

New Requirements Approved For Social Science, Chemistry, And Engineering

By Kevin Drum

Four required courses and four terms of laboratory work are now required for chemistry students as a result of action by the Institute Curriculum Committee and the Faculty Board. The changes, proposed by Dr. Sunney Chan, replace the old requirement of Chem 90 and a schedule to be worked out by individual students and their advisors.

Changes in the graduate program in Social Science and various changes in the degree requirements for Engineering Science were also approved at the Faculty Board meeting on Monday.

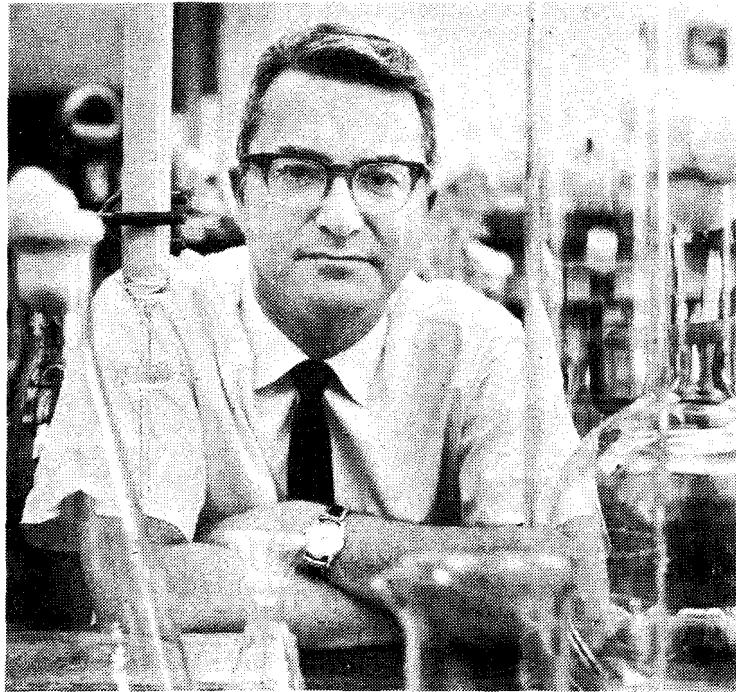
The requirement for the Chemistry degree now reads: "Undergraduates are required to pass Ch 14, Ch 21, Ch 41, and Ch 90 and a minimum of four quarters of laboratory work chosen from Ch 15, Ch 26, Ch 46, and Bi 111. Undergraduates in this option must also take chemistry courses below the 100 level for a letter grade with the exception of Ch 1, Ch 2, Ch 3, and Ch 90...."

In addition, the freshman requirement in Chemistry was changed from three terms of either Ch 1 or Ch 2, to three terms of Ch 1 or two terms of Ch 2 (nine units each term), or three terms of Ch 41.

The requirement for a minor for a PhD in Social Sciences was eliminated because of the fact that Caltech now has some Social Science grads. According to Division Chairman Robert Huttenback, when there were no students approaching the granting of the degree, the HSS Division "failed to pay any attention to the minor requirement or recommend its removal from the catalog." However, since the minor requirement has been eliminated in nearly all other fields, he requested that the minor requirement be removed. In view of the fact that the Social Science Department now has several candidates approaching the completion of their work without a minor, the change was approved.

Finally, various technical changes were made in degree requirements for Engineering Science. The changes are primarily intended to: eliminate the MS

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Dr. Norman Horowitz, the new Chairman of the Division of Biology
Photo-Floyd Clark

Report Suggests Modest Change In Size Of Caltech

By Henry Fuhrmann

"The size of the undergraduate student body should either remain constant or quite possibly decrease somewhat." This is the conclusion that the Faculty's Optimal Size Committee seems to be approaching, according to its chairman, Dr. Norman Davidson. In a preliminary report presented to Faculty Chairman R. E. Vogt, Davidson described his view of the committee's present findings.

The Committee has decided to limit its studies to the advisability of relatively small changes—e.g. minus 10% or up to 1000 or 1300—in the number of undergraduate students. In general, the belief is that the overall excellence of Caltech is related to its smallness, which is conducive to close interactions between the various factions of the community.

During the course of its four meetings, the committee has addressed the major issues that always seem to arise in discussions of Caltech's size. Among these issues are the taxing of the already strained facilities (housing, athletic, health) and insufficient funds (for scholarships). Clearly, such problems will be aggravated by student body increases, feels Dr. Davidson.

On the other hand, a larger student body will result in increased general budget funds, funds available for undergraduate education and improved facilities.

Recent trends in distribution of students, most notably the

shift towards electrical engineering and applied physics, and the resultant student to faculty ratio, are also among the concerns of the committee. According to Dr. Davidson, most of the faculty believe that the recruitment of new faculty should be based primarily on the intellectual promise in various areas, not on (the shifting) undergraduate interests. "Therefore, any substantial increase in the size of the undergraduate student body by freshman admissions will result in greater overcrowding of the popular options."

One suggested way to counteract this overcrowding of certain options is to admit first-year students into specific options. The present committee believes, as did the 1972 Optimal Size Committee, that such a plan is unfeasible. The committee does suggest, however, that Caltech undertake a vigorous recruitment

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Y Noon Discussion

Hardy Recalls '61 Rose Bowl RF

By Alan Silverstein

And Monday fifteen years ago, about fourteen Techers from Lloyd House gave Caltech nationwide fame by putting Caltech's name into one of the card stunts at the Rose Bowl Game. The story of the "Rose Bowl RF," that masterwork of pranksterism unsurpassed (some would say) in Tech history, was retold last Wednesday by one of the leaders of the plot, Dr. Lyndon Hardy, '62, of TRW, was brought to campus by the Y for a well-attended noon discussion during which he provided inspiration to future tricksters by recounting the details of the scheme in a very amusing fashion.

The first question Dr. Hardy addressed was "why did we do it?" It seems that "at that time, Lloyd House was exactly one term old... there was a tremendous

Norman Horowitz Named Biology Division Chairman

By Tom McCabe

Dr. Norman H. Horowitz has been named by the Board of Trustees as the new Chairman of Caltech's Division of Biology. Dr. Horowitz's nomination was approved by the Board last Monday, and the official announcement of his new position by Acting President Robert Christy is expected to come today or early next week.

Dr. Horowitz will succeed Dr. Robert Sinsheimer, Division Chairman for the last nine years, who will be leaving Caltech next year to become chancellor of the University of California at Santa Cruz.

The choice of Dr. Horowitz only temporarily completes the task of a search committee formed last Christmas to find a new chairman. The committee, chaired by Dr. Horowitz himself, originally had not expected to have to find a replacement for Dr. Sinsheimer until 1978, when his second five-year term as Chairman would be finished and

he would have to step down. They had planned to be able to consider several non-Institute as well as Institute candidates in the eighteen month interval before choosing. However, with the appointment of Sinsheimer to the chancellorship at UCSC, and Sinsheimer's subsequent early departure, the committee's timetable had to be drastically pushed forward. As a result, according to Dr. Horowitz, it was no longer possible to consider a non-Institute person for the position, since any such person would require time to research the campus and the job. However, having previously talked to the Institute personnel under consideration, the committee also knew that none of them would really be able to assume the Chair on such short notice. The committee therefore urged Dr. Horowitz to take the job, and he agreed, for the next three years, until he must retire at age 65, according to Institute policy for

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Carnation And Prize Scholarships Awarded To 41 Caltech Students

Forty-one students have been awarded Caltech Prize Scholarships in the expanded merit scholarship program. The scholarships are based principally on GPA and to a lesser extent on outstanding extracurricular activities. A total of about \$42,000 was distributed.

Candidates for the scholarships were nominated by faculty members. In addition, anyone who wished could apply. The initial screening of applicants was done by a committee of seniors selected by ASCIT last month. However, although the awards were meant to "identify true excellence, rather than simply reward the holders of high GPA's," many felt the final list of

scholarship winners indicated that exactly the opposite was the case.

At the BOD meeting last Wednesday, ASCIT President Bert Wells brought up the possibility that the student recommendations had not been taken seriously enough. According to Ann Orel, the chairman of the committee, about six people who were on their original list were either left off or replaced on the final list. Wells and others claimed that the people left off were the ones with modest GPA's but strong extracurricular merit. "It seems that our altruistic notions of merit were not the faculty committee's," he

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Inside The Tech

An explanation of the proposed ASCIT Bylaws revisions.

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The still further adventures of Sandy McCorquodale, this time finding an entire island full of McCorquodales.

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The Glee Club wraps up its concert season with its annual Spring Jubilee.

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Commentary

The Editorial Page

Bylaws Changes

The Excomm has recommended, and the BOD has approved, amendments to the ASCIT Bylaws in five areas. These amendments will come up to a vote on Tuesday, May 31. We recommend a Yes vote on all of the amendments described below. The full text of the bylaws changes appears on Page Seven.

1) The first change will make the *Teaching Quality Feedback Report* an official ASCIT publication. The Director for Academic Affairs will be responsible for "the production, publication, and distribution" of the TQFR, which includes finding an editor if he does not wish to do it himself. The amendment will also make the editor a salaried position, to put it in line with the other publications. This is described in the fifth amendment change (below).

2) This change simply gives the Excomm the power to create or amend Resolutions to the bylaws subject to BOD approval. This basically would make the present policy official.

3) This would require that ballots in all elections be cast secretly.

4) This would provide for a hike in ASCIT dues amounting to a four dollar increase over four years. The dues have remained constant since 1962, and inflation has finally caught up with the ASCIT budget. According to the calculations of the Excomm, the proposed increase will leave ASCIT \$2000 in debt next year, and \$1000 in debt the following year (both debts will be absorbed by ASCIT's savings account). ASCIT will break even the next year and come out \$1000 ahead the following year. The dues will increase one dollar per year for four years, avoiding the necessity of calling elections each year to provide the necessary dues hike.

5) This amendment will make clear the Excomm's interpretation of the bylaws concerning salaries of the editors of ASCIT publications. All editors will be paid through ASCIT (rather than through the individual publication) and the *Tech* editors' salaries will be raised from \$600 to \$900 (split between the team). In addition, they will be paid each term rather than at the end of their term of office. All other editors will be paid "upon satisfactory completion of the work." A system of bonuses for work completed on time will also be incorporated. Specifically, the *Big T* editor will receive \$300, with a \$100 bonus if the *Big T* is distributed no later than ten days after registration first term, and the *little t* and TQFR editors will receive \$150 with a \$100 bonus for on time delivery (registration day of first term). For publications which are completed on time, the editors' salaries (plus bonuses) will stay the same as their present salaries

—Kevin Drum
Henry Fuhrmann

Carnegie-Mellon

To the Editors:

Kevin Drum's article on Carnegie-Mellon's interest in the Caltech Social Science Faculty was by and large an accurate account of the episode, although the remarks excerpted from our conversation sound rather more pugnacious in print than they actually were when spoken. In two cases however, misquotations were sufficiently serious that the record should be corrected.

First, the article notes that CMU was interested in our entire group but implies that Noll, Ferejohn and Fiorina were only interested in stealing Charlie Plott. Much as we love Charlie Plott, we bear a similar affection for all our colleagues. What I said in fact was that Charlie Plott was the only other person formally contacted by CMU. Approaches to other members of the group were to await Noll's acceptance of the Chairmanship of the CMU program, a contingency which did not materialize.

Second, the article on the search for a Humanities and Social Science Chairman contains a statement attributed to me, a statement to the effect that the Division would have a hard time inducing a nationally prominent scholar to take the chairmanship because the social science program doesn't have the respect that it should. Given that the article on the CMU episode quoted me several times to just the opposite effect, something has to give. What I said in fact was that the *Institute* didn't have the respect it deserved in the area of Humanities and Social Sciences. I remarked that CIT was perceived primarily as a physics operation and that a Harvard or Chicago luminary in Humanities or Social Sciences

Letters To The Tech

might consider CIT as the boonies even though he/she regarded many of our H&SS people as individually good. I illustrated my point by relating that on several occasions I have received letters which were routed through Cal Poly Pomona or San Luis Obispo. I might teasingly suggest that such blasphemies so boggled the minds of *Tech* writers and/or editors that they rendered my comments into something psychologically more compatible with their world view.

Finally, the article on the Chairman search contains an incorrect claim that does a disservice to our present Chairman, Bob Huttenback. The *Tech* writes "... two years ago, when they were looking for a chairman at the end of Dr. Robert Huttenback's first term, they had no luck finding anyone from the outside world." Absolutely false. Two years ago Bob Huttenback received virtually unanimous support from the divisional faculty for a second term. The quoted statement is true only if it refers to seven years ago before Huttenback's first term. At the time H & SS was an undistinguished service department with a few bright spots here and there. Bob Huttenback built the Division into one the Institute could be proud of in the short span of five years. H & SS faculty would not be feeling restless were Huttenback not leaving.

Morris P. Fiorina
Associate Professor
of Political Science

Coffeehouse

To the Editors:

The Management of the Coffeehouse seem to be more interested in making excuses for their problems than they are in

doing something about them.

The food shortages still exist. In their letter of May 13 they stated that the food shortages were due to a widely variable business. The shortages happen regularly. They happen because the managers do not buy enough food. By this time they should know how much food to buy. I can see no reason why the managers can not get an adequate supply of food.

Before my first letter to the *Tech* the managers said that the loss of costumers was the reason they wanted to raise prices. After the letter they came up with a new reason: inflation. Which are we supposed to believe? I find inflation hard to believe at a time when food prices are going down.

I have no objection to paying sixty-five cents for a hamburger at one a.m. provided it is not a sixty cent charge for the hamburger and five cents for bad management.

Steve Oualline

Throop Site

To the Editors:

In the IHC's discussion of the Throop Site plans long ago the problem of "unofficial" walkways was raised, and I seem to recall hearing that any de facto paths would be acknowledged with flagstones or such.

Time passed, the paths wore deep, and B&G put up blockades and replanted. The paths around the blockades are now deep. The thought of flagstones might be my memory going, but it's still an idea.

Ed Bielecki

The Recombinant DNA Issue

Today at Noon: Peter Alsop, guitarist and folksinger extraordinaire, featured on Flying Fish Records, will offer his musical talents at a noon concert on the quad.

Tonight at 8 pm: A theater party will depart to see Ionesco's *The Bald Soprano* and Beckett's *The Play*. Curtain time is 8:30 and the cost is only \$1.75. Sign up in the Y for this Pasadena Repertory Theater production.

Next Monday: At 7:30 pm in Winnett Lounge there will be a presentation on the Recombinant DNA issue. Beginning with an informal lecture by Professor Norm Davidson, the program will continue with a presentation by Dr. Tom Maniatis and will conclude with a panel discussion moderated by Professor Lee Hood. Davidson intends to talk about the state of the Recombinant DNA art, the issues, and the controversy and will illustrate his lecture with slides. Maniatis will discuss Caltech's involvement in this field and the facilities here, including the P-3 containment facility. Finally, a graduate student panel will debate the whole RDNA issue, under the moderation of Hood. If your interest in this topic was piqued by last week's

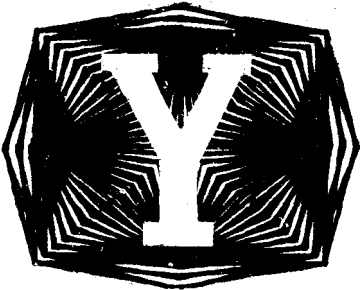
Tech article, this program could be for you. Remember, Monday, May 23 on your calendar.

Tuesday: At 8 pm in Winnett Lounge, Paul Tracey, an expert on African culture, will give a presentation on African folklore, music, art, humor, and anything else people might like to hear about. Friendly and having a way with words, Tracey should be most entertaining.

Wednesday: After long weeks of preparation under the guidance of Chris Verosick, the Drama Workshop will publicly display their talents. This eagerly anticipated event is sure to amaze you. It all happens at 8 pm in Winnett Lounge.

Next Friday: A noon concert will be given by that BBOC (Big Band on Campus), *Burnt Rubber*. Led by Brian Dyer, this group will blaze its way into your musical consciousness...

Next Fall: Signups are open for the precollege camping trips. This year there will again be two trips: one, a Sierra backpacking trek, and the other, a relaxed visit to Joshua Tree National Monument. We need to plan for these trips soon. So do indicate your interest, please. Information and signup sheets are posted in each of the student houses.



THE ASCIT FRIDAY NIGHT MOVIE

The Summer of '42

7:30 p.m. & 9:30 p.m.
in Baxter Lecture Hall
ADMISSION: 50¢—ASCIT members
\$1.00—anyone else

NEXT WEEK
THE MAGIC CHRISTIAN

THE CALIFORNIA TECH

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HARDY RECALLS ROSE BOWL RF

Continued from Page One

gram" ("I'm from Dorsey... it was a perfect cover"), interviewed the Yell Leader at the hotel, thus discovering how the card stunts were done and how the card stunt might be accomplished. Back in the days before computers were common, designing a card show was a very laborious effort, beginning with laying out the artwork on quadrille paper, which then had to be "sorted and merged" onto individual instruction cards.

Some Techers "staked out the place." When the room with the card stunt materials was left unoccupied, one student picked the lock to get in—"This is a pretty good lock... this is a terrific lock!" On this occasion, the first of several break-and-enterings in the next few days, the plotters borrowed a sample instruction card from the middle of a pile, and took it to a print shop which could give them 24-hour service on 2300 copies. Unfortunately, the color of the resultant forgeries was slightly off—because the original was faded a little. Said the printers: "This is what you want. We don't use bad stock here."

Back at Lloyd, a chemist tried to somehow fade or color the phony forms, but finally it was decided to go with what was available. The next task was the preparation of 2232 instruction cards with the correct display card colors stamped in for all but three of the stunts, numbers ten through twelve. These three were to be altered slightly....

Number ten was to be a picture of a Husky. "What's a Husky, anyway?" Dr. Hardy asked, "but a beaver with pointed ears?" On number eleven, a "spell-out" of the team name, some instructions were changed to cause the spellout to go backwards. And, on number twelve, it was decided to create the famous black on white letters ("there weren't too many color TVs around") that spelled the "CALTECH" that was broadcast coast to coast. The cards were spread out in Lloyd's dining room, and on New Year's Eve, with a party going on in the lounge, about 30,000 colors and numbers were stamped on the bogus cards. "The afternoon wears on... the evening wears on..." By late that evening, when the Washington Yell Leader should be getting back from a Disneyland trip, it was time for desperate moves: lots of people went around stamping every blank spot there was left with any color handy. "That's why some of the stunts were pretty motley."

Finally, the time came to make the switch. Several Lloydies returned to Long Beach and once more picked into the hotel room of the yell leader. Lots of adrenalin was flowing then, recalled Dr. Hardy. "Picking a lock—it's pretty hard to find an excuse if you're caught: 'I lost my contact in the keyhole!'"

A long series of lucky breaks paid off, at last, during the half-time of the game. After waiting a day and a half for that moment—not sure if their activities had been noticed—the schemers saw, on the Page House TV, a "Heaver-Busky?" appear in slot ten, and watched the backwards spell-out happen as planned. Then "CALTECH" came up and "the announcer

went absolutely silent... you know, there isn't supposed to be a long silence on television." The two (unaltered) stunts were cancelled. The only live picture of the occurrence was taken across the field by a graduate student who had no foreknowledge of the RF.

Dr. Hardy said the first published explanation of the trick appeared in the *Times* who said that apparently a large number of Techers had got into the Washington card stunt section and convinced 2232 people to do the feat. "Wish we'd thought of that," he said wryly.

Total printing cost for the operation—Dr. Hardy showed the lunch-hour crowd the bill from the print shop—was \$23.14, and campus-wide contributions after the fact covered it.

What is the difference between an RF and a prank? Dr. Hardy couldn't say for sure, but thought it might have something to do with the making of a hoax in the former case. One thing he emphasized, though, was that the best RF has little potential to do real harm, and that the victims should be able to laugh with everyone else.

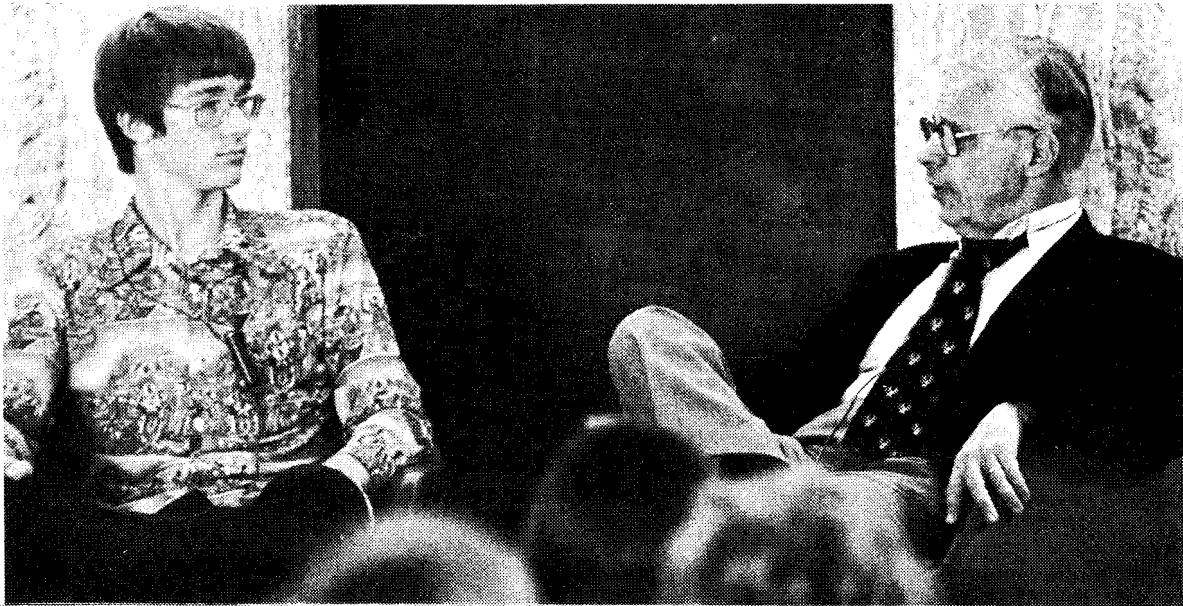
Kennedy, Putnam Team Honored At Math Banquet

Several Caltech undergraduates were honored Tuesday night at a Mathematics Awards Banquet.

Thomas Kennedy received the Eric Temple Bell Undergraduate Mathematics Research Prize for outstanding original research in mathematics. Kennedy, a senior math major, wrote a paper entitled "Banach Space Properties Involving Weak Compactness in the Dual." The prize, consisting of a cash award and a certificate, is financed by funds won by the Caltech team participating in the William Lowell Putnam Competition, a national mathematics contest.

Professor Gary Lorden, the team's faculty advisor, presented awards to participants Chris Henley, Karl Heuer, Bert Wells, and Douglas Tyler for their outstanding performance in the 1976 competition. The Caltech team took first place for the fifth time in six years.

The entries in the Bell prize competition were judged by a committee consisting of Professors Tom Apostol, Alexander Kechris, and Hershy Kisilevsky.



Daniel Schorr, former CBS newscaster, at a Y noon discussion on Thursday, Left, Bert Wells moderates.

All The News That Fits

Become A Vegetable

With a view to understand and appreciate world food problems, and both nutritional and ethical aspects of vegetarianism, I feel a need of a closely interacting group at Caltech. Interested individuals are very welcome to send constructive suggestions regarding policies, organizational structure and probable future activities of such a group to Kiran R. Magiawala, Caltech 1-87.

A Simple Painless Operation

Early tryouts for the Caltech Glee Club Men's Section will be held Monday, May 23, from 3 to

6 pm in the Choral Office, Fleming Basement.

The Glee Club is now preparing for its 1977-78 season and wishes to fill as many vacancies caused by graduation as possible. Olaf Frodsham, director of the club for 24 years, states that tryouts are "private and painless" and lack of experience should keep no one away. The Glee Club is one of the most active organizations on campus and, in spite of an extensive concert season, watches carefully to avoid academic conflicts and pressures. The Club is open to undergraduates, graduate students, staff and faculty, and provides vocal instruction to all its members.

Housing Contract

Attention: If you do not receive your housing contract for 1977-78 by May 24, please contact the Master's Office.

And Here's

The Pepperoni...

The Dean's Office will be sponsoring a pizza party on Sunday, May 22, at 5 p.m., at the Fleming-Ricketts Courtyard. All invited.

Nominations Close

Nominations for all class officers and all remaining ASCIT appointed offices close today at 5 pm. Those interested may sign up on Flora's door in Winnett.

Gays Discuss Stereotypes

The Caltech Gay Discussion Group will be holding another of its regular weekly meetings this Wednesday, May 25, at 7 pm in the Y Lounge. We'll be talking about "Stereotypes and the Gay Image" among other things. So, if you've always thought all gay men worked on highway construction crews or all gay women dream of being Miss Teenage America, maybe we can help raise your consciousness. Some people even say there are gay scientists!

T Time

Remember, *Big T* deadlines are coming up soon. In fact, they've already passed. However, if you're nice to us, we may accept your senior photos even now if you get them in quickly. They should be black and white prints, about 3" by 4".

Health Center Hosts Conference

The Nursing Staff of the Young Health Center will be hosts this weekend for the spring meeting of the California College Health Nurses Association.

Gregory Ketabgian, MD, Director of Health Services, and Rhonda Campbell, RN, State Secretary of the CCHNA will welcome the participants. In addition, Ray Teplitz, MD, Director of Cytogenetics and Cytology, City of Hope, and Joan Klotz, PhD, Associate Research Scientist, City of Hope, will present papers.

The Saturday Seminar will cover the basic as well as the applied aspects of contemporary immunology and its relationship to modern medicine. Distinguished Caltech faculty speakers include Ray Owen, Lee Hood, and Jack Pettigrew.

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TONIGHT AT 7:05 & 10:35 - MATINEE SAT & SUN



David Grimes, who was featured in the Glee Club program

Grimes, Miles Featured At Annual Glee Club Spring Jubilee

By Tom Creswell

The Caltech Glee Club featured two of America's outstanding artists as well as its own program full of entertaining variety in concluding its concert season with the annual "Spring Jubilee" last Saturday in Beckman.

Caltech alumnus David Grimes presented the West coast premiere of Mario Castelnuovo-Tedesco's "Fantasia" for guitar and piano, with Glee Club accompanist Melanie Moss at the keyboard.

He also presented Morena Torroba's "Piezas Caracteristicas," a beautiful set of pieces that were alternately lively and haunting. Grimes is a professor at Cal State Fullerton, and has been acclaimed by critics throughout the United States.

The first section of the program started with the premiere performance of "Whispers of Heavenly Death," a suite of original songs composed and "dedicated to Olaf Frodsham and the Men's Glee Club" by Richard Slater, the Los Angeles Times music critic. Bert Wells accom-

panied at the harp.

The Women's section, accompanied by Kathleen Kong, put together an excellent performance, ending their first segment with the beautiful "Salut Printemys" by Debussy. David Grimes closed the first half.

After intermission, "Send in the Clowns," by Sondheim and "Let's get Together" were performed in classic style by the Women's Section directed by Monica Roegner. John Nelson and the Apollo Singers brought a few sprightly madrigals, followed by a the Chamber Singers and the Varsity Quartet, singing songs that "Mama don't Allow."

Music Theater personality David Miles brought songs from Italy, and presented a medley from "The Student Prince" with the men's section. Miles is currently lead tenor with the Johnny Mann Singers.

The concert concluded on its traditional note with the singing of "Salvation Belongs to Our God" by Paul Tschesnokov and the Caltech Alma Mater by present Glee Club members and alumni in the audience.

J'ai bu du Cafe Noir

An Island Of McCrocodiles

Former Tech Editor-in-Chief Sandy McCorquodale is winding up a year of travel and study in France. His accounts of the past year's adventures appear here regularly.

The McQ Saga is nearing its end, as Sandy makes his way to Scotland, the homeland of the McCorquodales. The country, he finds, is composed of equal parts sheep, rock, and bog (apparently all one needs to keep a Scotsman happy).

By Sandy McCrocodile

Aside from a channel crossing from Oostende to Dover being expensive (\$19), it is also boring. The boat cruises down the continental coast to Calais before turning out for the actual passage and winds up burning six hours, all the more frustrating when one sees the hovercraft (90 minutes from Calais to Dover) zipping past full of tourists waving and snapping photos. Nobody on the boat speaks English, of course. They're all German tourists. It's easy to pick out the Dutch conversation from the German, however, as the Dutch sound like Germans with herring caught in their throats.

Then for the first ride on British Rail to London. Different from what one might expect, though if one believes the British built the railroads of the world, it is easy to feel why so many countries demanded their independence. At least it was a relief from the British immigration officials. Why are you entering the country? To shout obscene IRA slogans, bomb pubs, rape women and terrorize children. How long will you be in the country? Until U.S. bookstores sell out of Uris's Trinity. How much money do you have? Three forged Swiss passports and a genuine Hell's Angels California leather jacket. Do you have a ticket back? Only a ticket to ride. May I see it please? Well, it's tattooed on a rather off-color part of my anatomy. What were you doing in France? Screaming improper PCF mottoes, bombing bistros, molesting sheep and exposing minors to Alsatians. Do you always make errors in parallelism? No more than British Rail does.

Given leave to enter the United Kingdom for six months
Immigration Officer
(77)
-4 APR 1977
DOVER (W)

Arriving in beautiful grimy Victoria station I set out at only ten in the evening for my first jaunt around the ville in search of a hotel. Hitting the sidewalk and reaching a cross-walk I glanced to the left, deftly

congratulating myself for remembering that the British changed over to driving on the right a few years ago, stuck my foot out and almost had it taken off by a double-decker bus barreling along at 60 or so. As I came out of adrenalin shock I remembered the country which switched was Sweden, not England. Ahh, there's nothing like the school of hard-knocks. Much mapless meandering later, I found a hotel and crashed.

English-English

London is one of these cities which should have been fenced off as an historical reservation long ago. Virtually every alleyway, doorway and brick wall contains a bust or plaque of some historical personage who was involved in some fashion with the spot. One of the more memorable is two blocks away from the London Euston Rail Station and reads "The House of Charles Dickens stood near this sight." London is also the city of English-English. There are no exits, only ways out. There is an underground, neither a subway nor a metro. Nor do the movie theaters have an admission price. They have inner and outer circles, regular and royal boxes and balconies all wrapped up in a sufficiently baffling melange. Troll out the theatre map, fight through the line and discover they're all booked up until a week later. For a film!

What really hits one is that very few people on the street speak English. Among themselves they are always speaking a tongue from some past corner of the British empire, reserving the English for dealing with shopkeepers and the like. Odd vibes to ask directions of someone who obviously resides in this mother-city of English and realize he only half understands.

The Tower

Being a big journalism fan, I whipped right over to the Tower of London the next morning to see a few sights and then make the pilgrimage down Fleet Street into the Strand. The Tower was impressive, after I passed the mandatory bag-rifling and pat-down ceremony at the entrance. The whole fortress is dominated by the White Tower (1068), whose original architect went by the name of Gundulf. Henry VIII's armor is nice, but the really studly suit of armor in the entire building was built for "a foot soldier of large stature," around six feet six. While poor Henry is relegated to a few cases scattered around the room and mixed with French and Italian armor, our friend of large stature is settled into a private case and looks enough to take on the Caltech football team with one

gauntlet restrained to the rear of his body plate. The Traitors' Gate leading down into the Thames would be a fine location for a BOC meeting.

But on to Fleet Street and the Mecca of Western Journalism, or so they would have one believe. The heart of British journalism is just another grimy and gray London thoroughfare and the pubs "packed with denizens of English publishing" are mostly full of morose laborers downing stout and scanning the want-ads. After reading the papers themselves for a few days, one notices a lot of the tabloid in these pinnacles of proper journalism. Seems that profit lines have enticed Fleet Street down the Yellow brick road, unlike such tarmac operations as this one.

The Runaround

The height of London proved to be trying to get to Ireland over the Easter week-end. At London's Victoria station they send me to Euston station. At Euston station they say I must have a sailing ticket in addition to a passage ticket. This sailing ticket, costing 30p, is required on only three days of the year: today, tomorrow and the day after tomorrow as these are the peak Easter traveling days. Of course, they've all been sold. Everybody wants to get home in time for a little sectarian violence. But I have an InterRail pass and the teller thinks I might be able to get on the boat with that instead of a sailing ticket. I board the train for the six-hour ride to Holyhead. (What else would you call the port of embarkation for old Eire?) Wait in freezing wind in an English queue for an hour and arrive at the moment of truth: pass him the InterRail card and wait. He's turning it over, he's muttering to himself, he's passing it back, he's waving me on! I'm on the boat! After the boarding check, i.e., the sailing ticket check, came the real ticket check and I hadn't bought one. "Go around," the chap says, "And buy a ticket. I can't let you board with just an InterRail pass. Show it to the chap and he'll give you a discount on the Ticket." Well, no problem this. The sailing ticket control had let me pass once before and he'd certainly let me go again. Fight my way through the queue as there was no other way out and hop over to the ticket counter to buy a ticket.

Give Him A Break

Do you have a sailing ticket? No, but the fellow at the sailing ticket control said I could pass with the InterRail card. Just sell me a passage ticket. But I can't sell you a passage ticket unless you have a sailing ticket. My

Continued on Page Six

CALTECH GLEE CLUB TRYOUTS

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Entertainment Calendar

By David Ritchie

USC Opera Company Beckman Auditorium Friday, May 20

USC's Opera company will present two evenings of Mozart operas at Caltech. On Friday, May 20, USC Opera will perform "Cosi fan tutte," and the following evening "Abduction from the Seraglio," both in Beckman Auditorium, and both beginning at 8 pm. The staged and costumed operas will be sung in English, with two-piano accompaniment for the company of 20.

Tickets for the two performances may be obtained at the Caltech Ticket Office, 332 South Michigan Avenue in Pasadena. For information, call 793-7043.

Ace Trucking Company The Ice House Friday, May 20

The comedy gang, Ace Trucking Company, is set to appear at The Ice House in Pasadena through May 22. Toulouse Engelhardt is the special guest act.

Reservations can be made by calling: 681-9942

Viking Update Beckman Auditorium Wednesday, May 25

On Wednesday, May 25 at 8 pm in Beckman Auditorium, Dr. Norman H. Horowitz, Caltech Professor of Biology will discuss the scientific results of the Viking Mission to date. The last in this year's series of Earnest C. Watson Lectures is open to the public free of charge.

Beethoven Recital Beckman Auditorium Thursday, May 26

Robert Haag will give the final concert in the Ramo Keyboard Series, at Caltech, on Thursday, May 26, at 8 pm in Ramo Auditorium.

For his recital at Caltech, Robert Haag will play Sonata in A major, Opus 101; Sonata in E major, Opus 109; Sonata in A flat major, Opus 110; and Sonata in C minor, Opus 111, all by Beethoven.

Tickets are available at the Caltech Ticket Office, 332 South Michigan Avenue in Pasadena. For information call 793-7043.

Music Center Presentations Ahmanson Theater Tuesday, June 7

James Whitmore will essay his third national hero, the late Theodore Roosevelt, in "Bully," a play by Jerome Alden, directed by Peter H. Hunt, in seven performances in the Music Center's Ahmanson Theater June 7-12. For information call 972-7481.

Student Discount Tickets L.A. Philharmonic Orchestra Through October 14

Zubin Mehta and the Los Angeles Philharmonic are offering college students the opportunity to subscribe to their 1977-78 season at the Music Center Pavilion at a 50% savings over the regular subscription price—as little as \$1.25 per concert.

Students may choose loge, balcony, or rear orchestra seats to evening series on Wednesday, Thursday, Friday and Saturday. Featured are guest conductors Andrew Davis, Erich Leinsdorf, Lawrence Foster, and Jesus

Lopez-Cobos, with outstanding soloists Yefim Bronfman, Murray Perahia, Misha Dichter, Itzhak Perlman, Isaac Stern, and Alfred Brendel. Programs include Berlioz' "L'Engance du Christ" with the Los Angeles Master Chorale and soloists Frederica vod Stade, Seth McCoy, Michael Devlin, and Richard Stilwell, Stravinsky's "Le Sacre du Printemps" and Mahler's Second and Fourth Symphonies, plus many other exciting and unusual works from ten symphonic and concerto repertoires.

In addition to receiving the 50% discount, subscribing

students may attend a Philharmonic rehearsal of their choice (by advance reservation) and will receive priority ticket order privileges for special concerts during the season.

Student subscription orders are filled in the order received. To obtain the best possible seats, send in your order right away. Interested students should call the Philharmonic Season Subscription Office at (213) 972-7200, extension 842, to obtain a brochure and inquire about seating availability. The deadline for student subscriptions is October 14, 1977.

HOROWITZ NAMED BIO CHAIRMAN

Continued from Page One

division chairmen. Meanwhile, the search committee will continue to consider other possible candidates to take over from Horowitz three years from now.

Dr. Horowitz has been with Caltech for most of 41 years. He first came here as a grad student in 1936, and received his PhD in 1939. During the early forties he worked at Stanford with Dr. George Beadle, doing research for which Beadle would later receive the 1958 Nobel Prize. He returned here with Beadle in 1946, and has stayed here ever since.

It was an early interest in biochemical engineering that first led him to study with Beadle the relationship between genes and enzymes in mutations. This later developed into an interest in the process of evolution, and ultimately

in the origin of life itself. Therefore in the early 60's he worked at JPL on an advisory committee to NASA when they were beginning their interplanetary programs. He continued to work with NASA on the Mariner 6 and 7 flybys of Mars. In his latest NASA job, he has headed the Bioscience Section at JPL, which designed the gas chromatograph and mass spectrometer analysers for Viking I and II, and developed one of the three life-detection experiments also sent to Mars. In fact, Horowitz is just now writing the final report describing the results of the Viking biology experiments, and will be speaking about the results in Beckman Auditorium next Wednesday night, May 25.

Dr. Horowitz had been planning to get back into the lab

Continued on Page Six

We need certain college majors to become Air Force lieutenants.



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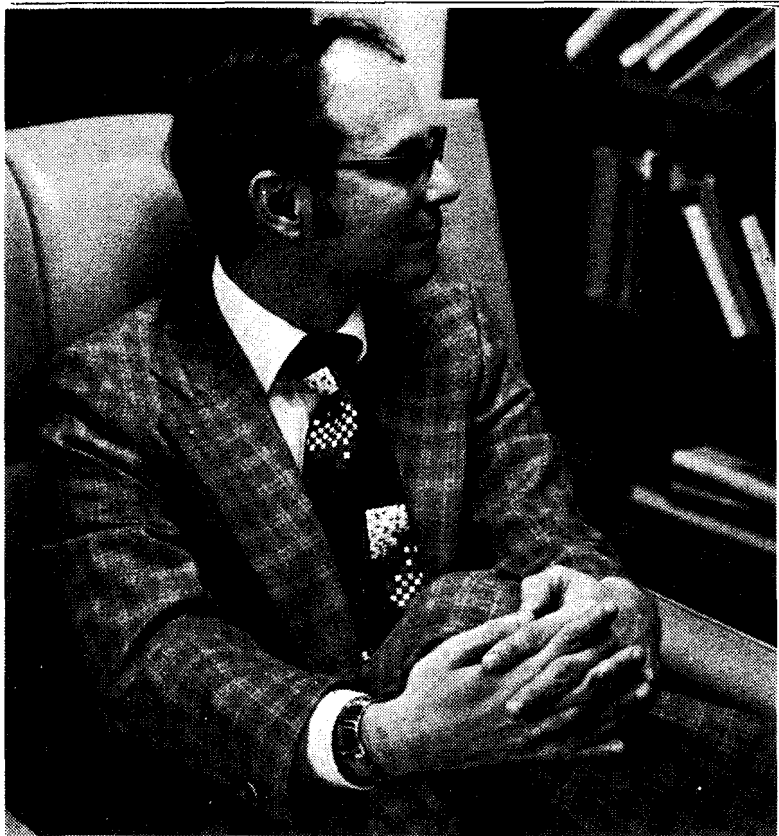
The Air Force is looking for young men and women with academic majors such as these. If you're majoring in one of these areas, you may be eligible for either the two-year or the four-year Air Force ROTC program. And to help with the college bills, two, three, and four-year scholarships are available. These scholarships pay tuition, textbooks, lab fees,

and \$100 tax-free dollars a month. The Air Force ROTC program leads to an Air Force commission, an excellent starting salary, challenging work (with some of the finest equipment in the world), promotions, responsibility, graduate education and much more.

Find out today about an Air Force ROTC scholarship. It's a great way to serve your country and to help pay for your college education.

Pre-med, Pre-dental Scholarships are available. For details write or call Major I. H. Washington, Jr., Dept of Aerospace Studies, USC, Los Angeles, California 90007, (213) 741-2670.

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Dr. Lyndon Hardy, the mastermind of the famous Rose Bowl RF
Photo-Don Bacon

BIO DIVISION CHAIRMAN

Continued from Page Five

with experiments trying to simulate the results on Mars, and to specifically determine the necessity of water to life. But now, as he says, "I won't be able to get my hands dirty." However, he will try to keep in touch and supervise the research as it progresses.

Horowitz is not inexperienced at administrative duties, having served as executive officer of the Biology Division from 1971-76, and as acting Chairman in 1973. The responsibilities of the Chairman are, according to Horowitz, "to serve as an interface between the faculty and students in his division and the upper administrative levels." He also has a central role in all of the work that is done within the division. In reference to any future plans he might have for the Biology Division, Horowitz states that he will not be entering the position "with any past axe to grind," but will "strive to maintain the extraordinarily high standards for which Caltech has come to be known."

SCHOLARSHIP WINNERS

Continued from Page One

Wells also wished that the members of the student committee had gotten more credit for their work, since they were the ones who did all the leg work in compiling dossiers of the candidates.

The scholarship winners, by class, are:

Juniors Triantaphyllos R. Akyas, Michael J. Aziz, Wayne Baxter, Michael Chandler, Bruce Cortez, William Danchi, Andrew H. Falls, Duane Gray, Scott Hochwald, Eric W. Kaler, Izabella Kierkowska, Bing Ho Ko, Kam-Yin Lau, Richard Lye, Thomas McDonnell, Ralph Page, Leland Paul, Daniel Rimkus, Joshua Rothenberg, Charles Schlindwein, Michael Sup Shin, Michael Steigerwald, John Wathey, Albert L. Wells Jr., and King-Wah Yeung.

Sophomores Robert Bourret, Liew Chiu, Ping Yiu Chiu, Viet Elser, Bonny Fort, Mark Hall, Robert M. Hanson, Stephen Jackson, Thongchai Kengmana, Sangtae Kim, Sandra Koch, Jack Kohn, Scott Konishi, Michael O. Thompson, David L. Wang, Kit-Lai Yu, and David Zelinsky.

J'AI BU DU CAFE NOIR: ISLAND OF McCORQUODALES

Continued from Page Four

InterRail card is just as good as a sailing ticket because I can board the ship. Just sell me the passage ticket. *Sorry, I can't do that without a sailing ticket. I don't think the InterRail card will get you onboard.* But the guy at the control said it would—I haven't been informed. But you don't matter. The control fellow says it's good. *I can't sell you passage without a sailing ticket.* Give me a break. I just want to go to Ireland -- *Sorry.* And he walked away.

Just had to board the 6:47 for London. Nothing else to do. Wait out the night in a cold waiting room. Being woken by two bobbies (boobies if you ask me) every hour on the hour and telling them I'm waiting for a train. They haul off the same bum every hour and he's back on the quarter hour without fail to go to sleep again. To the platform at 6:30 to find the 6:47 canceled as it's Good Friday. Had to wait till 9:50 and decided Holyhead is a singularity in the world's karma. Back at London Euston 24 hours after I'd left for Holyhead, drinking stout and awaiting the Glasgow train.

In Glasgow I finally abandoned the train system and began hitch-hiking into the highlands, consuming only four hours in walking from the downtown train station to the highway on the outskirts of town. The first chap to pick me up was rather disconcerted when I told him I had no map of Scotland and was intent on just working my way as far north as possible. He quickly produced a map, showed me where I was, and dumped me without further ado by an exit-ramp. Up went the old thumb and in typical Scottish fashion, down came the rain with nary a trace of shelter in site.

Roadside Etiquette

I was still there half an hour later when three other hitchhikers mosied down the exit-ramp, glanced at me, walked 100 yards towards the on-coming traffic and promptly put their thumbs up. And as if this appalling display of ignorance concerning roadside etiquette wasn't enough, a car snaked off the road less than five minutes later and picked them up. Passing me, the driver made many apologetic gestures to the effect that his car was full and I just grinned and went on with my wet beaver imitation, wondering if I'd be the next cairn on the hillside above me.

But I was saved from a pre-mature ground state in the bonnie banks of Loch Lomond by three Glasgow teenagers with a fast car and accents so thick I felt as though English were a foreign language for me. I concentrated on the scenery and relaxed. The highlands of Scotland are truly spectacular in both coloring and desolation, and some stretches are very desolate. Every once in a while, a lone

statue or monument will appear adrift in the interminable bog, commemorating some long past interecine gathering of the clans. Still, there's something inspiring about a kilted highlander with blunderbuss and tam o'shanter staring forlornly over the oblivion of the heath.

The Inner Hebrides

The next day, I made the ferry crossing to the Isle of Skye, in the Inner Hebrides, and thereby passed into the land of my ancient ancestors. The Hebrides themselves are composed of roughly equal parts of bog, rock, and sheep. The resourceful Hebrideans dry the bog, use it to build houses on the rock, and live off of the sheep's wool. The weather is a staple diet of wind, rain, and hail, none of which affect the sheep's placid grazing.

The topic of returning to one's motherland has been a bit overworked in these post-Roots days, but I'll tell you the biggest thrill for me. If I say *McCorquodale* in the states or virtually anywhere else in the world for that matter, people give pleasant uncomprehending smiles, misspell it, mispronounce it, and offer their consolations. At least when I say *McCorquodale* in the Hebrides everybody recognizes the name, knows how to spell it and pronounce it, and knows somebody else with the same last name. Indeed, I hopped a ferry on the other side of Skye and made it out to the Outer Hebrides where there is an island full of McCorquodales. That's right, thousands of us living on a North Atlantic isle. And you thought one was more than sufficient for the world as we know it....

Of course, the only things that can endure living out there with them are the sheep, the rock, and the bog. I missed the opportunity to test my own endurance as I had a pressing appointment with some of those *ETS* beasts.

Paris In The Springtime

Paris! (What better place to confront *ETS* exams?) There is a real thrill in returning to a city one knows particularly Paris in the springtime. Ah, to be sure, I maintained my detachment by chanting the Woodward-Hoffman rules of orbital symmetry while strolling down the Boulevard St. Germain in the heart of the Latin Quarter, but I lost it all when I turned into the Boulevard St. Michel and was whisked along by the crowds of sensuous and stylishly arrayed French women. And thus for several days I lost myself on the streets of Paris, breakfasting on cafe and croissants before walking the length and breadth of many many arrondissements, the seeking eye continuously rewarded in sights of culture or sensuality. It confounds the mind to attempt to describe the snap and style of Parisians as they walk in the street; every step of each warm-leather-booted calf past the pave-

ment artists and each seductively slit skirt and the cornucopias of impeccably coiffed hair all united in an eclectic exhibition of fashion in a city where Pierre Cardin is just the name of yet another boutique. Then after putting away steak and frites immaculately seasoned by the warm sun on the sidewalk table, between quaffs of frosty-mugged Alsatian beer and while watching kaleidoscopic silks and pastels swirl past, one finds oneself adrift on the intangible exquisite magic Paris is, and only a scientific cad would need a dictionary to know the meaning of *elan*. But I've run on a bit, since prose is to Paris as hexagons are to benzene: one must experience it to know it. Just zip on over to the registrar and ask for some of that green papyrus....

El Boracho Nadando

Some of you Hans fans out there have been asking whatever became of our alcoholic anti-hero and now you shall have your peace. After the Saturday morning exams (instructions read in English by an Indian with an incredibly abstruse accent) and a day of bopping around Paris, I had a rendezvous with Hans (where else?) beneath the Eiffel tower; date, time, and place having been selected many weeks prior in the best CIA fashion. He'd gone to Barcelona when I'd left Strasbourg and arrived there in the midst of a painters strike. The painters in the train station, that is, and they were busy flicking brushfuls of paint from the scaffoldings onto the people on the platform. The platform people were throwing back whatever could be lifted and a cavalry unit of the Guardia Militar cantoned onto the platform just as he stepped off the train. Weaving his way through the ensuing melee (I made a lot of saving throws...) and uttering phrases appropriate for such occasions, he finally reached the comparative calm of the streets with a paint-bespattered bag and some gifts from the cavalry horses stuck under one shoe. At home, however, his parents had gone to Switzerland, leaving a note to the effect that the house key was at the bottom of the swimming pool. Thus in that state of lessened consciousness induced by two straight days of riding trains, *el boracho volando* became *el boracho nadando*, replete (he says his exhaustion was such) with shirt, pants, boots, and coat. "I just sort of walked off the end of the diving board...."

And from the bet-you-thought-this-language-was-dead department:

Hori hwgym yrk yn re agws ro kart leyn. Siw doriv!

JESUS AT THE LEADING CORNER

PEACE

108

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COOKING CONTEST

Interhouse Cooking Contest, Saturday, May 21, 12:00 noon in the Ruddock House dining hall. Sponsored by Master of Student Houses office. Seven undergraduate houses will compete for one of three prizes for best three-course meal prepared and served by undergraduate students. Contest will be judged by faculty members.

TODAY IS DROP DAY

OPTIMAL SIZE REPORT

Continued from Page One

of of Junior transfers in selective fields from the California Community College system. In this way, modest increases in under-populated options would be possible.

The present committee also agrees with the 1972 committee's findings concerning diversity: that is, an increase in the number of undergraduate students will not contribute significantly to increased diversity among them. As long as the present admission criteria (which are basically determined by the requirements of the Caltech curriculum) are used, any additional students admitted will be more or less like the present students.

So far the committee has encountered, in Davidson's words, "a persistent tone of dissatisfaction with the quality of undergraduate student life and ... education." Davidson feels that inquiries into matters such as student body size tend to attract a non-representative sample of negative responses. The committee has not obtained a representative sample (whatever it might be). None the less, such strong negative evaluations are very likely real.

Many of these negative evaluations are not new: large classes, the "anti-intellectual" atmosphere, stain due to rigorous curriculum. "I have heard them during most of my thirty-year career at Caltech," said Prof. Davidson. One most logically conclude that the complaints, however valid, are not primarily due to the recent increase in the number of undergraduate students. Still, any defects from which these compaints arise will be aggravated by an increase in student body size.

It must be emphasized here that the report is only *preliminary* and represent Prof. Davidson's views of the Optimal Size Committee's findings. The other members of the committee had not yet (at present) read the report.

In any case, Profs. Davidson and Vogt wish to encourage all interested faculty and students to direct opinions to the committee. Feedback to the committee is extremely valuable.

The present committee members are: J. Bercaw; R. Dean; D. Kevles; F. Humphrey; R. Gomez; D. Morrisroe; W. Schaefer; F. Shair; L. Silver; J. Strauss; D. Wood; L. Bonner; T. McDonnell; E. Rea; and B. Wells.

CURRICULUM CHANGES

Continued from Page One

degree requirement for 54 units of elective courses and elimination of the elective course list, substitute a set of specific requirements for MS in Computer Science and require faculty approval for MS programs in the other two groups, eliminate specific requirements for mathematics courses for the MS and PhD degrees for Bioinformation Systems and Computer Science (substituting requirements for approval of courses by the faculty groups concerned), and delete the statement that foreign languages may be taken as a subject minor (since the Humanities and Social Sciences Division has not allowed this since 1973).

Amendments to ASCIT Bylaws

Bylaws changes in five areas will come up to a vote on Tuesday, May 31. Following is the text of the changes. Deleted portions of present bylaws are crossed out and additions to present bylaws are in italics. Commentary is in bold type.

Change 1: TQFR

Article IV, Section 7

DUTIES OF THE DIRECTOR FOR ACADEMIC AFFAIRS. The Director for Academic Affairs shall be a member of the Board of Directors. He shall be responsible for committees formed by the corporation on academic affairs. He shall work with members of the corporation who represent it on faculty committees. *He shall be responsible for the production, publication, and distribution of the Teaching Quality Feedback Report.*

Article XIII, Section 1

The Director for Academic Affairs shall be the chairman of the Educational Policies Committee. The Board of Directors, with the advice of the outgoing Educational Policies Committee, shall appoint at least four and no more than seven at-large representatives. During the third term of each academic year, each undergraduate house may appoint a representative who will take aoffice at the beginning of the next academic year. The Educational Policies Committee shall be responsible for maintainn the corporation's interests in reagrd to the academic policies of the Institute. *The Educational Policies Committee shall be responsible also for the production of the Teaching Quality Feedback Report.*

Article XVI, Section 1

~~The official publications of this corporation are a newspaper, The California Tech, an annual, The Big T, a handbook, the little t, and literary-art anthology, Totem. The publications of this corporation are a newspaper, The California Tech, an annual, The Big T, a handbook, the little t, a literary-art anthology, Totem, an a course-evaluation booklet, the Teaching Quality Feedback Report.~~

Change 2: Powers of the Excomm

Article VI, Section 2

PURPOSES AND DUTIES. The purpose of the Executive Committee shall be to recognize, investigate, and discuss the long range and immediate problems of the corporation, and in so doing to make use of qulaified people both within and outside the Board of Directors.

(a) It shall have the power to interpret the By-Laws.

(b) It shall submit recommendations on the problems that are considered to the Board of Directors.

(c) It shall assist the President in coordinating activities of the corporation.

(d) *It shall have power to create or amend Resolutions to these by-laws subject to approval of the Board of Directors.*

Change 3: Election Procedure

Article IX, Section 1

Balloting shall take place at least from 11:00 am to 4:00 pm in Winnett Center, and at least from 11:30 am to 1:00 pm in each of the undergraduate Houses. Each voter must sign an official register at the place of voting in the presence of a member of the Election Committee before receiving a ballot. Absentee ballots shall be allowed in the case of a voter who expects to be absent on the day of an election. Absentee ballots must be filed with the Election Chairman no later than the midnight prior to the election. *All ballots shall be cast secretly.*

Change 4: Dues

Article XIV, Section 1

~~The corporation dues shall be payable on registration day at the rate of seven dollars (\$7) on registration first term, and seven and one half (\$7.50) second term and third term. One dollar (\$1) each term shall be for a subscription to the California Tech. The corporation dues shall be payable on registration day of each term at the rate given in the Schedule below:~~

Academic Year	Fall	Winter	Spring	Total
1977-1978	\$8.00	\$8.00	\$7.00	\$23.00
1978-1979	\$8.00	\$8.00	\$8.00	\$24.00
1979-1980	\$9.00	\$8.00	\$8.00	\$25.00
1980-1981	\$9.00	\$9.00	\$8.00	\$26.00

For the academic years 1981-1982 and beyond the dues shall be twenty six dollars (\$26.00) per year, payable at the same rate as in

1980-1981. One dollar (\$1) each term shall be for a subscription to the California Tech.

Change 5: Salaries

Article XVI, Section 5

~~All commissions and salaries will be paid on the satisfactory completion of the year's work. No commissions may be paid under any circumstances until the advertising has been paid for. The Board of Directors will pay all salaries from ASCIT funds upon the satisfactory completion of the work. Commissions will be paid from each of the publications' funds. No commissions may be paid under any circumstances until the advertising has been paid for. For the purpose of paying these fees a team of editors or business managers shall be considered as one office-holder.~~

(a) ~~The California Tech~~ editors will receive a salary of six hundred dollars (\$600) for the year's work. The editor will receive a salary of \$300 for each term's work payable at the end of each term. On advertising sold and paid for, there will be commission of 35%; the net commitssion will be the differece between 35% and the total external discounts and commissions (if anv). Should the total external discounts and commissions exceed 35%, the net commission will be the difference between 40% and the total external discounts and commissions. The net commission will be distributed as follows: the first eight hundred dollars (\$800) will be guaranteed to the business manager; of the remainder, 50% will go the business manager and 50% will go to the editor(s).

(b) ~~The Big T. The editor will receive a salary of four hundred dollars (\$400) for the year's work. The editor will receive a salary of three hundred dollars (\$300) with a possible bonus of one hundred dollars (\$100).~~ He may appoint a maximum of four assistant editors, who will each receive one hundred dollars (\$100). The business manager will receive a commission of 15% on all advertising sold and paid for.

(c) ~~the little t. The editor will receive a salary of two hundred fifty dollars (\$250).~~ The editor will receive a salary of one hundred fifty dollars (\$150) with a possible bonus of one hundred dollars (\$100). The business manager will receive a commission of 15% on all advertising sold and paid for.

(d) The Teaching Quality Feedback Report. The editor will receive a salary of one hundred fityv dollars (\$150) with a possible bonus of one hundred dollars (\$100). He may appoint a maximum of two assistant editors, who will each receive a salary of fifty dollars (\$50).

Section 7. The editor and business manager of *The California Tech* take office at the beginning of the corporate fiscal year; the editor and business manager of *The Big T* take office at the beginning of the academic year covered by their edition; the editor and business manager of *the little t* take office immediately following their appointment; ~~the editor and business manager of Totem take office the first day of June; the editor of Totem takes office the first day of June; the editor of the Teaching Quality Feedback Report takes office at his appointment.~~

Section 8. ~~The distribution date of The Big T must be no later than ten (10) days after the beginning of first term the following year. The distribution date of the little t must be not later than the day of general registration first term. The responsibilities of the respective editors terminate after the publication goes to press. The responsibilities of the respective business managers terminates after distribution of the publication and the collection of all revenues from advertising. For the above mentioned bonuses to be paid, the publication must be distributed no later than the following dates: The distribution date of The Big T must be no later than ten (10) days after the beginning of first term the following year. The distribution dates of the little t and the Teaching Quality Feedback Report must be no later than the day of general registration first term. The responsibilities of the respective editors terminate after the publication goes to press. The responsibilities of the respective business managers terminate after the distribution of the publication and the collection of all revenues from advertising.~~

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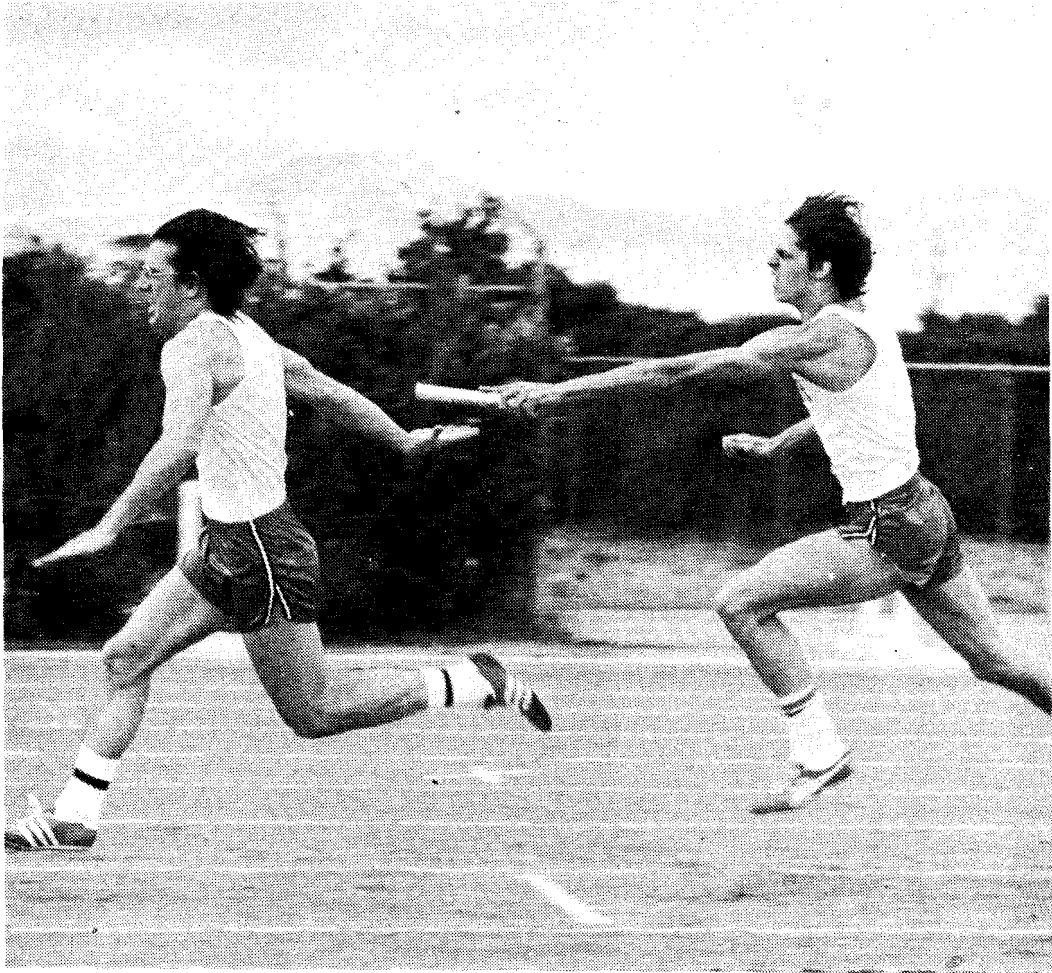
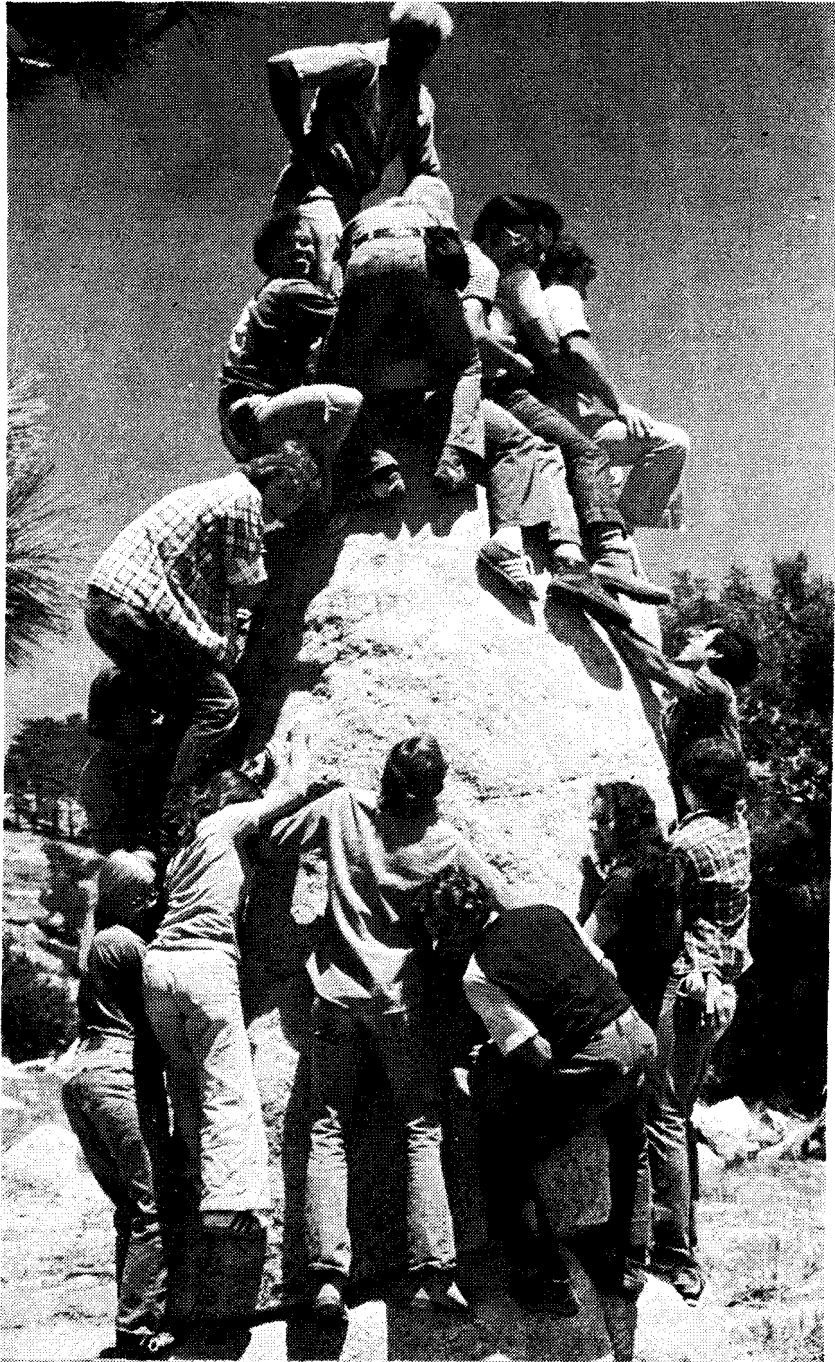


Photo-Steve Kellogg

Bottom, Rob Bourret in the middle of the pack in the 1500 meter run during District Finals. Above left, 17 people from Dr. Chuck Wilts' rock climbing class at Shand's Pinnacle. Above, right, Greg Blaisdell hands off to John Hattick in the third leg of the 440 yard relay.

Track Team Goes To Finals But Fares Ill

By Tommy Trolljan

Due to an interesting rule allowing one member from each team to compete in each District event, many members of the track team got to see district races, instead of just the 440 relay team, which had a time in Conference Finals good enough to qualify it for District.

District III contains roughly 19 schools from the southern California area, including Occidental, the new district champ, Pomona-Pitzer, UCSD, and Point Loma, district runner-up. This year, Coach Leroy Neal of Caltech was the manager of the meet at Redlands.

The 440 relay team took some bad handoffs and fared ill with a 44.8. Rob Bourret, despite many injuries this season, came through with a fine 4:10.8 1500 meters. This meet was particularly interesting for although it was also at Redlands, it was at night—the different time and conditions sometimes hurts, sometimes helps a runner. Much later in the night, Brett Van Steenwyk, hanging on at the back of the pack behind John Armstrong's burning pace (he ran a 4:27 mile and a 13:52 3-mile on his way to a 14:19 5000 meters) came up with a 15:47 5000 meters. Armstrong, of Pomona-Pitzer, also ran a 3:45 1500 m the next day.

For the district events on Saturday, Caltech put Norm Murray in the 200m and Greg Blaisdell in the high jump. Norm was unplacred in the 200m

prelims with a 23.5, and Greg Blaisdell just missed 6'2" and ended with 6'0".

Generally, district competition was very hard in comparison to regular season and conference meets.

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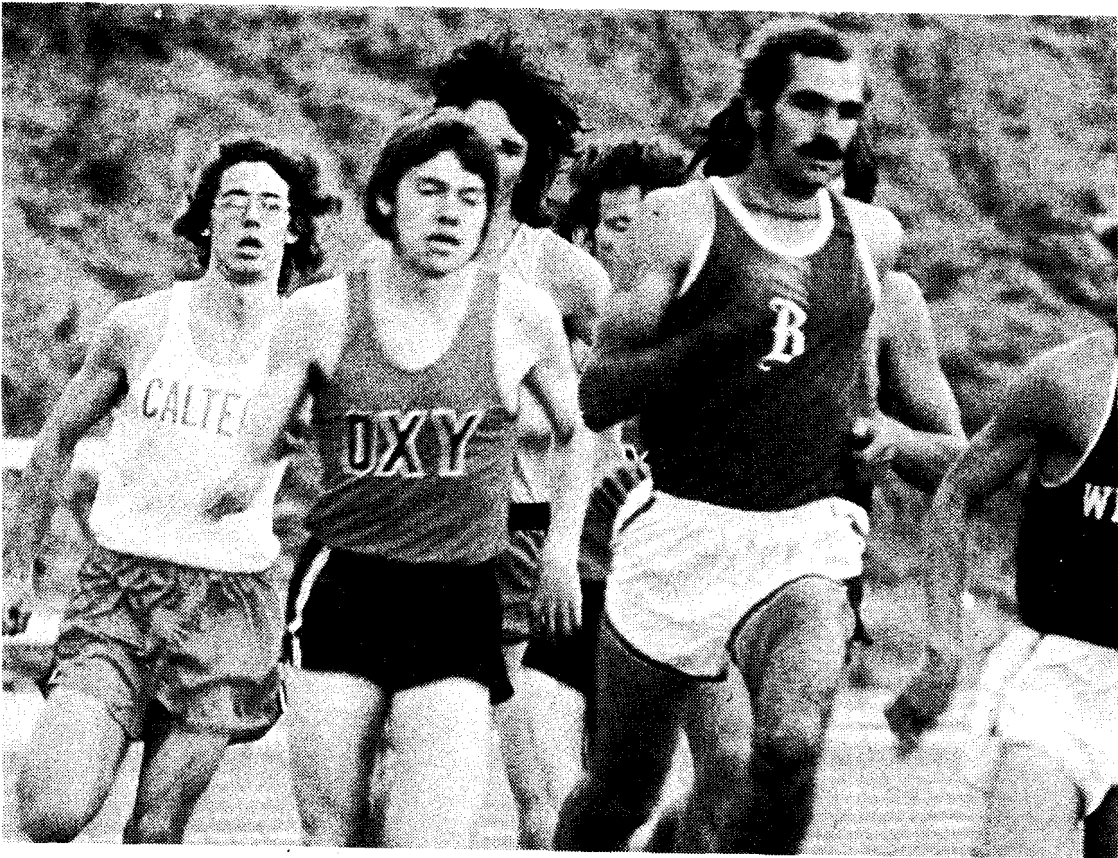


Photo-Tom Snyder

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