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**Your Mission,  
Should You  
Decide to Accept:**

# The CALIFORNIA Tech

**Find  
Spiro Agnew**

Volume LXXVIII Number 1

Pasadena, California

Thursday, September 23, 1976

Sixteen Pages



## Dr. Olds

(Caltech News Bureau, Pasadena)---We must regretfully report the death of James Olds, Bing Professor of Behavioral Biology in a swimming accident while he was on vacation in Laguna Beach, August 21.

Dr. Olds has made major contributions toward understanding how the brain functions. Internationally known in his field, he received widespread recognition early in his career for his discovery of "pleasure centers" in the brains of rats—a significant step toward understanding the basic physiological events underlying motivation. Stimulation of these centers—electronically or otherwise—produces highly favorable responses that cause animals to seek more stimulation.

Dr. Olds developed a technique to pinpoint memory storage areas in the brain by monitoring individual neurons in the act of learning. He found evidence that memory storage

sites exist in at least four different parts of the brain.

Recently he had been studying the mechanisms of reward and learning and had developed precise techniques for monitoring various parts of the brain with electronic microprobes.

He was interested in the neuronal factors and circuitry that determine what sensory phenomena an animal pays attention to at a particular time, and why. This information is related to perception and sleep, and also to motivation.

Olds' work resulted in many productive theories concerning the way the brain processes, analyzes, and stores information, and the way it makes decisions. For his research he received numerous awards and honors including the 1976 \$25,000 Kittay Prize from the Kittay Scientific Foundation for outstanding work in his field. He was a co-recipient of this honor.

A member of the National

Academy of Sciences, he won the 1967 Distinguished Scientist Award of the American Psychological Association, the 1962 Warren Medal of the Society of Experimental Psychologists, and the 1958 Hofheimer Award of the American Psychiatric Association, among others. He was a member of several professional societies as well as the American Association for Advancement of Science and the American Academy of Arts and Sciences.

Born in Chicago, he received a BA degree from Amherst College and MA and PhD degrees from Harvard University. He lectured and did research at Harvard, McGill University in Montreal, UCLA, and the University of Michigan where he was associate professor of psychology from 1959 to 1969. He joined the Caltech faculty in 1969 as professor of behavioral biology and was named Bing Professor of Behavioral Biology in 1970.

He is survived by his wife, Dr. Marianne Olds, research associate in biology at Caltech, two children, James L. Olds, a student at Amherst College, and a daughter, Dr. Jacqueling Olds Musliner, of Belmont, Massachusetts.

## Viking I-II

### OFF-CAMPUS HOUSING?

While the bicentennial was beginning to fade in our minds, events of potentially much more significance were taking place on Mars, and here in Pasadena at Caltech's Jet Propulsion Laboratory. Through the final months of 1975 and the first half of this year two Viking spacecraft were speeding through the interplanetary void to the planet Mars. Mars, although a mystery for centuries only revealed its true face in 1971 when Mariner 9 went into orbit around the planet and mapped and surveyed most of its surface.

So many questions were raised about Mars just from this orbital view that the Viking orbiters alone, with their better cameras and more sophisticated equipment, could have by themselves added many new volumes of knowledge on Mars. But the real attention was on the lander. There had been many attempts to land on the surface, but none of them had succeeded. Viking was the United States' first try, and while the touchdown of lander I at Chryse Planitia on July 20, seven years to the day after Neil Armstrong took his first step on the lunar surface, the first direct exploration of the surface of another planet began. On that day and in the ones to follow, Mars told us in the strongest voice possible that there was much new information to be gathered. Looking back over the past few weeks, it is difficult to believe that our knowledge of the planet could increase so dramatically in such a short time after years of

fruitless efforts. But this was not the last word. On September third with lander I's primary tasks completed, lander II touched down several kilometers away on the Utopia plain, and the process began over again. With Viking I's primary set of experiments just completed, and those from Viking II just starting, it is not possible yet to draw any firm conclusions, but the results of some of the experiments are known and thus it is possible to look at some of the new ideas emerging from them.

### The Search for Life

This has been the most burning question about Mars, and an attempt at its solution is the main purpose of Viking. To gain a better insight into the results of the Viking biology experiments

cont. on page four

This spectacular picture of the Martian landscape by the Viking I Lander shows a dune field with features remarkably similar to many seen in the deserts of Earth. The dramatic early morning lighting—7:30 a.m. local Mars time—reveals subtle details and shading. Taken on August 3 by the Lander's camera number one, the picture covers 100°, looking northeast at left and southeast at right. Viking scientists have studied areas very much like the one in this view in Mexico and in California (Kelso, Death Valley, Yuma). The sharp dune crests indicate the most recent wind storms capable of moving sand over the dunes in the general direction from upper left to lower right. Small deposits downwind of rocks also indicate this wind direction. Large boulder at left is about eight meters from the spacecraft and measures about one by three meters. The meteorology boom, which supports Viking's miniature weather station, cuts through the picture's center. The sun rose two hours earlier and is about 30° above the horizon near the center of the picture.

## In Memoriam

**James Olds**

Dallas had been dry as the Kalahari for the four weeks I spent relaxing there, which could only mean that the rainy season snuck in its first twister-spawning torrential downpour the afternoon I left for the airport. One soaked canvas suitcase later I boarded a beautiful bilingual Braniff International wide-body 707; having, of course, set off the metal detector and submitted

to the indignity of standing spread-eagled while a skin-tight-hot-pants-suited flight hostess ran a contraband weapons detector along my limbs and their various junctions.

Just because Braniff purports to be bilingual is no reason to believe the fact. Despite the taped flight announcements and the printed material being in both languages, the stewardess had to draw pictures to offer the Spanish chap next to me fish or meat.

It was also raining in Kennedy airport when I arrived I had to find the United terminal in the midnight rain, so I tucked my still-wet canvas bag under my arm walked out the door, turned ten meters to the right, and queried a cab driver as to the whereabouts of United. It wasn't until the third expletive that I realized I was standing directly in front of the United terminal. So far, so bad.

Squeaking my baggage under the twenty kilo weight limit, I finally came to enjoy the wonders of transatlantic charters. Everything on the plane was stamped with DC-3-53 probably the year they were taped together. For seven hours one is confined to a seat one foot wide and six inches from the seat in frons. If the poor person in the window has to fulfill a biological need, he has to wake up the two people between him and the aisle who in turn have to stand in the aisle to make way. We left Kennedy at 1 a.m.; dinner was served at 2 a.m., just after everybody had nodded off to sleep; sunrise at 3 a.m., the

wonders of flying east; and breakfast, a continental piece of bread with coffee, was served at 5 a.m.

Oh God No! I can't take it.... I just heard (on Radio Saarbrücken) *Trucking Convoy* in German; autobahns instead of interstates... help!

Needless to say, water was precipitating when we landed in Zurich. Being a charter, we didn't rate a terminal gate and had to catch a bus to the terminal to claim our baggage. Swiss Customs is very difficult. They have two divisions: *Something to Declare* and *Nothing to Declare*. If you have nothing to declare, you walk down a hall to the baggage claim, which opens onto the street, and never even see a Swiss Customs official. It's the greatest idea in Customs since they quit marking the border between Belgium and Holland (read Amsterdam).

Thoroughly soaked and exhausted, I caught a bus for an uneventful ride to the Chateau de Pourtales. They didn't even bother checking our passports at the Swiss-German or German-French borders. It was, will miracles never cease (?), no longer raining by the time I arrived in Strasbourg. Standing as a card-carrying member of the walking wounded at the front door of the Chateau I discovered that, while most of the students live in the Cahteau, I had been relegated to the Gate House; a 19th century edifice at the other end of the estate for lesser servants and assorted Scum-of-the-Earth replete (Modern Times!) with a panoramic view of the oil refinery across the street.

A stoic to the end, I shouldered my battered canvas bag and walked a muddy gravel road to the extremities of the estate. At the top of a rotting wooden spiral staircase I found my room—once used as a guards' barrack when the Wehrmacht occupied the Chateau.

## TROUBLES ?

School costs rise every year and as prices increase so does the student's search for financial aid. The Caltech Placement Office continually receives information for funding students. The Placement Office maintains the *Grants Register* and the *Foundation Directory* which are excellent sources to use for information on Fellowships and Grants. Look in next week's issue

for a list of some of the Fellowships available.

For more information one can contact the Student Information Center in Room 10 Dabney Hall between the hours of 8 a.m. and 5 p.m. or the Office of the Dean in 210 Dabney. Information on graduate level Fellowships is available at the Graduate Office in 204 Dabney Hall.



## LAY OFF FROSH

As is usually the case, we have a pretty good frosh class this year, at least partly as a result of the greater number of applications submitted last year. With more applicants, the administration could be more selective, so it is not surprising that the SAT scores have improved slightly in our frosh this year. As in other years, of course, it's a pretty good bet that we have the best frosh class in the country.

The trend in the last few years toward engineering rather than the pure sciences continues, with an increase in the number of frosh interested in engineering and chemical engineering, and a decrease in those interested in math and physics.

Coincidental with another good frosh class, this year's frosh camp promises to be a pretty good one, with Feynman and Ingersoll participating. Also helping out in this year's camp is the Women's Service League which will be supplying donuts and the Alumni Association which is footing a major part of the bill for this year's camp.

Rather than running things the same way they were run last year with three discussion group meetings, this year will see the

frosh participating in only two such meetings, with the third replaced by a gathering by options of the people at camp, so the frosh just might get an impression of what they're in for a little early.

The only fly in the ointment is that, as usual, we can expect some interhouse politics to crop up at camp, as is already has in preparations for the camp. Both Dr. Ray Owen and Dr. David Wales (who will be serving as temporary Master of Student Houses during rotation week while Jim Mayer is gone) have expressed strong negative feelings regarding interhouse politics at frosh camp; It is their opinion that the camp should be for the benefit of the frosh and *not* for the benefit of the houses, so let it be emphasized: *The camp is for the frosh to get a chance to find out about various organizations, extracurricular activities, etc. which are to be found at Tech, and not for them to be barraged by conflicting claims as to the greatness of various houses.* So please save the sales pitch for rotation week, and give the frosh a chance to relax.

And don't forget: enjoy the camp yourself!

### The CALIFORNIA Tech

Thursday, September 23, 1976

Volume LXXVIII Number 1

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# News Briefs

Glee Club (Men's and Women's Sections)  
 September 26, 1976, Sunday from 3 to 6 PM and 7 to 8 PM, in the Fleming Basement Choral Music Office.  
 September 27, 1976, Monday from 3 to 6 PM and 7 to 8 PM, in the Fleming Basement Choral Music Office.

Note: A prerequisite for participation in any of the small ensembles sponsored by Caltech's choral program is active participation in the Caltech Glee Club's Men's or Women's Section.

Chamber Choir  
 September 28, 1976, Tuesday from 5 to 6 PM, in the Fleming Basement Choral Music Office.

Apollo Singers  
 September 29, 1976, Wednesday from 7:30 to 8:30 PM, in the Fleming Basement Choral Music Office.

Barbershop and other quartets  
 Times to be announced.

Women's Ensemble  
 By invitation.

Wind Ensemble  
 September 30, 1976, Thursday from 7 to 9 PM, in Winnett Student Center Lounge.

Jazz Ensemble  
 September 30, 1976, Thursday from 4 to 7 PM, in Room 25, Baxter Hall of the Humanities.

Orchestra  
 September 27, 1976, Monday from 3:30 to 5 PM, in Fleming Basement Instrumental Music Office.  
 September 28, 1976, Tuesday from 3:30 to 5 PM, in Fleming Basement Instrumental Music Office.

### Dynamic Seminar

Biology majors interested in medicine, medical research, or management of health care facilities may be interested in a special seminar on "Health

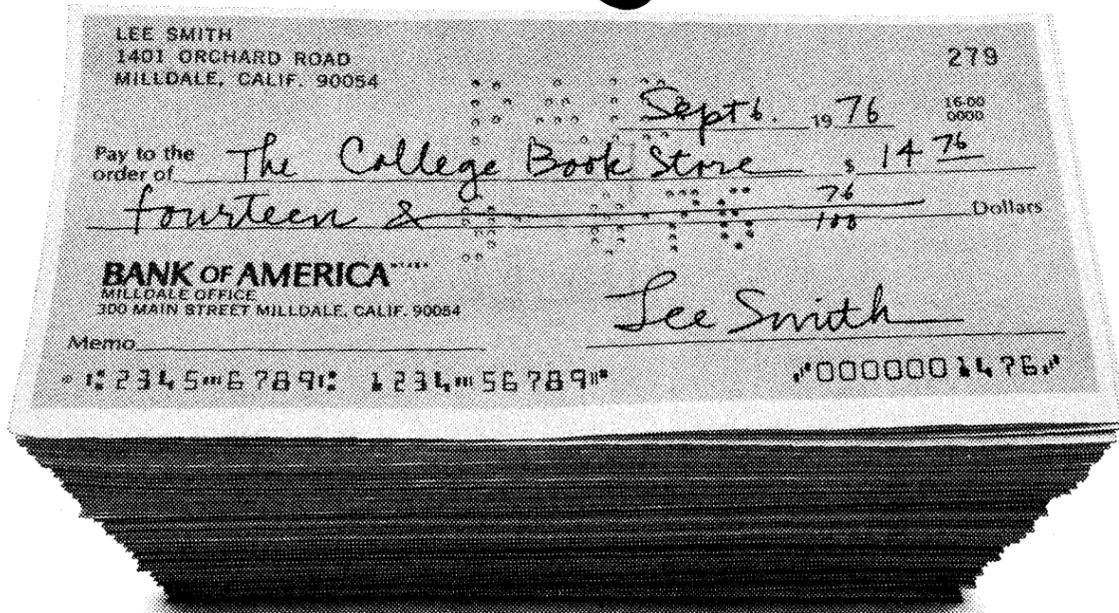
Facilities in Our Dynamic Society" and concealed in the registration information as BEM 106a, Sec. 2 The Seminar is conducted by Robert M. Sloane, Medical Center Administrator, City of Hope National Medical

Center. The first meeting will be on Tuesday, September 28 at 7:30 p.m. in the Industrial Relations Center. Additional information is available from Prof. Bob Gray

**See your name in print**  
**Become a reporter for**  
*The California Tech*  
**contact Al Kellner 106 Ruddock**  
**Carl Lydick 47 Fleming**  
**or drop by *The Tech* office**

*Become a proofreader and see it spelled right*

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## J'ai bu le cafe noir.

Sandy McCorquodale

One of the more intriguing facets of "life at Tech" is the system of student houses. The seven on-campus houses offer a spectrum of life-styles that combine characteristics of both fraternities and dormitories. The first week of first term is devoted by the houses to recruiting new members. In a process called "rotation", each new student has the opportunity to visit and be wooed by the various houses. Let me briefly explain how rotation works.

Rotation week officially starts with lunch on the Sunday preceding the first week of classes. During rotation week, each new student is assigned to one of the houses on each day. This means that he or she has been formally invited to eat both lunch and dinner on that day in the assigned house. The intention of these meal-time visits is that new students will be able to meet the members of the houses, in an effort to develop some feelings about which house he or she would like to be associated with. To help people to remember each other, and to keep track of whether or not a given person has visited a house on his proper day, name tags are issued at the waited meal of the day. In general, the houses make presentations following the waited meal, in an attempt to demonstrate the character of that house.

The final placement of new students into the houses occurs at the end of rotation week. Both the new students and the houses themselves have a voice in determining who goes where. By 8:00 p.m. on Saturday, the final day of rotation week, each new student is required to submit a list of the names of the four houses he or she would most prefer to join. This list must be submitted to the Resident Associate of the house in which the student is residing for rotation week. In the case of off-campus students, the list should be submitted to the Resident Associate of the house

they were assigned to visit on Sunday, the first day of rotation week. Each list implies that the four houses named are eligible to bid for the membership of that student. In a football-style draft, the presidents of all the houses then get together and pick their new members.

Let me emphasize several points. First, rotation applies to all incoming students, whether they are transfer students or freshmen, and whether they intend to live on-campus or off. House affiliation allows a member to participate in the social and athletic events of that house. Secondly, once an individual becomes the member of a given house, he will remain affiliated with that house for the rest of his stay at Tech. Transfers between houses can and do occasionally occur, but not until after first term. This is simply to insure that an individual has a complete picture of the house. Finally, the schedule of what house and which day will be posted in each house, or available from the president of that house. It is most important that new students follow the schedules and pick up their name tags on the appropriate night. If at any time it proves to be impossible to do this, the president of the appropriate house should be notified.

The official rules of rotation, as drafted by the Interhouse Committee last year are listed elsewhere in this paper. The rules are more explicit about rotation, and I'd strongly suggest giving them a look. The single penalty for new students violating the rules is a simple one—loss of draft choice. [i.e., the right to name four acceptable houses]

Rotation is not meant to be a foreboding period of grilling. It is not the "rush" of a frat community. Instead, it is simply the best system devised to date to allow new students and old to get together, shoot some bull, and decide whether or not they can stand living with each other for a

cont. from page one

the Tech interviewed Caltech biology professor Dr. Norman Horowitz. Dr. Horowitz and his colleagues, Dr. George Hobby, also of Caltech, and Dr. Jerry Hubbard of Georgia Tech are responsible for the design and operation of the Pyrolytic-Release experiment which has yielded the most promising results so far. In this experiment an attempt is made to measure the assimilation of carbon into more advanced organic compounds by any Martian organisms. A sample of Martian soil is obtained and exposed to a synthesized Martian atmosphere which is composed of CO<sub>2</sub> and CO tagged with radio active carbon-14. The sample is incubated for a period of seven days under simulated sunlight. At the end of the period, the sample is heated to drive off any organic compounds which may have been made by organisms in the soil. If this is the case it is possible then to detect carbon-14 with a counter to see if it has been used to form more complex molecules. When this was done the first time, the level of carbon assimilation was found to be far higher than would be expected from a sterile sample. When the experiment was done a second time with a sterilized control sample, the amount of carbon assimilated was consistent with an inactive sample. The experiment was performed a third time with the surface. Dr. Hobby, however, pointed out that scientists working with the surface images were unable to detect lichen, which was present on rocks brought back from the Mojave, in a test of the lander cameras scanning its rocks.

while. The experience is well worth both the time and effort. The IHC sincerely welcomes any suggestions and is available to help ease any problems that arise.

Ed Rea  
IHC Chairman

## Viking

Results from the other experiments in Viking have also been interesting. Atmospheric analysis shows the atmosphere to be composed mainly of CO<sub>2</sub> with small amounts of CO, O<sub>2</sub> and H<sub>2</sub>O. Argon was found to form one percent of the atmosphere, and nitrogen was found to form five percent—a big surprise. Nitrogen had not been previously seen on Mars, but it is a vital ingredient of life. Its detection, therefore is a plus for the probability of life. Using the nitrogen it is possible to hypothesize a past history of the composition and density of the Martian atmosphere.

Photography from the lander and orbiter has been rewarding. On the surface Mars is seen to be its familiar bright orange-red color. This color is produced by various iron oxide compounds. The sky itself is a pinkish color due to suspended dust particles. Geologists of course have been busy trying to classify formations seen on the surface. The lander cameras not only can produce pictures of the terrain, but can also give high resolution pictures of individual rocks or features, such as trenches dug by the scoop. Among some of the orbiter imaging results has been the detection of daily ground fog in some places, increased mapping of the north polar cap and new mapping of the Martian satellites. It has also been possible to get a much better look at some of the features first uncovered by Mariner 9.

One of the experiments just getting started is the seismometer on Lander 2. This experiment, designed and operated by Dr. Don Anderson, Caltech professor of geology, and his colleagues, will attempt to detect Mars quakes, the observation of which will improve our knowledge of the internal makeup and geological activity of Mars. The Viking seismometric team suffered a setback on Viking 1 when pins designed to immobilize the moving parts of the instrument during flight failed to remove once the lander was on the surface. Viking 2's seismometer is working perfectly, however. At this stage in the game the instrument is still being calibrated and tested. Dr. Anderson relates that the landing site is free enough from vibrational noise to permit operation of its seismometer at the highest sensitivity. In this mode it is possible to detect ground displacement as little as little as 30Å. This motion corresponds to a magnitude 3 earthquake 200 Km away. At this sensitivity the Viking Seismometer is more sensitive than most of the instruments that can be used on the more active earth. In southern California, a very active area, there are about 200 magnitude 3 earthquakes occurring each year. If Mars is as active as this area, Dr. Anderson hopes to catch a quake every week or so. Although the lack of a working seismometer at the an active sample. The amount of activity on this run was higher

than normal but lower by a factor of about 3.5 from the first run. By an error, however, this sample was performed at higher than normal temperature. There were two other biology experiments which have also produced interesting results. The labeled release experiment showed a release of CO<sub>2</sub> from the sample of soil after a drop of nutrient solution was added. The amount of CO<sub>2</sub> produced was large at first, but soon leveled off. The Gas Exchange experiment showed a release of oxygen when the soil sample was humidified.

Tantalizing results, but try to explain them. Life is a possibility, but a monkey wrench was thrown into the works when the Gas Chromatograph Mass Spectrometer on the lander failed to detect any complex organics in the soil. If life were present one would expect to see remains of dead organisms, and the building blocks from which others are formed. At least on Viking I this has not been the case.

There are then two ways to explain the results, with biology, or complex chemistry. The choice is difficult as life itself is chemistry on a highly organized level. Dr. Horowitz indicated, however, that chemistry seems the most likely process to explain the activity on lander I. Has organic compounds been found in the soil in addition to the signs of activity seen in the pyrolytic release experiment, life would have to be considered as a highly probable explanation. However, with the lack of the organic compounds in the soil, Dr. Horowitz and his colleagues will first try to see if all of the results can be explained by chemical processes. Indeed, one chemist at UCSD has suggested a process in which CO<sub>2</sub> in the presence of H<sub>2</sub>O vapor, and with hematite, Fe<sub>2</sub>O<sub>3</sub>, a chemical common to the surface, acting as a catalyst, can form organic compounds using the light of visual or near ultraviolet wavelength as an energy source. Heating the sample may drive off the H<sub>2</sub>O in the crystals, and thus prevent the process of carbon assimilation. This, then, could explain why the control pyrolytic release experiment showed low activity, if indeed this same chemical process was responsible for the high activity seen in the first run of the experiment. To test this idea Dr. Horowitz will incubate the first Viking II sample in a dark chamber. If organisms are present, they can gain energy by reducing the CO in the artificial atmosphere, and thus assimilate carbon without needing the energy provided by the light source. The above chemical process, however, will not work in the dark. The result of the experiment will be known soon.

In the mean time life on Mars can not be ruled out by Viking, and still is a possible explanation of the Viking I results. Hopefully Viking II will clear this up. Attempts to find visual evidence of life have failed. There are no visible types of vegetation, animals, or even any

cont. on page fifteen



CALTECH PRESENTS  
MUSIC — DANCE — DRAMA

Burch Mann's

### AMERICAN FOLK BALLET

Fri., Oct. 1, 1976—8 p.m.

Beckman Auditorium \$6.50 - \$5.50 - \$4.50

Pianist

### LEONARD PENNARIO

Sat., Oct. 9, 1976—8 p.m.

Beckman Auditorium \$6.00 - \$5.00 - \$4.00

Spectrum Drama/Ferenc Molnar's

### OLYMPIA

Fri., Sat., Oct. 22, 23, 29, 30; Nov. 5, 6, 1976—8 pm  
Ramo Auditorium Gen. Adm. \$4.00

Baritone

### HERMANN PREY

Sat., Nov. 6, 1976—8 p.m.

Beckman Auditorium \$7.50 - \$6.25 - \$5.00

Two Part Concert/400 Years of Guitar

### THE ROMEROS

Sat., Nov. 13, 1976—4 p.m.

Beckman Auditorium \$7.50 - \$6.25 - \$5.00

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As we gird our loins for another bout with the world of academia, I'd like to extend my own welcome to the new members of Caltech. Good luck, and remember that you've reached the rarified realm of both agony and ecstasy.

The purpose of this column is to supply information about culture and entertainment, two areas which occasionally overlap. In considering the topic, one finds the same dichotomy as in almost everything else—that which is *on*, and that which is *off*, campus.

On campus you will find Beckman and Ramo Auditoriums (seating 1171 and 415, respectively). The programming in these halls is designed both to entertain and to provide a broad cultural exposure (sounds awful, no?). Events this term include Burch Mann's American Folk Ballet—the ethnic dances of America performed by an adroit and attractive troupe, recitals by pianist Leonard Pennario, lyric baritone Hermann Prey, and the Romeros (all four) in a special

two part concert beginning at both 4:00 and 8:00, with a dinner break in the middle. Spectrum Productions will offer Ferenc Molnar's *Olympia*, and will probably love volunteer help from both the knowledgeable and the curious (call Shirley Marneus at ext 1076). The Caltech Glee Club will present its annual Festival of Light the week before finals, and tickets are going fast. Events 2nd term include the Bayanihan Philippine Dance Company, Wagnerian satirist Anna Russell, flamenco guitarist Carlos Montoya, and the Swiss mime troupe, the Mummenschanz. Other events in Beckman include travelogues, the Coleman Chamber concerts (for which techers get 50 free tickets and 50 more for \$1 each), the Leakey Lecture Series (for which techers get 50 tickets for \$1 each), and two series which are completely free, the Watson Lecture Series (featuring prominent members of the Caltech community) and the Dabney Lounge Concerts. For those events which do not make

special offers to techers, a discount of \$2 per ticket is available. If you want more active participation in the performing arts, the ASCIT musical is in February and begins work in a week or two I hope.

Off campus you will find diversion in staggering quantities. Some of it is pre-arranged, and the best index to it all you can find is the Calendar, the L.A. Times Sunday entertainment supplement. I can in these pages only deal with a few major items. There is a tremendous selection of theatre in L.A. at the moment. The Huntington Hartford features *Equus*, perhaps the finest play of the twentieth century. It is a most profound and entertaining exposition of two personalities engaged in a specific relationship that of patient and therapist. The point of contention is the patient's action of blinding six horses. Two excellent musicals are playing, *Chorus Line* at the Shubert and Sondheim's *Pacific Overtures* at the Music Center Pavilion.

The New York City Opera's annual visit is in November and December, and for those of you who know the significance of Wagner, the NYCO's contribution this year is *The Flying Dutchman*. The American Ballet Theatre will come through in February. The Los Angeles Philharmonic offers a

variety of series with a 50% discount for students. This year is one of your last chances to catch Zubin Mehta as director of the Philharmonic. The Caltech Y frequently organizes parties to these concerts, and is worth pursuing for further information.

There isn't a lot I can say about rock concerts. It depends upon who you like, and how fast you are. Good tickets at face value can only be had immediately after sales begin, for the ticket market in L.A. is vicious. Major tours by everyone are expected momentarily, and the thing to remember is that most concerts are released for sale on Mondays at 10:00 a.m. The question of popular concerts in Beckman has come up before, and last year ASCIT sponsored a highly successful concert by Pete Seeger. If further concerts in Beckman are to take place, it will require some demonstration of interest (like a letter or phone call) on your part.

Remember also that cultural (i.e. "live", in this case) events off campus qualify for a 50% rebate (up to a limit of \$6 per event) from Dean Owen's slush fund. If you've got any questions about public diversion, or want to buy tickets on or off campus, give me a call at the Caltech Ticket Office, ext. 1652. Cheers!

—Chris Harcourt

## PLAYBOY About Tech : Looking at Figures

The 1976 *Playboy Student Survey* reveals that although college women are becoming more sexually active, the percentage of male virgins is rising. In the 1970 *Playboy* survey, 49% of female students graduated with more than their brains intact, but by 1976, this figure had dropped to 26%. Yet, in the same period, the percentage of male virgins rose from 18 to 26%. This parity indicates the end of the double standard, observes *Playboy*—now women can if they want to, while men don't have to.

The three out of four coeds who get it on, get it on with a vengeance. *Playboy* findings show their activities equal those of men in every form of sex—except masturbation. Although the poll reveals 29 percent of the women consider simple friendship sufficient grounds for sexual intercourse, most student sexual activity today takes place within fairly monogamous relationships. Fifty-five percent of women and 47% of the men questioned had a lifetime total of three or fewer partners.

In spite of the fact that many students look upon college as a kind of sexual testing ground, conservatives need not fear that the increase in campus sexual activity is another sign that our moral fabric is unwinding. A full 60% of students disagree strongly with the statement "I hope to have an open marriage which

would include extramarital sex." Another 57% disagree strongly with the statement "I'm not interested in marrying. I hope to have a varied sex life, including a number of affairs.

Students offered some surprises on other issues, too. Although both politicians and the general public are busy denouncing Big Government, students say they want more government intervention in almost every area of life, particularly in enforcement of pollution laws.

Seventy percent favor handgun control, and almost half want to restore the death penalty. Students generally favor stricter laws, heavier penalties and mandatory therapy for hard-drug users. (Only marijuana and alcohol escape this prohibition.)

Almost all students (94%) support equal economic and political rights for women, while 79% oppose any move to restrict women's rights to abortion. In fact, 67% of Catholic students questioned oppose the so-called right-to-life amendment.

Only 58% of those polled were optimistic about the future. Seventy-five percent agree that there has been a shift toward conservatism among students, yet judging from the statistics, most students have a different definition of conservative. It appears that the New Morality of the Sixties has become the dominant moral code of the Seventies.



by Gavin Claypool

*The Forever War*, Joe Haldeman's story of a 1,000-year interstellar war, was awarded the Hugo for best novel of 1975 at the 34th World Science Fiction Convention September 5th in Kansas City.

Haldeman became the fourth author in four years to win both the Nebula and Hugo awards in the best novel category. Isaac Asimov's *The Gods Themselves*, Arthur C. Clarke's *Rendezvous with Rama*, and Ursula K. LeGuin's *The Dispossessed* turned the trick the past three years.

Roger Zelazney was also a double winner with "Home is the Hangman," winner of the Hugo and Nebula awards for best novella. It originally appeared in the 1975 November issue of *Analog*, and is the third part of *My Name is Legion*, Zelazny's collection of stories about his hero with no name.

Larry Niven won his first Hugo with his first Beowulf Shaeffer story ("Neutron Star"); his fifth Hugo was awarded for

"The Borderland of Sol," the fifth of the Shaeffer stories. It is part of his collection *Tales of Known Space*, and was originally published in the 1975 January issue of *Analog*.

"Catch That Zeppelin!" by Fritz Leiber appeared in the 1975 March issue of *The Magazine of Fantasy and Science Fiction*. It was awarded both the Nebula and Hugo awards for best short story. Leiber is now the undisputed leader in the four writing categories with six Hugos; Poul Anderson, Harlan Ellison, and Niven each have five.

*A Boy and His Dog*, an L. Q. Jones production based on the Nebula-winning novella by Harlan Ellison, was awarded best dramatic presentation. This was the second time Ellison has been involved with a winner in this category; he wrote the original script for "The City on the Edge of Forever," a Star Trek episode that won in 1968.

The professional categories were no surprise: Ben Bova won

## NEWS

### Chamber Music

The opportunity to study chamber music under the guidance of artist-teachers is again offered at Caltech this academic year. Violinist, Alice Schoenfeld and cellist, Elenore Schoenfeld will be in charge of chamber music master classes scheduled for Thursday afternoons between 4:00 and 7:00 p.m.

The course is open to Caltech students, members of the administration, the faculty, their families, and to qualified instrumentalists of the Pasadena community. Admission by audition only.

Audition date is set for Thursday, September 30 from 4:30 to 6:30 p.m. in Baxter Hall, room 25.

Former participants do not need to audition, but are requested to call (213) 681-8798 if they would like to be considered again for participation, and leave their name and phone number.

### Communicate with Your Spouse?

Community Psychological Services in conjunction with Fuller Graduate School of Psychology, Fuller Theological Seminary requires married couples to test a program designed to help couples to test a program designed to help couples communicate. The training will require in excess of eight weekly sessions of an hour and a half each. Call Gary Brainerd at 795-3513.

his fourth Hugo as editor of *Analog*; and Kelly Freas walked off with his fifth straight Hugo for best artist and tenth overall.

Charile and Dana Brown, winners in 1971 and 1972, were awarded the best amateur magazine Hugo for their editorship of *Locus*.

Richard E. Geis repeated as best fan writer and Tim Kirk was voted best fan artist for the fifth time in seven years.

Tom Reamy, who was the only Nebula winner not to pick up a Hugo, did receive the John W. Campbell Award for best new writer. "San Diego Lightfoot Sue" in the 1975 August issue of *The Magazine of Fantasy and Science Fiction* was the nebula recipient. The J. R. R. Tolkien Memorial Fantasy Award ("the Gandalf") went to L. Sprague de Camp for his lifelong contributions to fantasy.

(Note: *Young Frankenstein*, the winner of the 1976 Nebula for best dramatic presentation, was awarded a Hugo in 1975.)

No runners-up or vote totals have been announced in any category.

### Baxter Revised

The Baxter Art Gallery has opened this season with a collection of contemporary tapestries and a selection from the works of Southern California Artists. The show runs until October 8, noon to five.

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The HP-25C is our keystroke programmable. It can solve automatically the repetitive problems every science and engineering

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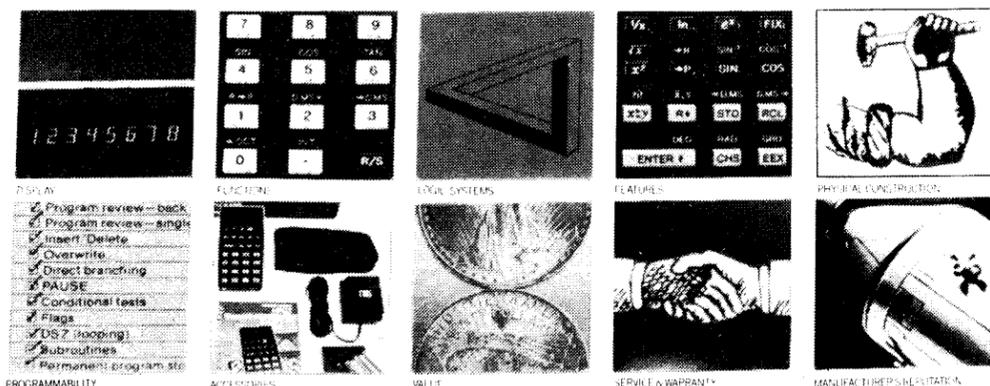
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# DISCOUNTING GRAFT AND CORRUPTION

The meeting was called to order at 7:28 p.m. by Bielecki. Present were Bielecki, Gromley, McDonnell, Chess, Rea, Rousseau, Fisher, Westover, Wilson, Schwartz, Backus, Yoshida, Anderson, Agha, and Silverstein.

- 1.) Wilson distributes list of candidates for tennis awards. The list is approved by the BOD (Chess/Rousseau: 7-0-0).
- 2.) Alan Silverstein requests ASCIT assistance in acquiring a new pot for Ricketts House. He plans to canvass 700 alumni for funds but would like to increase the expected donations by attaching the ASCIT name to the fund, thereby acquiring tax-deductible status (the "ASCIT-Ricketts House Pot Fund"; Chief Davis notwithstanding). The extra money will be used by the house. He has a copy of the draft and receipt letters. A motion was made to give Ricketts the requested support and was passed (McDonnell/Rousseau: 5-0-2 (Rea, Gromley)).
- 3.) Rea announces that the faculty/student committee positions still vacant will be reopened for nomination first term. The Undergraduate Academic Standards and Honors Committee (UASH) will be cut in size to nine faculty and three students—the BOD had earlier approved four. Backus thinks that a smaller committee would put people before the committee more at ease. Rea thinks that a larger student representation would have the same effect and plans to discuss the matter with Wells.

## Anderson:

### After all, why should I put in over-time on work that doesn't pay?

When I spoke two meetings ago I tried to emphasize the fact that my getting the \$1700 Josten's sponsorship was the result of work on my part above and beyond the call of good duty (note I don't say "normal" duty. Considering the work of my predecessors, the fact that I got bids was abnormal.) I certainly agree with the BOD's point of view that it should be expected that a Business Manager will solicit bids from several printing firms and that he should encourage the lowest bids possible by emphasizing to salesmen that they have competitors. I did all of that. That is not the question. The point that I want to make is that my further work in getting the sponsorship ad would not be expected after checking the records, I have noted that Josten's bid (their "discounted" price, not that quoted in their price list" was

- 4.) Chess reviews the now-familiar Big-T discount affair. Ole Anderson distributes copies of his argument to the BOD, which is read by Chess. Anderson says that he would not have done the bidding work if he thought that he would not profit from it. Bielecki says that it was decided that Anderson's taking of a percentage on the discount was an honest mistake, to which Anderson replies that he would still be "ripped off". Rousseau moves to withdraw the BOD's earlier decision but receives no support (Rousseau/no second). Backus has a few questions: Backus: "What was the discount on the first bid?" Anderson: "The discount was \$1700 on a bid of \$8500." Backus: "Did we pay for extra services?" Anderson: "Yes, about \$200." Backus: "What about the last bid?" Anderson: "The bid was \$9600 and the discount was \$2000." Backus: "How much did we end up paying?" Anderson: "I don't recall; there were a lot of extra costs because of 25 extra pages." Backus: "What is the standard printing cost?" Anderson: "There are none existing." Backus: "But there are rules of the trade. Who was told how many pages there were supposed to be?" Agha: "The editors specified the main part and gave the houses leeway in determining the size of their own sections."

over \$600 lower than their closest competitor (the bids ranged from Josten's \$8,500 to Typecraft's \$22,000. Typecraft was the regular printer.). Would it not therefore have been reasonable to sign with them because of this? I think so, considering the amount of time I had by this time put in, well over a month. By this time it was fairly certain Josten's would be our contractor.

At this point I singled out Dennis Proud, Josten's salesman, and tried to sell the idea of sponsoring the Big-T. The idea was the following: Caltech would agree to sign a two-year contract in exchange for Josten's placing an ad, thereby sponsoring the yearbook. Why should Josten's agree to such an idea? The reason was twofold: (1) Caltech is well-known and the fact that Josten's prints Caltech's year-

book would encourage other schools to do the same (a similar strategy is used for other "prestige" schools such as USC; (2) Josten's wanted to show Caltech that their work was of high quality despite lower prices. Thus such a sponsorship would be a wise investment on Josten's part even though they might not make a normal profit on the deal, and indeed, the sponsorship was finally agreed upon and the two-year contract went to Josten's. [Note: The ASCIT bylaws specifically prohibit such a contract without prior approval by the Board of Directors. —Editor]

Chess: "Mike Schwartz says that according to Betty Mead, the *Big-T* took \$1800 in loan from ASCIT last year; ASCIT paid the *Big-T* \$1800 in addition. This would seem to indicate that the *Big-T* owes ASCIT \$3600."

Anderson: "Betty Mead informed me that the *Big-T* had \$1800 extra. I took that, but I was not aware of any loan." Anderson thinks that the action of the BOD, in requesting the return of the questionable commission, is a violation of the Honor System—taking unfair advantage of him—and unless the action is reversed, the matter will be brought to the BOC. Bielecki reiterates that the BOD has stated that no guilt was involved; it was an honest mistake, but Anderson should not profit from it. Anderson disagrees.

Agha: "This was determined by retroactive legislation, which is unfair to Ole."

Westover: "But didn't he collect his commission before he should have?"

Backus (to Schwartz): "Have all of last year's ads been paid for yet?"

Schwartz: "No, not all of them."

Rousseau asks the BOD what action will be taken. Chess replies that we will collect the money if the motion stands. Agha interjects that when the first yearbook came out that the business manager would have received a \$300 bonus because of his performing his job.

Westover asks when this entire affair was first brought to the

attention of the BOD. Chess replies that it was shortly after Schwartz became *Big-T* business manager. Rousseau: "It seems that Ole deserves the money for his work. I think that the BOD should allow the commission."

Chess: "Do you think that this is advertising?"

Rousseau: "I think that he deserves it."

Westover: "We agreed earlier that this was not an ad."

Rousseau: "This was wrong; we should pay him anyway."

McDonnell: "That would be in violation of the existing ASCIT bylaws."

Agha: "Why don't we give him a bonus equal to the amount in question?"

Rousseau: "I think that would be a fair solution."

Gromley: "How long did it take you to reach an agreement with Josten's?"

Anderson: "At least a month; about as much time as I spent on all the other ads."

After Bielecki asks if there is any other business, Rousseau moves to give Anderson a bonus equal to the amount which the BOD had requested that Anderson return. The motion was defeated (Rousseau/Gromley 1(Rousseau)-3(McDonnell, Chess, Westover)-3).

5.) The meeting was adjourned unanimously at 9:04 p.m. (Chess/Rousseau).

## SCHRN

not considered it an advertisement. After all, why should I spend so much extra time for work which gives no pay? [any editor of the California Tech could well ask the same question] I could just as well have allotted this time to getting more conventional ads: both would have had the effect of lowering costs of the book by bringing in revenue and ads include a commission as recompense for the Business Manager's work. Or I could have stopped there and spent more time on academics.

The point is I did this work believing I would gain something from it as well as it being in the yearbook's (and thus the students') best interests. If the BOD now votes to retroactively deny me proper recompense for the work, I will, quite frankly, feel ripped off. This is all I have to say on the matter.

## CONVENTIONAL

### SCI-FI

Over 2600 fans attended the 34th World Science Fiction Convention, the annual gathering of the faithful held this year over Labor Day weekend in Kansas City.

The attendance was far short of the 6000 fans anticipated (and feared) by the convention committee, whose policy of escalating prices (\$50 at-the-door membership) and non-scheduling of special interest programming (e.g., *Star Trek*, Burroughs, etc.) apparently discouraged many fans so much that they chose not to attend.

The total membership of the convention was about 4200; as of the close of registration Sunday night 2609 had actually checked in. Besides the standard convention programming of panel discussions, author readings, a costume masquerade, an art show a huchsters' room, and parties, MidAmeriCon—as this convention was known—premiered a major dramatic presentation Friday night. Entitled *Sails of Moonlight, Eyes of Dusk*, it was a two-act play based on stories by Gordon Dickson, George R. R. Martin, Harlan Ellison, C. L. Moore, Robert Silverberg, and Thomas Burnett Swann, and with a framing story written about characters created by Cordwainer Smith. It was an ambitious project, and might have succeeded nicely.

#### But it Didn't

Its main problem, I believe, was its length. With a fifteen-minute intermission, it ran four hours. Each act dealt with three of the stories, but early on in Act Two is was clearly dragging along. Many of the audience did not return after the intermission, and a number of others left before the final curtain.

#### Scuba Club

For those of you interested in scuba diving, the Caltech Scuba Club will be holding a meeting in 125 Steele at 4 p.m. on Friday, October 1st. This will be mainly an organizational meeting at which we'll try to set the schedule for first term. For more information, see Phil Engelauf (Ruddock), Craig Broskow (240 S. Holliston, Number 2), or Al Nikora (Ruddock). Watch for another notice in next week's issue.

#### "Yeah, make it a news brief... we want everyone to come."

There will be a pizza bust for all incoming freshman and all returning upperclassmen (and even all transfer students) in Dabney Garden Saturday, September 25, at five o'clock (in the evening). Come and meet the twenty-one frosh girls.

## ETAION SCHROEDLU WRITES AGAIN

### Who Was That Masked Reviewer...

by Etaion Schroedlu

This season's theatrical offerings in the Los Angeles area promise to be an interesting and varied collection, proving once again that stage drama is alive and well (in fact, perhaps never better) in the land of the movie. Appearing this fall will be Katherine Hepburn, Maggie Smith, Julie Harris, Brian Bedford, Carole Shelley, Eva LeGallienne, among others. Only in New York, home of Broadway, and Los Angeles, home of Hollywood can theater patrons find such a large and thrilling choice of names, plays, and theaters to choose from.

The local large houses continue to operate under the star system of attracting customers. Opening next month is Katherine Hepburn, in "A Matter of Gravity," the first selection of the year at the Ahmanson (part of the Music Center, in downtown L.A. about 20 minutes from Tech), which runs into December. Maggie Smith and Brian Bedford follow in Ferenc Molnar's "The Guardsman," in December and January.

The Huntington Hartford, in Hollywood, currently features

"Equus," the prize-winning contemporary play, which runs through November sixth, an extended run. Following that closing, Julie Harris (recently seen on TV in "The Last of Mrs. Lincoln,") opens November 32 as "The Belle of Amherst," a show on Emily Dickenson. In December, "The Royal Family," a play about a Barrymore-type clan, follows at the Hartford featuring Eva LeGallienne, Carole Shelley, and Sam Levene. In Century City, the Shubert has "A Chorus Line," which seems set to run well into 1977.

#### Playing Around

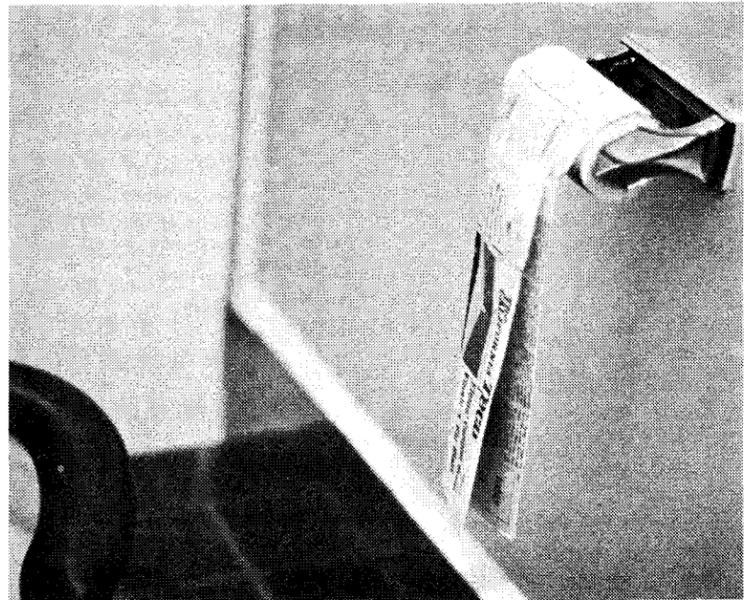
The acclaimed musical "Pacific Overtures" is at the Dorothy Chandler Pavilion, also part of the Music Center, and closes October 16. Other musicals, concerts, and opera will be available locally throughout the year, as usual.

There are too many small theatres in the Los Angeles

area to even begin a compilation of their schedules (see the Calendar section of the Sunday Los Angeles Times every week for details), but one group deserves the special attention of

Shakespeare buffs, the modestly-named Shakespeare Society of America, which operates out of the Globe Playhouse in West Hollywood, and is in the process of performing all 37 of Shakespeare's plays. This fall the schedule offers "Much Ado About Nothing", opening September 29 and running until October 30, "Julius Caesar," opening November 4, and "As You Like It," opening December 16. (The latter play also appears in Beckman Auditorium next February 19, performed by the new Shakespeare Company of San Francisco.) I have seen several of the Shakespeare Society of America's shows, and enjoyed them all.

For impecunious students, virtually all of the local theaters make arrangements for student discounts, student rushes, or both. (The 'rush' allows remaining tickets to be sold very cheaply just before curtain time, but of course it there aren't any, you're out of luck. In the past I have successfully 'rushed' at the Ahmanson and the Shubert, but this year we can't promise anything.) Another possibility is group excursions and group rates.



The Shakespeare Society offers group tickets at \$3.00 to students and teachers at Caltech and other Caltech community people at the same price if they come with a student group. Groups are "from two to twenty." (Their house seats less than 100.) The Caltech Y will probably be arranging group excursions on these terms, so check in with them during the course of the term.

For many Techers, it is a once-in-a-lifetime opportunity to select great drama from a large number of choices to fit one's personal tastes; everyone can afford to take a night off every once in a while. Go see a play!

#### If the Subtle Screw Doesn't Work . . .

The Caltech Christian Fellowship invites anyone desiring a one hour break from the rotation runaround to participate in its first meeting of the year on Monday at 9:40 p.m. in Winnett Lounge. For more information, contact Mark Swanson in 210 Ruddock (449-9886).



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AYRES, T.	PA	FL	BL	RI	DA	LL	RU	KANE, K.	BL	FL	LL	RI	DA	RU	PA
BASKIR, B.	DA	LL	BL	FL	RU	PA	RI	KATO, D.	O/C	DA	BL	FL	PA	RU	LL
BAYLESS, J.	PA	LL	RU	RI	DA	FL	BL	KENDALL, J.	O/C	DA	FL	LL	RU	BL	PA
BEAUSOLEIL, R.	DA	LL	PA	FL	BL	RI	RU	KERNS, D.	RU	DA	LL	FL	RI	BL	PA
BELMONT, P.	DA	RU	PA	FL	RI	BL	LL	KNOTT, C.	PA	FL	LL	BL	DA	RI	RU
BENNETT, J.	RI	BL	PA	RU	LL	DA	FL	KONG, C.	FL	PA	RU	RI	DA	LL	BL
BERGER, A.	FL	PA	DA	LL	BL	RI	RU	KURASAKI, K.	O/C	DA	LL	PA	RU	FL	BL
BERNSTEIN, F.	BL	FL	RU	DA	RI	LL	PA	LAMELAS, F.	DA	DA	LL	FL	RI	RU	PA
BERTSCHINGER, E.	PA	BL	RU	PA	FL	BL	DA	LAWSON, W.	O/C	DA	FL	RU	BL	RI	LL
BLAISDELL, G.	LL	RI	RU	PA	FL	BL	DA	LEE, N.	O/C	DA	FL	LL	BL	RU	PA
BLANCHARD, A.	LL	DA	RU	PA	BL	FL	RI	LENGUA, G.	BL	PA	RI	FL	LL	RU	DA
BOCKENSTETTE, C.	BL	FL	LL	DA	RU	PA	RI	LEVIN, J.	DA	RU	PA	RI	LL	BL	FL
BONHAM, B.	PA	DA	FL	RI	BL	RU	LL	LEWIS, I.	PA	LL	RI	BL	FL	DA	RU
BORDEAUX, T.	O/C	BL	RI	RU	PA	LL	DA	LO, E.	DA	RU	BL	RI	PA	FL	LL
BOYAR, A.	PA	BL	RI	RU	LL	DA	FL	LOH, E.	BL	PA	FL	LL	DA	RI	RU
BRACKETT, D.	RI	BL	DA	RU	PA	FL	LL	LOMAX, A.	BL	PA	FL	LL	DA	RI	RU
BRADBURN, D.	PA	BL	DA	RU	RI	FL	LL	LOUGHRY, T.	PA	FL	BL	DA	RU	LL	RI
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BROOKS, C.	RI	PA	BL	RU	FL	LL	DA	MARCADIS, D.	DA	LL	BL	RI	FL	PA	RU
BROUILLETTE, T.	RU	DA	RI	BL	PA	FL	LL	MARTIN, K.	PA	RU	LL	DA	RI	BL	FL
BROWN, R.	RU	DA	FL	BL	RI	LL	PA	MATHEWS, P.	O/C	RI	PA	RU	LL	FL	BL
BURKE, R.	FL	PA	RI	LL	DA	RU	BL	MATHIESON, R.	PA	BL	FL	DA	RI	RU	LL
BUTLER, R.	RU	PA	FL	BL	LL	RI	DA	MATHOG, D.	O/C	RI	DA	RU	LL	BL	FL
CAMPOS, K.	PA	RI	BL	RU	FL	LL	DA	MCANELLY, R.	O/C	PA	LL	RI	DA	FL	RU
CANIN, D.	PA	RI	RU	DA	FL	LL	BL	MCCABE, T.	O/C	RI	FL	PA	LL	BL	DA
CARLAN, D.	BL	RI	LL	DA	PA	RU	FL	MCLEAN, J.	O/C	RI	RU	BL	LL	PA	DA
CARPENTER, J.	LL	FL	RI	PA	BL	DA	RU	MCLOUGHLIN, K.	RU	PA	RI	FL	LL	BL	DA
CARTER, S.	O/C	RI	LL	PA	FL	DA	RU	MEADOR, J.	PA	RI	RU	DA	LL	FL	BL
CHAN, E.	DA	PA	RI	FL	LL	RU	BL	MICHAUD, M.	O/C	RI	LL	RU	PA	DA	FL
CHANDLER, R.	BL	RU	FL	DA	PA	RI	LL	MILLER, J.	DA	PA	RU	RI	FL	LL	BL
CHANG, R.	DA	RI	RU	FL	PA	LL	BL	MORRIS, D.	LL	PA	DA	RU	FL	RI	BL
CHAO, S.	PA	DA	FL	RU	BL	LL	RI	MORRIS, R.	O/C	DA	LL	PA	BL	FL	RU
CHIU, L.	SO	FL	PA	DA	RU	LL	RI	NARES, F.	FL	BL	DA	RI	RU	LL	PA
CHIU, P.	SO	DA	BL	FL	RU	RI	LL	NEER, L.	LL	RI	BL	RU	FL	PA	DA
COCCONI, A.	DA	PA	FL	LL	BL	RI	RU	NICHOLS, A.	O/C	RI	BL	DA	LL	RU	PA
CODONA, J.	PA	FL	LL	RU	DA	BL	RI	NICKELL, E.	PA	LL	DA	FL	BL	RI	RU
COLLINS, J.	BL	LL	PA	DA	FL	RI	RU	O'MAHONEY, B.	LL	DA	FL	RU	BL	PA	RI
CONCHA, J.	FL	BL	RI	LL	RU	DA	PA	OKITA, G.	BL	PA	RI	LL	FL	RU	DA
COOLE, W.	O/C	BL	FL	RU	PA	DA	LL	OTA, D.	O/C	RI	RU	LL	PA	FL	BL
CORMIER, P.	PA	DA	RU	BL	RI	FL	LL	PARK, C.	RU	RI	BL	FL	PA	LL	DA
CORTEZ, B.	O/C	BL	FL	LL	RU	DA	PA	PEDERSEN, B.	PA	LL	RI	FL	DA	RU	BL
COVINO, J.	RU	RI	DA	BL	LL	PA	FL	PETERSON, C.	O/C	FL	PA	RI	BL	LL	DA
COX, M.	DA	PA	RI	LL	FL	RU	BL	PETERSON, E.	PA	BL	RI	FL	RU	DA	LL
CRAIN, L.	O/C	FL	RU	DA	BL	PA	RI	PHINNEY, S.	BL	DA	RI	LL	RU	FL	PA
CRATON, L.	O/C	RI	DA	FL	PA	BL	RU	POWER, W.	O/C	FL	LL	BL	DA	RU	PA
CRUPE, G.	DA	BL	RI	LL	RU	FL	PA	PROOPS, K.	RU	PA	FL	LL	DA	RI	BL
D'AMBRA, N.	O/C	DA	RI	BL	RU	LL	PA	PURSIFULL, R.	PA	DA	LL	FL	RU	BL	RI
DAILEY, R.	DA	FL	PA	LL	RU	BL	RI	QUESNEL, S.	PA	RI	RU	FL	LL	BL	DA
DAMRON, P.	RU	FL	LL	BL	DA	PA	RI	RAGINS, M.	BL	FL	PA	LL	RU	DA	RI
DANIEL, K.	RU	LL	PA	BL	FL	DA	RI	RAMILO, C.	RI	FL	LL	BL	DA	PA	RU
DE LA HOUSSAYE, P.	O/C	BL	LL	RI	PA	DA	FL	RAY, W.	FL	DA	LL	RI	BL	RU	PA
DEMETRESCU, S.	O/C	RI	BL	PA	FL	RU	DA	REACH, M.	O/C	LL	BL	FL	DA	RI	RU
DEVORE, S.	DA	RI	RU	LL	PA	BL	FL	REDER, R.	RI	LL	PA	BL	FL	DA	RU
DIGIORGIO, J.	FL	DA	PA	LL	RU	BL	RI	REEDS, J.	FL	BL	RI	RU	PA	DA	LL
DRUM, K.	RU	FL	BL	DA	RI	LL	PA	REINIZ, J.	LL	FL	PA	RU	DA	BL	RI
EARLE, G.	FL	RI	RU	LL	PA	BL	DA	RENCKLY, R.	FL	BL	DA	RU	RI	LL	PA
EATON, S.	BL	PA	RI	DA	LL	FL	RU	RICE, J.	PA	RU	BL	FL	RI	LL	DA
EDWARDS, P.	RU	FL	LL	DA	BL	PA	RI	RISLEY, R.	O/C	LL	PA	RI	DA	FL	RU
EDWARDS, V.	FL	RU	BL	LL	RI	PA	DA	RITCHIE, D.	RU	PA	RI	LL	FL	BL	DA
ELLIS, M.	O/C	RI	DA	LL	FL	RU	BL	ROACH, K.	LL	DA	RU	BL	RI	FL	PA
ERICSON, D.	FL	RI	LL	PA	DA	RU	BL	ROMO, M.	O/C	LL	RI	RU	DA	PA	FL
ERIKSEN, E.	DA	RU	BL	LL	RI	PA	FL	ROSENER, P.	PA	RI	FL	LL	DA	RU	BL
ERWIN, D.	BL	LL	DA	FL	RU	PA	RI	ROTTER, M.	LL	DA	FL	BL	RU	PA	RI
ESTRADA, R.	O/C	RI	PA	RU	FL	LL	BL	ROYDEN, C.	RI	FL	BL	DA	RU	LL	PA
ETHERIDGE, E.	BL	LL	PA	FL	DA	RI	RU	RUBENSTEIN, J.	O/C	LL	PA	DA	FL	BL	RI
FARR, W.	DA	RI	LL	PA	FL	RU	BL	RUBY, C.	RI	FL	LL	DA	BL	PA	RU
FERGUSON, M.	RI	DA	FL	RU	BL	LL	PA	RUMPH, D.	O/C	LL	PA	RI	FL	DA	RU
FINAN, P.	RU	RI	LL	DA	PA	BL	FL	RUNDZJO, R.	FL	RI	BL	RU	LL	PA	DA
FINLEY, D.	LL	RU	BL	PA	RI	DA	FL	SANTUCCI, S.	RU	DA	RI	LL	BL	FL	PA
FINN, M.	O/C	BL	RU	DA	PA	RI	LL	SAUND, E.	O/C	BL	DA	FL	RU	RI	LL
FISCHER, M.	RU	BL	FL	DA	PA	RI	LL	SCHLEICH, K.	RI	RU	LL	DA	PA	BL	FL
FLANAGAN, C.	O/C	BL	DA	FL	PA	RU	RI	SCHMIDKE, W.	O/C	FL	LL	PA	DA	BL	RI
FONG, J.	O/C	RU	BL	PA	RI	LL	DA	SEIDLER, M.	O/C	LL	BL	RI	FL	RU	DA
FOOTMAN, C.	O/C	RU	LL	PA	DA	FL	RI	SEIDLER, P.	O/C	DA	RI	LL	BL	PA	RU
FORT, B.	O/C	RI	BL	DA	PA	RU	FL	SHAFER, D.	FL	DA	LL	RU	BL	PA	RI
FORTUNATO, M.	DA	RI	RU	PA	LL	BL	FL	SHIH, D.	RI	RU	BL	PA	LL	DA	FL
FREYBURGER, D.	DA	FL	RU	PA	BL	LL	RI	SHUPAK, P.	FL	LL	PA	RU	DA	BL	RI
FRIEDBERG, S.	LL	BL	DA	PA	RU	RI	FL	SIGMUND, S.	RU	FL	PA	LL	BL	DA	RI
FRUCHTERMAN, J.	RI	FL	LL	RU	DA	BL	PA	SILVESTRE, C.	RU	RI	BL	LL	PA	DA	FL
FUHS, S.	LL	RU	PA	FL	RI	BL	DA	SILVIA, M.	RU	BL	DA	LL	RI	PA	FL
FUNSTEN, C.	O/C	LL	DA	PA	FL	RU	BL	SMITH, D.	PA	RI	RU	LL	FL	BL	DA
GARDNER, D.	O/C	RI	RU	BL	FL	PA	LL	SMITH, J. S.	LL	RI	FL	PA	DA	RU	BL
GILLEY, S.	LL	RU	BL	RI	PA	DA	FL	SMITH, K.	O/C	RI	FL	BL	PA	DA	LL
GILLILAND, J.	RU	PA	RI	DA	LL	FL	BL	SNYDER, P.	LL	RI	FL	BL	PA	RU	DA
GOLDIKENER, N.	FL	RI	RU	PA	LL	BL	DA	SOBEL, E.	PA	DA	RU	LL	BL	FL	RI
GOODHART, C.	PA	DA	FL	BL	RU	LL	RI	SPARKS, J.	LL	RU	DA	BL	PA	RI	FL
GOREE, J.	LL	FL	BL	RI	DA	PA	RU	SPREITZER, M.	O/C	RU	BL	DA	RI	PA	FL
GOULD, W.	FL	DA	RU	PA	BL	LL	RI	SUZUKI, M.	DA	FL	LL	RI	BL	RU	PA
GRENIER, D.	FL	LL	RI	PA	BL	DA	RU	TAM, C.	SO	BL	RI	LL	PA	FL	RU
GRIEVE, P.	LL	PA	RI	FL	BL	LL	RU	THOMAS, R.	RI	BL	FL	DA	PA	RU	LL
GROSS, W.	PA	RI	FL	BL	LL	RU	DA	THOMPSON, K.	RU	RI	LL	PA	FL	BL	DA
GRUTZMACHER, D.	O/C	BL	RU	PA	RI	LL	DA	TING, D.	O/C	RU	LL	DA	RI	FL	PA
GUBRUD, M.	FL	RU	BL	PA	RI	DA	LL	TREVER, S.	RU	RI	BL	PA	LL	DA	FL
HARTMAN, W.	O/C	FL	RI	LL	BL	PA	RU	TSANG, K.	O/C	RU	PA	BL	RI	FL	LL
HEIMAN, L.	DA	BL	FL	RI	RU	LL	PA	UHL, J.	RI	LL	PA	DA	FL	RU	BL
HELLINGER, J.	RI	DA	RU	BL	PA	FL	LL	VALENCIA, C.	PA	FL	RI	LL	BL	DA	RU
HENRIQUEZ, D.	FL	BL	DA	PA	RU	RI	LL	VAN ECK, T.	PA	FL	RI	LL	BL	DA	RU
HENSLIN, W.	O/C	BL	RU	DA	RI	PA	FL	VAN STEENWYK, B.	O/C	FL	RU	PA	DA	RI	BL
HERKENHOFF, K.	PA	RU	DA	BL	LL	RI	FL	WADE, S.	RU	FL	BL	PA	DA	LL	RI
HERLEIKSON, E.	O/C	LL	RU	PA	DA	RI	BL	WALP, P.	O/C	BL	PA	FL	RU	LL	RI
HERRMANNFELDT, G.	RU	LL	DA	FL	BL	PA	RI	WANG, J.	LL	FL	PA	BL	DA	RI	RU
HEUER, K.	DA	PA	FL	RU	LL	RI	BL	WEAVER, R.	PA	RU	BL	LL	RI	DA	FL
HICKS, J.	LL	BL	DA	RI	RU	FL	PA	WEISS, M.	PA	BL	DA	LL	RU	RI	FL
HILDEMAN, L.	LL	DA	FL	RI	BL	RU	PA	WEST, L.	FL	DA	RU	BL	RI	LL	PA
HILL, B.	O/C	RI	PA	FL	LL	DA	RU	WICKERHAUSER, M.	DA	BL	RI	RU	PA	FL	LL
HINKLEY, J.	RU	LL	PA	FL	DA	RI	BL	WILSON, B.	RU	LL	RI	PA	DA	FL	BL
HOLSTEIGE, E.	RI	DA	FL	BL	RU	LL	PA	WILSON, N.	O/C	DA	RU	FL	BL	PA	RI
HOPECK, J.	FL	RU	PA	RI	LL	BL	DA	WINCHELL, R.	O/C	FL	PA	RI	DA	LL	RU
HOWELL, T.	LL	BL	RI	RU	PA	DA	FL	WINKELSTEIN, L.	O/C	RU	BL	DA	PA	RI	FL

# MOSES, WE'VE GOT THESE THESE COMMANDMENTS...

The rotation plan provides a means for distributing new students among the seven undergraduate houses. Each new student is given a voice in selecting which house he will join, and each house has some say in choosing its members. The motivation behind these rules is simply the Honor System. Specifically, *the spirit of these rules is that no house or new student may take unfair advantage of any other house or new student.* Hereafter, the term "house" refers to either the organization as a whole, or to any of its members. The rotation plan provides a means for distributing new students among the seven undergraduate houses. Each new student is given a voice in selecting which house he will join, and each house has some say in choosing its members. The motivation behind these rules is simply the Honor System. Specifically, the spirit of these rules is that no house or new student may take unfair advantage of any other house or new student. Hereafter, the term "house" refers to either the organization as a whole, or to any of its members.

## I. Procedures

- 1.) Rotation week is defined to be the seven consecutive days beginning with the Sunday immediately before registration day first term
- 2.) On Sunday of rotation week, each new student officially visits the house to which he is temporarily assigned.
- 3.) Each succeeding day he visits a different house on the basis of a random assignment, so that by the end of the week he will have visited each house. Each new student eats his noon and evening meals at the house he is assigned to visit, but remains in residence in the house to which he is temporarily assigned. There are two exceptions, however. On Sunday, students eat only an evening meal, and on Saturday, only a noon meal.
- 4.) Each new student must choose four of the seven houses which he would prefer to join, and submit a list of these four houses to the Resident Associate (RA) of the house to which he is temporarily assigned by 8:00 p.m. on the Saturday of Rotation Week
- 5.) Selection of new students will take place at a closed meeting of the Master of Student Houses, the Interhouse Committee Chairman, the seven house presidents, the RAs, and one rotation chairman from each house. This meeting will occur on the Sunday immediately following rotation week. No house can select a new student who did not list that house as one of his four choices.
- 6.) The final placing of new students into the appropriate house must be completed by Tuesday of the week following rotation.
- 7.) No transfers of students between houses will be allowed during first term

## II. Regulations

- 1.) Rotation rules are in effect for any contact with new students prior to and during rotation week.
- 2.) Houses are specifically authorized to do the following during rotation:
  - a.) have receptions after dinner
  - b.) serve refreshments at a fair cost to new students
  - c.) have only current or ex-members at receptions
  - d.) have open presentations anywhere on campus

- e.) publish and distribute informal literature which is inexpensively reproduced
- 3.) Individuals may accompany new students to any place open to the general public, provided no credit of extraordinary services are given, and provided the event occurs outside house auspices.
- 4.) Houses are specifically prohibited from doing the following IG during rotation:
  - a.) make a trophy or alley challenge
  - b.) publish a social calendar or relate in any fashion coming social events
  - c.) organize or sponsor a social event
  - d.) spend money on a new student, provide goods or services on credit or for no charge, or get a new student a date
  - e.) otherwise violate the spirit of these rules
- 5.) Aside from the specifically authorized activities, houses may also do anything that the IHC approves in advance of the act.

## III. Penalties

- 1.) Possible violations must be reported to either the Master of Student Houses, to the IHC Chairman, or to any of the house presidents.
- 2.) Alleged violations of these rules will be tried by the IHC; a four out of seven vote of the house presidents will be sufficient for a conviction.
- 3.) Any house which is found to have violated these rules will be penalized by loss of draft choices or by a fine or both.
- 4.) Any new student who is found to have violated these rules will lose his rights to house selection, i.e., he will be considered to have chosen all seven houses.
- 5.) The Master of Student Houses will be the final authority on all rotation matters.

## State Fellowships

The California Student Aid Commission announces the opening of competition for the 1977-1978 State Graduate Fellowship Program. About 350 fellowships providing up to full tuition will be available and they will be distributed among nine categories including the Sciences and the Medical Professions. To qualify, any test scores must be from examinations taken before December 11, 1976. See the Financial Aid People for more information.

## Midway Rejoined

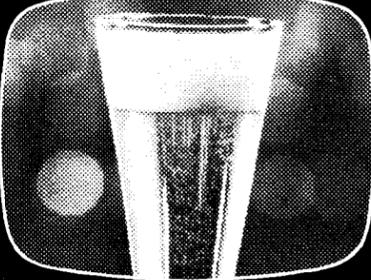
For those of you who didn't like the original, or the way it felt in *Sensurround*, the Caltech Gamers will relive, and presumably re-die, the Battle of Midway. Hostilities begin at 7:30 p.m. in Dabney Hall Lounge on September 25. Freshmen are welcome to act as gun-fodder.

# HAVE THESE COMMANDS... Rotation Schedule

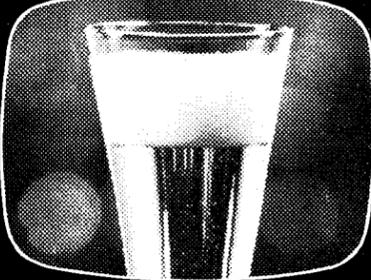
← "JUST LIKE A RIGHT HAND SCREW" →



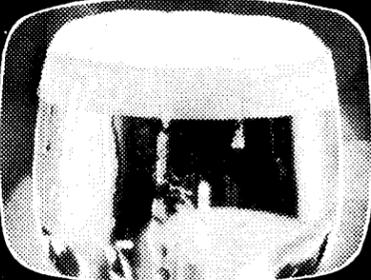
## Should you sip beer or what?



1. Sip... by sip...



2. ... by sip. That's one way to drink beer — and it's fine.



3. But when it's *Budweiser*®, why not try a good, l-o-n-g drink?



4. Ahhhh. That's the best way to enjoy Bud's rich Beechwood Aged flavor and aroma.



5. Of course, long swallows might empty your schooner sooner...



6. but look at the bright side: it sure was great while it lasted!



Get a free copy of the Budweiser "Beer Talk" Booklet. Write "Beer Talk," Anheuser-Busch, Inc., St. Louis, Mo. 63118

# Hugo Awards

**New Universe**

The Universe ends tomorrow night To welcome the new Universe join the Caltech gamers in Clubroom 1, Winnett, 8:00 p m for Dungeons and Dragons.

**May I have . . .**

The Hugo Award Ceremony ran just over an hour. Tucker, as master of ceremonies, stood alone on the stage and read the nominees, and then waited until an envelope was brought out. (He usually kissed the bearer, and was hissed when he didn't. It was a poor way to keep the audience amused during the interminable waits.) Probably it would have seemed much more tedious at the end of a long banquet, but it did keep the suspense from becoming too short. Having waited in line the better part of an hour just to get in didn't hurt either.

The Guest of Honor address was a disappointment. Robert Heinlein had been the Guest of Honor twice before, in 1941 (Chicago), and 1961 (Denver). I had expected a mamorable speech perhaps dealing with volunteer blood donation (which he had supported greatly this past year), something inspirational from a man who stood very tall among tall dreamers.

Instead, it appeared to be a rambling monologue with no theme, no direction. There were anecdotes about a South Seas voyage, and early Kansas Ctij; a joke that seemed from a stand-up comedian's file, about a man who had never had a birthday before he was 21 (which he never

finished—it degenerated into a South Seas story); and references to predictions made in past addresses. He was actually booed, a sharp contrast to the standing ovations he'd recieved all weekend when he laughed at the name of the Peace and Freedom party. His opinion was that if you had one, you couldn't have the other. A majority of the audience responded to the boos with applause and cheering. He was booed again when he spoke of males as the protector of women and children. He repeated his prediction that men would go out into space, "but I don't know what language will be used." He said that he had predicted another major war in his Denver address, but that his prediction had not turned out to be right. However, he again predicted a major war, and stated flatly, "There will be survivors." When the time he had allotted himself ran our, he said "Good night," and the speech came to an abrupt end. The audience responded with another standing ovation.

**. . . Another Alka-Seltzer?**

One solution to the crowding the committee expected was the use of videotaping. Most eventw were to be taped and made available to those living in the main hotel (the Muehlback). This didn't work out as planned. Technical difficulties were

experienced the first day. Some of the rooms' TV receivers didn't function, and others only showed black-and-white. (On my set the color showed up magically in the middle of one of the early broadcasts.) Most importantly, they found it impossible to publish a schedule, so most of the time you couldn't know what would be shown when. The major events (the masquerade, the Hugos) were shown "live"—about one tape's worth behind reality—an added incentive to avoid the hassle and stay home. I watched the masquerade that way, and was comfortable rather than hot and suffocated. The the TV couldn't transmit the quality of color found in most costumes, so it was not very satisfying.

MidAmeriCon was billed in its advertising as the "Ultimate Worldcon." It wasn't, but it wasn't a disaster either.

The production itself suffered from the inability of all the speakers to project throughout the Music Hall, Kansas City's municipal auditorium (capacity of 2600). The framing story, a contest of sorts between two humans of the far future, made little sense to me because I couldn't hear what the point—to them—of each story was.

The quality of the acting, and the production in general, was quite high But four hours of not quite hearing the lines added up to a dismal evening.

**Publish, Else Perish**

Another ambitious undertaking were the convention publications. Each convention publishes several "progress reports," which are mailed to all members, and a program book. Under the firm guidance of Tom Reamy, editor of the fanzine *Nickelodeon* and a recent Nebula winner, the publications reached new heights of artistic triumph. The progress reports were offset-printed with justified text, 50+ pages, and beautiful wrap-around covers. The program book was 168 pages, *hardbound*, had a dust jacket with a specially-contained 35-page portfolio of paintings illustration many of the Guest of Honor Robert A. Heinlein's works, featured a new short story by Harlan Ellison and much much more. A pocket program guide was supplied to carry around the convention while the program book stayed safely upstairs.

Another innovation, although its been considered before, was the separation of the Hugo Award ceremony from the banquet. Normally, the Hugos are presented at a banquet following

the various speeches, including the Gust of Honor's. A logistics problem was apparent, since the largest banquet hall could only seat 1400, and left no room for those who wanted to skip the banquet and hear the program. This was resolved by moving the Hugos to the Music Hall, and Robert Heinlein elected to speak following the presentation.

It worked quite well. The banquet became a tribute to the Guest of Honor, following George Barr's address with various testimonials (by Alfred Bester, Jerry Pournelle, Fred Pohl, Sprague de Camp, Larry Niven and others). Toastmaster Bob Tucker interleaved these with quotations from a special 200-pagemanuscript of tributes, prepared as a special gift by Heinlein's friends and colleagues.

**Phoenix Gets the Bird**

Part of the convention proceedings involved the site selection of the 1978 Worldcon, to be held in the western division of North America. Phoenix won the right to host it by defeating a Los Angeles bid 533-460. Guest of Honor will be Harlan Ellison. An attending membership is \$7.50 until the end of the year. For all of 1977 the price is **doubled**: \$15.00. For 1978 prior to t he con (Labor Day weekend): \$20.00 At the door: \$25.00. Supporting (non-attending, but convertible) memberships are \$7.00. Both types of memberships guarantee all publications and the fight to nominate and vote for the Hugos that year. Checks should be made payable to "IguanaCon II", P.O. Box 1749, Phoenix, AZ 85001. The address will change in 1977 January; the convention name is likely to change also (but that's politics).

The 1977 Worldcon was originally slated for Orlando, Florida, but a bankrupt hotel has forced them to move to Miami. Attending memberships go from \$10 to \$15 October 1, so decide fast. Supporting memberships are \$7.50 Jack Williamson is the Guest of Honor, and the convention dates are 1977 September 2-5 Checks payable to: "Suncon", P.O. Box 3427, Cherry Hill, NJ 08034.

"Hour 25" is a weekly science fiction radio program on KPFK-FM (90.7 MHz), listener-sponsored radio in Los Angeles. Edward Bryant, the author of *Phoenix Without Ashes*, and *Cinnabar*, will be the guest Friday night/Saturday morning from midnight to 2 a.m. I don't know if their signal will reach all the way to Catalina, but they'll be around next week.

—Gavin Claypool

## Briefs

**Movie**

**Greats**

Starting September 15, the Fine Arts Theater, Beverly Hills will present a ten week series of Warner Brothers films. The films will be shown from the 35mm prints on full screens and will be presneted with contemporary trailers and cartoons.

**More**

**Movies**

Robert Rosenstone will present a series of films as part of his History 131 class this fall. Open to the Caltech community, they will be shown on Tuesday evenings at 7:30 p m Dates and times as follows:

## Longs

**Burch's Ballet at**

**Beautiful Beckman**

Caltech's fall season of music, dance, and drama opens with a show by Burch Mann's American Folk Ballet, in Beckman Auditorium, on Friday, October 1, at 8:00 p.m.

Tickets for the October 1 performance in Beckman Auditorium are available at the Caltech Ticket Office, 332 South Michigan Avenue (just north of Beckman Auditorium) and at all Ticketron, Mutual and Liberty agencies. For a brochure with complete information on the season and for ticket information, call 793-7043.

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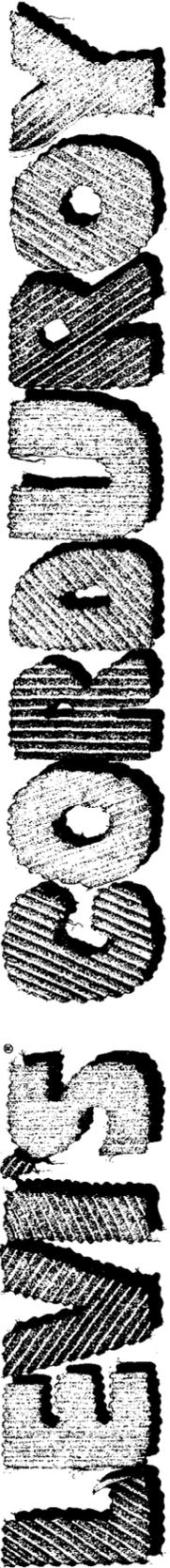
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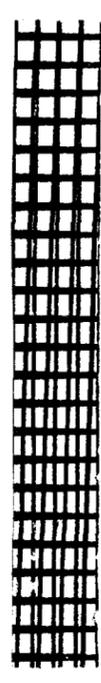
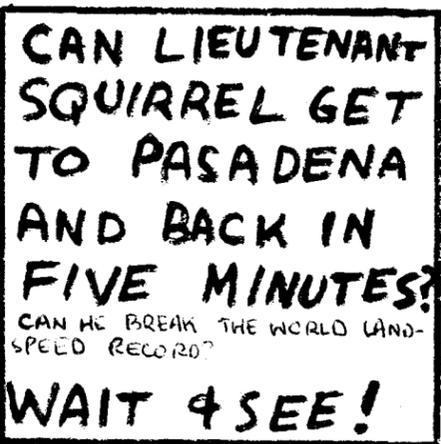
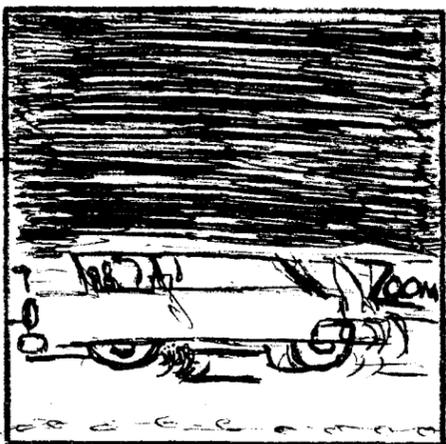
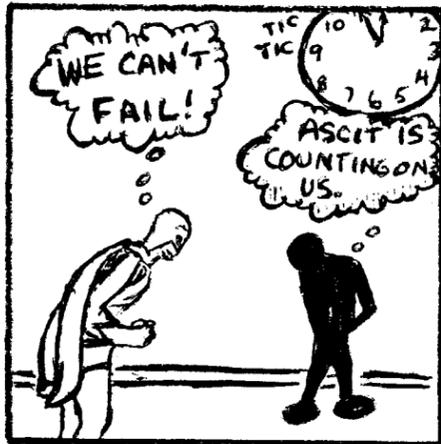
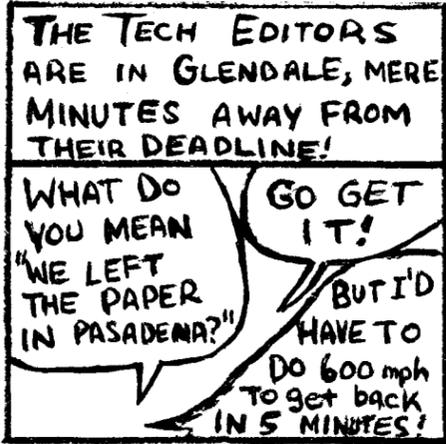
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ATLANTIC SQUARE, MONTEREY PARK

The Adventures of the Tech Trio

by H. Wink and D. O'Malley



**Voter Registration**

Anyone who will be eighteen on or before November second can vote if they register beforehand. Registration may be performed at the Caltech Y on the second floor of Winnett. If you did not vote in the November 1974 election you must re-register, as you must if you have changed address, name or occupation since you last registered.

The deadline is October 4.

**Discount Concerts**

The Los Angeles Philharmonic is offering a special program for students this year. Tickets for loge balcony, or rear orchestra seats of any Wednesday, Friday, or Saturday Philharmonic series will be available for half price. Also students will be able to attend rehearsals and receptions honoring the artists. Information can be obtained by calling 792 7200, extension 842.

**Post-Pizza Bike Slides**

There will be a slide presentation on biking in the Sierras and up and down California after Saturday's pizza bash given by two Tech students. It will be held at 6:30 in Winnett Student Lounge.

(Space filling line.)

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Fares and savings subject to change without notice. The Coach Pub is available on all Continental DC-10's excluding Hawaii through service.



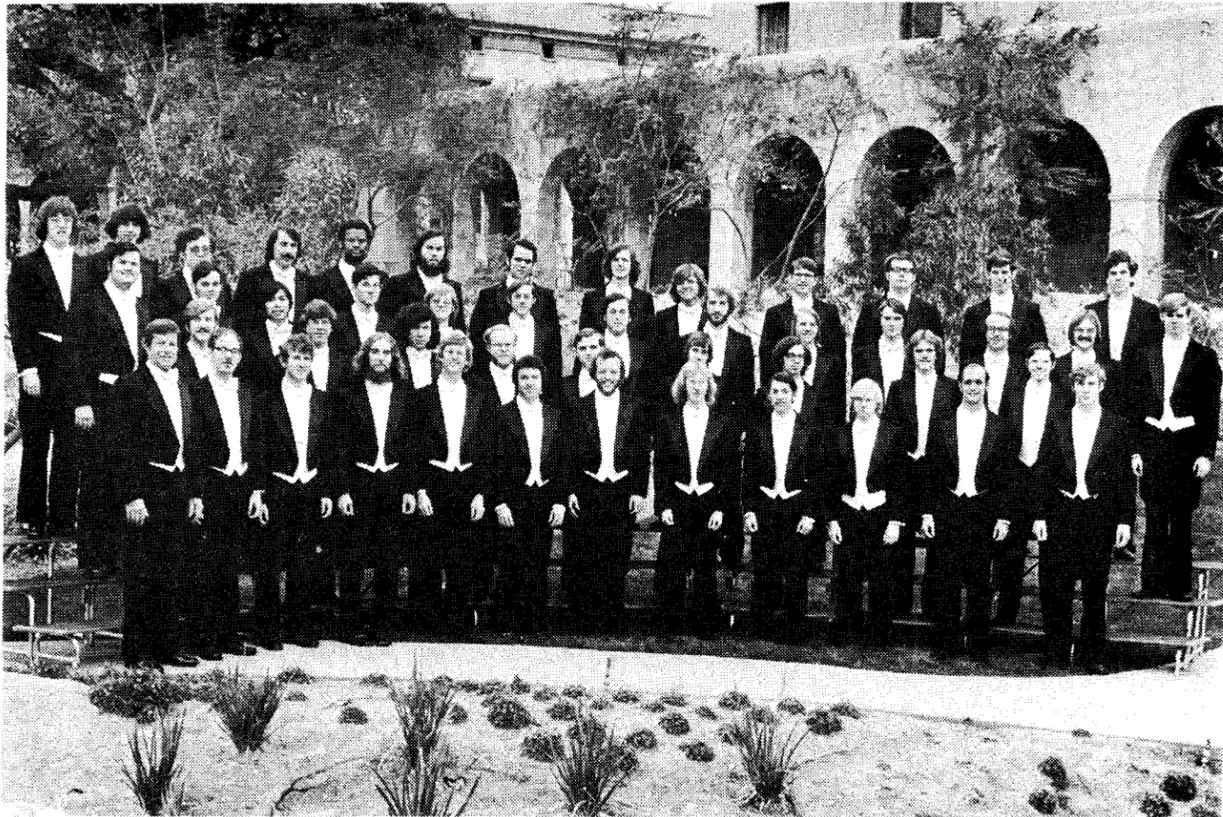
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# GLEE CLUB AUDITIONS

**SPOUSES**



**GRADS**

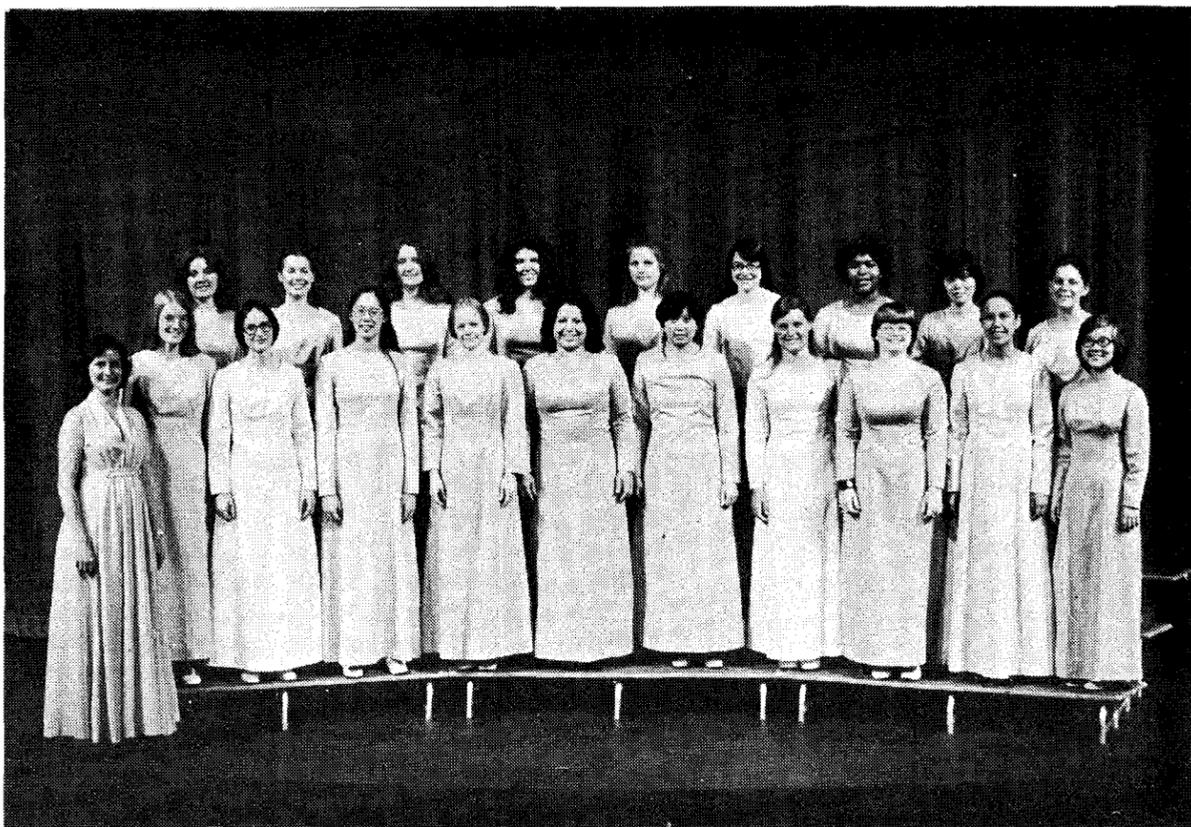
## Fleming Basement

**Sunday, Sep. 26**

**Monday, Sep. 27**

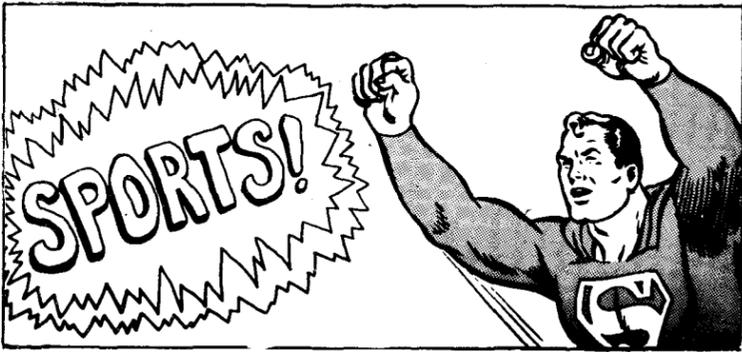
**3-6 p.m., 7-8 p.m.**

**FACULTY**



**STAFF**

**UNDERGRADS**



and mid September, and the California Tech crossed California Boulevard to get a progress report.

**Football**

Caltech's football team has never been a real powerhouse, but according to head coach Tom Gutman, the prospects for a winning season are better this year than they have been for quite a while. Tech's team has managed to strengthen itself in many of the areas that it was weakest in.

One of the areas that shows the greatest improvement is the quarterback position. In the past Tech has played one, sometimes two, quarterback. Now according to Gutman, we have three better-than-average quarterbacks: Sophomores Johnny Crumpton and Jimmy Moore, and Freshman Mark Fortunato. Because of the varied skills exhibited by these players, Coach Gutman anticipates a slightly different style in Caltech's offense.

"I think that you will be seeing more passing—much more passing," said Gutman. He also feels that we have a much quicker backfield than before, leaving a greater number of options concerning Tech's ground game. Senior Gary Cox, Sophomore Doug Talley and Freshman Mark Fortunato were mentioned as being particularly outstanding.

The size of our line has also seen a change in the right direction. Currently, the proposed starting line has an average weight of over 200 pounds, which is quite a change from years past. There is also an increase in the number of linemen. In the past, we have been saddled with essentially one set of linemen, who played both ways. Now, with nine or ten linemen, it is possible to have both offensive and defensive lines.

One of the most outstanding things about this team is its spirit. Not only has the turnout for preseason training been larger than that of the last nine years (30), but the dropout rate is lower than it has ever been (0). Morale is good. As Coach Gutman put it, "Spirit is the best I've ever seen. This has been the best training camp in 11 years."

Even though this year has seen a large turnout, the team is still looking for more players. The current goal is an active group of at least 40 people. If you are a prospective player, by all means contact any of the following people: Head Coach Tom Gutman, Line Coach Ralph Allen, or backfield coach Dean Bond

**Soccer**

The soccer team won its first game by a score of 3-0 against Azusa-Pacific. One of the outstanding players was Anthony Sneed who scored all three Tech goals. Coalie Steve Trimberger was credited with six saves.

Despite this preseason win, Assistant Coach Bill McCallum warned against overconfidence. McCallum feels that the potential is there for a good soccer team but a certain amount of work will be needed. A number of players have shown up to practice out of

shape, and a number of minor injuries have resulted. Still, many of Tech's better soccer players have returned, with a number of outstanding freshmen to help them. McCallum feels that this team has great potential, not only in terms of skill, but in terms of experience, since this year's soccer team is relatively young.

**Cross Country**

Cross country also reported good news of sorts. In a practice meet against UCR, PCC, and Ambassador College, in which no score was kept, Tech would not have done too well. However, Tech's top five finishers: Bob Bourret, Steve Kellogg, Brett Van Steenwyk, Eugene Loh and Eric Sirri all finished with faster times than the top five finishers from Tech had at the same meet last year.

The team's next meet will be against Claremont-Harvey Mudd and LaVerne at Whittier on September 25. This could be a critical contest, according to Coach Leroy Neal: "This meet could determine who comes in second or third in the conference." The potential, again, is there, but needs development.

**Water Polo**

The water polo team also promises to do well this year. While there are no returning seniors, and the team currently lacks a goalie of any sort, the large turnout (about 20), and some outstanding freshmen indicate a potentially good team.

Some of the promising freshmen are Doug Jones, Jim Howard and Josh Levin. Again, the emphasis is on potential, because of the extremely young team. Their first meet is September 29 at East Los Angeles City College.

**Viking**

cont. from page four

signs of motion of anything on Viking 1 site prevents accurate location of the quake epicenters, it still may be possible to locate the source of a quake to an error of about 10° by studying the log between and the different intensities of the P and S waves as they are recorded coming in from a quake. If this is the case an attempt can be made to correlate tectonic activity to geological formations seen from orbit. It will also be possible to find out more about the interior of Mars. Mars is believed to have a core and mantle like the earth's, but Viking should be able to fill in missing detail. In the meantime the seismometer is sensing the mechanical activity aboard the lander, and the wind vibrations. The real hope for the seismometer will come from operating it over long periods of several months in order to get a good picture of Mars' activity. As of yet it has not been in operation long enough to draw any conclusions about tectonic activity on Mars.

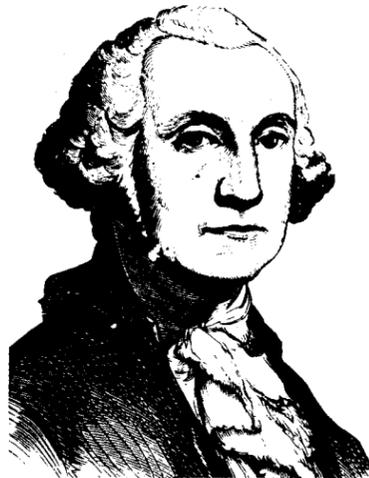
These and other experiments such as meteorology at the surface and other experiments aboard the orbiter are far from complete. Viking 2 is just getting started. There is much more to be learned in the months to come. As this issue is going to press its first set of biology experiments aboard Viking 2 was being completed. Two of the experiments, labeled release, and gas exchange are giving signs similar to what was seen on Viking 1. These results seem to indicate chemistry. The results of the pyrolytic release run will be known later today. It is this experiment which could give better insight to whether it's chemistry or life on Mars.

**SOCCKER: TECH 2, E.L.A.C.C.**

**Saga Food Service**

HERE'S WHAT'S COOKIN'  
9-26-76 through 10-2-76

- Sunday 9-26-76
  - Brunch- Scrambled Eggs, Sausage Links, Hashbrowns, Fruit, Toast and Waffles
  - Dinner- Grilled Cube Steak  
Spagetti with Meat Sauce
- Monday 9-27-76
  - Lunch- Sloppy Joe on a Bun  
Scalloped Ham & Potato Casserole
  - Dinner- Roast Beef  
Fried Breaded Perch
- Tuesday 9-28-76
  - Lunch- Hot Turkey Sandwich  
Spanish Macaroni
  - Dinner- Baked Meat Loaf  
Corned Beef and Cabbage
- Wednesday 9-29-76
  - Lunch- Barbequed Ham Sandwich  
Savory Beef Casserole
  - Dinner- Veal Parmesan  
Beef Stroganoff
- Thursday 9-30-76
  - Lunch- Hamburgers  
Tomato-Rice Casserole
  - Dinner- Grilled Chopped Steak  
Sweet & Sour Pork
- Friday 10-1-76
  - Lunch- Pizza  
Tuna Ala King
  - Dinner- Baked Ham with Fruit Sauce  
Chicken Pot Pie
- Saturday 10-2-76
  - Lunch- Grilled Salami & Cheese Sandwich  
Chili Fritos
  - Dinner- Roast Beef  
Double Cheeseburger



As you may or may not know, George the III, also fought against the French. The battle field consisted of a hill between the two camps, and the British took many prisoners. These prisoners were a strain on the British supplies, so King George called his wise men.

George: "What do I do?"

WM: "Well, kill them."

George: "Not when they're prisoners."

WM: "No, on the battle field."

George: "But how?"

WM: "Build a big rack, and pull it on to the field."

So the rack was built, and it was too heavy for horses to move so the wise men said: "Elephants."

Luckily, George had a Maharaja friend who sent him six

elephants and a driver.

The night before the attack, the elephants were chained to the rack and every one retired. About 2 a.m a mouse got into the elephants' tent and they stampeded. The mahout woke up, and jumped on the lead elephant and tried to turn them. But he could not, and the whole assembly tore up the rack with such speed that it flew over the friendly camp and disappeared into the night.

Two friendly sentries saw it pass, and one asked the other what the hell that was.

"Easy" said the other.

"It was a rambling rack from George's attack and an elephant engineer."

**The Bedford Incident**

Presented by JPL Space Explorers  
Caltech's Baxter Lecture Hall  
7:30 pm Friday Sept. 24 1976  
Donation: \$1.50  
For Information Call 794-4828

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The four largest Martian volcanoes are portrayed in this picture of Mars taken June 17 by the Viking I orbiter from a range of 575 000 kilometers. The topmost is Nix Olympica, its mountain reaching a height of about 25 kilometers with a base 600 kilometers across. The middle volcano in the row of three straddles the equator. The great rift, stretching some 3500 kilometers can be seen faintly between the terminator and the bright limb in the lower half of the disc. The bright area at the bottom is Xayve, a large impact basin. The south pole is in the dark to lower left. Photo compliment public relations, Caltech.

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