

-photo by Ron Gidseg

Catholic Campus Ministers initiated a series of Monday evening discussions on religious and ethical issues this past week. The topic was "Science and Faith: Why have there been conflicts?": a discussion of the famous Galileo case.

101 USES FOR A DEAD QUASAR

by Diana Foss

The first thing we really knew about quasars is that they are very, very far away. This lead immediately to the second things: they put out unimaginably huge quantities of energy, and they are creatures of the very early universe. Sometime later it was discovered that quasars observed optically had some sort of "fuzz" around them. These fuzzy patches turned out to be galaxies, and we then knew that quasars were the wildly energetic cores of galaxies. Around this same time the conjecture that quasars were powered by the infall of matter into immense black holes was also proven. But all this time these monsters remained very far away in space, up to ten light years away, and hence, very far away in time. Until now.

Astronomers working at Kitt Peak National Observatory and at Lick Observatory have discovered that some "normal," nearby galaxies showed the characteristic spectra of quasars, although they were much weaker than the spectra of normal quasars. Quasar spectra are characterized by emission lines quite different from those of normal hot stars. In addition, certain lines are broadened because of doppler shifts caused by the turbulence of gas flowing into the black hole. But Caltech astronomer Wallace L. W. Sargent and former Caltech graduate student Alexei Fillipenko, now at UC Berkley, have shown that this phenomena is widespread.

Using a CCD double spectrograph on the five-meter telescope on Mount Palomar, the astronomers surveyed seventy-five bright nearby galaxies. They subtracted the spectra of the galactic

nuclei from either a standard galactic spectrum or from the spectrum of the galaxy in question, measured off of the nucleus, and found that, "in 19 to 28 of the cases, the emission lines characteristic of quasars became evident," said Fillipenko. "The reason for the range is that we are still analyzing the data, and since these emissions are only a few percent above the background, they're extremely hard to detect. Many, if not most, of these [75] galaxies could be quasars, but the spectral lines may just be too weak for us to see." Fillipenko compared detecting these emission features to seeing other stars in the daytime. "The light is there, but it's swamped by the huge amount of scattered light from the sun."

One of the galaxies in the survey is M81, a galaxy structurally similar to our own. Sargent and Fillipenko will continue this observational program over the next few years, eventually including five hundred galaxies, including M31, the Andromeda Galaxy, our nearest galactic neighbor. "We can't examine our own galaxy," according to Fillipenko, "because the center is obscured by a clouds of gas and dust. But if our galaxy was once a quasar, it was a rather modest one, containing a black hole the mass of only about five billion suns."

Though the survey will continue using the Hale Telescope, we must wait for the Space Telescope for the most definitive results. Because of its extremely high spacial resolution, Space Telescope would be able to detect smaller quasars than is possible with the 200-inch. Says Fillipenko, "We may end up with an avalanche of galaxies that are dying quasars."

SCHEER OBSESSION

by Ketan Shah

The American foreign policy model since the Bolshevik revolution has not held up well, asserted Robert Scheer in the first of three talks at Caltech.

In a speech almost two hours long, Mr. Scheer repeated several times that his thesis was not what he would consider controversial. Indeed, he altered the theme of the World Affairs Forum lecture from the announced title of "Reagan's Obsession with Communism" to a talk on of America's compulsion with the spectre of an international communist advance.

The American foreign policy model, he explained, is based on a reaction to Marxism-Leninism: the perceived internationalist, even anti-nationalist nature of Marxism-Leninism; the supposed aggressiveness of communism; and the view that the communist ideology is unrelentingly rigid.

Robert Scheer went on to demolish the foundations of the model with counterexamples drawn from twentieth century history. He showed the American turnabout on relations with China to be the most revealing indictment of the foreign policy model. Sino-Soviet tensions were cited as an example of international communism taking second place to nationalism.

America's compulsion with Marxism-Leninism began with the Bolshevik revolution, claimed Scheer. He believes that by its nature, the revolution was traumatic for the United States from the start. Americans witnessed what was thought to be only a well-organized minority take over a giant country and wield political and military power over an unwilling majority.

This suspicion and distrust was followed by a "honeymoon period" during World War II. Mr. Scheer believes that the end of the Second World War predetermined the Cold War. Leaders of the Western world declared that the West had been betrayed by the Soviets over their agreements to divide Europe into Western and Eastern (Soviet) spheres of influence. Winston Churchill was



-photo by John Fourkas

L.A. Times reporter Robert Scheer Wednesday in Baxter

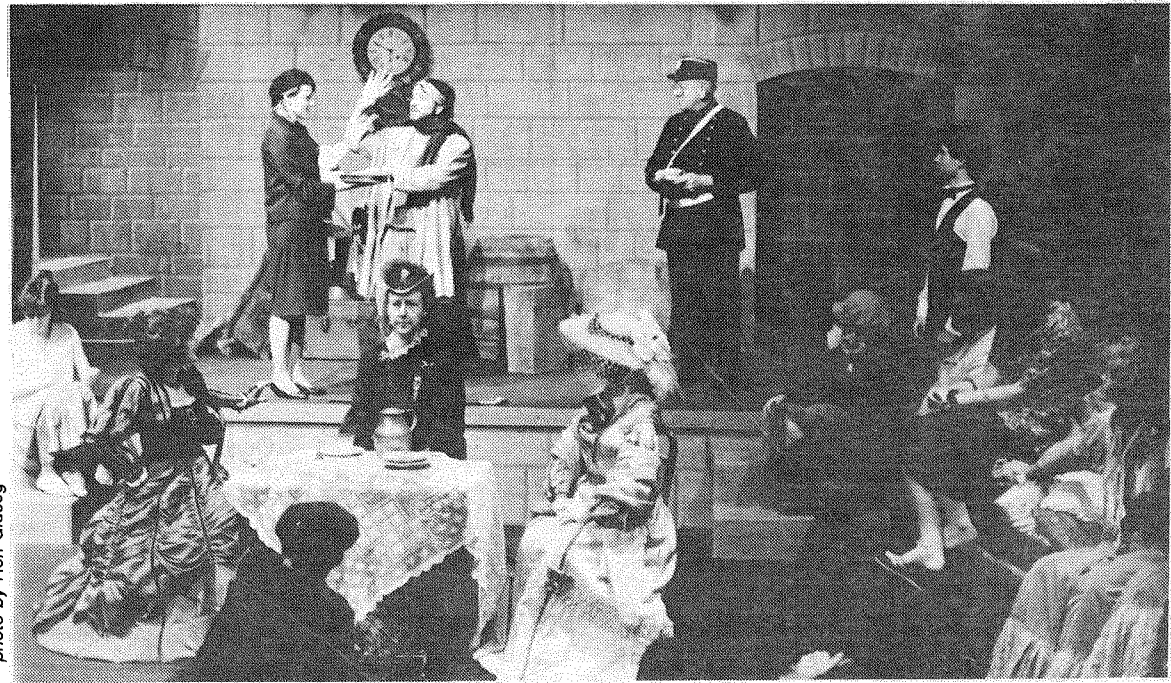
especially vociferous. Scheer maintained that the ambiguity of the agreements at Yalta, Potsdam, and Teheran and the concessions made in the name of great power "understanding" make it difficult to argue that the Soviets disregarded their agreements with Britain and the United States. Nevertheless, the perceived betrayal set the stage for the Cold War and the creation of the American foreign policy model for communism.

Mr. Scheer's basic point was that "adherence to an outmoded, never valid model of the enemy has destroyed our capacity to deal with the world." He confessed to not having an alternative foreign policy model, but went on to ask why foreign policy experts on the public payroll cannot come up with a

workable model that can withstand scrutiny.

Mr. Scheer has observed that most people don't want to think about foreign policy. Citizens prefer dealing with the shortcomings of the local school board to challenging leaders about the nation's foreign policy. A good example is the complacent nature of the debate over the invasion of Grenada. He sees why people are jingoistic and fall back on patterns of prejudice: one cannot expect people to think about the nation-state in foreign policy.

Robert Scheer will present the second half of this lecture on Wednesday April 17th at 8pm in Baxter Lecture Hall. He will also speak on Monday April 22nd in the Y Lounge.



-photo by Ron Gidseg

The wealthy people of the world are put on trial in Jean Giradoux's *The Madwoman of Chailot*, which starts tonight in Ramo Auditorium. More on page six.

LETTERS

To the Editor:

Vineer Bhansali is wrong in saying [Letters, April 5] that all criticism of Caltech is necessarily a bad thing. He seems to be telling us "Caltech—love it or leave it." There is no in between for him.

Most criticisms found in the *Tech* are not meant to put down the Institute as a whole, just one part of it, such as the BOC, the Honor System, the House System, Rotation, or the lack of humanities courses.

When done properly, the letters serve to prompt further discussion on the subject. Everyone gets a chance to present his or her opinion to the entire community. Then, having seen a variety of student input, the appropriate governing body (IHC, BOC, ASCIT BOD, etc.) can take suitable action.

There are instances where student complaints are not constructive at all; such criticism is not

healthy to the community. But even just pinpointing the part of the system that really needs to be changed, or explaining how the problem arose, or offering a rough sketch of a solution is useful. I therefore feel that most of the complaints seen in the *Tech* serve a good purpose.

Let me offer a few examples. Last year, there was a flurry of letters to the *Tech* on Rotation and the House system questioning many long-standing traditions of both (see last year's *Techs* or, for a summary of what happened, the 1984 *Big T*, pp. 252-253). When formal proposals were finally presented to the IHC at the end of the year, the house presidents knew what was going on, and so did the houses (if the Ricketts house meeting was any indication). The result, then, was an informed decision.

Mr. Bhansali uses Charles Hu's letter about the bookstore as an example of bad pessimistic thinking.

Actually, that letter is already reaping results: Bert Koehler [Letters, March 8] responded to that letter by backing up its claims, explaining why the problem exists, and suggesting that when the new student center is built, more room be reserved for the bookstore.

The *Tech* is not the only place to point out problems. Anyone may attend the meetings of the ASCIT BOD and the IHC, whose members are open to reasonable suggestions. People on Faculty-Student Committees should be more than happy to receive input on matters pertaining to their Committee. And house governments are also easy to get involved in.

At a place like Caltech, where students have so much influence (an enormous number of policies can be changed by just a majority of a particular committee or the student body), it is essential that people point out what they feel is wrong. Otherwise, it will remain wrong.

Sincerely,

—Art Duval
Ricketts House.

has the audacity to object to the showing of a perfectly good movie [Midnight Express, shown as the ASCIT Movie, March 7th] and insolently deplores the lack of information available about Turkey.

It is indeed deplorable that no one knows about the true state of affairs in Turkey, but it is certainly lucky for Mr. Doganata and his ilk. Today, in Turkey, the persecution of minorities, including Armenians and Greeks, still goes on, albeit "unofficially." While I have never been to Turkey personally, I have talked to enough people who emigrated from Istanbul to know that what was shown in the movie is perhaps but a fraction of what really goes on. Certainly, bribery of officials, persecution of Christian churches, schools and communities in general are in no way exceptional.

Recently, Turkey has lodged a complaint against Bulgaria for forcing Bulgarian Turks to adopt Bulgarian last names. It is ironical that Armenians in Turkey often find themselves constrained to do the same. A year ago, an Armenian priest was arrested on charges of treason. The proof? He carried a number of Armenian folk music tapes. Two summers ago, a group of Armenian students from Los Angeles traveled to what used to be

Turkish Armenia. On the way, they took slides of their homeland. Just as they were preparing to leave the country, they were arrested by Turkish customs and searched—brutally. Their slides were confiscated.

One of the hallmarks of propaganda is that it denigrates all truthful information, at the same time trying to pass itself off as the fountain of truth. Perhaps Mr. Doganata's remarks stem from ignorance, in which case he should be blamed, not only for speaking out, but for being ignorant of daily conditions in his country as well. A final remark: it will be said that, being an Armenian, my own views are biased. Possibly, but do take a look some day at the reports of Amnesty International. You will find there all the information about Turkey that Mr. Doganata has been clamoring about—and more.

On behalf of those interested in truth,

—Ara Kassabian
Fleming 1-57, x3772

The Inside World

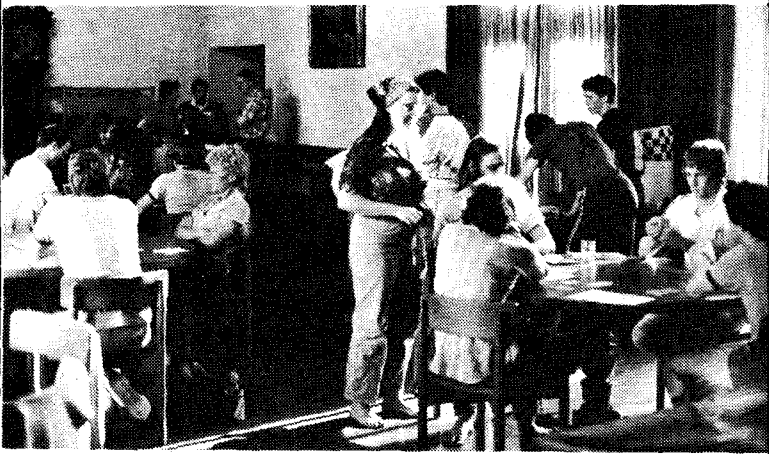
Fleming: Congratulations to the Fleming tennis team for their victory over Lloyd, sealing Discobolus for us. Today Discobolus, tomorrow the world.

Country Club II was a great success. The big question is: Does Page Exist? Interhouse Basketball is next: come out and practice with our winning team.

—Al Fansome

Lloyd: The Chinese have a curse which, roughly translated, means "May you live in interesting times." If Myles wasn't gaining valour on the battlefields, it was Min Su discovering previously untested limits to his capabilities. Lloydies! (Glad to have you back, friend.) Praveen switched to a medical major (option: brain surgery), to the delight of some and the dismay of others. The monkey comes in on Monday, ready or not! Rod got older, more matted, and (we hope) learned the wisdom of helping Dave find his contacts. Take two on the beach, eh? And bring the wood!

—J.P.



—photo by Ron Gidseg

Ricketts: In keeping with traditions old and new, this past weekend saw the House/Alumni Bridge Tournament Bar-B-Que Four-Square on Saturday, as well as the beginning of a *River of Light* adventure in Stan's room on Sunday. The question is: how long will those colored eggs survive? [Not long, if you ask me—Ed.]

—R.G.

To the Editor:

This is in reply to Yurdaer Doganata's Letter to the Editor published last week. Mr. Doganata

The Caltech Y Fly-by

Friday... April 12

Noon Concert with Smokewood. Lunchtime on the Quad.

Philharmonic Concert with Schumann and Bruckner, or at least their music. Y-Car leaves at 7:45 PM.

Saturday... April 13

Learn to Square Dance with the CCF. In Dabney Hall Lounge, 8:00-10:30 PM. Free refreshments provided.

Sunday... April 14

The Physics of Firewalking, South athletic field, 3 PM.

Monday... April 15

Dr. Samuel Oliner, Holocaust Survivor and Professor of Sociology, Humboldt State. "They Had Courage to Care: Rescue Behavior in Nazi Europe" Baxter Lecture Hall, 8 PM.

Tuesday... April 16

The Rabbi and the Priest: An informal, interfaith discussion of the Holocaust and its theological implications. Rabbi Michael Perelmuter and Father Huston Horn. In the Y-Lounge at 4:30 PM.

The second trip to Cats. If you have tickets, don't forget to go.

Wednesday... April 17

"To Bear Witness" A documentary film of the liberation of the death camps. At noon, in the Winnett Lounge.

Robert Scheer will give the second part of his lecture titled "Reagan's Obsession with Communism." 8 PM in Baxter Lecture Hall.

All Beethoven Piano Recital in Dabney Hall tonight. Free admission.

For those of you travelling to Chicago tonight, Y Transportation leaves at 6 PM. The concert starts at 7:30.

Thursday... April 18

A Commemorative, Interfaith Worship Service, including the Kaddish. 11:45 AM, Winnett Student Center Quad.

Friday... April 12

Another Noon Concert on the Quad. Ask Leslie or Morgan about the band.

Mozart lovers, this is it! Enjoy an evening of Mozart at the Philharmonic.

Anything you want to know or suggest? Come into the Y or call 356-6163.

To the Editor:

Hark! Optimism exists at Caltech (and in Page House). That's one small step for...

As Buckaroo Banzai said, "Remember, no matter where you go—there you are."

Born in the USA (and presently on academic hold),

—Kelley D. Cherrey
Pasadena, CA

The Editor, Matt "Buckaroo" John-John Rowe, replies: I am very confused.

THE CALIFORNIA TECH

Volume LXXXVI Number 23
Friday 12 April 1985

Published weekly except during examination and vacation periods by the Associated Students of the California Institute of Technology, Inc. The opinions expressed herein are strictly those of the authors and do not necessarily reflect those of the editor.

Letters and announcements are welcome. All contributions should include the author's name and phone number and the intended date of publication. The editor reserves the right to abridge letters, so please keep them concise.

Turn in copy to the *Tech* office mailbox, room 107 Winnett. The deadline for copy is Wednesday at 5 p.m.; for announcements, Tuesday at 5 p.m. Late copy may not be printed unless previous arrangements have been made with the editor.

- Editor in Love... Matt Rowe
- Entertainment Editor... John Fourkas
- Announcements Editor... Hisaho Sonoda
- Photo Editor... Ron Gidseg
- Strange Consultant... Peter Alfke
- Reporters... Charles Barrett, Diana Foss, Tom McKendree, Ketan Shah, Hisaho Sonoda
- Photographers... Chris Meisl, Behzad Sadeghi, Min Su Yun
- The Inside World... Bob Bolender (Ricketts), Jim Bell (Blacker), Ken Needham (Dabney), Ravi Subramanian (Lloyd), Chris Mihos (Ruddock), Warren Goda (Page), Ed Zanelli (Fleming)
- Production... Nick Smith, Hisaho Sonoda

- Business Managers... Jed Lengyel, David Goldreich
- Circulation Staff... Chris Dean, Paul Gillespie

The offices of the *California Tech* are located in Winnett Center on the Caltech campus.
 Editor: Room 107 356-6153
 Business Manager: Room 107 356-6154
 Production: Room 115 356-6153
 The California Tech, Winnett Center, Caltech 107-51, Pasadena, CA 91125
 Printed by News-Type Service, Glendale, California.
 Subscriptions should be directed to the attention of the circulation manager.
 \$6.00 per year (three terms) \$100.00 per life
 ISSN 0008-1582

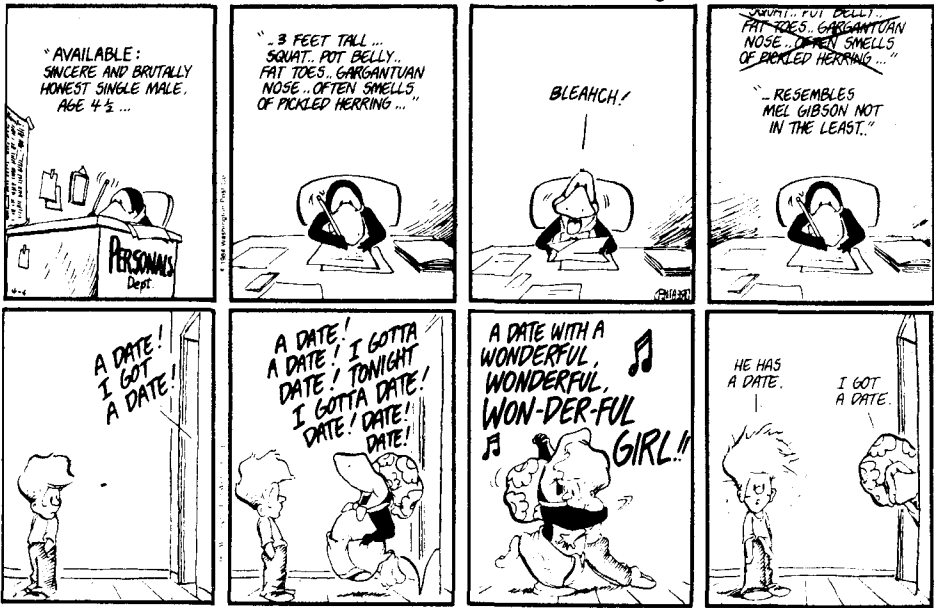
THE ASCIT MOVIE
TONIGHT at 7:30 and 10:00



Next Week - The Year of Living Dangerously
in Baxter Lecture Hall
\$1 ASCIT members \$1.50 all others

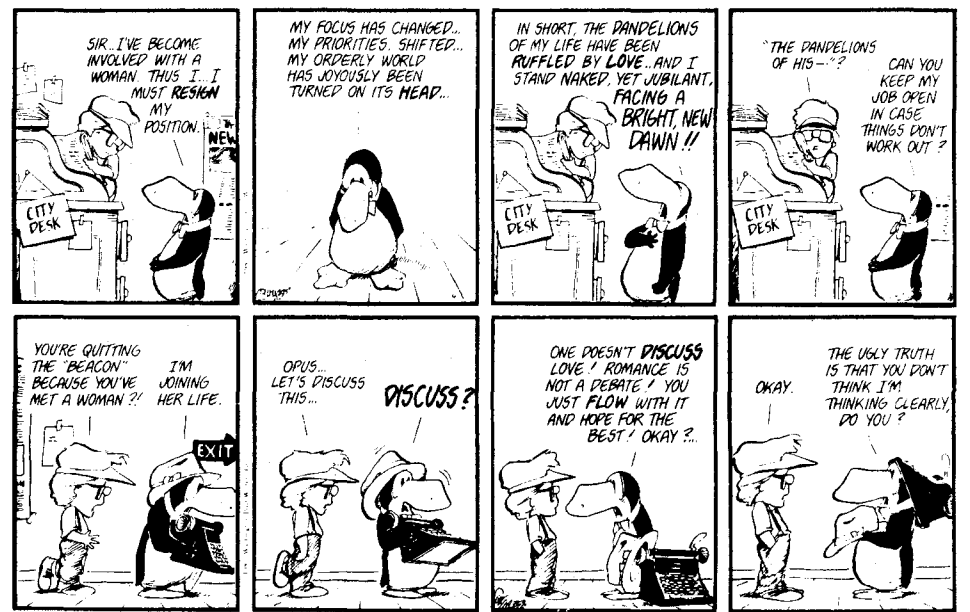
BLOOM COUNTY

by Berke Breathed



continued on page 4

SPONSORED BY THE CALTECH Y



Serving Caltech & JPL since 1938

Pasadena's only complete source of ART, DRAFTING, CHART-MAKING, and LAYOUT supplies.

Now open Thursday evenings until 9.



1292 East Colorado Blvd., Pasadena CA 91106
(213) 681-0615 Caltech Student Discount (818) 793-4-ART

COPIES

3 1/2¢

kinko's copies
Open Early,
Late, Weekends

10% DISCOUNT
TO ALL
STUDENTS
AND FACULTY
WITH ID

Through 4/30/85

Copies beyond belief from state-of-the-art Xerox copiers for great looking flyers, newsletters, brochures, theses, reports and resumes.

Print quality and incredible speed at prices that will astound you!

kinko's

827 E. Colorado Bl.
Pasadena, CA 91101
(818) 793-6336

Buy Caltech Cards and save 20%

CALTECH'S

Buy Caltech Cards and save 20%

BURGER CONTINENTAL

TO ALL CALTECH STUDENTS AND FACULTY:

Have your **BREAKFAST** with us 6:30-11:00. Ham, bacon, or sausage, 3 eggs, country potatoes, and zucchini bread for only \$1.99 with Caltech ID, Monday thru Friday.

SPECIALTIES: SHISH-KABOB, SHAORMA, SOUVLAKI-STEAK
HOMEMADE PASTRIES: BAKLAVA, BURMA, AND NAPOLEONS

good food at reasonable prices refills on soft drinks at all times
seconds on salad bar

For the Entire Month of April

A free root beer float to all Freshmen and Sophomores

Faculty, Grad Students, Attend!

Mondays and Tuesdays are Beer Days. Half price on beer.

B. C.: On Lake Avenue
1/2 Block North of California



Ars Amore

by Charles Barrett

MORALITY

It is difficult to address the subject of sexuality without having to contend with the question of morality at some point. That is a touchy topic to handle objectively; by its very nature morality is an abstract and highly subjective concept (in spite of what its staunchest and most vocal advocates would say to the contrary).

Morality *per se* is defined as pertaining to the evaluation of individual or social conduct in terms of right and wrong, goodness and evil. Although "morality" in common parlance carries with it definite connotations, there is nothing implicit in the concept beyond its connections to "good" and "bad".

Applying "good" and "bad" labels to the entire spectrum of human social and sexual behavior is a formidable (and ludicrous) proposition. Certainly, given the constraints of society and living in harmony with our fellow humans, respect, fairness, and concern for others can safely be considered "good". Likewise, actions that harm others or display flagrant disregard for their health and welfare are easily termed "bad". Even in defining extreme cases of "good" and "bad", however, relative scales and subjective interpretation must be employed. Is harming an attacker in self-defense "bad", "less bad", or "good"?

One cannot get very far in identifying the nature of the full range of human interaction armed only with an arsenal of good-bad or right-wrong responses (I won't even address the concept of "evil", a term so overloaded with social and religious connotations that it has lost any shreds of objectivity it may have at one time had). On the large scale of social existence, the danger of trying to live in harmony using abstract and subjective definitions gives rise to judicial systems of some sort or another, whereby people abide by laws and civil rulings based on precedent, consensus, and informed investigation.

But what about applying definitions of morality to individual behavior? The aforementioned judicial structure, necessary for protecting individuals from others, has no business concerning itself with behavior that does not affect others. Modern Western law does not by and large, concern itself with sexual conduct between consenting adults. Pre-marital and extra-marital intercourse are of no secular concern whatsoever under modern Western law. The so-called "Sodomy Laws", describing any non-coital intercourse as criminal, no longer exist except as a separate count in rape charges, and some regions under Western law have legalized prostitution.

Of course, there are legal systems in the world that go out of their way to regulate individual sexual behavior (Islamic law comes to mind), but they are found primarily in countries that combine church and state.

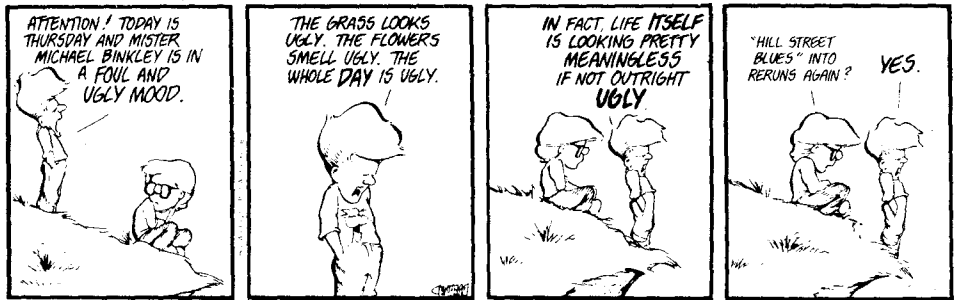
In the modern Western world, morality as it pertains to individual behavior is primarily a social question, not a legal one. As with most aspects of society, it is also a dynamic thing, changing in

response to shifting public views and serving more as a reflection of society than as a restriction to it.

That is not to say that there is no friction, however. Many of today's social trends are not compatible with more conservative concepts of morality, especially for people with a strong religious background.

There are two major manifestations of an individual's resolution of their own sense of morality with the doings of the outside world. One can proselytize and pronounce the *verité* of those whose opinions differ from his own, or one can be comfortable and secure in the knowledge that his moral choices

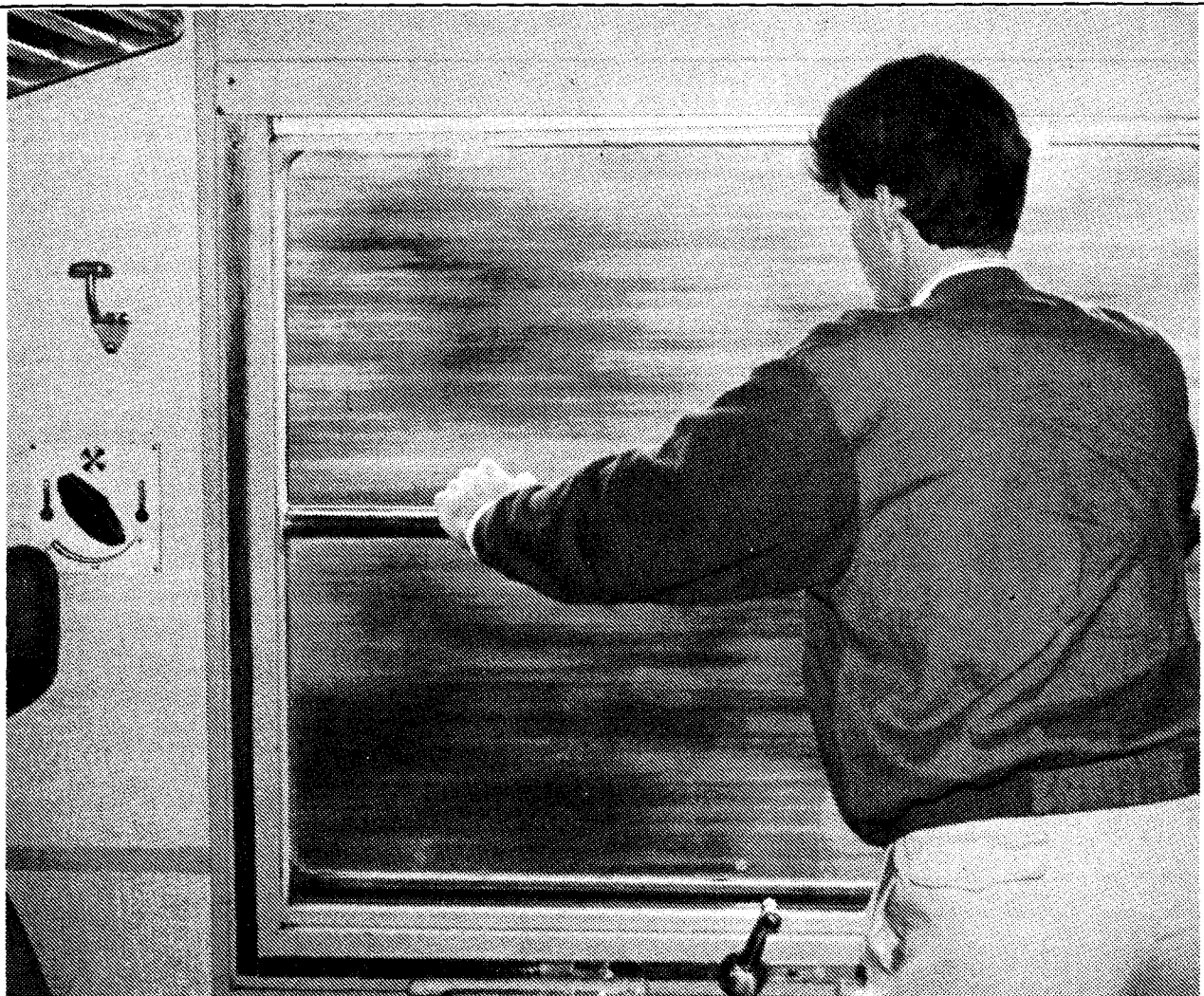
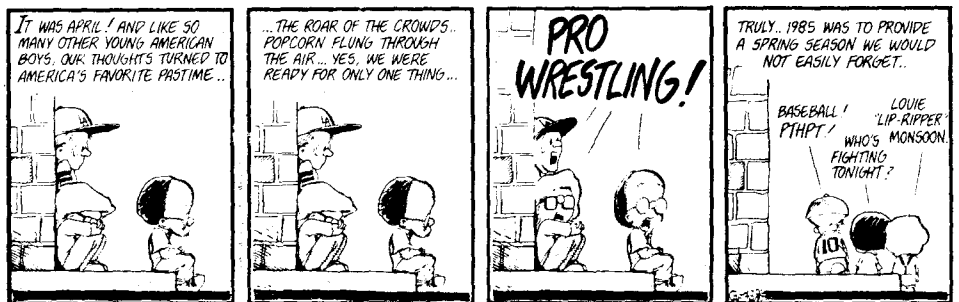
continued on page 5



BLOOM COUNTY
from page 3



by Berke Breathed

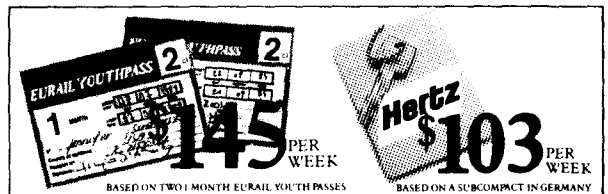


Now see Europe at a more reasonable rate.

With Hertz, you can see Europe from a first class compartment that stops anywhere you want and goes whenever you're ready. And whether you share that compartment with three friends or just one, Hertz will cost you less than Eurail. At a level of convenience that takes the commotion out of locomotion.

As long as you're 18 years old you can rent a car from Hertz*. And you can reserve it just seven days before renting, without paying in advance. What's more, our rates are guaranteed. And there's never a charge for mileage. Plus, by renting from Hertz you can get discounts at over 3,000 hotels throughout Europe.

For details and reservations, talk to a travel agent or call Hertz at 1-800-654-3001. Because even if you're on a student budget, you shouldn't have to see Europe on a pass.



Please send me more information on how Hertz can save me money in Europe.

Name _____

Address _____

City _____ State _____ Zip _____

Send to: Hertz Affordable Europe
P.O. Box 2692
Smithtown, N.Y. 11787

SNEWB04

The #1 way to rent a car.™

Hertz rents Fords and other fine cars.

*Some restrictions apply. Car must be reserved in the U.S. at least seven days in advance. Car must be kept at least seven days or a higher weekly or daily rate will apply. Rates guaranteed in local currency through March 31, 1986. Approximate dollar equivalents are for guidance only, are based on exchange rates as of Nov. 30, 1984 and will fluctuate with exchange rates. Refueling service charge, taxes, optional CDW, PAI and drop-off charges where applicable not included. Hertz standard age, credit and driver qualifications apply. Reservations for first night's lodging must be made in the U.S. Quality of service and facilities of participating hotels are not the responsibility of Hertz. Holiday or seasonal surcharges will apply. Rates are nondiscountable. REG U.S. PAT. OFF. HERTZ SYSTEM INC. 1985

ENTERTAINMENT

LOST IN THE FUNHOUSE

by John Fourkas

*Funhouse*Written, designed and directed by Eric Bogosian
Matrix Theatre

A rubber fetishist. An insurance salesman. A drunken redneck. A wino. A TV preacher. A convict on death row. What do these people have in common? Better yet, *who* do these people have in common? The answer is Eric Bogosian; these are just a few of the characters he portrays in his one-man show, *Funhouse*.

Funhouse is, to say the least, a remarkable play. Bogosian portrays over a dozen characters, each of which is somehow representative of the American lifestyle. He segues from character to character relentlessly, giving little time for the analysis of emotions and forcing harsh contrasts. But this intensity is intentional, and clearly

works to Bogosian's advantage. The audience realizes the inherent similarity among all of us—the beggars and the choosers, the winners and the losers, the haves and the have-nots. If the lesson is sometimes rather unpleasant and cynical, it is meant to be. After all, isn't life the same way?

Bogosian drags his audience from one emotional extreme to the other. At one moment there is gut-wrenching laughter, at the next a solemn silence. The silence is, more often than not, brought about by a character change which makes the audience suddenly ashamed of its laughter. Yet this is a two-edged sword, and it is used as such: while many "funny" situations are more serious than they seem, the audience is also taught to look for the humor in the more serious situations. Perhaps the final lesson is

that humor is a way of survival. And indeed, this is what every one of Bogosian's characters is attempting to do—survive. From the rubber fetishist to the convict on death row, each character is struggling to live his own life in his own way. If there is any central theme in *Funhouse*, it is this battle for individuality and for life itself.

Funhouse is branded a "black comedy," and this is an appropriate label. It is no coincidence that *Funhouse* quite literally begins and ends in the dark. On the one hand, this indicates that no matter how hard a person swims, he can at best just equal the current in the river of survival. On the other hand, the black accentuates the darker side of human nature, which is explored throughout the play. The audience experiences fear, greed, loathing, and many other

"black" emotions. The lesson learned is that there is no escape from these emotions. They must be lived with and must not be allowed to produce a vulnerability. Bogosian's characters use guilt, fear, and other dark emotions to take advantage of people, and they do this without shame.

That *Funhouse* works and works well is quite a tribute to Bogosian. Not once does he slip out of character or over-react to his audience. His character transitions are flawless—perfectly smooth and yet emotionally rough. His characters are genuine and entirely believable. They are at once scary and funny, cheating and being cheated, living and dying. *Funhouse* is a study of extremes, a vision of contrasts, an impressive and calculatedly cynical view of American life.

MORES

from page 4

are correct for him, tolerant of people's individual decisions of what's right for them.

Morality is all too often an acquired set of do's and don'ts, followed unquestioningly, and based on outdated or incomplete information handed down over generations. In a world that at least attempts to work by the rules of cause-and-effect, it seems incongruous to accept at face value opinions on social and personal behavior that were formulated decades or even millennia ago. As an example, condemning birth control as immoral is understandable for a young-and-growing group looking to assure its future survival through expanding its numbers, but in light of modern problems of overpopulation and resource distribution it hardly seems conscionable. Here I appear to be arguing with religious doctrine, which is futile since any such arguement is impossible to win on the basis of its merits alone (after all, the Vatican did not acknowledge the sun to be the center of the solar system until 1825, centuries after the substantiating data were available).

This is not to advocate discarding moral guidelines simply because they are old. Many proverbs and admonitions are still relevant after thousands of years. What is important is to be aware of why your moral convictions, especially those governing your own mode of behavior, are acceptable and appropriate for you. This is not always possible, especially for followers of religious doctrine, who are not usually allowed to pick and choose among the various positions of the church.

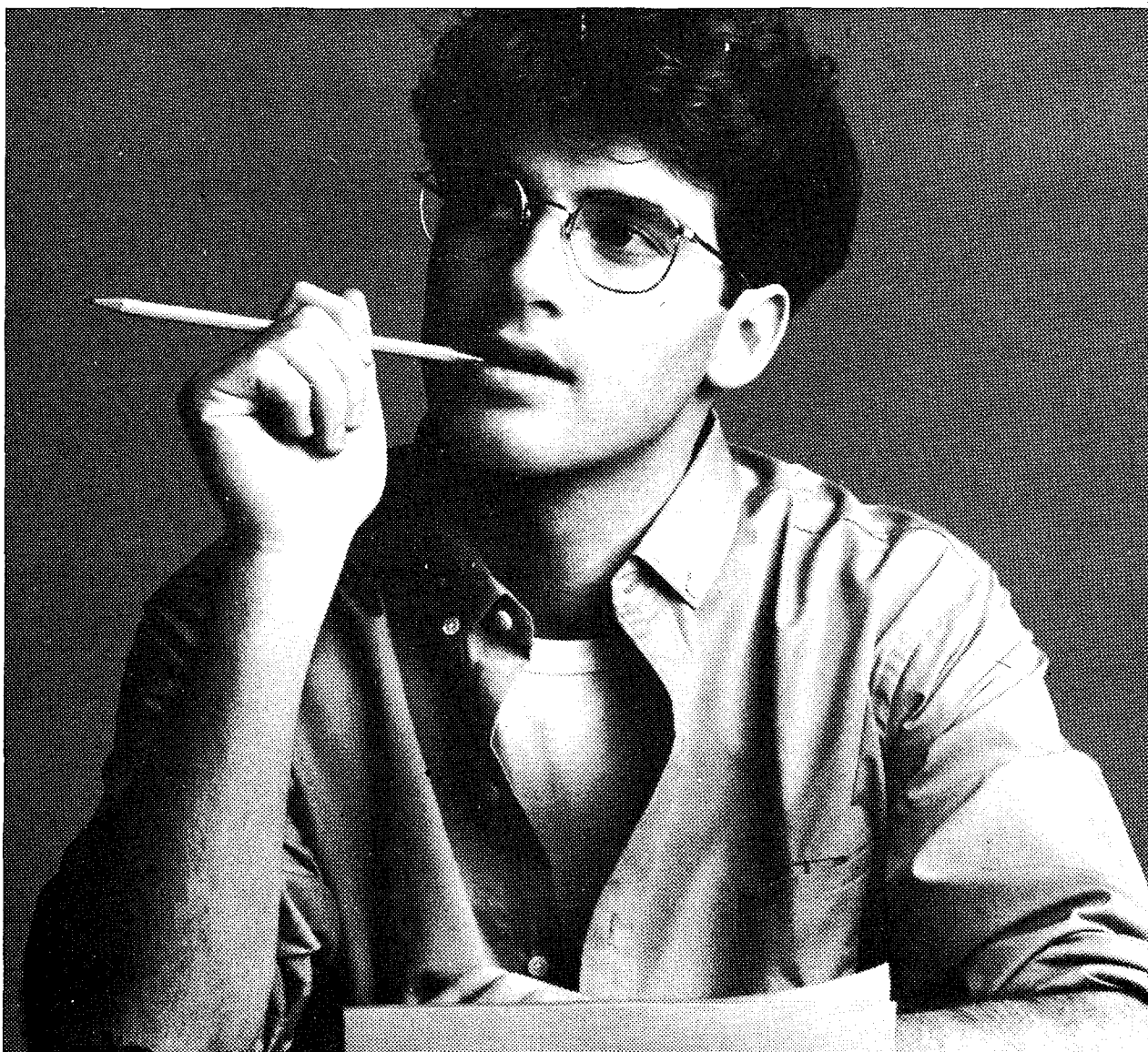
If a growing child is presented with a full and inflexible code of morality, and deprived of the opportunity to form his or her own conscious and informed opinions, later years may bring conflict, lack of conviction, or open rebellion. Growing up requires identifying which emotional and intellectual responses to the world are truly yours, and which are a legacy from your parents (there is nothing wrong with sharing the same opinions as your parents, as long as you are sure that that is how you feel).

Religious conviction and adherence is of course perfectly appropriate if it is a sincere reflection of your personal beliefs and not just a set of abstractions foisted upon you.

Going off to college bring within range broad latitudes of both freedom and responsibility. Specific responses to given circumstances is going to depend on personal concepts of morality, and as far as sexual conduct is concerned, those definitions are highly individual and often difficult to set and maintain. Ours is a complex world, not lending itself to simple definitions of "good" and "bad" (except perhaps by simple people). Others may offer advice or their opinion, but to dictate or define the morality of sexual behavior and attitudes for someone is intolerable.

True growth can come only with the freedom and responsibility to *act, believe, and feel* for oneself.

As always, direct comments, criticism, or suggestions for topics to Charles Barrett (1-59 or 577-8593), or in care of *The California Tech* (107-51).



**EVEN BEFORE FINALS,
YOU COULD FINALLY GET THE
AMERICAN EXPRESS CARD.**

If you've been wanting the American Express® Card for some time, this is some time to apply.

Because if you're a senior, all you need is to accept a \$10,000 career-oriented job.

That's it. No strings. No gimmicks.

(And even if you don't have a job right now, don't worry. This offer is still good for 12 months after you graduate.) Why is American Express making the Card a little easier for seniors to get?

Well, to put it simply, we believe in your future. And this is a good time to show it—for we

can help in a lot of ways as you graduate. The Card can help you be ready for business. It's a must for travel to meetings and entertaining. And to entertain yourself, you can use it to buy a new wardrobe for work or a new stereo.

The Card can also help you establish your credit history, which can help in your future.

So call 1-800-528-4800 and ask to have a Special Student Application sent to you. Or look for one on campus. **The American Express® Card. Don't leave school without it.™**



ENTERTAINMENT

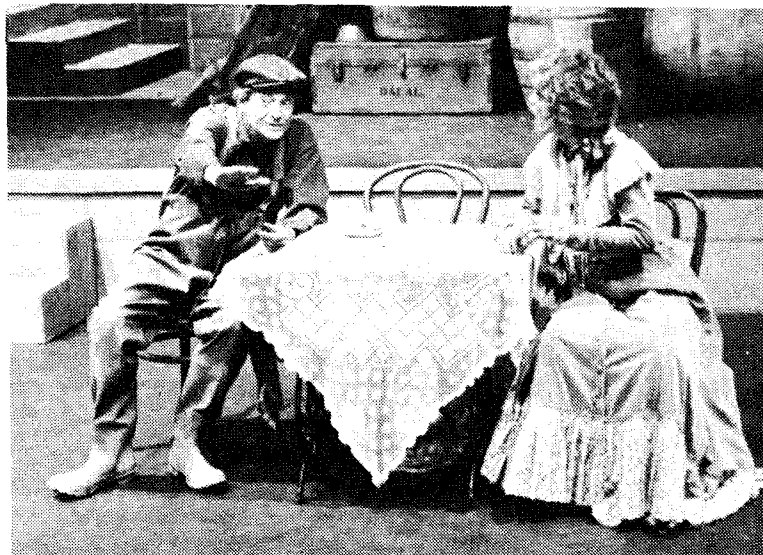
MADWOMAN IN RAMO

This weekend and next, TACIT will present Jean Giradoux's *The Madwoman of Chaillot* in Ramo Auditorium.

The Madwoman, written in 1943, shortly before the author's death, whimsically recalls an earlier day when life was simpler. The distinction between good and evil is sharply drawn; and the evil is represented by the forces of modern, capitalistic industry, who want to dig up Paris for oil. The heroes of the piece are the poor folk, the beggars, street singers, and waiters, led by a madwoman who has some kind of magical authority for the people of the district of Chaillot. So in Giradoux's fantasy, happiness belongs to the poor and innocent, but it lies in the realm of madness.

Ironically, madness and reality blend together throughout the play. Whether the Prospector can taste the oil in the city's water because the underground pipelines pass near the oil, or whether the invisible dog Dicky is present or not, we cannot tell; we cannot believe the villains any more than we can the mad Countess. In the end, all that we can say is that the Countess believes that she has banished the President and his cronies to the underworld.

The Madwoman plays at 8 p.m. on April 12 (tonight!), 13, 19, and 20; at 7 p.m. on April 14; and at 2 p.m. on April 21. Tickets are \$4, \$5, and \$6, and may be purchased at the door or at the Caltech Ticket Office, north of the Beckman parking lot. For further information, call x4652.



Dickie Feynman, King of the Sewers, explains the ways of the underground to the madwoman

—photo by Ron Glaseg



Every TI calculator comes with one extra number.

1-800-TI-CARES

When you buy a Texas Instruments calculator you don't just buy a calculator, you buy Texas Instruments' commitment to quality.

It's a commitment backed by a fully developed service network that includes the above toll-free number you can call from anyplace in the United States.

If you have any applications,

operations, or service questions, call us Monday thru Friday between 9 am and 4 pm CST, and we'll be glad to help.

If your calculator needs repairing, we'll direct you to one of our 46 conveniently located service centers for an immediate exchange. Under warranty, it's free. If there's no center near you, we'll do it all by mail.

Of course, there's just one catch. It has to be a Texas Instruments calculator. But then, if you're as smart as we think you are, why wouldn't it be?

TEXAS INSTRUMENTS

Creating useful products and services for you.



Bananamania has come to Pasadena

In the heart of the Arcade Lane, a long vine-swing from Colorado Blvd., lies our new family/fun restaurant... Goin' Bananas. A place you'll go ape over!



After parking your banana boat inside the walled surroundings, commence to the eatery where monkeying around is expected. Now if you're going to Goin' Bananas to eat, bring your appetite! Goin' Bananas does not chimp on portions... and nothing on the menu is over \$5.95.

Using only fresh, lean, premium quality beef (ground daily), Goin' Bananas will, over a smoky mesquite fire, broil you a 1/2-lb. burger - then it's up to you to load it up with lots of good stuff!

Ready for the picking: beefy ribs, barbeque chicken, 1/4-lb. hot dogs, Hawaiian pork ribs, juicy steak sandwiches, fries, Pasadena chili, a crisp Jungle Salad Bar and banana splits, (of course).

Try Our Jungle Bar

House specialty: Banana Dacquiri (what else?)



Birthday Parties

Reserve the Jungle Hut - we have a fresh bunch of ideas.

Open daily from 11:00 a.m.
Major credit cards
Phone (818) 793-5111



Arcade Lane Shopping Center
Free easy parking
695 East Green Street

SPORTS

Weekly Sports Calendar

Day	Date	Time	Sport	Opponent	Location
Sat.	4-13	11:00 am	Women's Tennis	Whittier	Whittier
Sat.	4-13	11:00 am	Track	Occidental & La Verne	Caltech
Sat.	4-13	12:00 noon	Baseball	La Verne	Caltech (2)
Sat.	4-13	1:30 pm	Men's Tennis	Pomona-Pitzer	Pomona-Pitzer
Sun.	4-14	1:00 pm	Women's Soccer	Spinoffs	Caltech
Tue.	4-16	3:00 pm	Baseball	La Verne	La Verne
Tue.	4-16	3:00 pm	Men's Tennis	Redlands	Caltech
Wed.	4-17	3:00 pm	Women's Tennis	Claremont-Mudd-Scripps	Caltech
Sat.	4-20	11:00 am	Track	Westmont & UCSD	Caltech
Sat.	4-20	12:00 noon	Baseball	Pomona-Pitzer	Pomona-Pitzer (2)
Sat.	4-20	1:00 pm	Women's Tennis	Occidental	Occidental
Sat.	4-20	2:00 pm	Men's Tennis	Christ College	Christ College
Sun.	4-21	3:00 pm	Women's Soccer	Caltech vs. T.N.T.	La Salle High

THE HAIR CUTTERS

HIS AND HERS
OPEN EVENINGS



449-6967 449-1022

\$3.00 Discount for Caltech students with this ad
1009 E COLORADO PASADENA
NEXT TO THE ACADEMY THEATRE
PARKING IN REAR

ENTERTAINMENT

LIFE'S little NECESSITIES

The Great World Cruise of the Queen Elizabeth II—Armchair Adventure. Narrated by Doug Jones. Beckman Auditorium. Fri. April 12, 8 pm. \$6.50, \$5.25. Student rush: \$5.00.

The Man Who Loved Women—(The original, from 1976.) Classic Truffaut. Monica Theatre, Santa Monica. Sat. April 13, Sun. April 14. \$4.50.

Darryl Denning—Classical guitarist. Dabney Lounge. Chamber Music Series. Sunday, April 14, 3:30 pm, free.

The Music Man—A great musical. Catch it if you missed it on PBS... Rialto Theatre, South Pasadena. Sunday, April 14, Monday, April 15.

Jane Goodall—This year's Allen O'Brien Memorial Lecture, entitled "The Nature of the Mother/Child Bond in Chimpanzees: Implications for the Western Nuclear Family." Beckman Auditorium. Tuesday April 16, \$7.50 (students \$5.00)

The Madwoman of Chailot— See story, page 6.

**BETRAYAL
BY TACIT**

by Tom McKendree
TACIT sponsored a production of Harold Pinter's play *Betrayal* last weekend in the Reading Room of East Bridge. The only flaw was combining a small theatre with a mere four-day run, thus limiting the audience. A good production should not be restricted to so few viewers.

Daria Martel and Brian Warr opened the play as Emma and Jerry, two former lovers who were married separately. Jerry's wife Judy remained offstage throughout the play "on the night shift at the Hospital." In the second scene Emma's husband, Robert (played by Parker MacCready), visits his once best friend, Jerry, although they "no longer play squash."

Betrayal then spirals backwards in time, through reminiscing scenes, culminating in Jerry's drunken declaration of desire for Emma, which had started the affair nine years earlier.

The direction, by Astrid Howard and Lisa Novick, beautifully captured the nuances of characterization which Pinter's play was built on. They directed the action in the cramped reading room so well that the stage felt much larger, yet kept the scenes intimate when needed.

Lacking special make-up, none of the actors appeared physically convincing as the almost-middle-aged characters they were playing, especially Parker MacCready. Nonetheless, the three's acting, aided by clever costuming, made them all quite believable early in the play.

Lombros Katfygiotis supported the play well in his role as a waiter in one scene. Small characters breaking ensemble badly damage many non-professional plays; Lombros Katfygiotis enhanced this one.

Unfortunately, TACIT has finished its run of *Betrayal*. This was a production well worthy of its script. In the future, perhaps good productions such as *Betrayal* will find their way to larger audiences.

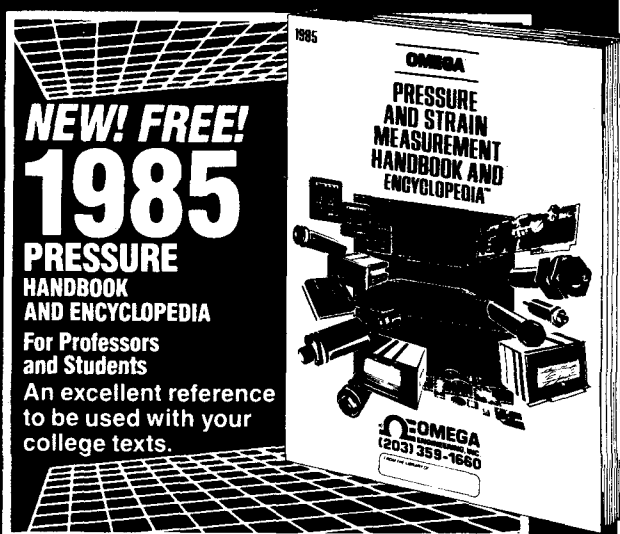
SPLISH! SPLASH!

by Charles Barrett
This week, ASCIT presents *Splash*, starring Darryl Hannah and Tom Hanks in a contemporary comedy-fairytale-love story about a man and a mermaid. Hanks plays a successful but unfulfilled grocery wholesaler who, following a boating accident, is rescued by a mermaid (Hannah). He returns to Manhattan, dismissing what he saw as a hallucination, but she is so

smitten, she goes to seek him out, her fish-tail transformed into legs as long as she stays dry. They get together, he unaware of her background, and of course they encounter many difficulties in bringing their different worlds together in the pursuit of love.

SCTV regulars John Candy and Eugene Levy round out the cast of this light and entertaining comedy, directed by Ron Howard.

OMEGA ENGINEERING, INC.
THE WORLD LEADER IN MEASUREMENT AND CONTROL!



When you call, please be sure to give your college affiliation, and ask for your Special University Handbook Package.

(203) 359-RUSH

One Omega Drive, Box 4047, Stamford, CT 06907
Telex 996404 Cable OMEGA FAX (203) 359-7700

COPYRIGHT 1985 OMEGA ENGINEERING, INC.

**MONKS PIZZA
FREE DELIVERY
304-9234**



HOURS
Sun-Thr 11:00-1:00 AM
Fri-Sat 11:00-2:00 AM

**\$2 OFF
ANY
MONKS
SPECIAL**



304-9234
(Limited Delivery Area)
(1 COUPON PER PIZZA)
Expires April 30, 1985

**LUNCH
SPECIAL
2 FREE
PEPSIS
WITH ANY
MONKS
PIZZA**

ORDERED BETWEEN
11 AM & 4 PM
(Limited Delivery Area)
(1 COUPON PER PIZZA)
Expires April 30, 1985

**\$1 OFF
ANY
MONKS
PIZZA**



304-9234
(Limited Delivery Area)
(1 COUPON PER PIZZA)
Expires April 30, 1985

**\$2 OFF
ANY LG.
2 ITEM
PIZZA**



304-9234
(Limited Delivery Area)
(1 COUPON PER PIZZA)
Expires April 30, 1985

WHAT GOES ON

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.

Lost: 36 Mikados

A roll of 36 slides (35mm film) from *The Mikado* was mistakenly picked up from the bookstore on Thursday or Friday, April 4 or 5. If you know anything, please contact Kathleen Fletcher (1446 Rose Villa, 796-6561) or the Drama Office (north side of Winnett).

Programmer Wanted

Individual needed to develop software for data acquisition, analysis, display, and processing. Mathematical background including Fourier analysis required. Some familiarity with chemistry and biology desirable as well as some experience with computer hardware. Data consisting of large (200K bytes) arrays will be acquired and analyzed on an IBM XT with the use initially of the commercially available software package ASYST. Application is the development of prototype automated analytical instrumentation. The applicant must be able to interact and communicate effectively on a daily basis with scientists directing the project(s), and must be able to work well in a demanding scientific environment. Long term appointment with further computer applications in biological research. Salary commensurate with qualifications.

Sam Custom Tailor

P M SAMSON
49 NORTH ALTADENA DRIVE
PASADENA CA 91107
818-793-2582

ALTERATIONS
RETYLING
TAILORING
INVISIBLE REWEAVING

Special rates for Caltech/JPL community.

CLASSIFIED

REALTY—

WHY RENT? . . . when you can enjoy your own furnished single unit near serene Sierra Madre. Price reduced to \$54,000. Ask for Clark (agent) at 818-357-0057.

FOR SALE—

CompuPro 816A, 8MHz 8088, 6MHz 8085, 128K static RAM, dual 1.2M disk drives, 512K M-Drive/H, Televideo 950 with 4 pages mem., CP/M-80, CP/M-86, SuperCalc2, dBASEII, Pascal, Spellbinder 5.3. \$4200. Vicki (818)246-7829

GENERAL—

INSURANCE WAR! Will beat any price, or don't want your business! Sports cars, multitickets, good driver disc. Request "Caltech Plan." Call (818) 880-4407/4361.

Celebrate Shabbat

There will be a Friday night (Passover) service tonight from 5:30-6:00 in the Y Lounge. Everybody is welcome to attend. If you cannot attend because of the time, please contact the Caltech Bayit (793-3859), since we are considering changing the time of the service for future weeks.

ESL—Communication

ESL—Oral Communication will continue third term. Monday classes with Joseph McVeigh will begin April 15, 7-9 pm, in 115 Dabney. Thursday classes with Michael Linden-Martin will begin April 18, 7-9 pm, in 121 Dabney. Attendance is limited to 12 per class and applications will be accepted on a first come, first served basis. Interested students should sign up with Betty Hyland in 211 Dabney.

Honor! Wealth! Fame!

The Mary A. Earl McKinney Prize of \$500 is awarded for excellence in writing. Any sophomore, junior, or senior at Caltech is eligible to compete. Essays may be ones you have prepared for a humanities class or any good piece of your writing on a topic relevant to the humanities. Papers must be typewritten and double-spaced. Students who wish to be considered for this prize should contact a member of the Humanities faculty. If the essay is worthy, the faculty member will turn the paper over to the McKinney Prize Committee. Each student is entitled to only one entry. All contestants must submit their papers to a faculty member by May 7th.

The essays will be judged by a three person committee from the Literature faculty. Papers will be judged on the quality of the thought and the effectiveness of the writing. Winners will be announced the last week of May. The name of the winner (or winners) will appear in the commencement program. The Committee may divide the award in case of more than one outstanding entry.

If you have any questions, contact Dr. Jenijoy La Belle, x3606.

Burning Issue

The Southern California Skeptics in conjunction with the Caltech Y will hold a free public lecture and demonstration on the physics of firewalking.

For centuries people in all cultures have walked on hot coals and certain types of burning lava without getting seriously burned. Ordinarily this is associated with religious rituals, or rites, and success is attributed to spiritual, mystical, or paranormal powers protecting the firewalkers. Since firewalking is generally done in far away places, many Americans are quite willing to give some credence to the firewalkers' claims that some sort of mysterious powers protect the walkers from harm—powers that can be harnessed only after great study and preparation.

Recently thousands of Americans have already paid anywhere from one hundred to several thousand dollars to learn the ritual of firewalking. They are told that these classes will also teach them to control pain with their minds. They claim that you can then have complete control over both your physical and mental health, i.e., cause terminal cancer to go into remission, restore failing eyesight, and improve one's sex life, among various other things. Because firewalking seems mysterious or impossible to most of us, the firewalk serves as a powerful persuasive tool in convincing the walker that all of the material taught in the seminar must be correct. After people are successful in walking the hot coals, many times their belief structures are blown. This is often the way cults are started. It is also a possible path to fraud.

Lecturers UCLA physicist Dr. Bernard Leikind and UCLA psychologist Dr. William McCarthy investigated American firewalking in Los Angeles as taught by Tom Robbins of the Robbins Research Institute. They both participated in a firewalk. One of them attended Robbins' seminar, the other did not, since they wished to test the proposition that the training in the seminar was not necessary in order to walk across the coals without getting burned. Drs. Leikind and McCarthy will discuss the results of their extensive analysis of the newest "fad" of firewalking. They will provide not only an entertaining and informative lecture, but also a carefully prepared eight-foot-long bed of 1400°F hot coals for anyone to walk across.

The lecture and demonstration will be held on the Caltech south track field (near the bleachers) at 3:00 pm on Sunday, April 14th. Marshmallow roast will follow! The lecture will be canceled in case of rain.

TINA & MICHAEL HAIR DESIGN

For Men and Women

Haircuts, Perms, Color
Manicures, Pedicures

20% Off to Caltech community

By Appointment Only
Tuesday through Saturday

991 E. Green St., Pasadena CA
Parking on 108 S. Catalina
793-2243 or 449-4436

C★L★A★G★S

CLAGS will be meeting this Sunday to plan the third term dance and work on our new office. We'd like as many as possible to show up, so come and find out what's happening.

Junior Travel Prize

This is one last reminder that the Dean's Office is once again awarding the Junior Travel Prizes. These cash awards are available to encourage Juniors to rest their weary minds and bodies before their Senior year. If you are interested, please write up a short description of your proposed travel and a tentative budget. Proposals are due in the Dean's Office, 102 Parsons-Gates, by April 19th.

Portfolio

The Caltech Student Investment Fund will meet on Wednesday April 17th at 5pm in the Millikan Board Room.

Oxy-Caltech Orchestra

The Occidental-Caltech Symphony Orchestra will present a concert this Tuesday, April 16 at Thorne Hall on the Occidental campus. The program will be Bartok's *Dance Suite*, Haydn's Symphony No. 99 and Debussy's First Rhapsody for Clarinet and Orchestra.

This performance at Oxy will be the only one; facilities are unavailable for the usual second performance at Caltech. However, some transportation to Oxy is available through the Caltech Y. Sign up in the Y office.

The orchestra, directed by Dr. Allen Gross, is composed of students, staff, and faculty from both schools; it has over 60 members, including around 20 from Caltech.

The concert is free and open to the public.

Spring Blood Drive

Caltech will be having its spring blood drive in two weeks, on April 23 (9:45 am-2:30 pm), 24 (1:15 pm-6:00 pm) and 25 (8:15 am-1:00 pm) in Winnett Lounge. There will be a competition between the seven houses, as follows: the house with the highest percentage of blood donors will win ½-keg of beer or an equivalent amount of soft drinks. Make appointments in advance if possible, but drop-ins are welcome. For appointments, call Linda Martin, extension 6374 (Personnel).

Bridge Tournament

Arrangements for the First (Great) Annual Caltech Bridge Tournament have been made:

When: Sunday, April 21. Two sessions, 1-4 pm and 7-10 pm.

Where: Red Door Cafe and Winnett Lounge

What: Round robin tournament for teams of four. All levels (beginner to expert) are welcome. If you haven't got a team we can match up pairs (or possibly even individuals). About 25-30 people are expected. A \$1 entry fee will be levied, and trophies and other prizes awarded to the winners.

To enter, or ask questions, call Jeffrey Pugh (x4744 or 793-0814). This may be the most important event of the year—Enter NOW!

Children's Center

Have you filled out and returned the Needs Assessment Survey from The Children's Center at Caltech? Yes? Good for you! No? Better hurry, all surveys need to be returned to the Children's Center today (April 12).

The Children's Center at Caltech, located at 293 South Chester, receives an increasing number of requests for child care from the Caltech and general communities. Since the Center hopes to eventually expand its services by increasing enrollment and providing care for a wider age group (current enrollment is for 2 to 5 year olds). Prior to expanding the facilities, however, the Center must accurately determine the present and future child care needs within the Caltech community.

If you have young children or expect to within the next five years, have post docs or graduate students arriving with children, or have witnessed child care problems with friends who were once associated with Caltech, please complete the survey that was mailed to you. Surveys were distributed last week to all of Caltech's students, faculty and staff.

The Children's Center at Caltech was established to help YOU and your family. In order to meet the steadily increasing demand for child care within our campus community, the center needs YOUR help, too!

Read All About It

There will be a meeting of the staff of *The California Tech* today at 12:15pm in room 127 Baxter. (This is also known as the class PA 15.) Feel free to stop by if you're interested in working on the *Tech*.

Caltech 107-51

PASADENA, CALIFORNIA 91125

The California Tech is published weekly except during examination and vacation periods by the Associated Students of the California Institute of Technology, Inc., Winnett Center, Caltech (107-51), Pasadena, California 91125.