory.

Saturday, in protest of a seven a.m. breakfast of Instant Breakfast, Tech almost succeeded in

handing over the game to U of R. Tech outplayed Redlands, but its shots came nowhere near the goal. At the end of regulation play the score was tied 7-7. In the closing moments of the second overtime period, Ed Mikowicz stole the ball and made the most perfect shot of the game, putting Tech ahead 9-8. He immediately proceeded to foul out, but Tech played a clean game (for a change) and avoided giving Redlands a free shot. The game ended with 9 fouls against Tech (10 is a free shot), and the score 9-8. Credit must be given to the Redlands second string

for an outstanding job and near upset.

The Caltech water polo team was again victorious as they downed Pasadena City College, 9-5 on Nov. 5. Watkins and Wright dominated the scoring with Watkins scoring 5, Wright scoring 3 and Micowicz scoring 1.

Caltech took a 5-0 lead during the first half as they swam fast and used their heads in building their lead. They also had good ball handling as Mikowicz led in that department. There were usually more Beavers than PCC ducks around the goals.

The second half started well as the Beavers quickly scored 3 goals. Suddenly PCC scored 4 goals, one on a penalty shot. The Beavers failed to convert their penalty shot.

The final quarter was dominated by the Beavers. Yet, the Techers could only score one goal and allowed PCC to score a goal. The Beavers, except for a poor third quarter, played a good game. Goalie Ken Hansen played a fine game, stopping many PCC shots. Bob Hall, Mike Stefanko, and Mabry Tyson played good defensive games.

This week Tech plays two games here: Oxy Thursday and CHM (grudge match) Saturday 10 a.m.



photo by Link

A Beaver heads the ball away from an Oxy player as Eismann and Hall look on.

Oxy Downs Booters, 2-0

by Nick Smith

Last Saturday's soccer game against Occidental was one of those games where both teams would have done better not to show up. Most of the game was a comedy of errors, and it was almost a battle to see who could lose first. Oxy got a goal less than four minutes into the first period, and didn't score again until 4½ minutes into the fourth period. Both goals came on Tech defensive errors again, as the

weaknesses of Oxy and Tech offenses were matched only by both defenses. During the first period, the ball stayed in the center of the field except when Oxy scored, since neither offense could drive, and neither defense could stop drives. Had either team been playing even a mediocre game of soccer, that team would have had a resounding victory.

Caltech was playing without two injured players, Vesa Junkkarinen and Ron Stevens, and lost another at the start of the second half (Milt Johnson) due to a broken collarbone. All three of these were defensive players, and the effect of the loss showed.

For the first three quarters of the game, the coaches of both teams seemed amazed that their teams could play so badly. Both teams had put up better games in bad defeats than they were in this closely matched contest. In the fourth quarter, both teams seemed to wake up, as they doubled their number of shots in the rest of the game. Neither team need be ashamed of that quarter.

The next soccer game is this Saturday at Whittier, at 10 a.m.

Runners Lose

by Martin Smith

Lack of depth again hurt the Caltech cross country team Friday as Caltech wound up the dual meet season losing to Redlands 21-38. Lane Mason took first for Caltech in 21:54, a time this year no one approached on the new Caltech home course in Brookside Park. The next ten places were very closely bunched (although a few Redlands runners, including the first two, were not going all out) within less than 30 seconds. Caltech placers were Tardiff (6th in 23:24) and Higgins (8th in 23:36), who both went out fast and finished as strongly as possible, in their normal manner. Smith (11th in 23:42) found his slow start, fast finish technique biting the dust, while Hermeyer's steady pace 25:31 overcame Gagliani's fast starting 26:01. Paul Johnson, hampered by a foot injury, was unable to finish.

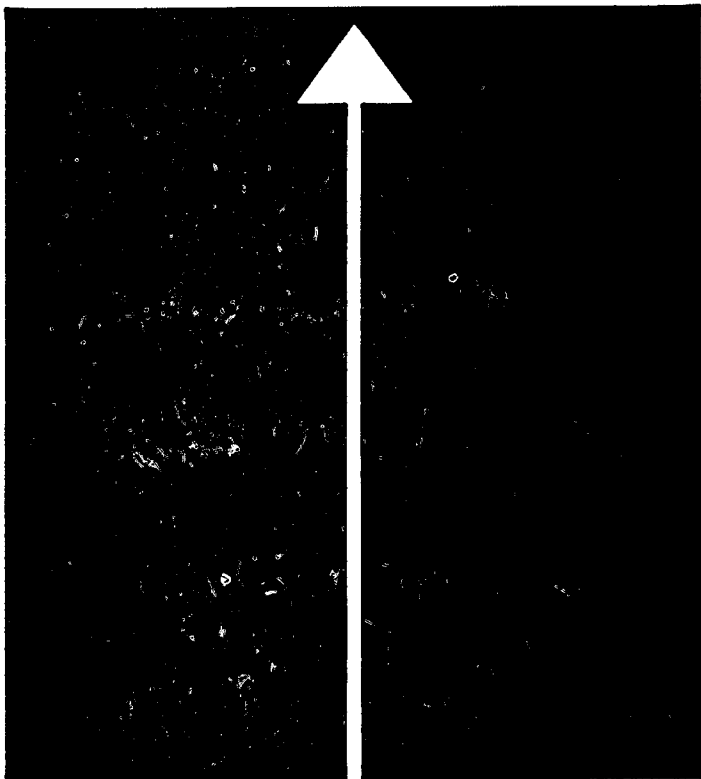
This weekend, the team's prospects in the SCIAC all-conference meet at Mt. San Antonio College are for an underdog battle with Pomona and Whittier for third, fourth and fifth places. Mason should finish in the top six, with Tardiff, Smith, and Higgins all between 15th and about 23rd.

"Fourth?"

(Continued from page 4)

may consist of four to six players. For information and entry forms, see either Bob Geller (Fleming) or Louise Hood. Entries close November 14.

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As gently as possible, Arlo dissembles the known world with new tales and songs from Alice's Restaurant. Live, in living color, and to be heard with ultra-high frequency and an open mind.



ARLO Arlo Guthrie RS 6299





Ph.D.'s at IBM

"The diversity helps you keep up to date."

"At IBM you're constantly working with people in a lot of different fields," says Gary Kozak.

A Ph.D. in analytical-physical chemistry, Gary's an IBM Development Chemist and Project Manager. "The diversity helps you keep up to date," he says. "You find out what's new in fields that affect your specialty, and you get a better idea of where you fit into the total picture."

Gary describes how people with different backgrounds work together on the solid logic technology used in our System/360 computers:

"An E.E. tells you how many conductors you'll have, where they go, and what should be at the terminals. An M.E. designs fixturing and automatic processes. A polymer chemist formulates insulators and says how they should be used. The metallurgist specifies alloy compositions. The physicist decides how to optimize a process for producing transistors and diodes. And all these people have to talk with each other and help each other."

An informal atmosphere

A constant mesh of people in different fields would be impossible in a rigid working environment. So we make sure ours is relaxed and informal. "Nobody stands over your shoulder," says Gary. "It's a great place for a scientist to develop his potential." That could be one reason IBM has pioneered such major advances as the injection laser and the Gunn effect.

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