

Startling Admissions

by Diana Föss

Caltech students love to complain. Of course, this isn't the sort of place that leaves people indifferent, yet it seems that no facet of life at Caltech escapes from the intense and often negative attention of its students. For all that, however, those who complain often feel that they are alone in their dissatisfaction, that none of their feelings are shared, much less likely to be acted upon. This just isn't so.

Last year, Dr. Donald S. Cohen, the Chairman of the Faculty, called together an *ad hoc* committee to study Caltech's admissions policies and procedures. Rumbblings of discontent from past and present faculty members of the admissions committee had reached a sufficiently high level that the administration decided that something had to be done. Dr. Bruce Cain, professor of political science, was chosen to chair the committee, and Drs. John Bercau (chemistry,) Glen Cass (environmental engineering,) Steve Koonin (physics,) and David Van Essen (biology) formed the rest of the group, known to some as the "Young Turks."

In his charge to the *Ad Hoc* Committee on Admissions Policies and Procedures, Dr. Cohen requested that they "make a comprehensive and critical review" of Caltech's admissions process. He went on to say that the current admissions structure was "not functioning well" and was "badly fragmented," and he urged them to consider the whole range of options from minor modifications to a "radical restructuring of our entire process."

Dr. Cain (who happens to play tennis with Dr. Cohen) feels that he was chosen to chair the committee because he had never served on the admissions committee before, and could look at the problems with a fresh perspective. The "Young Turks" took their charge seriously. They started by sending letters to everyone who had ever been involved with admissions at Caltech and asking for people's perceptions of the admissions process. They received about 40 memos in return, and talked in person to everyone who had replied.

Next, they dug around in the attic of Dabney Hall to find records and evaluations of Caltech admission policies dating from the late 60's and early 70's. This work by Barbara Brown was extremely helpful in seeing the changes over the years in factors such as test scores and acceptance rates. The members of the committee also visited the departments of admissions of many other schools to compare their programs with ours.

The findings and recommendations of 88-page *Report of the Ad Hoc Committee on Admissions Policies and Procedures*, published in June are varied and far-reaching. The major problem that precipitated the formation of the committee was the decline in the yield (i.e. the acceptance rate) of those admitted to Caltech in the period 1982-1984. The yield is defined as the percentage of those admitted to Caltech who actually come. Throughout the 70's, Caltech's yield remained approximately at 55%; in 1982, however, it dropped to 48% and remained below 50% until this year.

The members of the committee feel that the sharp increase in Caltech's tuition and self-help level in 1982 was responsible for the decline. These financial considerations are very important to many prospective Caltech students, and the increase in the yield to 52% this year may well be attributable to the innovative financial packages offered this year, and to the fact that the self-help level has actually declined since 1982. There is, however, evidence of an inverse relation between yield and applicant quality. Stanford, for example, has a 76% yield among its lowest-rated applicants, but only 47% among its highest-rated.

The committee is most concerned with Caltech's pool of applicants and how we fare in direct competition with our major rivals. The suggestion that some of the best students are not applying to Caltech was heard often enough to warrant investigation. In the main, test scores of Caltech students have stayed at their traditional high level, with the notable exceptions of the verbal SAT and the English achievement test. Before 1979, the average verbal SAT dropped below only 660 once, and the English AT dropped below 650 only once. Since then, however, the SAT verbal average has been above 640 only twice and the English AT above 640 only twice. These are minor shifts, to be sure, but they are nonetheless worrisome.

In competition with our major rivals, we seem to have a real problem. In the last decade, we were getting 60% of those accepted by both Caltech and MIT or Stanford, but in the 80's, we are getting only about 40%. Additionally, the percentage of the Caltech entering class that was rejected by MIT or Stanford has also increased markedly during the same period, although there are indications that this merely reflects the differences in the two schools' admissions procedures. MIT places greater weight on well-roundedness and personal characteristics than Caltech does, which may serve to reinforce the point that our standards are more narrowly academic than those of other schools.

The students who apply to Caltech are not the main problem, however. The most commonly expressed concern was with Caltech's neglect of recruitment and self-advertisement, resulting in a bad image and low or invisibility among high school seniors. A regional analysis by Barbara Brown in the mid-70's showed that, while we got a 70% yield in California, the yield in New England was 33% and that in the mid-Atlantic states was 48%. In addition, Caltech's image as presented by popular college guides is less than favorable. Negative descriptions focus on the intensity of the work, the weakness of the HSS offerings, and the perceived absence of any social life. And while there is truth in all of the criticisms of student life, one knows when one has been treated harshly when it is said that Caltech is located in smoggy Pasadena, and Occidental in sunny southern California.

A major strength of Caltech's admissions process is the fact that faculty make the decisions concerning which students are admitted. Unfortunately, it is becoming more

and more difficult to get faculty to serve on the committee. The time commitment is so demanding that only exceptional faculty members feel able to handle it. Perhaps more disturbing is the distribution of members among the divisions. This last year there were no biologists on admissions, and only 2 of the 17 members came from Geology and Planetary Science. Contrast this to 4 out of 17 from Chemistry and Chemical Engineering and a whopping 6 out of 17 from Humanities and Social Science.

There are problems with the faculty control of the process, however. There is little coordination between the various faculty committees, and the lines of authority for the staff are confused. Staff initiative tends to get stifled by the immobilizing cacophony of faculty voices. As a consequence, staff members become too cautious to undertake the recruitment programs Caltech so badly needs.

The committee's report contains a large number of good recommendations. First among them is that Caltech must develop a vigorous fall visit program, sending staff to college fairs and regular visits with counselors and AP science teachers. We should also consider a fall road show in major cities where we'd rent out a hotel banquet room and meet with interested students, parents, and teachers in the area. We should particularly target for recruitment the major science schools in the country, and extend and improve our interactions with local high schools, perhaps expanding the Summer School Program.

We should target students with specific interests and send them special brochures about opportunities for study and research in that field at Caltech. We should consider offering merit scholarships to incoming freshmen and advertising them in major science magazines. Improvements to stu-

dent life itself would substantially improve our image with potential applicants, not to mention the beneficial effect they would have right here at home. To that end, the *Ad Hoc* Curriculum Committee has been formed and urged to explore ways to reduce pressure on students and the inflexibility of the curriculum.

Caltech's humanities offerings are not as varied as those of other schools, but they are in no way inferior in quality. A special brochure on HSS offerings would offset the image that Caltech is weak in this area. Other aspects of Caltech that should be specially emphasized in our recruitment literature are the SURF program, our small size, intimacy, and flexibility cooperation among the students, and the honor system. A shuttle bus service to schools with cultural and humanistic offerings Caltech cannot provide would be a novel way to offset our supposed lack of commitment to aspects of education aside from science.

The committee also recommends the expansion of the 3/2 program, and exploring whether it could be extended to areas outside of engineering.

The Faculty Admissions Committee should really develop a set of written criteria for admissions that would be reviewed and revised annually. Applications should be read by more than one person. A personal rating for nonacademic interests should be introduced, and an effort made to increase the diversity of the incoming class without sacrificing academic excellence. Caltech should make a special effort to recruit students in biology, chemistry, geology, and other underpopulated options.

A systematic, computerized evaluation of undergraduate admissions and education would be invaluable in formulating admissions criteria.

Caltech should consider raising large amounts of money for non-

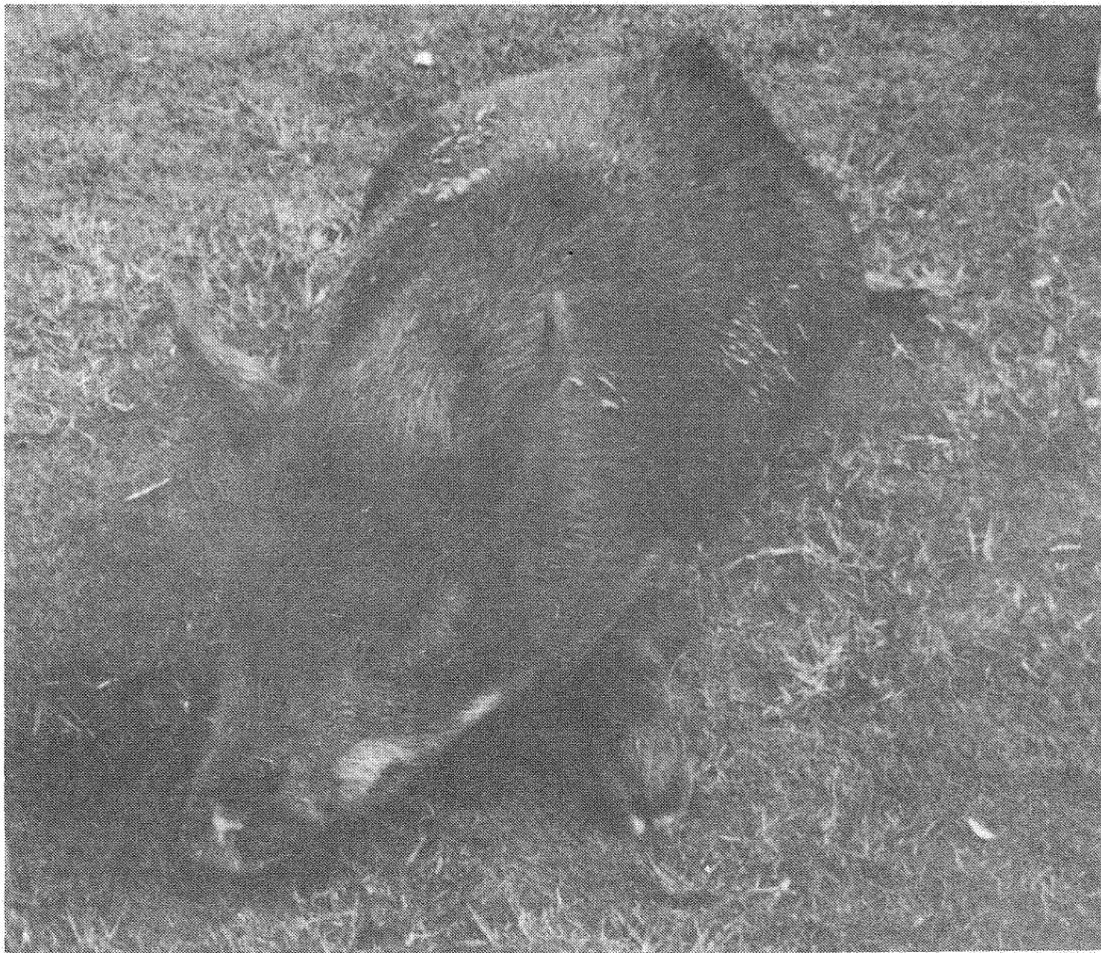
need fellowships, reduced tuition, or reduced self-help levels to insure that outstanding students don't turn us down because of money. Additionally, the Financial Aid Committee should be notified of proposed increases in tuition or self-help levels early enough for them to provide useful input.

Caltech must develop a systematic program for recruiting applicants after they have been admitted. Involvement of faculty and alumni, as well as a larger early admissions effort, would increase our yield.

The confused organization of the admissions procedure could be eliminated by the creation of the office of Dean of Admissions and Financial Aid. The position would be one of broad policy and oversight decisions. The administration staff should also have the freedom and autonomy to carry out bold recruitment plans without faculty interference. To lessen the burden of the faculty members of the Admissions committee, they should be given a term of teaching credit in exchange for their service. Also, every division should send at least one representative. The Admissions committee should consist of 10 faculty members, the Director and Assistant Directors of Admissions, and the student members.

In order to insure that their recommendations stay in the front of everyone's minds, the members of the *Ad Hoc* Committee on Admissions Policies and Procedures plan to continue meeting and reminding the administration of their commitment to improving the admissions process at Caltech. Dr. Cain doesn't feel he's done his job right unless members of the administration cringe when they see him approach. For the sake of fresh classes to come, let's hope the administration will do more than cringe.

Copies of the report are available from Dr. Cain in Baxter Hall.



SPARKY THE PIG HAS NOTHING TO DO WITH THE ABOVE ARTICLE. OR WITH ANY OTHER PIG. FOR THAT MATTER

LETTERS

Honor System Questioned

To the Editor:
We come to the end of propaganda week. It began with the somewhat mystical ceremonies on Catalina Island in which the freshman undergraduates were introduced to what it is to be a Techer. In particular they made their first acquaintance with the Honor Code. The lectures they received there will not be their only ones, rather they will receive them time and time again until a maniacal zeal for them obtains. This process is one of the simpler methods for human control.

I strongly feel that if someone does not already have a clear idea of how to behave within a society then they are not yet equipped to enter a university. There may be new situations to cope with, of course, but one should have a sufficiently strong *personal* ethic to make reasoned decisions. If 'growing up' is still something that one has to do then a campus is not the place.

I wonder what the Institute thinks would happen if they abandoned the Honor Code. Do they imagine that social order would break down? If so, this is a rather pessimistic view of human nature. Most people behave 'decently' because they perceive that to be in their best interests.

It is true that there are temptations to gain unfair advantage over one's neighbor, but it is up to each man to weigh up the consequences of his actions. I see no moral *principle* here.

I would not be wright this article if I thought that the Honor Code was merely unnecessary. It is in fact harmful, for it inculcates self-righteousness, rather in the manner of most Christian-based religions. I have, for example, heard undergraduates make the

remark that graduates, as well as themselves, should attend regular seminars on the Honor Code. This is a completely preposterous idea. Graduate students are adults who've made *all* the relevant decisions on how to lead their lives. No honor code is applicable to them.

Now I'm afraid that as the Week unfolds things actually manage to get worse. We have the spectacle of Rotation during which the Freshmen find out what it is to be a Flem, a Darb, a Page Boy, a Scurve, a Lloyd or a Rudd. Soon, there will be a run at the bookstore on those sexy red shirts with an 'F' printed suggestively on the back, a shirt which after a few weeks will become superfluous as the wearer by his very gait will betray the house of which he is a member. Similar remarks hold for the other houses.

We are informed that it is good for a young person to feel a part of something that is greater than himself, so that he can learn loyalty and team-spirit. But actually the virtuous parts of these characteristics can be learnt in many ways. In the House system the bad part, namely the herd mentality, plays a key role. Witness the popularity of the Young Americans for Freedom.

It is difficult to understand the evils of propaganda when one has only worked within one system. One of the clearest things I have seen in my three years at Caltech is not only the magnitude of the propaganda here and in the country at large, but also that in my home country of England. Caltech has been enlightening for me, therefore, in more ways than just my academic research, and I wish the same to be true for all the incoming students.

—Brian J. Warr
Grad Student, Physics

Why Move the Coffeehouse?

To the Editor:
About the Coffeehouse rumors...

On the night after rotation ends, Monday, October 7, the Coffeehouse will be opening where it has always opened at 300 S. Holliston. Take a refreshing walk away from campus between 8 pm and midnight. Look for the red light.

Third term last year we started hearing rumors through the grapevine that somebody wanted to move the Coffeehouse into Fleming-Dabney basement. We were amused and we waited for someone somewhere to contact us. And we waited. Finally, the week before finals we get official notice that ASCIT was making a decision that night. THAT NIGHT! So we went to the meeting. I was appalled.

I didn't think people as intelligent as Techers could get railroaded so easily. It was a classic example of he who has the gold makes the rules. I found myself backed into a corner. The only thing I could do was poke holes into their arguments for moving it. Not an easy thing to do on the spur of the moment. ASCIT voted to move the Coffeehouse. A better decision would have been to investigate further, get estimates, draw up preliminary plans, etc., then make a final decision. Too bad none of us thought of that at the time.

What ASCIT wanted was a student-centered activities complex centrally located in a space that currently isn't used. The Coffeehouse and a game room or two would be easily accessible to all undergrads. The move had the backing of the administration.

ASCIT cited other reasons for moving the Coffeehouse. *The*

housing shortage. Wrong. The managers have to live somewhere. *The Coffeehouse is a mess*. Not anymore. We have a new floor, new paint on the walls, no holes in the walls, no junk in the backyard, no junk in the garage. We are getting new major appliances. *The Coffeehouse managers gave drugs to an SSSPer*. Wrong. The drugs were given by a SCURVE. Nobody proposed moving Ricketts house into the Fleming-Dabney basement. *More business because we'll be closer*. Actually, much of our business comes from off-campus people. We won't be any closer to them. Grad students wouldn't ever come to the Coffeehouse. *The Coffeehouse is losing money because of its location*. Wrong. Monk's Pizza hurt a lot. Nothing can be done about that regardless of where it is. The Coffeehouse lost money because of poor management and a poor or untrained waiting staff. *The new Coffeehouse will be open by fall term [1985]*. No way in hell.

ASCIT conveniently failed to mention a few things. There would be only two managers [in the new location]. The Coffeehouse now would be a considerable amount of work for two managers. To do as much business as ASCIT cited, the work would be phenomenal.

We received the plans for the new Coffeehouse before school started. It was really obvious that they were not designed from an operational point of view, and need major modifications.

The entire atmosphere at the Coffeehouse would change. There might not be any comic books. We have enough problems with theft where we are. If we had comics, they would have "COFFEEHOUSE" stamped all over

them in big black letters. I feel this would undermine the spirit of the honor system. I don't want to do it.

ASCIT's word is not law. I would like to work something out with ASCIT and the administration if that is possible. Otherwise I'll feel compelled to circulate a petition amongst the student body.

On a positive note, the Coffeehouse wants to say 'hi mom' and announce the beginning of its rain making project.

—Tim Cotter
Coffeehouse Manager, 1-53



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The Caltech Y Fly-by

HI EVERYBODY! Welcome to another exciting fun-filled year at Tech, brought to you by the Y's guys (and girl.)

First, all week long next week, watch for ways you can give to help the victims of the Mexico Earthquake in Pasadena's sister city, Ciudad Guzman. This is part of a city-wide effort called Program Amigos.

Friday...October 4

The first Noon Concert! The group Sincha will play Eastern European music on the Quad at lunchtime. Co-sponsored by the Y and Hillel. Bring a friend and a falafel.

Sunday...October 6

The Southern California Skeptics and the Y present "The Great Pterodactyl Project," a slide-film-lecture program with Dr. Paul McCready, builder of the Gossamer Albatross. Baxter Lecture Hall, 2 P.M.

Wednesday...October 9

Professor Dean Hansell of Southwestern University School of Law will speak on "Consumer Law." First of two parts. 8 P.M. in the Y Lounge.

Thursday...October 10

The First Philharmonic Trip! This year's season debut, with new Philharmonic conductor André Previn. Works include: Zwilich's Celebration for Orchestra, Mozart's Symphony No. 39, and Prokofiev's Symphony No. 5. At the Music Center. 8 P.M. Y-Car leaves at 7:15.

Friday...October 11

Noon Concert, but we don't know who it is yet.

Any questions, comments, or ideas?
Stop by the Y or call 356-6163



Correction

The photo credit to the nifty picture of Millikan Bridge that we ran last week disappeared somehow, so we'd like to let you know that it was taken by Yang-Tse Cheng.

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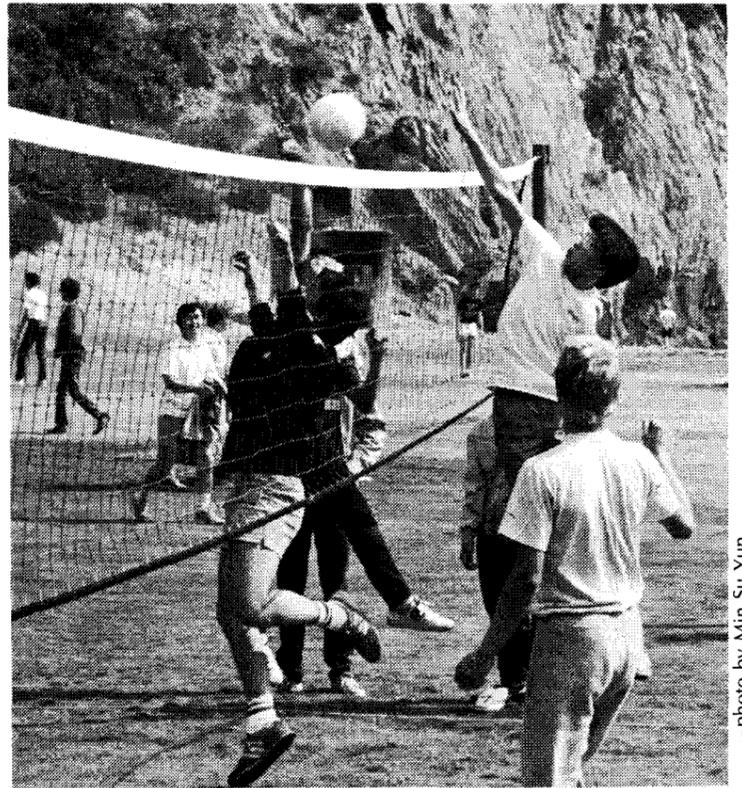
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\$1 ASCIT members \$1.50 all others



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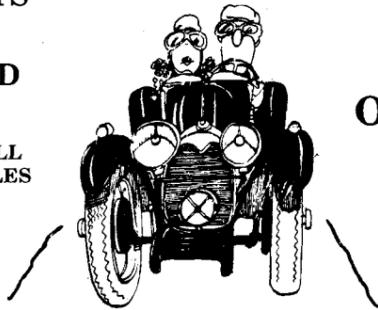
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ASCIT BOD SHOWS FROSH HOW TO MAKE IT TO THE TOP

—photo by Min Su Yun

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JUGGLING MADNESS!

—photo by Min Su Yun

-photo by Michele Serre



BRIAN ADAMS AND HIS STAND



GSC Report

by Sue Larson

In May of this year, citing "recent changes in undergraduate housing and a very large incoming class of undergraduates," the Housing Office announced that they were complying with an "administrative decision" to make more housing available to undergraduates. Graduate students living in 290 and 297 S. Holliston were asked to move from these properties to allow undergraduates to move in. The Housing office offered the evicted students replacement housing in on-campus graduate dormitories.

Shortly after the decision to convert the two Holliston houses into undergraduate off-campus alleys, it was announced that one of the graduate dormitories on Holliston would be used for undergraduate housing in the academic year 1985/86. In both of these decisions, neither the Graduate Student Council nor the Faculty Housing Committee was consulted. Subsequent to these announcements, the Faculty Housing Committee recommended that additional spaces be found for undergraduates by "converting singles to doubles and filling vacancies," making "additional housing units available," "leasing condominium units or an apartment building," "using spaces in the Athenaeum," and using graduate housing only if necessary and only where vacancies exist. These recommendations were not followed.

On August 20, the Graduate Student Council sent letters to members of the administration protesting the use of graduate housing for undergraduates, and asking for reassurances that the use of Marks House for undergraduates is indeed temporary. To date, no response has been received.

There are now over 1000 graduate students at Caltech. Approximately 500 of these can be housed in Caltech housing. (Most undergraduates are housed in some sort of Caltech-owned housing.) Currently, 60 graduate students are on the waiting list for on-campus single-student housing. In response to the need for graduate student housing, the construction of additional graduate apartments is planned. The new complex would consist primarily of two-bedroom apartments and would house approximately 150 students. Construction is slated to begin in December, 1985 and to be completed in September, 1986. A multi-level parking garage is included in the construction plans. To clear the construction site (on Catalina and Wilson) 29 students (including four undergraduates) were asked to vacate their rental properties by November 1, 1985. Most of these students have been relocated by the Housing Office to other Caltech rental properties.

The decrease in available graduate student housing this academic year has perhaps most strongly affected the incoming graduate students. The Housing Office has tried to increase both off-campus listings and the amount of temporary housing, yet some students may still be without suitable housing. Anyone in the Caltech community able to provide temporary or long-term housing for students is asked to contact the Housing Office with their listing.

TACIT presents
the first of this year's
Acting Classes and Workshops

Wednesday, October 9, 8:00 P.M.

Mime with Don Fosgreen, B.S. '84

A Watson Fellow, Don has spent this last year studying in Paris with Marcel Marceau

Millikan Board Room
Wear comfortable clothes.

Other workshops scheduled this month:

Tuesday, October 15, 7:30 P.M.

Voice Workshop—The Linkletter Method with John Walcutt (bring a tape recorder)

Wednesday, October 16, 7 P.M.

Polish Theatre Workshop with Leonidas Ossetynski. Wear comfortable clothes and don't eat for two hours before.



Nifty-Thrifty Offer
Free Regular Drink



Present this coupon when ordering at this participating Little King Restaurant and when you buy one regular sized hero receive one regular drink absolutely free.



LITTLE KING

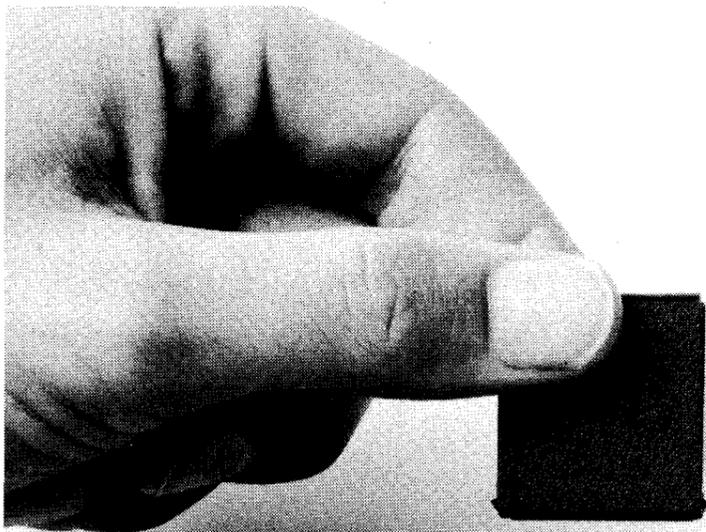
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Solid Rock with Amazing

by John Fourkas

Dire Straits
Cal Expo Amphitheatre
Sacramento
15 September

Dire Straits, after a two year hiatus, released a number one album this year—*Brothers in Arms*. In conjunction with this album, they decided to go on their first large-scale tour of the United States. (They had only visited the U.S. once before, six years ago.) You might think that a band would have a few problems on their first large-scale U.S. tour; after all, European crowds are so much more sedate and polite. (*Take soccer fans, for example—Ed.*) With Dire Straits, however, the key word was *control*. Quite simply, Mark Knopfler had the crowd at the Cal Expo Amphitheatre under his thumb. Never before have I seen a concert with so little talk and so much control. In this respect, Dire Straits is utterly amazing.

The band rolled on stage about half an hour after the appointed time with little fanfare and no opening act. Without a word, they sank straight into "Ride Across the River," and the crowd mesmerization had begun. This song, and every other, was graced with a Knopfler guitar solo which captivated the audience. This was probably one of the quietest concerts I have ever attended, not because of boredom but rather because of intense concentration. Knopfler is quite a showman.

The touring band consists of seven members: Knopfler, a bassist, a rhythm guitarist, two keyboardists, a drummer, and a horn/flute player. Although almost everyone had his little solo to do, the center of attention never drifted far from Knopfler throughout. Even with the distractions of a great light show and intermittent fog, the eyes of those who stared strayed little.

The band's repertoire held no great surprises (other than a version of "Wild West End," from their first album). They played six songs from *Brothers in Arms*: the title cut, "Why Worry," "One World," "Ride Across the River," "Walk of Life," and, of course, "Money for Nothing." It was only during the last of these songs that crowd control slipped out from Knopfler's hands. Indeed, it seemed as if many people at the concert went only to hear this one song. A good percentage of the crowd stood up for this song, swayed, danced, sung, and generally had a good time. But even if Knopfler lost the upper hand at this point, he was certainly prepared. The intro to the song was extended, the final crescendo stretched out moving higher and higher, building lots of tension in the expectant crowd. All of a sudden, the power guitar chords of the song broke through, and a shiver of excitement and release traveled around through the crowd. This song left no reasonable doubt that Knopfler knows his audience.

The other music played included the required "Sultans of Swing," "Private Investigations," "Two Young Lovers," the theme from "Local Hero," and four songs from "Making Movies." The only great surprise in their repertoire was that the band didn't make use of the

saxophone player to do "Your Latest Trick," which is in my mind the most powerful song on *Brothers in Arms*. The choice of "Brothers in Arms" for the first encore caught the audience by surprise and disappointed many people. This song is too mellow and depressing to end a concert with. Knopfler, undaunted, came right

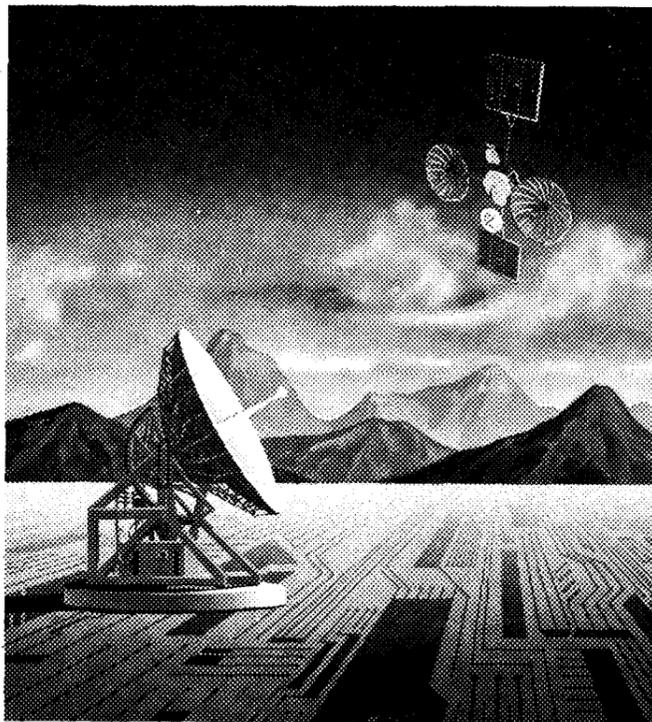
back for a second encore with the hard-hitting "Solid Rock," which pleased the crowd no end. He softened the blow again, however by ending with the theme to *Local Hero*. It was a strange choice for a finale, and yet Knopfler pulled it off with amazing grace. What could have been an extremely disappointed crowd was turned in-

to a charmed crowd. This shows great skill on his part.

The stars of the show that I haven't yet mentioned were Knopfler's guitars. I counted no less than eight of them, and almost all were custom made. These guitars ranged from the one seen on the cover of the album to that

workhorse of rock and roll, the Stratocaster, to the ultramodern Steinberger. Each guitar had its own special use, and Knopfler had utter control once again. The only guitarist that I have ever seen with more power to enchant with his instruments was Steve Howe, and Knopfler, to be fair, has a while to catch up to him...

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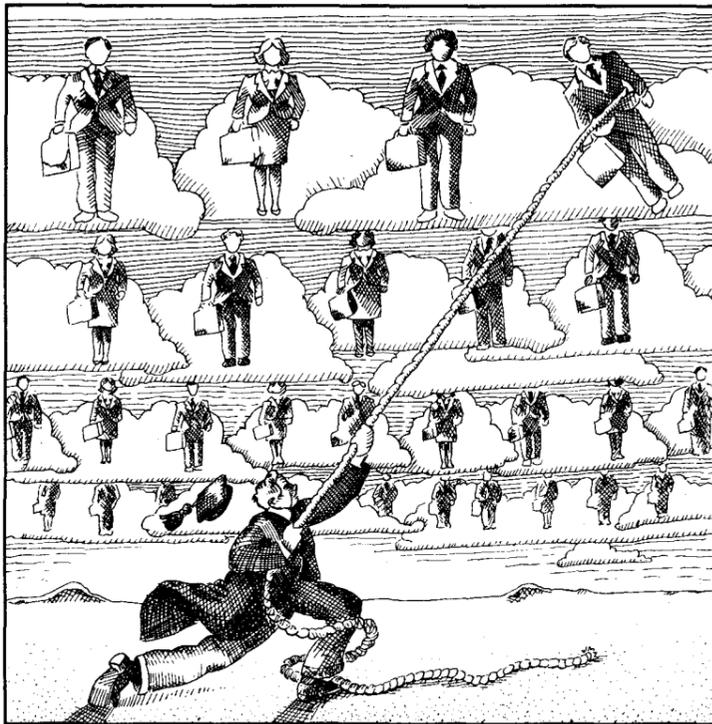
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Commission, Garrett Pneumatic Systems Division, NASA, GTE Government Systems, TRW and others. You'll hear about their philosophies, training and job opportunities on our large projection screens. And participate in a live question-and-answer period on our Satellite Career Network with company representatives.

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OBLIGATORY SELF-GRATIFYING PICTURE OF THE EDITOR (NOT TO MENTION THE ASCIT PRESIDENT)



—photo by Michele Serre

HEEEERE'S BERNIE!

News

[CNB]—The current federal tax reform proposals and how they affect business will be the subject of a talk at Caltech by William F. Ballhaus, former vice chairman and chief executive officer of Beckman Instruments and president of International Numatics, Inc.

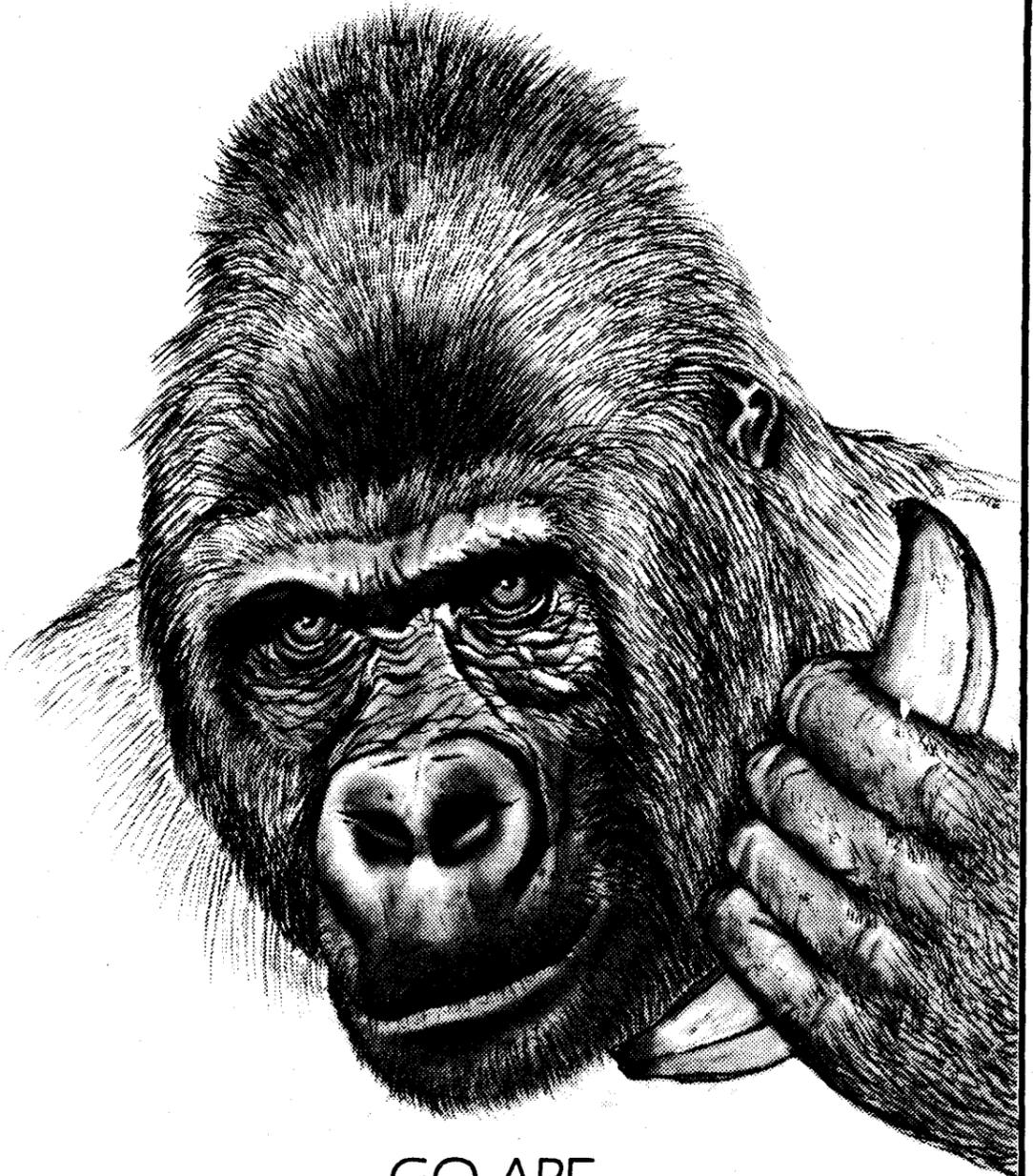
The lecture and dinner program will take place on Monday, October 7, beginning at 6:45 pm at the Athenaeum.

Dr. Ballhaus' talk, "Tax Policy for Progress," will be given at a dinner meeting of the Executive Forum, sponsored by Caltech's Industrial Relations Center. The Forum is open to key executives of corporations, and represents an opportunity for them to hear presentations on economic, technological, management, and government issues.

An advocate of supply-incentive economics, Dr. Ballhaus has presented his views before Congress to speed passage of investment tax credit legislation in 1978. In his talk, Dr. Ballhaus will recount the struggle to obtain passage of that legislation and give his views on what current tax reform proposals offer business in the foreseeable future.

The lecture is one of the Ulric B. and Evelyn L. Bray Visiting Lectureships on the American Economic System, endowed in honor of the late Dr. Bray, a longtime business and civic leader in Pasadena and Los Angeles. Dr. Bray, who died in 1977, was president of Bray Chemical Co., a manufacturer of detergents and cleaning compounds, and Bray Oil Co., a manufacturer of lubricants, hydraulic fluids, and corrosion inhibitors. He was also chairman of the board of Northrop Institute of Technology.

Dr. Bray received his Ph.D. from Yale University and was a National Research Council Fellow at Caltech. His honors include the American Chemical Society's Tolman Medal in 1968 and an honorary fellowship in the American Association for the Advancement of Science. He held honorary degrees from his undergraduate alma mater, Emory University, and from Northrop Institute of Technology.



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Life's little Necessities

Bach at Ramo: John Solum and Preethi De Silva will perform the music of Bach using historic instruments. Ramo Auditorium. Fri. Oct. 4, 8:00 pm. \$15.00.

The Flying Karamazov Brothers: If you must only see one necessity from this week's list, this should be the one. A combination of magic, juggling, comedy, and all kinds of other fun. Beckman Auditorium. Sat. Oct. 5, 8:00 pm. \$20.00, \$17.50, \$15.00 (I gather that the usual \$5 student rush tickets will be available).

Building a Flying Pterodactyl: Paul MacCready, designer of the Gossamer Condor, talks about his newest project—building a working mechanical pterodactyl. Sponsored by the Southern California Skeptics and the Caltech Y. Baxter Lecture Hall. Sun. Oct. 6, 2:00 pm. FREE.

Chamber Music Concert: The first Dabney Lounge Chamber Music Concert of the year will feature pianist Stanley Waldoff. Good music, and the price is right. Dabney Hall Lounge. Sun. Oct. 6, 3:30 pm. FREE.

Cry of the Kalahari: An L.S.B. Leakey Foundation lecture narrated by Mark and Della Owens. Beckman Auditorium. Tues. Oct. 8, 8:00 pm. \$7.50 (CIT/JPL \$6.50, full-time student \$5.00).

Juvenile Behaviour

by John Fourkas
Behaviour
Saga
Portrait Records

Most people are familiar with Saga because of their mildly successful fourth album, *Worlds Apart*, which contained "On the Wind," "Wind Him Up," and "Amnesia." Although this Canadian band is very popular in Europe, it took these three big songs to get a somewhat adulterated version of *Worlds Apart* released in America. Saga's earlier efforts are to this day mostly available on Canadian or British imports, although there was a small rash of American pressings after the success of *Worlds Apart*. Well, Saga has released three (count 'em, three) albums since *Worlds Apart*: *Saga in Transit* (a pretty good digitally recorded concert album), *Heads or Tails* (featuring "The Flyer" and a chopped-up American version of "Catwalk"), and *Behaviour* (which came out about a month ago). Whether you like it or not, *Behaviour* is obviously unlike any of Saga's previous releases.

Saga's first four albums, (*Saga*, *Silent Knight*, *Images at Twilight*, and *Worlds Apart*) consisted of pleasant and upbeat (for the most part) pop songs, with a heavy inclination towards synthesizers. Eight chapters (two on each album) of a "saga" of a futuristic war helped to make the four albums into a coherent set. *Saga in Transit*, then, was released at an appropriate time, a real transition point for the band. This album showcased the group's concert talent, reaching its high point at "A Brief Case," an innovative double drum solo. *Heads or Tails*, released in 1983 in Europe and 1984 in America, showed evidence of a new style. The music on this record was tighter, less lyrical, and more cynical than ever before. To this point, Saga had not released any song that might even remotely be termed a love song.

The differences between *Behaviour* and Saga's other albums are immediately apparent. The trends begun on *Heads or Tails* have been continued. In fact,

Behaviour is so tight that it squeaks. This is probably due to the fact that Saga is no longer produced by Rupert Hine, but rather by Peter Walsh. Walsh's mix is tight and haunting—as if the music comes out of a tunnel to the nether world.

Behaviour opens with "Listen to Your Heart." As the title suggests, this is a love song, a grave departure for Saga. This song makes it painfully obvious that the band has no experience with love songs. The tortured vocals and ominous guitar rumblings do little to render the song convincing. The next number, "Take a Chance," opens with a punctuated drum and bass beat which sets the mood for the rest of the song. "Take a Chance" could well have been from an earlier album, except for the over-echoed vocals. The guitar work is by far the best on the album, and there are many echoes of a happier past existence.

"What Do I Know?" follows, a hurt-in-love song with all-too-cute rhyming lyrics. Saga's first female vocal adds little to this song. The next song, "Misbehaviour," opens with some promising guitar chords, which are fully picked up by the synthesizer. The guitar is then relegated to intermittent whines and moans. The lyrics are once again unconvincing. "Nine Lives of Miss Midi," an instrumental, comes next. This is a rather pointless Steve Miller-style intro to "You and the Night," the most (and perhaps only) touching love song on the album. If "You and the Night" has any fault, it is over-emphasized drums—everything else works perfectly. It is nice to know that love songs aren't entirely wasted on Saga.

Side two opens with "Out of the Shadows," a haunting piece with too much of a thundering backbeat. The lyrics are OK, but the song just doesn't fly. Next comes "Easy Way Out," a song that would work much better with a freer mix. This is a prime example of the overproduction which plagues the album. "Easy Way Out" could be a very moving song, but the production saps all of its energy. Emotion cannot be so finely tuned.

The third song on this side, "Promises," falls flat for much the same reasons. The vocals are simply too mechanical and unfeeling to convey any sense of what the writer was trying to say. "Here I Am" could also benefit greatly from a better mix, but it comes across well as it is. Much of Saga's former vitality is still visible here. The ending is weak, but the song is definitely one of the best on the album. "Here I Am" turns into "(Goodbye) Once Upon a Time," another hauntingly enjoyable song in need of a good mix. The lyrics are vaguely reminiscent of "The Sound of Strangers," my favorite cut from *Heads or Tails*.

Saga has always sounded heavily produced, but never overly so. The change in producers, for whatever reason (I suspect it is because of Rupert Hine's new solo career), was a terrible mistake. Walsh obviously has no feel for Saga's music, much as Saga has no feel for a good love song. The mix is ever too precise, the endings too disappointing (lots of poor fades instead of solid conclusions). Many a song has an intriguing opening, only to drone on into tediousness. *Behaviour* is a disappointing album to say the least. As a debut album it might show great promise, but the members of Saga are veterans by now and I don't buy albums because of their producer...

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SPORTS

Weekly Sports Calendar

Day	Date	Time	Sport	Opponent	Location
Sat.	10-5	9:30 am	Cross Country (Men's)	Chris College	Caltech
Sat.	10-5	10:00 am	Water Polo	Alumni	Caltech
Sat.	10-5	11:00 am	Soccer	L. A. Baptist	L. A. Baptist
Sat.	10-5	1:30 pm	Football	Cal Poly	Caltech
Sat.	10-5	2:00 pm	Women's Volleyball	Pomona-Pitzer J.V.	Caltech
Tue.	10-8	5:30 pm	Women's Volleyball	Redlands J.V.	Redlands
Wed.	10-9	3:00 pm	Soccer	Whittier	Caltech
Wed.	10-9	4:00 pm	Water Polo	Pasadena City College	Caltech
Fri.	10-11	2:00 pm	Football	La Verne	La Verne
Fri.	10-11	7:00 pm	Soccer	Occidental	Occidental
Sat.	10-12	8:30 am	Water Polo	Caltech J.V. Tournament	Caltech
Sat.	10-12	9:30 am	Cross Country (M/W)	La Verne, Redlands, Whittier	Whittier
Sat.	10-12	11:00 am	Soccer	Christ College	Christ College
Sat.	10-12	11:00 am	Women's Volleyball	Pacific Christian	Pacific Christian

The Inside World

Salem: The forces of evil made some big headway this week. Bo's escape attempt was foiled when the shifty warden caught him in the hall after he drugged the guard. Chief Cates and Sgt. McBride (*evil!*) are keeping a close watch over the Fish Market and the Horton residence so that Hope and the monk are unable to get a message to anyone about who really shot Norma. Liz is home from the hospital after the brutal shot in the throat, but she'll never sing again. Tony and Anna will be kicked out of the penthouse if Anna can't prove that she didn't kill Klaus the crooked art dealer. Victor Popalopolos may suspect that Kim has regained her sight and is taking her to Miami (whether she likes it or not). Shane was right—she should have moved out while she could.

Eugene and Calliope have a plan to save Anna. Eugene is working on his time machine while Calliope is trying to infiltrate the phony art ring with her trendy painting techniques. Marlena and Chief Cates caught each other at the fish market trying to buy fake fish for their trip (no macaroni and cheese sandwiches this time).

Meanwhile, back on Green Acres, Todd finds a woman (Amy) in a haystack and she's already after his body. The fake Eva Gabor walks in on Pete and Melissa kissing in the barn and, since she thinks that Todd and Melissa are married, tells her and Pete to tell Todd about their love.

Tune in next week for more exciting true-life adventure!

—Saxy

YO, DUDES: If anything has been going on in the houses this past week (rotation, maybe?), we haven't heard about it. Send in your *Inside World* reports, campers!

—Jens Peter

Polo Starts Season

Off

by D. Mikasa

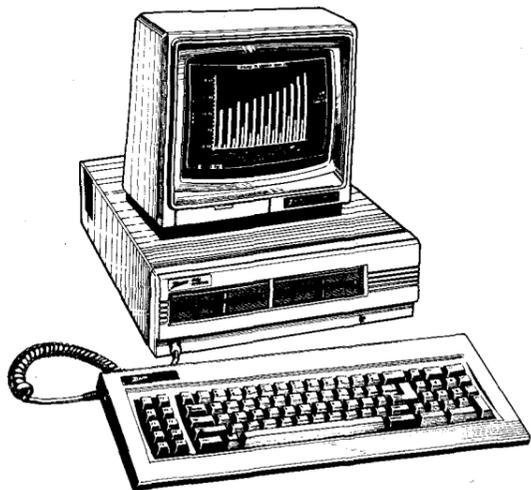
The men's water polo team started out on a good note this year, with 13 frosh showing up for preseason. A few of these frosh had played in high school, which made the team look more promising. Almost all of the non-seniors last year also returned, giving the team a hope of some experience and talent.

After two hard days of work, we traveled to University of California at Riverside and then to Redlands. While getting soundly trounced, 18-8 and 20-7, we did play rather well and showed some flickers of promise. Later in the week, a scrimmage against PCC gave us more time to play, and showed just how good the frosh might be. Especially promising are Davin Leonard, Clark Highstrete, and Boyd Bangerter.

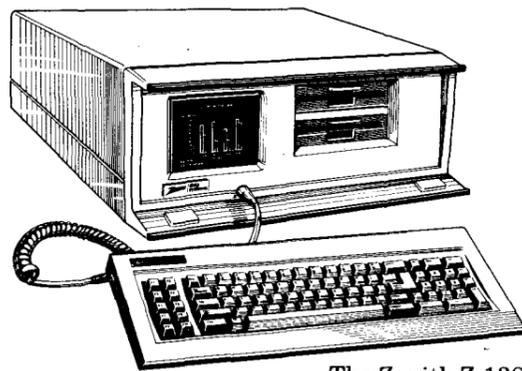
The second week of the season has gone even better. On Tuesday we travelled to Rio Hondo. In our first win of the season, 19-9, three upperclassmen stood out as offensive threats: Hans Hermanns with 5, Vince Ferrante with 5, and David Bruning with 4. On Saturday, with Fred Ferrante, our starting goalie, and Hans Hermanns off resting at Frosh Camp, ten brave souls traveled out to the Riverside Tournament. In our first game, we were defeated by Redlands 22-16 in what was really a close game. Chapman College provided our next opportunity for victory. After tying the game 15-15 with 41 seconds to go, we let the last chance get away while Chapman took advantage for a 16-15 victory. In the last game, we played very well against a strong Riverside team, finishing with a 14-9 loss. Even though we did not win, it was a promising day. The highlight came when Vince Ferrante, who scored 19 of our 40 goals, was named All-Tournament. Also named All-Tournament was Heidi Langenberg for her contribution to the day.

Saturday at 10 am is the Alumni game, and then the next two Saturdays are Caltech-hosted tournaments. Hope to see you out there cheering us on.

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Material for What Goes On must be submitted typed on or with an Announcement Form, available at the offices of The California Tech, by the Tuesday preceding the Friday of publication.

Watson Fellowships

Essays for the Watson Fellowships are due on Friday, October 21. Seniors interested in applying for these travel fellowships should talk to Gary Lorden or Jean Noda, Associate Dean, in the Deans' Office, 102 Parsons-Gates.

C•L•A•G•S

The Caltech Lesbian and Gay Students will have its first meeting of the year on Monday the 7th at 8 pm in the Y Lounge (2nd floor, Winnett). All Caltech/JPL faculty, staff and students are welcome.

New Humanities

The following courses will be offered this term:

Lit 180—Modernist Poetry—taught by Lawrence Rainey on MW 2-3:30. A survey of the major modernist poets (Yeats, Eliot, Pound, Williams) and the characteristic forms and concerns of their work.

Lit 180—Poetry and Painting Between the Two World Wars—taught by Jacqueline Ollier, a visiting Professor from the University of Nice, France.

PS/SS 12—Introduction to Political Science, taught by Rod Kiewiet.

Health Advocates

It's not too late to enroll! Applications for the 1985-86 Health Advocate program are now being accepted. If you would like to become a paraprofessional member of the Health Center, trained in health education, common student health concerns, and certified Emergency Medical Technician training, applications are now available at the Health Center. Any student (from any major) may apply who is interested in helping other students with medical self-help, health information, informal counseling, first-aid and referrals. No experience is necessary. The course is a three-term commitment, now through May 28, and offers three units of credit (P/F) each term. Return applications by October 9, to the Health Center, 1-8.

Food Committee

The 1st meeting of the Food Service Committee will be on Wednesday, October 9th at 7:30 pm in the Master's Office. The food service will not come to this first meeting, but all food reps and any interested waiting reps are invited.

Women's Glee Club

It's never too late to join the Women's Glee Club. If you missed the signups last weekend, come to our next rehearsal on Monday, October 7, at 7:30 pm in the Choral Room, Fleming basement.

C•C•F

The Caltech Christian Fellowship will be meeting together Friday at 8:00 pm in 210 Thomas. Everyone is welcome to attend the time of singing, fellowship and prayer.

Caltech Bridge Club

The Bridge Club meets Mondays at 7:00 pm, in the Red Door Cafe. We play duplicate. Everyone welcome. Earn Master Points! (We are ACBL sanctioned.) Call Jeffrey (x4543) for more details.

Cycling Club Meeting

All Caltech-affiliated persons interested in cycling are encouraged to attend a general meeting of the Caltech Cycling Club on Saturday, October 5 at 10:30 am in Winnett Lounge. Items to be discussed at the meeting include improvements and additions to the repair shop, distribution of keys, and possible group rides. Inquiries about the Cycling Club should be sent to the Caltech Cycling Club, 218-51.

Undergrad Check-In

All Undergraduate students living in On-Campus Houses, Off-Campus Houses, Marks House, 150 South Chester, and 1170 East Del Mar are required to check in with the Housing Office no later than October 7 (Monday) or the housing contract may be canceled. Students should plan on checking in with the Housing Office upon their arrival to campus. Continuing students (students who were here during the summer period) are welcome to check in immediately.

At the time of check-in, students will be required to make a decision concerning their board program plans for first term.

Thank you for your cooperation!

Job Teleconference

On Tuesday, October 8, the second BPI satellite teleconference will take place from 10 am to 2 pm in Dabney Hall Lounge. Representatives from corporations will be broadcasting information relating to their company and recruiting needs via satellite. This will be a live telecast and there will be an opportunity for students to ask questions of each company.

The tentative schedule is as follows:

10-11—TRW, Bell Communications Research, Naval Ocean Systems Center.

11-12—Garrett Pneumatic Systems Division, U.S. Nuclear Regulatory Commission, GTE Government Systems.

12-1—NASA, AT&T, National Security Agency, Society of Women Engineers.

1-2—Aerojet General Corporation, Sperry Corporation, CIA

Hillel Open House

The Caltech Hillel-Jewish Community invites everyone to join us for a welcoming Open House on Tuesday, October 8 from 5:30 to 6:00 pm in the Y Lounge. Meet old friends and make new ones while devouring delectable desserts. Meet Rabbi Michael Perelmuter and Program Director Myra Baxter. Everyone welcome.

Kick In The Jams

The Caltech Jam Room is an ASCIT organization which provides practice space and instruments to musicians in the Caltech community. There will be a meeting on Wednesday, October 9th at 7:00 pm, in the Jam Room (basement of Dabney). Current members come and pay your dues, new members welcome.

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Material for What Goes On must be submitted typed on or with an Announcement Form, available at the offices of The California Tech, by the Tuesday preceding the Friday of publication.

Roles, Anyone?

The Caltech Gamers are a club for players and designers and people who just want to learn about games, especially of the role-playing variety. The Gamers meet on Friday nights at 7:30 pm in Clubroom 1 of Winnett (as well as whenever people choose to get together). Undergrads, grad students, faculty, staff, alumni and general friends of the community are all welcome any time. The Gamers act as a meeting place for people who, even if they don't want to attend regular meetings, can find other people with similar interests. In addition, we run continuing and sporadic games of various types, design games, and have even put a few things into real-world publications. (How many campus clubs get royalties instead of subsidies, eh?) Just drop in any Friday evening, from 7:30 pm to whenever. There's always room for one more, and beginners are especially welcome. Games commonly played include *Champions*, *Warlock*, *Fantasy Hero*, *Paranoia*, and whatever else people want to play.

United Nations Day

A free lunch at the Athenaeum and a talk by onetime United States ambassador Nathaniel Davis are being offered to Caltech students by the Pasadena United Nations Association.

United Nations Day will be observed on campus on Saturday, October 26, from 11:30 to 2 pm. Dr. Davis, a U.S. diplomat who served in the U.S.S.R., Chile, Guatemala and Switzerland, and now teaches humanities at Harvey Mudd College in Claremont, will give the principal address.

Dr. Davis' topic will be "Directions in U.S. Foreign Policy."

To encourage undergraduate and graduate students to participate in the 40th anniversary of the United Nations, the Pasadena chapter of the UNA invites students to be its guests at lunch. Students who wish to attend must register in advance at the office of The Caltech Y in Winnett Student Center.

The Caltech Y is co-sponsor of the program.

Waltzing! At Caltech!

On Saturday, October 19, at 8:00 pm in Dabney Hall, the Caltech-Occidental Orchestra will provide music for an evening of waltzes and polkas. Under the auspices of the Alumni Association, the Caltech Y, the Graduate Student Council, Master of Student Houses, and Office of Student Affairs, the dance will be open to everyone, without admission charge, and refreshments will be served. There are no dress requirements—wear whatever you like to waltz in.

In preparation for the party, there will be two dance practices (Tuesday, Oct. 8 and Tuesday, Oct. 15) in Dabney Hall, beginning at 7:30 pm; the instruction will be given by members of the Caltech chapter of the International Folk Dance Association.

Putnam, '85

It is time to sign up for this year's Putnam Contest. The contest will be held on Saturday 7 December 1985. Sign up now! Deadline for registration is Monday 14 October.

Sign-up sheets are located in Sloan. Or call the Mathematics Department (x4335 or x4357) and leave your name and campus address. There is no fee. The exam is in two parts: one in the morning; one in the afternoon. It will be given in Baxter. [But where can you take it?—Ed.] More details later.

The Other Coffee Place

The Red Door Cafe is the place to go—upstairs in Winnett Center, the Red Door Cafe is open and waiting to provide you a warming snack in a most friendly atmosphere, inviting to all. A cookie, a slice of cake (fresh daily), a bagel with cream cheese, a muffin—all with juices, teas and coffees—Espresso, Cappuccino or ordinary—any way you want it. Open 2:30-5:30 pm Monday through Friday, 8:30-11:00 pm Tuesday, Wednesday and Thursday. Please come up... "and see us sometime."

Software Scholarship

A scholarship for up to \$5,000 for students enrolled in a computer science or computer technology program is being offered by International Computer Programs, Inc. of Indianapolis, Indiana.

To qualify for the 1986-87 scholarship, a student must be a full-time sophomore or junior who is maintaining a "B" grade point average and who has financial need.

Selection of the scholarship finalists will be based on the student's grades in his/her field of study as well as in electives, financial need, participation in data processing-related activities, school activities and leadership roles.

The finalists will then be asked to write a software-related essay which will be judged by a committee of data processing professionals. ICP will announce the winner in early April, 1986.

Student Shop Meeting

The Student Shop will hold its organizational meeting Saturday, October 12, at 1 pm in the basement of Winnett Student Center. The Student Shop offers facilities for woodworking, metalworking, and welding. Annual membership is 15 dollars (and a \$10 key deposit).

Free OWC Luncheon

The Organization for Women at Caltech cordially invites all members of the campus women's community—female undergraduate and graduate students, staff, faculty, and friends—to its annual fall welcoming luncheon on Tuesday 8 October from 11:30 to 1:00 in the garden of President and Mrs. Goldberger at 415 South Hill Ave. There will be a bountiful catered buffet and enjoyable conversation in beautiful surroundings. As always, the OWC luncheon is free, and no RSVP is necessary. We look forward to seeing you there!

Rodan Lives!

The Southern California Skeptics (SCS) and the Caltech Y proudly present SCS board member Dr. Paul MacCready, the "Father of Human Powered Flight," who will be lecturing on "The Great Pterodactyl Project" in Baxter Lecture Hall. The lecture will take place on Sunday, October 6th at 2:00 pm. The slide-lecture will also feature a short film. The lecture is free and open to the public.

Fossil evidence exists for a gigantic pterodactyl, *Quetzalcoatlus northropi*. This flying reptile, with a wingspan estimated at 36 feet, represents the largest flying animal known. It lived between two hundred and sixty-five million years ago. A project is near completion to recreate a full-sized flying replica to be propelled by wing flapping and controlled by radio. One aim of the project is for the flying replica to be incorporated into the new IMAX film, "On the Wing," which interrelates biological flying creatures and airplanes.

Dr. MacCready became internationally known in 1977 when his "Gossamer Condor" made the first sustained, controlled flight by a heavier-than-air craft powered solely by its pilot's muscles. Two years later his team designed the "Gossamer Albatross," a 55-pound craft which made the first and only human-powered flight across the English Channel. Dr. MacCready is also the inventor of the "Bionic Bat," the first solar-powered aircraft, and has authored or co-authored over 100 formal papers and reports in the fields of aeronautics, soaring and ultralight aircraft, bird flight, wind energy, and many other related topics.

For more information call (213) 540-0915.

Rules For Getting Sick

The Young Health Center, located at 1239 Arden Road, across California Blvd.

HOURS: 8 am Monday until 5 pm Saturday during the school year, except holidays (when hours will be posted).

SERVICES: Nurse practitioners and physicians provide evaluation and treatment of medical illnesses, injuries and preventive health information by both walk-in and appointments daily between the hours of 8 am and 5 pm. In addition the following specialty clinics are available by appointment: gynecological and birth control services, allergy clinic, immunizations and orthopedic clinic. More detailed information about our services is available at the Health Center and in your brochures.

The staff welcomes new returning students and invites you to come by and get acquainted.

This Time For Sure...

The Big T, believe it or not, is getting put out on time this year. With this fact in mind, our first meeting will be Monday night, October 7, at 7:00 pm in the Public Relations Office (107 Winnett). Anybody with so much as a passing interest is encouraged to attend. For more info (or if you can't make it), call John Fourkas (578-9952) or Alex Zorrilla (578-9346).

Guitar Classes

The Beginning Guitar Class (no experience necessary) has been reformulated to include not only classical repertoire but a new jazz and folk chord system as well. This will give the student a strong classical technique and enable him to branch into other forms of guitar if he desires. For further studies in classical and flamenco, Intermediate and Advanced Guitar classes are also offered. Classes are free to Caltech students (and other members of the Caltech community, space permitting). Undergraduates can receive 2 units of credit if they choose. Classes will be on Tuesdays, starting October 8, in the Fleming Music Room, as follows:

Beginning Guitar, 4:30-5:30 pm
Intermediate Guitar, 3:30-4:30 pm
Advanced Guitar, 5:30-6:30 pm

Private instruction can also be arranged on any level with instructor Darryl Denning, who has an international background in recording and performance. For further information call Mr. Denning at (213) 465-0881.

Read All About It

There will be a meeting of the staff of *The California Tech* today at 12:15PM in room 128 Baxter. (This is also known as the class PA 15.) Feel free to stop by if you're interested in working on the *Tech*. (That is: BE THERE OR BE SQUARE!)

ANNOUNCEMENTS ISSUE
CALTECH
PASADENA, CA 91125

The California Tech is published weekly except during examination and vacation periods by Associated Students of the California Institute of Technology, Inc.

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