

# Feynman On the Shuttle

by T. Gould

The Caltech Management Club hosted a lecture given by Richard P. Feynman on the Rogers' committee investigations of the Space Shuttle disaster, last Tuesday afternoon. Introduced without fanfare by his former student Dr. Albert Hibbs, the Caltech physics professor responsible for an afternoon queue from Beckman Auditorium to Dabney Hall took the podium.

In the style that is distinctly his own, Feynman addressed the crowd of Caltech employees, undergraduates, and graduate students. He is as always simple and concise in words, so much so as to risk losing an audience steeped in the verbosity of modern technical communication. To attempt to paraphrase Feynman is a futile effort to distill the purest information.

He began with a quick review of the technical details of the Shuttle failure covered so extensively by the media. Here, as in the entirety of his lecture, Feynman endorsed the exemplary efforts of the Jet Propulsion Laboratory. After accepting an invitation to join the Rogers' committee, Feynman submitted himself to a rapid-fire briefing by JPL engineers which in retrospect revealed essentially all of the problems which would subsequently take the committee months to uncover. Feynman displayed a copy of his notes from that briefing, the second line of which contained references to the difficulties of the infamous O-rings.

Some of Feynman's most insightful contributions to the four month investigation were those concerning the nature of human, rather than material, failure. There was a very deep and critical misconception of the use of statistical inference among the NASA management, according to the physicist. The management's assessment of the Shuttle's probability of failure was tacitly based upon its prior successes. If a flight considered dangerous was later deemed a success, the next flight was considered less of a risk.

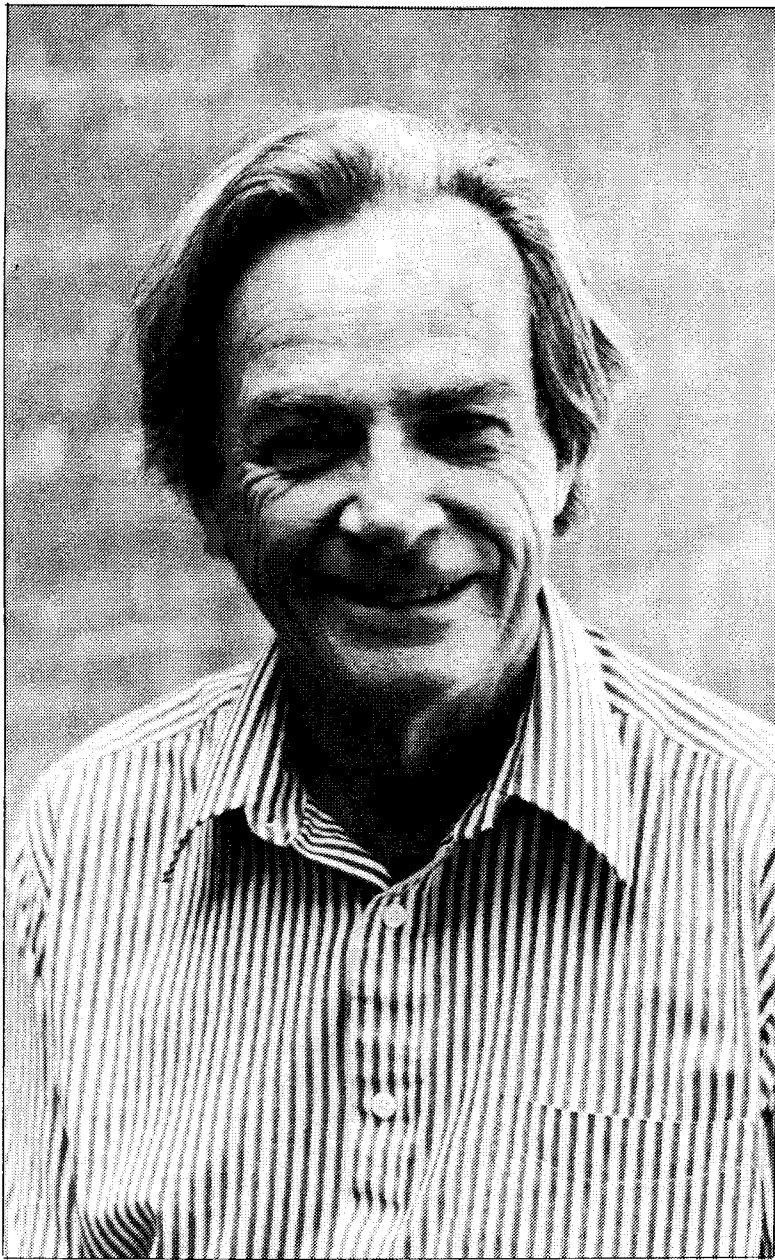
Feynman continued to encounter a great discrepancy between the estimates of the probability for launch failure given by managers and those given by engineers. Apparently, this communication breakdown between the managerial and the technical personnel was pandemic, and was uncovered in the Morton Thiokol Company as well.

Feynman's audience on this afternoon was privy to his theory on the miscommunication between engineers and managers of the organizations involved. Feynman believes that at the heart of the matter lies a loss of common interest among the constituents of the shuttle project. The 1960s was an era in which the birth of the space program and the international race for space supremacy spawned a common interest among the technical and the administrative personnel. There was a common goal and as importantly a common means with which to achieve it.

With the passage of the space program through the Apollo era, it became necessary for the space program's administrative personnel

to evolve into salesmen for new and far-reaching projects. Future projects had to be not only technically possible, but economically aesthetic in the eyes of an increasingly cautious Congress.

Feynman believes that the interests of the administrative and technical personnel began to diverge, eventually leading to an environment in which a subtle and dangerous lack of communication could exist. In an era of potentially enormous scientific projects financed on the national level, future managers are faced with the challenge of being technologically astute as well as objective and receptive toward the work of their personnel.



Dr. Richard Feynman spoke at Beckman Auditorium about his work with the Rogers' Commission in Washington, DC.

photo by Robert Paz

# Brown Bag Lunch Sex Bias at Tech

by Theron Stanford

The Organization for Women at Caltech held a panel discussion on women faculty at Caltech during their most recent Brown Bag Lunch in Winnett Lounge on Wednesday, May 13, 1987.

The panel consisted of Dr. Ann Boesgaard, NSF visiting professor of astronomy from the University of Hawaii, Dr. Judith Cohen, associate professor of astronomy, Dr. Jennifer Reinganum, associate professor of economics, Dr. Annette Smith, professor of French, and moderator Dr. Eleanor Searle, professor of history.

The session began when each of the first four members of the panel briefly stated her views. Dr. Cohen started off, remarking that hiring decisions seem to be made without overt sexual bias, but that the statistics are still appalling. There are only two tenured women faculty outside the Division of the Humanities and the Social Sciences, and in the last two years 35 appointments have been made and none were women.

There is also historical discrimination in that currently most of the faculty are men and the turnover rate is very low. Married women have trouble accepting appointments because their husbands usually also work. In making junior appointments, there is a tendency to favor men with lower status; they don't play political games or hype their own work, and they usually work on group-oriented projects that obscure their individual abilities.

Dr. Cohen proposed that two appointments specifically reserved for women be added to each division per year. The appointments would be for five years, but not subject to review until after four years—so that way the women would have enough time to finish a reasonable part of a project for review. She admitted that the system has pitfalls; for example, those so appointed may be treated as second-class citizens.

Nevertheless, it could still be carried out legally as some sort of affirmative action program.

Dr. Reinganum stated that there are economic gender-related costs that predispose working women to take jobs in industry rather than academia. The years during which a woman strives for tenure are her child-bearing years; having children slows down the speed at which she does research, so she looks less productive. To rectify the situation, Dr. Reinganum proposed that, instead of just treating maternity as a six-month disability leave, there be a delay of tenure decisions of one year for each child born. Another cost is that it is more common for female professionals to be married to professional men, who don't have good job mobility. Fortunately, in a large city such as Los Angeles, if the man hates his job, his chances of finding a better one are pretty good.

## Situation Not "Optimistic"

Dr. Smith said the situation was "not optimistic," and that there would be few women faculty for years to come. However, in the short run, the best tactic is to maximize the power of women at Caltech, such as by increasing their membership on committees. She cited examples of how Caltech

loses women faculty. In one instance, the Institute became no longer interested in a field of research which resulted in the loss of two tenure-track positions. Another time, a woman had written a book which prompted another school to hire her away, but what bothered Dr. Smith was the indifference with which some men she knew treated the situation.

Dr. Smith made some proposals to counteract other types of discrimination at Caltech. The admissions standards for women undergraduates should be lowered, such as has been done at the Massachusetts Institute of Technology. Studies show that low test scores do not correlate with an inability to do college work. Also, there should be more public relations work emphasizing women at Caltech, as is done at many other schools. Finally, faculty should be sure to give the same opportunities of advancement to women graduate students as they do to their male counterparts.

Dr. Boesgaard made some recommendations based on her twenty years of experience at a state university. To get more women faculty, more activism by the faculty themselves is required. Also, advertisements for positions at Caltech are scarce and too vague; they don't always have deadlines for application on them. The selection committees must shy away from the false impression that they know everyone in the field; no matter how few people work in an area, they still need to look at the applications.

Furthermore, a special effort is needed to attract women faculty. In 1983 at the University of California at Berkeley, students sent out letters to alert women astronomers of an open position. The woman who finally filled the slot said that she never would have applied without being contacted.

Dr. Boesgaard read a few of the guidelines set by Berkeley in 1984 in order to increase the number of women faculty. One policy is that if one department finds a woman candidate who is better than those found by other departments, then the university allots the next new faculty position to that department. The guidelines also emphasize the need to get women to apply for positions and to go the extra mile to contact hard-to-reach candidates. Active recruiters of women should sit on the various committees.

Dr. Boesgaard also cited statistics compiled by the National Science Foundation that reflect how women fare in academics. For example, men and women judge their successes and failures by different yardsticks. If a man does well, he credits his ability, while if he does poorly, he blames bad luck. On the other hand, if a woman achieves, she credits hard work and luck, while if she doesn't, she blames a lack of ability, which will influence her to drop out of academics. Identical papers, one with a man's name and one with a woman's name, can receive different reviews. Letters of recommendation for women often contain personal remarks instead of strictly professional ones.

After the four panel presentations, the questions began. Dr. Cohen, beginning a slow burn that

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# The Incoming Crop of Freshmen

by Huy Cao

Every year around this time, high school seniors have already decided where they are going to college.

For Caltech, this year's incoming freshmen were chosen from 1589 applicants, the fourth-highest number of applicants that Caltech has ever had. The number represents a 34% increase over two years.

Of these applicants, the Admissions Office gave 452 the option of accepting Caltech. And of those, 224 have accepted admission and plan to attend Caltech next year.

"You have to be careful about interpreting that number," said Dr. Stirling L. Huntley, Director of Admissions. He explained that while 224 sounds large, it will pro-

bably reduce by autumn to the target of 215. Some students will change their plans for various reasons, one being that they have been taken off the waiting list of another college.

The group of 224 can be divided into two sub-groups: females and males, with 37 and 187 respectively of each. This represents a 1 to 5.054 ratio, an improvement over the 1 to 7 ratio of the present frosh class.

## General Admission Policy

Caltech does not make concessions in admitting women. Rather, the policy is to put more energy in recruiting them; special publications are sent to potential female applicants, in addition to the annual

pre-frosh weekend for women.

Like other schools, Caltech is not obligated to follow what in the business world is called "affirmative action." But it does make a good-faith effort to recruit some minorities. This does not include the Asian minority, since they are not under-represented.

Caltech's policy with SAT scores is somewhat different from that of other schools. SATs are weighed relatively more here because they are a better indicator for Caltech than for most other schools. With a school like Harvard there are many majors, but with Caltech there is a core math/science curriculum which every student goes through, and so the SAT is a good measure of math skill.

## OPINION

# Protesters From Tech Arrested For Trespassing in Nuclear Zone

On Mother's Day, May 10, eight people from Caltech participated in a protest at the Nevada Test Site against the U.S. government's policy of continued nuclear testing in the face of a Soviet test ban of a bilateral nuclear test ban.

Four of the Caltech group—graduate students Erica Harvey, Ann Heil, and Kris Potter, as well as seismologist Riley Geary—were among over 500 people arrested for committing acts of civil disobedience by trespassing on the site. Because many were arrested more than once, a total of 746 citations were issued for trespassing. Also participating in the action were graduate students Jonathan Nagler, Bob Sweeney, and Peter Gray; as well as recent alumnus Mark Cohen.

The Caltech people attended the action out of a sense of conviction that traditional means of lobbying the government to end testing have been insufficient. Ann Heil explains her motivation. "I went to Nevada because I have a deep-felt conviction that nuclear weapons are illegal, immoral, and dangerous. I went to Nevada because I'd exhausted all other alternatives. I've written letters to my con-

gressmen, letters to the president, and letters to newspapers. It was time to go one step further and get arrested for peace. I'm worried not only about myself but also about future generations. I want to see them grow up on a vibrant, living planet rather than a barren wasteland of suffering or, worse yet, not to be born at all."

Non-violent direct action, including civil disobedience, is playing a growing role in the movement to end nuclear testing. In the last year, there have been major actions at the Nevada Test Site, in Washington D.C., and at the Florida missile test site on Cape Canaveral. Many of the actions have been organized by the American Peace Test (APT), a national organization formed in 1985 to coordinate direct action against testing.

The Mother's Day action was designed to emphasize the role of women in the peace movement, and was organized by a coalition of women including the founders of APT. Mother's Day was chosen for the action because its original purpose was to protest war and to call upon women to use their power to bring about peace. The original

"Mother's Day Proclamation," written in 1870, states "Our husbands shall not come to us, reeking with carnage, for caresses and applause. . . . As men have often forsaken the plough and anvil at the summons of war, let women now leave all that may be left of home. . . . to promote the alliance of different nationalities, the amicable settlement of international questions, the great and general interests of peace."

The protest began on Sunday morning with a gathering consisting of songs, chants, and speeches aimed at empowering those present. It was led by Vicki Noble, a shaman healer, and drew heavily on spiritual concepts of the original inhabitants of the test site land, the Shoshone Indians. Kris Potter had strong feelings about the ceremony. "I became aware of our mission as women, sources of life and supporters of life, to fiercely protect our children and all living things."

As Erica Harvey describes, "None of the women who spoke were very famous: an Australian congresswoman, a Shoshone mother of eight, a radiation survivor who had worked in a lab providing nuclear feedstocks for the earliest atomic bombs. Their message was simple and clear: no matter what you believe about the Soviet Union and its ability or desire to take over the world, and

no matter what you believe about the usefulness of nuclear weapons as deterrents, you must acknowledge the increasing evidence that the act of testing is an act of rape against our earth, ourselves, and our future generations."

## The Action Phase

After the gathering, the action phase of the demonstration began. Some protesters walked across a cattle guard marking the entrance to the test ground. Others, the Caltech group among them, climbed over the fence surrounding the test site. It was a surrealistic scene as the four from Caltech scrambled underneath the fence and began walking hand-in-hand into the desert, bringing to mind scenes out of "Road Warrior". A helicopter descended from overhead and a camouflaged dune buggy and a motorbike converged on the four, driven by security guards in camouflage. The guards handcuffed the four and herded them toward waiting buses.

Demonstrators lining the fence offered applause, waves, peace signs, and shouts of "We love you." Kris Potter describes her feelings about the experience, "As soon as I crossed under the fence, I felt a surge of confidence, sure that I had done the right thing. While we were walking out into the desert of the government's forbidden land I felt like I was stepping into freedom from nuclear oppression. . . . For a moment, out there in the desert, people's right to justice, self-determination, and human survival assumed the right place in my life."

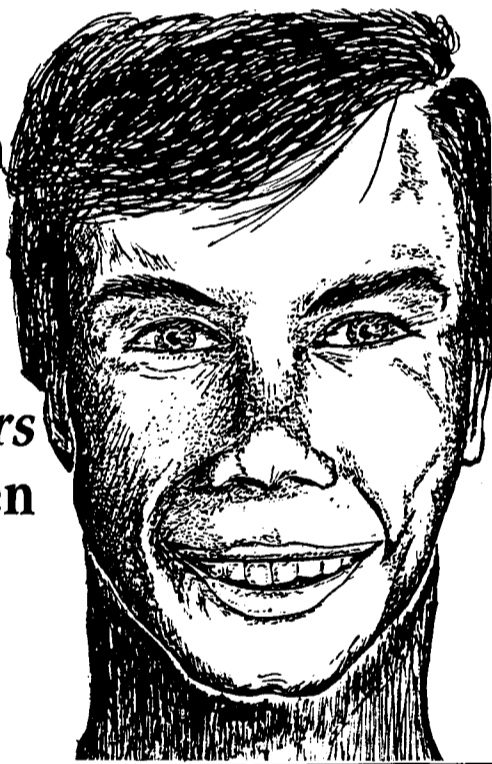
The protesters were issued citations for trespassing. Many protesters chose not to give their names to the police, and some gave symbolic names such as Mother Earth. Erica Harvey and Kris Potter chose not to verbally give their names, but instead each handed the issuing officer a permit from the Shoshone Indians to be on the test site land. This was done in sympathy with the Shoshone people, who claim that the test site land was taken from them unfairly in violation of treaties with the US government.

The Mother's Day action followed an earlier action on February 5 of this year at which three Caltech students—Jonathan Nagler, Ann Heil, and Peter Gray—were arrested. Also among the 438 arrested in the February action were Carl Sagan, Martin Sheen, Rev Tim McDonald of the Southern Christian Leadership

continued on page 8

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Volume LXXXVIII • Number 28  
15 MAY 1987

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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.

Letters and announcements are welcome. All contributions should include the author's name and phone number and the intended date of publication. The Editors reserve the right to abridge and edit letters for expediency, literacy, or other.

Turn in copy (preferably on an IBM-compatible, WordStar-formatted floppy disk) to the Tech office mailbox, room 107 Winnett. The deadline for copy is Wednesday at 5PM; for announcements, Tuesday at 5PM. Late copy may not be printed even if prior arrangements have been made with the editors.

Subscription requests should be directed to the business manager. Rates are \$3.00 per term, \$8.00 per annum (three terms), \$100 per life.

Printed by News-Type Service, Glendale, California

ISSN 0008-1582

# Welcome Home, Alumni

# Seminar Day Calendar of Events

by Jeff Tekanic

Tomorrow is Alumni Seminar Day, and if you were like me before I became involved in planning this event, your reaction probably is: "So what?" Fair enough. I can understand that, but I feel you have the right to know why approximately 1500 alumni and prospective students will be descending upon the campus at 8:00 tomorrow morning.

For the past 50 years, the alumni of Caltech have used Seminar Day as their own opportunity to flock back to the campus and get back in the classroom. The professors, who have been asked to give the lectures, are speaking on topics they want to talk about (rather than being assigned to lecture a required course).

Each speaker will give a 40-minute lecture twice in the day (see schedule printed in this issue) and all undergraduate and graduate students are encouraged to attend. For more information on the lectures themselves, contact the Alumni House or your House president.

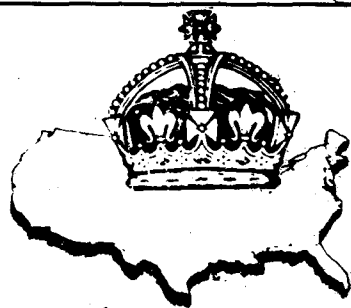
OK, so maybe you slept through the whole day of lectures, is there anything left in the day? Why yes, there is a GSC/ASCIT/Alumni Association-sponsored catered barbeque in front of Winnett Student Center, with the Seven House Crew Race to follow. Again all undergraduates are invited and encouraged to attend free of charge. We only ask that you pick up a BBQ ticket from your house president or the MOSH's office. If the presidents have not informed you of the BBQ, please yell at them for a while.

Graduate students are also invited to attend and should contact Tony Shjillum to obtain a ticket. We are also expecting about 200 alumni and 75 members of the teaching faculty to attend. The BBQ begins at 6:30PM, and the crew race should get rolling about 7:30, so have your ten-man teams ready.

If you are looking for something to do after drinking all that beer, the Caltech Glee Club is giving its Annual Home Concert at Beckman Auditorium at 8:00PM.

La la la.

	Beckman Auditorium	Ramo Auditorium	Baxter Lecture Hall	201 E. Bridge	153 Noyes	119 Kerckhoff
8:15 a.m.	<b>REGISTRATION</b> — Dabney Lounge					
Session I 9:00 a.m.	Return to the Red Planet  A. Albee	The Gender Gap In the Brain  M. Konishi	Breaking Waves and their Effect on our Coastline F. Raichlen	Experimental Economics: An Emerging Discipline  C. Plott	Tiny Particles in the Water Environment: Their Origin and Removal J. Morgan	
Session II 10:15 a.m.	JPL in Space: Past, Present, and Future  A. Hibbs	Face to Face: Women, Mirrors, and Identity  J. La Belle	Neural Circuit Computer for Complex Decisions  J. Hopfield	From Nanofabrication to Quantum Dots  K. Vahala	The Birth of Quasars? — Ultraluminous Galaxies B. Soifer	Collaborating with the Soviets in Planetary Science  A. Ingersoll
Session III 11:15 a.m.	<b>PRESIDENT'S WELCOME AND DISTINGUISHED ALUMNI AWARDS</b> — Beckman Auditorium					
Session IV 12:00 p.m.	JPL in Space: Past, Present, and Future  A. Hibbs	Fault-Finding in Tibet  C. Allen	Experimental Economics: An Emerging Discipline C. Plott	New Directions for the World Bank  R. Oliver	SURF Student Speakers J. Becker, S. Khan, K. Yun	Tiny Particles in the Water Environment: Their Origin and Removal J. Morgan
12:45-2:00 p.m.	<b>LUNCHEON</b> — To be served on Olive Walk near the Athenaeum					
Session V 2:15 p.m.	<b>GENERAL SESSION</b> — Dr. Francis Clauser — Beckman Auditorium					
Session VI 3:15 p.m.	Fact to Face: Women, Mirrors, and Identity J. La Belle	Breaking Waves and their Effect on our Coastline F. Raichlen	Return to the Red Planet  A. Albee	The Gender Gap in the Brain  M. Konishi	New Directions for the World Bank  R. Oliver	
Session VII 4:15 p.m.	The Birth of Quasars? — Ultraluminous Galaxies B. Soifer	Collaborating with the Soviets in Planetary Science  A. Ingersoll	Neural Circuit Computer for Complex Decisions  J. Hopfield	Fault-Finding in Tibet  C. Allen	From Nanofabrication to Quantum Dots  K. Vahala	



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## The Inside World

**Blacker:** Welcome back to the old inside world. I have returned as the Blacker Inside World author once again. I stopped writing earlier because I felt that I had run out of fresh ideas, but I soon found myself wanting to tell you all so many things that I decided it best that I start writing once again and I regained control.

Well, I've been better lately, now that my midterms are finished. I had a really great dive last weekend. My car has been running a little worse these days. I'll probably have to take it in one of these days for some work. You know, life around here would be a lot harder for me if I couldn't get away in my car once in awhile and completely forget about Caltech.

I'm not saying that life here is really ideal, though, even with a car. I think that for many of us here it is a sort of love-hate relationship that we have with the school, and the combination of the social problem and the challenge of the academics really makes it hellish sometimes. That is basically why I made the decision to transfer. It will be good for me. I think that my ultimate goal should be my own happiness and, since I'm not really happy here, it seems the obvious choice.

I think that the Inside Worlds that were written by the others (after I stopped) were lacking in that they failed to have any significant message or purpose. I think also that they were much more offensive than mine and rather stupid at times. I was also personally offended several times by the use of my name (without my permission or knowledge) as a hiding place, a place from which insults and racial attacks and all manner of morbid, sick humor could be launched without fear of feeling the response. That was why I wrote my letter explaining how I was being hurt by all of this and that I didn't feel it fair that my name be connected with such shoddy journalism. I also think they wanted to attack me, personally, because they didn't feel that a homosexual should be allowed to write something that's supposed to be representative of the entire house. Judging from the articles they wrote, it's probably also because I am Chinese and they have some very racist tendencies. It's just that sort of attitude that I was tired of reading about in my Inside World.

I guess that's all I really have to write this week. I hope you enjoyed my new (old) Inside World and I hope that you read it next week, too. I should be writing until the end of the term.

Reminders: Kelrof is coming up soon. I'll be there. F.U.C.K.E.D. was great, although my team only finished fourth. Good going, social team. I'm looking forward to the Associate's Tea; it's also coming up very soon.

—Arex

**Dabney:** SURFCUBE Profile: Andrew O' Reilly

"It's alarming how charming I feel." —Natalie Wood, *West Side Story*

Andrew O' Reilly. What can be said about him? Certainly, a man of taste, of dignity, of style. Indeed it goes beyond that, for to compare Andrew today with any mortal is almost an injustice. Now, I remember the time I first met him, not too long ago, when Andrew was still young and inexperienced like the rest of us. It was back in the summer of '86, after my freshman year at the California Institute of Technology. I was hired to work with the SURFCUBE group, a tight-knit research team composed of some of the hottest hotshots on campus. Andrew was captain, of course, and I looked forward to meeting a man so widely famed for his smooth moves.

It was a sweltering California June morning, and a bunch of us were waiting to be picked up by the shuttle bus to JPL, where the SURFCUBE offices were located. A tall blond kid approached me, and I recognized him instantly as Andrew from the pictures of himself he had posted all over campus.

"Hello, my name's O' Reilly. Andrew O' Reilly. Aren't you the new guy with SURFCUBE?"

I told him I was, and he shook my hand firmly.

"I'm very glad to meet you. I've heard some promising things about you, and SURFCUBE can always use another good man. Have I mentioned to you," he added, "that a man in a dress is a man nonetheless?"

He was friendly and cordial, and easily made me feel at home. I noticed a bottle in his knapsack, and was only slightly reluctant to inquire.

"Oh, this is just a bottle of shoe polish," he explained. "You'd be surprised at its alcohol content, and it's cheaper than beer. Best of all, it makes the girls go crazy. I thought it just might help soften up your first day."

We continued speaking, but he broke off suddenly in mid-sentence and focused his eyes over my left shoulder. For the next few minutes, he failed to acknowledge my existence, as he began to ogle (and I do mean ogle) the chick who had appeared behind me. She was beautiful to be sure, sexy without a doubt, and Andrew let everyone know he thought so. He walked around and around her, studying her from every possible angle. He tried not to look conspicuous, but she seemed increasingly uncomfortable by the second. Andrew involuntarily exclaimed things like "wow" and "heavy" and "amazingly amazing" as he discovered new outstanding features of her body. He licked his lips, he drooled, he emphasized her curvature with hand gestures, it was truly a man in ecstasy.

Finally, the shuttle bus arrived to interrupt this embarrassing scene. Relieved, believing that this fiasco was over, I soon realized that it had hardly begun. The chick rushed to the bus to escape Andrew, but Andrew was too quick, catching up with her before the door opened. As she climbed the steps, Andrew prodded her buttocks with his knees, his immense enjoyment obvious, her unease just as clear. He masterfully cornered her into a window seat, and in an attempt to learn something, I took the seat behind them.

"The name's O' Reilly. Andrew O' Reilly. What's yours?"

"Laura." She scrunched even closer to the window, though it hadn't seemed possible to me. Andrew shifted over, also (perhaps over-compensating), and continued his attack.

"You know, I think you've got a great body."

"Thanks."

"And guess what I keep in this pocket."

"I give up."

"Condoms. One-hundred and fifty, to be exact, and I've sewn one of these pockets onto every single shirt I own. And I still run out sometimes."

Laura failed to respond, but Andrew continued undaunted.

"What are your measurements? Mine's fourteen inches, and growing." He pointed at his pelvis as if to elaborate. My curiosity piqued, I peeked inconspicuously at his crotch and sure enough, his pant leg supported his claim. (Later, he told me that it was just a cucumber he had earlier taped to his thigh for just such an occasion.) Laura was paralyzed with fear (or perhaps fascination); all she could do was stare.

Andrew went on, regardless. "You know, I believe in body language." He then executed the longest continuous lick I have ever seen. It wasn't easy to keep myself from applauding, as he pulled the lint ball off of his tongue.

She slapped him. "Hey, lighten up Laura. You know, I think I have just the thing to warm you up." Andrew reached into his knapsack, and drew out a battery-powered drill. He attached a Coleco™ E.T. finger (like in the movie E.T.) to the drill head (though I don't think it came with the drill) and revved it up. By this time, Laura was hysterical, and naturally, she screamed. The bus driver braked violently, and came running back with a gun. He threw Andrew off the bus, the first in a long series of walks for Andrew to JPL. By July, Andrew had frightened all of the women away from the shuttle bus, and eventually JPL created a new shuttle run just for females (which Andrew frequented, but unsuccessfully, attempted to board.)

But hey, that was then and this now. The man who first violated the Law of Conservation of Fun, the man who rewrote the book on how not to act at parties, Andrew O' Reilly has become one of the most quoted men in Gentlemen's Quarterly. Not only that, he is one hell of a wailin' guy to be with. Believe me, it's no coincidence that Andrew O' Reilly has won the SURFCUBE "Guy of the Year" Award every year since 1983. Nor will I vote against him next year.

Quote of the week: "The adjective is the enemy of the noun."

—M. P.

**Fleming:** A leading brand of breath mints [which will be referred to as BUTTMINTS or simply MINTS, since an endorsement from these pages doesn't just happen for free] has had an advertising campaign based on letters from satisfied consumers. So it wasn't too surprising that rough draft of some letters to MINTS were found around the house this week.

Dear Mints,

You know, I've read extensively about those MINTS encounters, but I didn't think one could happen to me. No, no way. Then one afternoon, on my way home from the library, I stopped at the store to pick up some ice cream sandwiches. I think if I had to pick a favorite snack, that would be it—next come those ice cream bars. Well anyways, I was standing at this crosswalk and fondling this pack of MINTS in my pocket. The signal changed and I was about a third of the way across when I noticed this group of little kids on the opposite side laughing and shouting "There he is!" while pointing to the little man flashing in the WALK sign (because of my posture while walking). Needless

continued on page 5

## ENTERTAINMENT

# Laser Gallery In Old Pasadena? PCC, Art Center, Tech Can Do It

by Mike Hingle

Hello! My name is Mike Hingle, and I have a proposal for you to consider. I would like you to join me and others in an effort to establish a Laser Art & Science Gallery in Old Towne Pasadena.

By now nearly all of you have been touched with wonderment by some application of laser light. You may also have been astonished by the diversity and magnificence of its potential applications. Yet like any new technology, lasers will not help society unless they are utilized. Therefore I propose a Laser Art & Sciences Gallery displaying "State of the Art" laser technology to encourage the growth of public awareness and utilization.

I think the time is right.

Old Towne Pasadena is undergoing a major renovation to capture a large and growing market of sophisticated people. Currently in Old Towne there are a number of fine restaurants and bars, typical after-dinner art galleries and gift shops, the latest in health and aerobics clubs, and a few yogurt and ice cream shops.

People are looking for a little diversity, something new in the lineup of downtown entertainment. A Laser Art & Science Gallery will be a tasteful addition to Old Towne, and will fill the needs of that "seeking" market.

### What Has Been Done So Far

I've talked with the city and the Old Towne landlords and found a few candidate locations. One space is available for as little as 25¢ a square foot; up to approximately 8000 square feet available for use.

PCC's Physics Department houses the nation's most complete Laser Electro-Optics Associate program with almost 200 students. PCC also has the largest Laser Institute of America student chapter, who are willing to help.

The students and faculty from the prestigious Art Center College of Design would like to direct the exhibit's art work.

Interior design students from PCC expressed interest in designing the interior.

Dr Lee Browne, director of

secondary school relations at Caltech, would like to get the local high school and junior high students involved with gallery field trips and competition in preparation of mini-exhibits.

Prime players like Dr Demetri Psaltis and Dr Amnon Yariv and several other outstanding electrical and optical engineering faculty here at Caltech have stated a desire to guide student involvement in the gallery.

Ultimately we could develop and display a futuristic model of the world dominated by light. Technology, from light computers, data storage, communications, medical applications, sensing and monitoring, industrial applications, energy systems, transportation, and defense. We are realizing that just about anything that we do can be done better light.

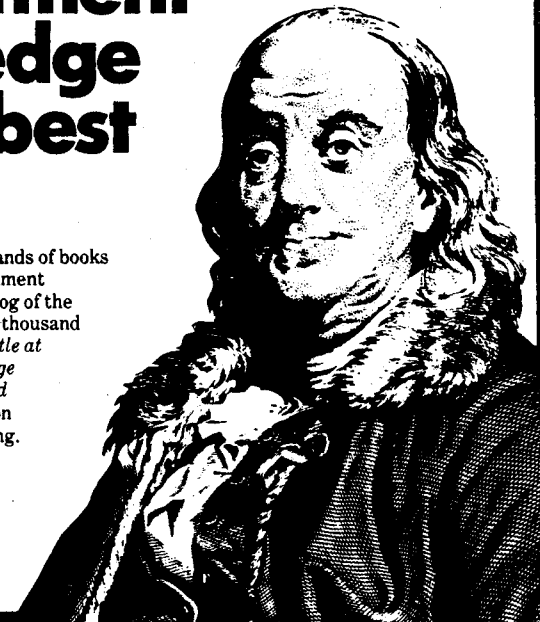
For you who are interested to help materialize this concept, a draft plan will be available for your comment. Research advisory committees will be selected to hash out particulars. Keep in touch with the *California Tech* for details.

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# Discoverer Of the Red-shift Of Quasars Is Mosely Professor

[CNB]—Astronomer Maarten Schmidt, whose discovery of the red shift of quasars ranks as one of the premier achievements of modern astronomy, has been named the Francis L. Mosely Professor of Astronomy at Caltech, Ruben F. Mettler, chairman of the Caltech Board of Trustees, has announced. Dr Schmidt, who has been the Institute Professor of Astronomy at Caltech since 1981, will be the first holder of the endowed chair, established last year with a grant from the Flintridge Foundation.

Francis L. Mosely, who died in 1984, was a pioneering electronics engineer and founder of the F. L. Mosely Company, now the San Diego division of Hewlett-Packard. In 1964, he founded Servo Products Company, a manufacturer of numerically controlled tools and related products. With his wife

Louisa, he was a lifetime member of the Caltech Associates, a major Institute support group.

"Francis Mosely was both an innovative engineer and an enthusiastic supporter of astronomical research at Caltech," said Caltech's president, Dr Marvin L. Goldberger. "We think it is especially fitting that Caltech's first Mosely Professor should be Maarten Schmidt, an astronomer whose research opened new frontiers in cosmology and astrophysics and permanently reshaped our view of the universe."

Dr Schmidt was born and educated in the Netherlands, where he received his doctorate from the University of Leiden in 1956. He joined Caltech three years later as associate professor of astronomy and became professor of astronomy in 1964. He was named executive

officer for astronomy in 1972 and was appointed chairman of Caltech's Division of Physics, Mathematics and Astronomy in 1975. From 1978 to 1980, he was director of the Hale Observatories.

Dr Schmidt made astronomical history in 1963 while studying quasars—extremely bright, star-like objects whose spectra of lights were unlike those of any known stars in the Milky Way Galaxy. His crucial contribution was to recognize that the light from these mysterious objects had undergone a very large red shift, signifying that quasars were located far beyond the Milky Way, billions of light years from earth. On the evidence of the spectra, Dr Schmidt and other astronomers determined that quasars were the brightest and most distant objects

**continued on page 9**

# James Olson Named Trustee

[CNB]—James E. Olson, chairman and chief executive officer of American Telephone & Telegraph, has been named to the Board of Trustees of Caltech, Chairman Ruben F. Mettler has announced.

"We are delighted that Mr Olson has agreed to serve as a Caltech trustee," said Dr Mettler. "Caltech is now facing a number of important challenges and we plan to put Mr Olson's leadership ability to good use."

James Olson, 61, is a native of Devils Lake, North Dakota. He has worked in the telephone and telecommunications business since

1943 when he was hired as a splicer's helper with the Northwestern Bell Telephone Company in Grand Forks, ND. Twenty-three years later, Mr Olson had moved up through the ranks of the company to become vice-president and general manager in its Iowa area. He was transferred to Indiana Bell in 1970 as vice president, operations, and became president of that company two years later.

In 1974 Mr Olson assumed the presidency of Illinois Bell, and in 1977 became executive vice-president of AT&T headquarters in New York City. He was made vice

president and chief operating officer in June, 1985, after serving as vice chairman of the board since 1979. He assumed his current position in September, 1986.

Mr Olson is a graduate of the University of North Dakota. He serves as a director for Borg-Warner, Chase Manhattan Corporation, Ing. C. Olivetti and Company, and Caterpillar, Inc., among other companies and organizations, and is a trustee of the American Enterprise Institute and The Conference Board. He is also a member of the Business Roundtable and the Business Council.

# More Inside World

from page 4

to say, my eyes googled out—especially when I saw their babysitter: Babs staring at my eyes only a few feet away. I kept on walking, but she caught up to me and, well, let's just say there haven't been any bugs in my program yet—thanks MINTS.

—Googly

Dear MINTS,

I heard about them MINTS, uh, encounters, but shoot I never thought one of 'em would happen on my account. I ain't got me no car, see, so I take this here RTD bus over to OXY and I sit in that there lounge. See, I do this a lot an' I brings a snack along—like some fried chicken—and then take the bus on back home. Well, there sure are a lot of girls around and one day I was just sittin' there when I get to noticin' I missed the last bus home. Good thing I just chewed a pack of your MINTS (it gets the smell of fried chicken off my breath) since I had the gall to ask this girl, Bertha, for a ride home. She obliged and on the way home, on the, uh, floor of her car I see this half eaten piece of fried chicken and I got to thinking 'bout dinner. So I leans up close and asks her real nice if she wants to go to the Colonel's down yonder. It musta been them MINTS 'cuz since then I haven't even needed to take no buses!

—Bongo

Finally, there was this scrap of a letter:

Dear Mints,

I'm usually pretty squeamish and easily grossed out, so I was more than a little queasy on my return from lunch last week. Luckily, I chewed one of your MINTS indigestion tablets. Upon entering my room I saw a sight that could have made me puke sitting down: the maid was sitting on my bed, picking her toes and using my pillow to catch whatever fell off! Right next to her, I spotted my toothbrush covered with toejam! I must have shocked her, because she farted on my bed...

Messages:

Outdoor Olympiad Sunday  
Check out Interhouse Football and Discobolus vs. the lloydies.  
Fleming House/Paramount Pictures presents *Beverly Hills Cop II* opening Wednesday—be there!

—Wayne Manor

Lloyd: More fine programming from the FOX network...

Little Yellow House on the Prairie

[scene of western prairie with frontier village]

Intro: Hi! My name is Laura Patwell. This is LLOYD Prairie, where I grew up. I'll never forget those good old days on the prairie, especially with my Pa.

(Father Murphy enters)

Father Murphy: Hi Charles. What a fine day on the prairie it is.

Charles: Yeah. Like our new house? I just built it!

Father: It's very nice. Isn't this the second one this week?

Charles: The third! Plus I built the sawmill and Mr. Oleson's new store.

Father: All Yellow.

Charles: Right! 'cause they belong to Lloyd Prairie. Wouldn't want people from other prairies to steal 'em. (yelling toward yellow house #3) Honey! Send out our fine daughters, Laura and Mary!

Mrs. Patwell: Laura went to burn down the school house so you can build a new one. Mary fell in the river and drowned yesterday.

Charles (excited): Hey! I should build a bridge across that river.

Father: Later, Charles.

Doug: You're just mad 'cause you didn't...

Entire Cast: SHUT UP!

commercial break

If you can imagine a world where this tall female social team member would say, "The hell with movie night. Let's all get plastered!" then you can imagine a world without Coors Extra Gold.

If you can imagine a world where this Caltech summer counselor would say, "She's really cute, but I only go out with girls over 15" then you can imagine a world without Coors Extra Gold.

If you can imagine a world where these idiot writers could think of something new to write every week, then...

jingle

This ain't no whiny-ass, limp-dick, ROTC-fag, Gary-Hart-voting-for, scum-sucking,  
**continued on page 8**

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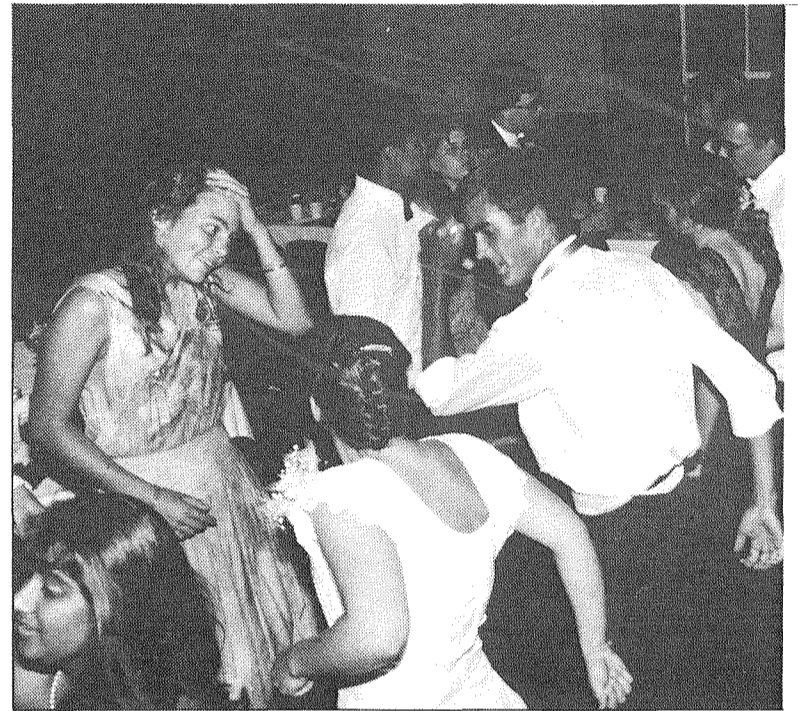
Okay, Paul, just what is so funny?

# A GALA EVENING

All photos by Robert Paz



Steve Perry and the gang toast the evening.



Scott McCauley shows his fine dance form as Bibi Jentoft-Nilsen sweats profusely.

## Robert Scheer Speaks About USSR *Glasnost*

by Huy Cao

Robert Scheer, a columnist for the Los Angeles *Times*, spoke about what is called the new *glasnost*, or openness, in the Soviet Union. The lecture was sponsored by the Distinguished Speakers Fund and the World Affairs Forum, which, according to the *little t*, does not endorse any specific political viewpoints.

Mr Scheer forewarned the audience, "I am not an expert on the Soviet Union." But, he has made three trips to the Soviet Union, the most recent one being about two months ago.

He said that he doesn't think anyone can say what permanent changes will be brought about by Mikhail Gorbachev's *glasnost*, and that he's no exception. His lecture, he said, was based on his opinions and observations.

"I don't have the competency to interview people on the streets, to find out what really goes on in the factories, and so forth. What I want to say is largely based on conversations with influential Soviets, the reformist-minded leadership. . . .

"Let me just say that I consider this to be the most exciting time in my life. My life has been dominated by the Cold War, and I think it kills many opportunities in our own society," said Mr Scheer.

The opportunity to end the Cold War has a lot to do with changes in the Soviet Union, he said.

His view is that the changes are partly due to a new "post-Stalin" generation of leaders. Secondly, the changes stem from the use of the "scientific method," a rejection

of the shoddy Lysenkoism of previous Soviet science.

One sign of the openness, says Scheer, is the muckraking in the Soviet press. Another is new freedom for the masses, evident even at nightly rock concerts.

Scheer speculated that the changes, the "new thinking" in terms of domestic reform in the Soviet Union, could be because of what he views as the failure of Soviet foreign policy. Their foreign policy has brought neither the prestige nor the power that the Soviet Union has been seeking, and because of this thinks Scheer, they are turning to internal reform.

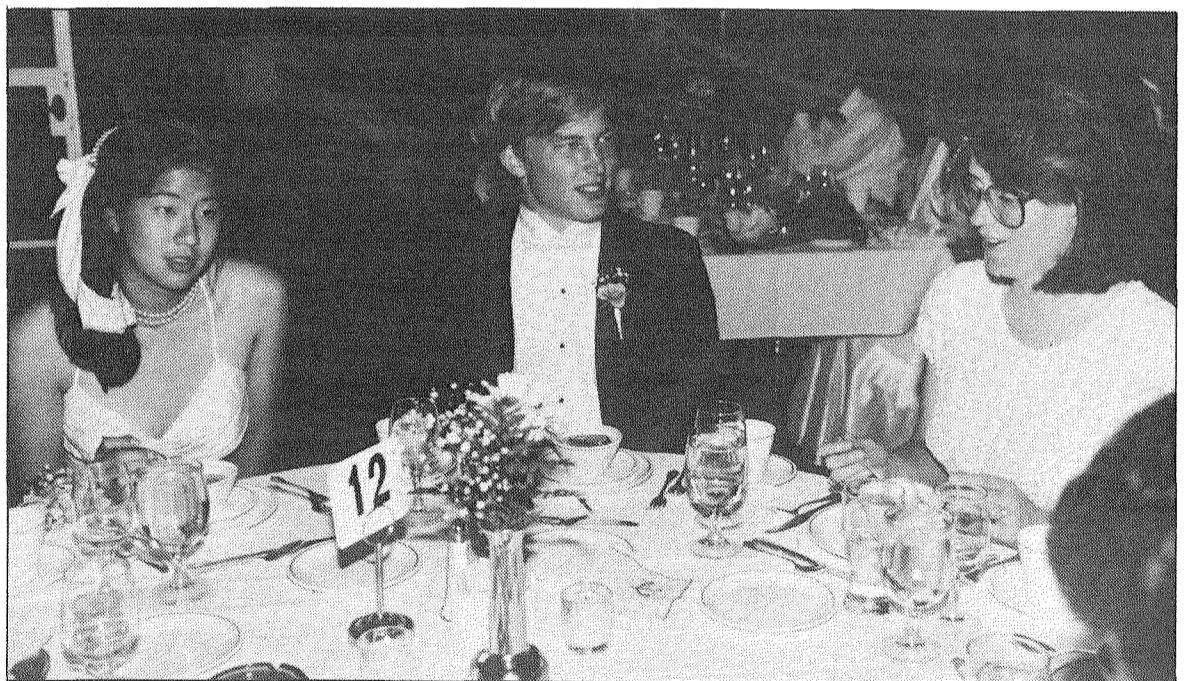
"It seems to me that in the rethinking of the foreign policy agenda, connected with domestic needs, there are lots of possibilities. . . . It seems to me that the core is a sense that the East-West confrontation should not be at the center of driving relations."

Mr Scheer predicted that the question for "our mutual civilization" would be, "Which society requires a state of tension in order to operate domestically? Which society requires a state of tension in order to feel a sense of national cohesion, purpose?"

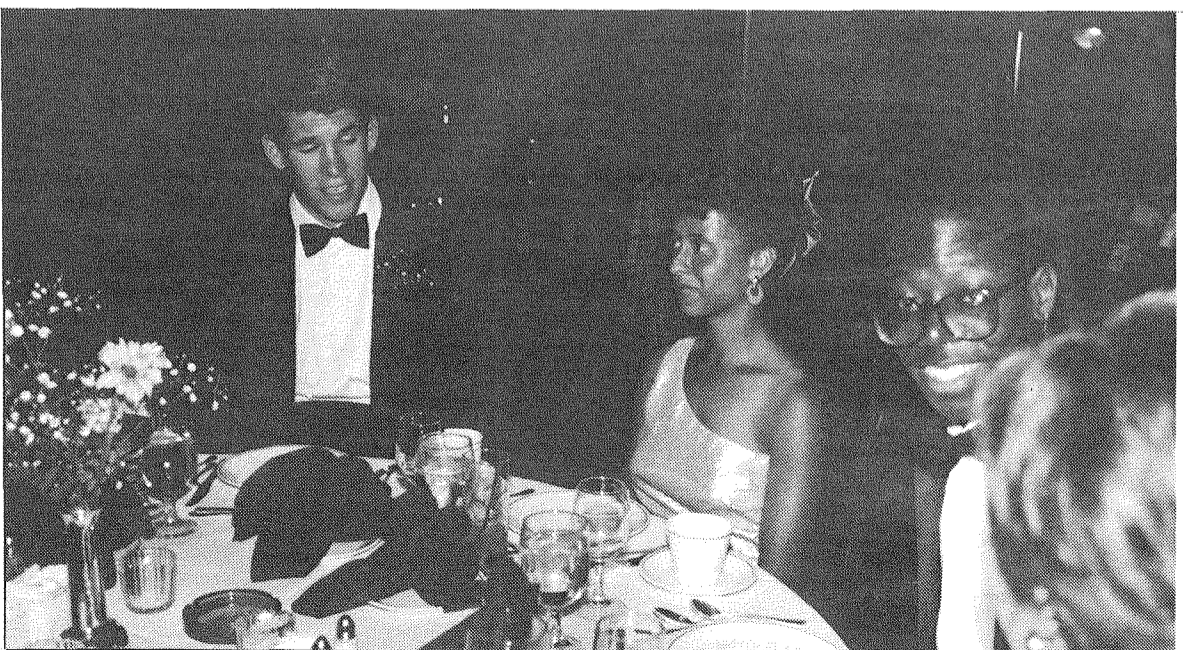
"What good is it to have a democratic society," he asked, "if it requires a state of Cold War? Is that not a sad reflection on a democratic society?"

Reflecting on his expectations for changes, Scheer said, "I don't expect that the Soviet Union will suddenly become a benign society

continued on page 10



Even the Tech staff takes the night off to enjoy high society life.



John explains his stock market theories while Trina seems unimpressed and Cliff is downright amused.



Millions filled the floor and danced to Scandalous sounds.

# at the ASCPT FORMAL

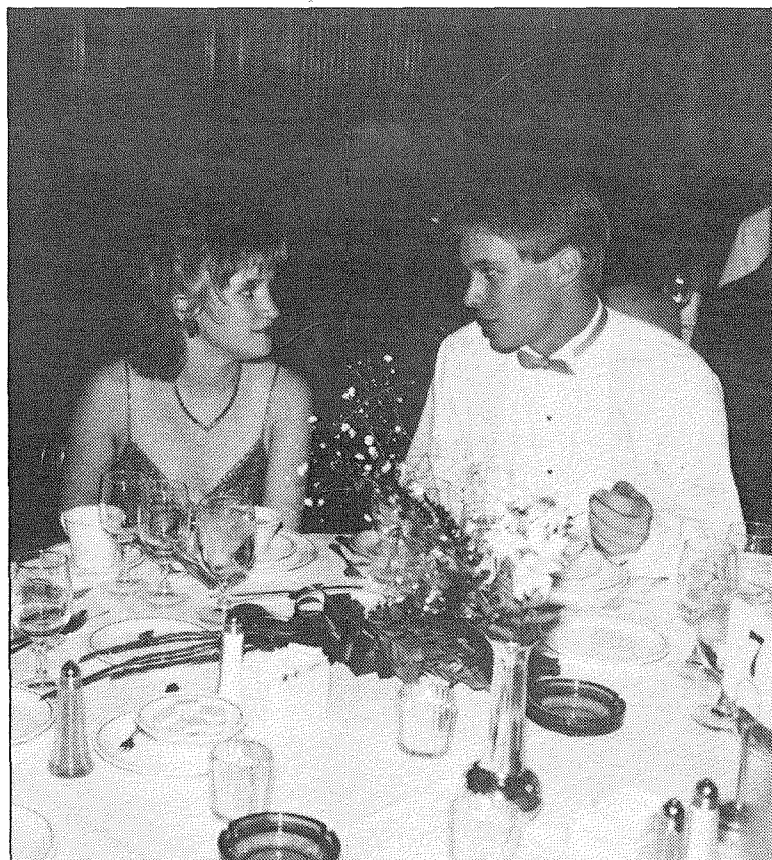
## Scandal at the Ath

by Nancy Drehwing

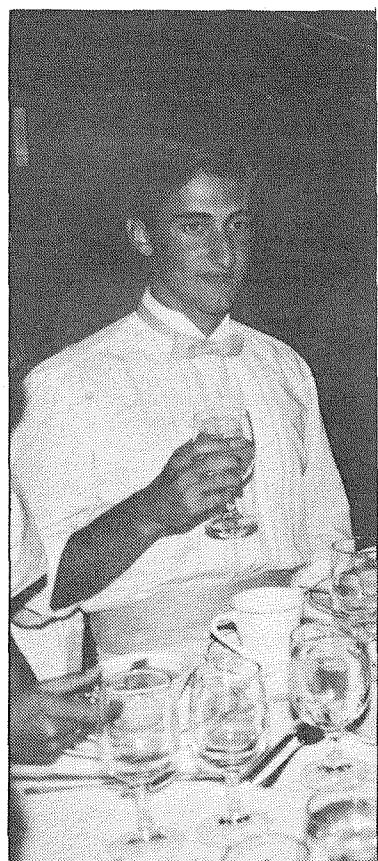
No, a waiter didn't spill soup in Feynman's lap. Scandal was the band that played for an enthusiastic group of almost 140 people at the Spring Formal at the Ath last Friday. This band was a last minute switch from the band originally booked, Restless — whose lead singer contracted laryngitis that morning (Nancy nearly became a second casualty due to heart failure upon hearing this). However, Scandal played a wide variety of danceable tunes and was well received by

everyone except the Pasadena Police Department, who had gotten noise complaints. Thus the volume was turned down temporarily until the final song, "You Gotta Fight For Your Right To Party." Good thing it was the last song.

I hope that everyone enjoyed themselves... and no sympathy for those of you who weren't there. You all missed out on a fun time — if you don't believe it, just check out the pictures!



"You mean I have to slow dance with you?"



Amazing Jeff, our fearless leader, concludes that he holds a fine vintage of Pasadena tap water.



Karen and John attempt to ignore the camera while Brett and Kyuson "watch the birdie."

## SPORTS

## Track Tricks Terminate

## -Beavers Finish A Winning Season

by Road Runner

After completing a very successful dual meet season with an impressive winning record of twelve wins and six losses, the blazing beavers were primed and ready to achieve their best performances at the SCIAC championships which were hosted by Pomona-Pitzer.

At the prelims, on Friday May first, both Andrew Stevens and Konstantin Othmer qualified for the 400m final in 56.63s and 53.44s respectively. At 800m, John Beck ran 1:59.41 which was just fast enough to grab up the last qualifying spot, while Sean Hillyard ran his best effort of the season in 2:02.66.

The 3000m steeplechase final was contested on Friday with Ray Hu finishing eighth in 11:21.6. another final was the women's Discus in which Dee Morrison finished eighth with a throw of 83'7½". This was far below her school record setting performance

of 102'2" the previous week.

Due to an ankle injury, Dave Gates was unable to participate in the long and triple jump competitions where he had been sure to score points. Instead he gamely ran the 200m in 23.91. Additionally, Tom Tetzlaff clocked 24.25 to record his fastest time ever.

Things heated up considerably on Saturday for the finals. The 1500m was contested under a blazing sun and the times were slow. However, John Gehring came ready to run and lowered his personal best to 4:05.81 despite the conditions. He missed sixth place by less than a second. Alex Athanasopoulos was eighth in 4:11.11.

Freshman Randy Ralph placed fourth in the conference in the high jump with a leap of 6'4" to establish himself as a force to be reckoned with in the future. He just missed clearing 6'6" and it appears that he's got the school record of 6'6½" in his sights.

John Beck also scored points as

he placed fifth in the 800m final in a personal best time of 1:55.34. In an exciting race, he came from eighth place after 400 meters to kick past three runners down the stretch.

Andrew Stevens also scored by claiming a tie for sixth in the 400m race. His time of 52.52 seconds is very respectable considering that he had to dodge a hurdle which had inadvertently been left in his lane.

Additional notable performances in this meet were Ed Mao's in the shot put with a throw of 33'5", Darin Acosta's and Gary Bloomberg's times in the 5000m of 17:34.9 and 17:14.5. Mark Carlin and Chandra Raman threw the javelin to personal bests of 107'1" and 119'5". And Dee Morrison threw the shot put 27'3½".

To cap off the meet in proper fashion, our 4X400m relay team consisting of Alex Athanasopoulos, John Beck, Tom Tetzlaff, and Sean Hillyard ran the fastest time of the year in 3:27.00 to claim fifth place in the conference.

A select few athletes continued their competition for one more week in the Oxy Invitational on Saturday May ninth. At this twilight meet, in a last chance attempt at achieving national qualifying standards, Alex Athanasopoulos won his heat in 1:53.07 with John Beck in hot pursuit at 1:55.08. Alex came within a half second of qualifying and might well have done it had he been seeded into a more competitive heat. John Gehring ran 4:08 in the 1500m and Randy Ralph cleared 6'2" in the high jump. Andrew Stevens placed third in his heat at 400 meters in 52.99. Eric Smith was unable to clear 13'6", the opening height in the pole vault so instead he anchored our 4X400m relay team to a season's best time of 3:26.8. John Beck ran a 49.8 second 400 meter split while Athanasopoulos and Stevens ran their usual steady performances. Dee Morrison threw the discus 96 feet as our lone female competitor. 'Tis all. 'Til next year....

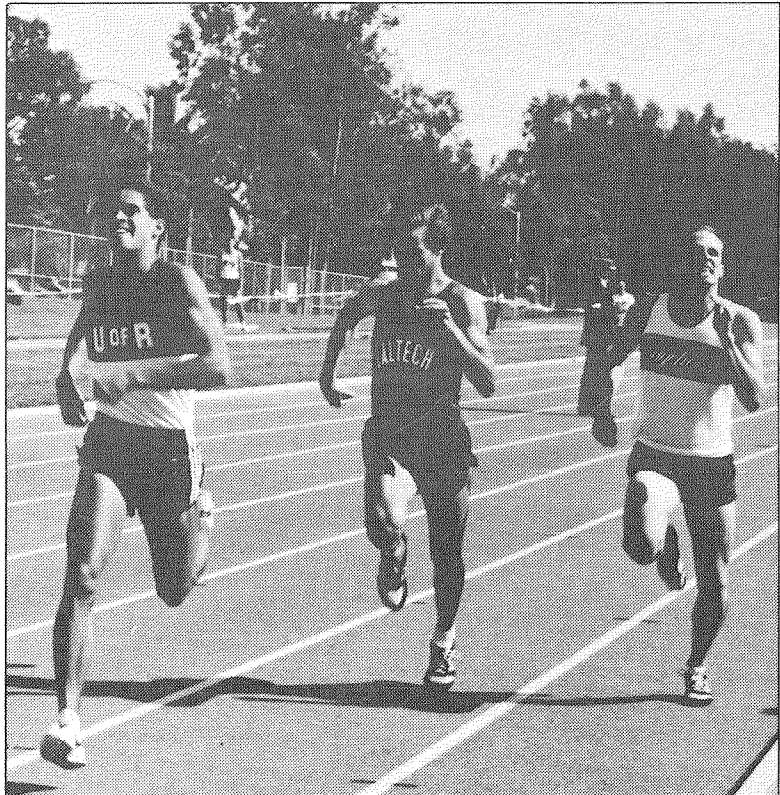


photo by Steve Lodge

John Beck grunts out a good 400 meter race in the SCIAC championship meet last weekend. The track championship was hosted by Pomona-Pitzer on their new blue track.

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CALTECH MONDAY JAZZ BAND  
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With guest artist: JIM SELF — Tuba  
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Also on the program will be a visual presentation  
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## Protesters

from page 2

Conference, and Daniel Ellsberg, author of the Pentagon Papers.

## Legal Questions

Legal questions stemming from the February 5 arrests are still being ironed out. Nagler and Heil chose to plead not guilty to their charges and took their cases to trial, hoping to use what is known as the "necessity defense", stating that their illegal actions were motivated by the need to stop a greater harm from occurring—the greater harm being violation of international law, as well as preparing for the destruction of the planet through nuclear war. However, during their trials on April 24, the two were not allowed by the judge hearing the case to introduce this defense, despite the fact that the DA prosecuting the case, Philip Dunleavy, pointed out that Nevada law allows the introduction of such a defense. The two were found guilty and levied a \$150 fine, and are now looking into the possibility of serving jail time instead of paying the fine, at a rate of one day

of jail per \$25 of fine.

Less than a week after these trials, Daniel Ellsberg came to trial and was allowed by a different judge to introduce a necessity defense. The judge issued a continuance for both sides to gather more evidence, but the next day Dunleavy dismissed all charges pending against protesters from the February action. He cited the time and expense of prosecuting the trials as a reason. It is not yet known whether the DA will press charges against those arrested on Mother's Day. If he does, they face possible penalties of \$150 or six days in jail for a first offense, \$300 or twelve days for a second offense, and even stiffer penalties for three or more arrests.

As a final note, three of the people arrested told Caltech Board of Trustees members about their experiences. An annual luncheon between trustee members and students allowed this opportunity. They explained to the trustees that their actions were motivated in part by a sense of responsibility as scientists to see that the products of technological advance were not used to harm the human race, and asked the trustee members to support education of Caltech students on moral and ethical issues related to science and engineering.

## More Inside World

from page 5

Flem-liking, Darb-smelling, Ruddock-looking, Scurve-hygiene, Blacker-president, Page-Australian's-Nightmare, Beer you can tell;  
This is Coors Extra Gold;  
The beer with the taste you can smell.

And if you can imagine a world where this column's format continues, then you can imagine a world without Coors Extra Gold.

—Skeeter, Jethro, and Enos

Page: A time of crisis has come to Page House... Only now have we realized that graduation will take two illustrious Seniors of Page House from us all too soon. What will we do without the likes of John Beck and Vince "towhead" Ferrante? WILL PAGE HOUSE HAVE NO GODS?? Fear not, there comes a man from afar...

Yes, James the Aussie has come to help us in our time of need! This man, with both John Beck's ego AND his way with women, is surely fit to lead us as Page House's newest God. (Worship: room 105, 9am-5pm)

Meanwhile! Back in the real world:

The ASCIT/Spring/Ath Formal was a smashing success, Page God Sr. was there. (rumor has it Page God jr. stayed home to tidy the House). The Page/Fleming (or something like that) Casino Night was great, though everyone agreed the band should be shot. Where is Konstantin when you need him?

Sports News: Interhouse Football is here! The Page unbeatables include Armenian hit man Aram Kaloustian, and Psycho "I shot my mother in the face" Wittry. Game today against Ruddock at 4:30—BE THERE!!

Social team says sign up for David Copperfield Flick. And stay tuned for "Caltech goes to Hollywood..."

—Cynthia LePage.

P.S. Page House allowed publication of the last two (awful) inside worlds in order to sell them to an abnormal psychologist. Aussie, he's very interested in your case... and we need the money.

Ricketts: What's this? An Associate Dean attending a formal dance with a student? And she's a married woman! At least Mark has good taste. He chose the best-looking Associate Dean we have.

More FORMALities: The Ricketts women were stunning in (and out of) their lovely gowns. Speaking of women not in their gowns... but we shouldn't talk about Deans too much. After all, this is the Ricketts Inside World.

Dancing with girls taller than you can be fun, but nothing beats a slow dance with Jerry. Speaking of dancing, Mark and Lisa didn't stick around very long for that part of the evening. Perhaps they had something better to do. The rest of us sweated too, but I'm sure we didn't have nearly as much fun.

The flame-wielding Scurves threatened to burn the trees at Capra Ranch this past weekend. The trees, fearful for their lives, promised the services of a bushel of wood in return for their own safety. The nubile nymphs emerged from the forest, to be greeted by the expectant Scurves. Zippers, not sounding at all like the rustling of leaves, at first scared the nymphs. But when they beheld (and held) the wonders that were hidden behind those doors of enchantment, they forgot their fears and remembered why nubile nymphs never wear clothes. The trees were safe, as the nymphs kept up their ends of the bargain and the Scurves kept up theirs. All in all, a weekend well spent.

The BDR party is tonight. Rumour has it that we will be inundated with hordes of beautiful young women. If it's anything like last year's party, it will be a smashing success (more on the party next week).

Other naughty bits: Jerry's dating service is off to a roaring start. All he has to do is find someone to take Diana to the glee club concert. Any takers? You sure Jeff? Lisa's blond fetish continues, but so does her frustration. Boofer is still trying to give away a pussy. She must be really desperate if she announces this at dinner. Kirk just isn't the man he used to be. Katryn has a secret plan to distract the other houses during Interhouse football. It might not work but it sure is fun watching her practice. The romantic interlude of the week goes to Brian Of The Beautiful Eyes. But next time you go out with her, Brian, leave Jerry and Roberta behind.

—The Great Neck Strangler and The Lil' Cook-Man

Ruddock: The way whipping awesome Ruddock Inside World has returned, chock full o' bullshit about alley challenges, social events, and interhouse football games. Social event this weekend is a beach trip to the beach on Sunday. The Tanning Invitational is May 23, so if your skin isn't peeling in pieces big enough to taste yet, this might be a good time to get to work. For more info talk to your friendly neighborhood social disease.

Speaking of social diseases, Coker may never have to worry again but the cen tip for the week is: don't go sticking things in holes in the wall. Alley 6 is playing Alley 1 in D&D. Dungeon master Joe says of the challenge, "D&D is fun. I'm looking forward to another 5-hour D&D marathon on Sunday night."

Last weekend was the Drinkoff, an excellent tradition of our fine house. Some of the more outstanding events of the evening: Itch crashed the porcelain bus straight into Biff's bed; Werner "Werntzed" the Alley 1 bathroom; and Mikey Vanya phoned in from New York with his powerful 40+ ounces to ensure a senior victory.

Wednesday was contract trashing. Kathleen got sauced, lower frosh paid \$40 to have Joe slopped and even innocent bystanders got soaked.

Football versus Page, today at 4:00.

The boc rep is a butt-buddy.

And rest in peace, Mr Mellow.

—Bets the Frosh



# Patterson Elected To National Academy

[CNB]—Caltech geochemist Clair Patterson, who established the age of the earth and alerted the modern world to the dangers of lead pollution, has been elected to the National Academy of Sciences (NAS), it has been announced by the Academy in Washington, DC. Dr Patterson is senior research associate in geochemistry at Caltech.

"Clair Patterson is one of the most imaginative and creative scientists I have known," said Caltech's vice president and provost, geophysicist Barclay Kamb. "His thinking and imagination are so far ahead of the times that he has often gone misunderstood and unappreciated for years until his

colleagues finally caught up and realized that he was right. It is gratifying to see that his important contributions are now recognized by the National Academy of Sciences."

Dr Patterson developed many of the basic principles of lead isotope evolution and pioneered their application to the dating of earth rocks and volcanic magmas, meteorites, and moon rocks. He is recognized for establishing the age of the earth at the now widely-accepted figure of 4.6 billion years and for his discovery that lead pollution from automobile exhaust had reached unacceptable levels in the earth's oceans and atmosphere. Working in ultra-clean, lead-free

laboratories at Caltech, he is investigating the continuing hazards posed by lead contamination of the earth's oceans, air, and marine life.

Election to the Academy is considered to be one of the highest honors that can be bestowed upon an American scientist or engineer. The Academy, founded in 1863, is a private organization charged with acting as an official advisor to the US government. Dr Patterson's election brings to 59 the number of NAS members currently in the Caltech faculty.

Dr Patterson received his AB in 1943 from Grinnell College, his MS in 1944 from the University of Iowa, and his PhD in 1951 from the University of Chicago. He joined Caltech in 1952 as a research fellow and was appointed senior research fellow in 1953. He became a research associate in 1971 and senior research associate in 1973.

## Schmidt

from page 5

in the cosmos and that their red shifts were a consequence of the expansion of the universe.

Research by Dr Schmidt and several colleagues subsequently established that the most powerful quasars were considerably more numerous when the cosmos was young, and that light from the most remote quasars had traveled a distance equal to about nine-tenths the age of the universe before reaching earth. Since light radiated by an object shows the state of the source at the time it emitted the light, Dr Schmidt's discovery also gave astronomers an unprecedented view of the universe at an early period in its history, billions of years before the formation of the

sun and its planets.

Much honored for his professional achievements, Dr Schmidt has received the Helen B. Warner Prize and the Henry Norris Russel Lectureship of the American Astronomical Society, the Rumford Premium of the American Academy of Arts and Sciences, and the Gold Medal of the Royal Astronomical Society. In 1965, he was named (with Caltech astronomer Jesse Greenstein) California Scientist of the Year, the state's highest civilian honor, by the California Museum of Science and Industry. He was elected a foreign associate of the National Academy of Sciences in 1978 and is a Fellow of the American Academy of Arts and Sciences, an associate of the Royal Astronomical Society, and a member of the International Astronomical Union and the American Astronomical Society.

## ENTERTAINMENT

### Caltech MRS—Just Jousting

by L. L.

On Saturday, May second, the Caltech Medieval/Renaissance Society held its second annual May Day Tourney in Tournament Park. People came from as far as Fresno and Orange County to participate in this event, and CMRS sold the attendees a hearty turkey leg lunch between the armored combats, maypole dances, and various competitions, the most entertaining of which had to be the Body Looting Contest. Half a dozen armored fighters volunteered to be stripped of all but their breeches (and the odd sock) by eager individuals and teams, many of whom were women who seemed to have found their métier in life carrying off greaves and breastplates, squabbling over chainmail hauberks—and one enterprising lady (Janis

Beckenbach) got tackled as she was making off with a male competitor's loot (she won the contest, however)!

The event was organized by CMRS president Doug Bloomer and Secretary Amy Carpenter—but they couldn't have done it without Charles and Henry Fu, Chris Bertani, Joe Beckenbach, Daniel Briggs, Pat Lammerts, Fillmore Love, Sean Johnston, Lynne McGrath, and Steve and Pamela Walton. Leona Kershaw of Radio Astronomy and husband Alan arranged the setup of period pavilions, and helped with the lemonade for all those thirsty folk who laughed and kissed their way 'round a gorgeously beribboned maypole in traditional fashion.

And when the tourney ended

late in the afternoon, people trooped off to Dabney Hall to take potluck, dance to items with names like "Jenny Pluck Pears," the "Caidan Measure," "Nonesuch," and the "Washerwoman's Bransle" (pronounced 'brawl'), and to listen to half a dozen madrigals sung by the Occasional Consort (a group to which Caltech Mike Pettersen, Carol Polansky, Lynne McGrath and Joe Beckenbach belong).

The evening came to a close sometime after eleven pm when the guests, exhausted by games in Dabney Gardens (May is a very silly month), took themselves off after a busy and amusing day. Would that everyone could get a taste of history in such good company! We're already planning for next year....

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## Caltech Sex Discrimination

from page 1

was to erupt soon, opined that Dr Boesgaard's remarks were just platitudes, and that her ideas would not work. Dr Boesgaard defended herself, reiterating that Caltech would not get anywhere with ads stating a position might be available soon; she asserted that more activism is necessary. Dr Cohen conceded that she herself would not be at Caltech had not one of the faculty invited her to apply.

When someone asked for the number of females in tenured positions, Dr Cohen replied that she got the runaround at Parsons-Gates after asking for the statistic. Dr Smith also mentioned that she had received similar treatment. President Marvin Goldberger, sitting in the audience, replied that that was absurd, whereupon Dr Cohen, fully ablaze now, yelled "It was your secretary, Murph" that wouldn't give her any help.

President Goldberger quickly lost any chance at reducing his casualties by referring to the "girls in the office", but did offer that a note from the Provost is necessary to get such information. Dr Cohen replied that she had no help from them either, and turned to Provost Barclay Kamb for enlightenment. He said that he didn't have the numbers immediately at his fingertips, and that his secretary is reluctant to just give out information indiscriminately. Dr Cohen was rather miffed. Dr Reinganum tried to make peace and remarked calmly, "All right, there's a problem to be fixed."

Dr Nanette Le Coat asked from the floor whether or not such figures were needed for affirmative action reporting. Dr Cohen immediately attacked the administration for faking numbers by coun-

ting research associates. Dr Kamb said that his office would start keeping better statistics.

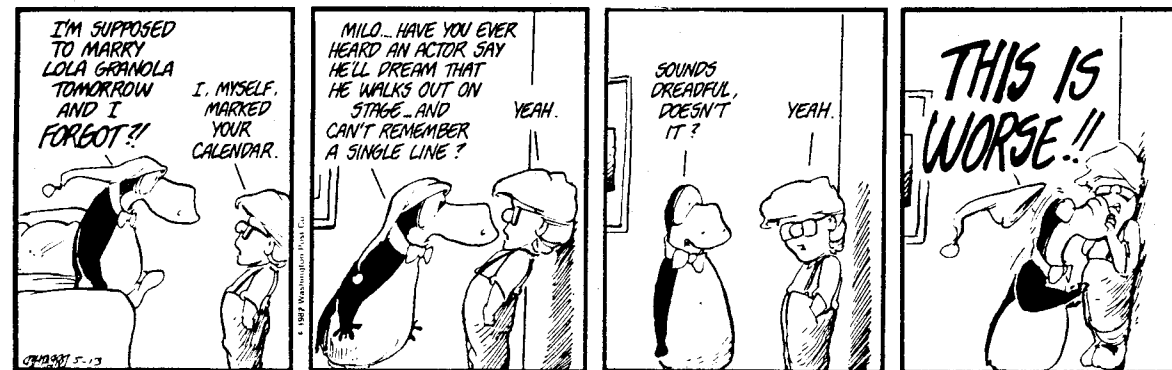
Someone from the floor asked Dr Searle to speak. She referred to the time in the 1970s when the faculty sex ratio at Berkeley was brought to the attention of the Department of Health, Education, and Welfare. They lost their federal funding, and six months later they had a plan to increase women faculty. She continued that Caltech would someday get into trouble just as well. However, she made it very clear that we would need a Democratic Administration to do it.

Dr Ed Munger suggested that something should be done about minority representation on the faculty, and went so far as to say that perhaps the women should be asking for broader reform. The crowd was split between "Why should the women take on the additional responsibility?" and "If we don't stick up for others, who will stick up for us?"

Statistics came up again. President Goldberger said our faculty sex ratio was equal to that at Yale, which has a much broader range of academic fields. One person asked why statistics were needed—is there an obvious problem? Affirmative action came up again, giving President Goldberger a chance to reply to Dr Cohen's earlier accusation by stating that Caltech did not change any numbers and complied with Federal guideline by setting up an affirmative action program seven years ago.

However, he continued with one of those phrases of his that sound so unconvincing, that he was "terribly dissatisfied" with the progress that has been made. He said that there was no overt attempt to disregard the need for more women faculty, to which Dr Cohen delivered her final jab with "We believe the sincerity of your intentions".

# BLOOM COUNTY



## Scheer on USSR

from page 6

in every respect. Nor do I expect that we will have no points of conflict, nor do I expect that there won't be serious things to criticize... I'm merely saying that something very exciting, something very different is happening in the Soviet Union. We ought to pay attention, and we ought not to dismiss what is happening, because to dismiss it might prevent it from happening. At some point, there has to be a response [by the West].

Mr Scheer, near his conclusion, quoted Noam Chomsky. On a local radio station, Chomsky hypothesized that the United States continues the East-West tension because "the United States needs an enemy."

### The Rules

He ended by saying, "It seems to me we should be thinking seriously about the response of this country and whether we are prepared to change the rules of the game."

One of the first questions Mr Scheer received involved "active measures" by the Soviet Union. The USSR has been behind various disinformation campaigns against the US, one charge being that the AIDS virus is a product of US biological weapons development. Other Soviet charges include that the CIA killed Samantha Smith, the US irradiated women protesters in Great Britain, the CIA was behind the Jonestown massacre, and the US was behind the assassination of Olof Palme of Sweden.

Mr Scheer was asked if the continuation of disinformation didn't reflect insincerity on the part of the USSR. He responded, "The essence of the Cold War is not that we think that everybody ought to adhere to the same standard of human behavior. When we talk about

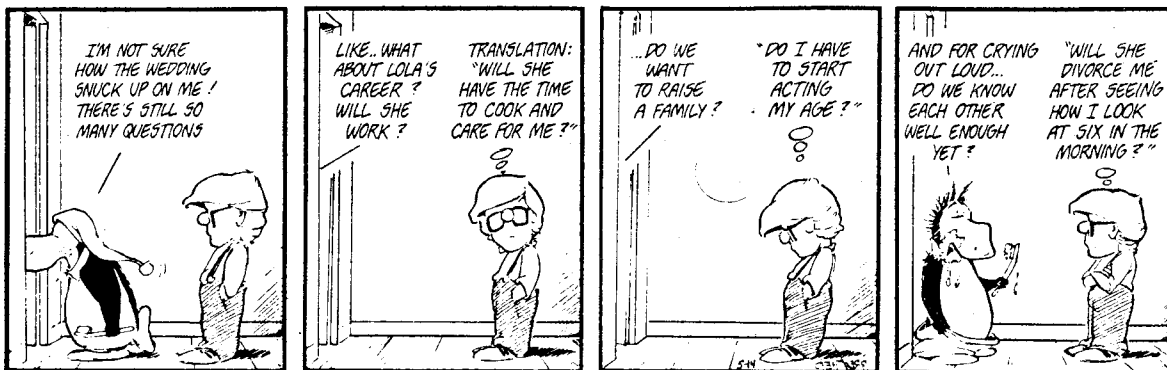
the Cold War we're talking about when one society in some tangible way threatens the security of another society... For those of you too young to remember its original formulation, it was an international Communist conspiracy with a time table to take over the world!... To insist that the Cold War continue until the Soviet Union become a society that we want to live in is to insist on a missionary view of the world... The [disinformation] is not something Gorbachev presents before the UN. There are dumb things said in the Soviet Union."

According to Mr Scheer, the US also spreads false information about the Soviet Union. "We [the US government] said they tried to kill the pope. We said they tried to poison people with yellow rain. This has not been backed up. We've also made many charges." Mr Scheer's position on alleged US disinformation regarding the pope and yellow rain directly contradicts that of State Department research.

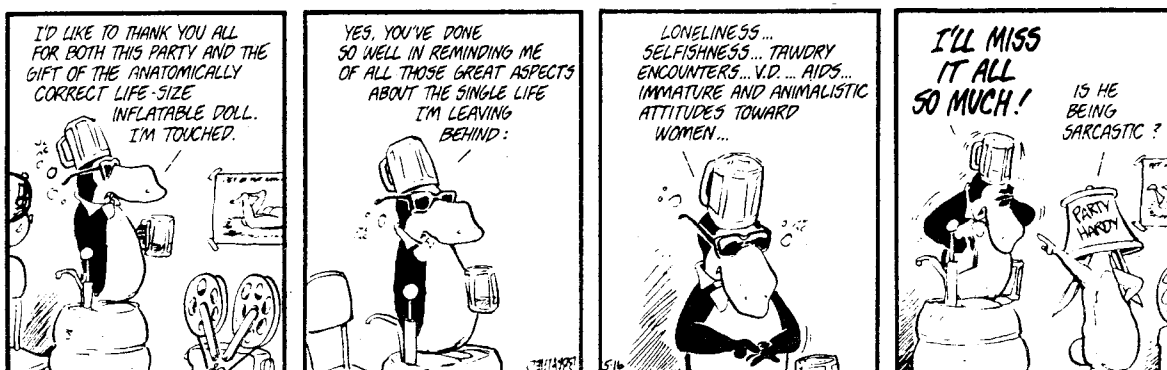
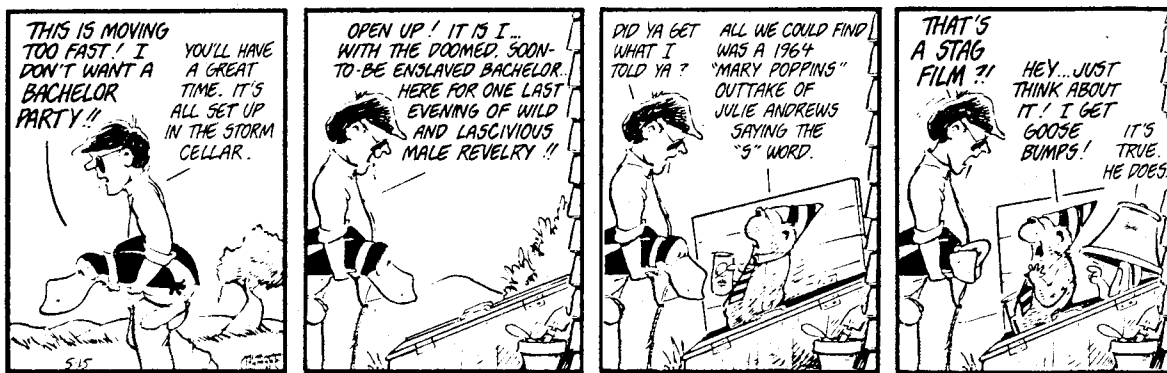
In response to another question, Mr Scheer suggested that we should better understand the Soviet Union by reading the translated versions of TASS, Pravda, and other Soviet journals to find out the Soviet position and the position of Mr Gorbachev on various issues.

To another question, Mr Scheer said that we must rethink the position which we've been taught to think in terms of, that is, that the Soviet Union is chiefly responsible for the Cold War. "I could make a very strong case of at least equivalent responsibility for the Cold War [on the part of the US]."

Asked why protest over Reagan Administration refusal to accept recent Soviet offerings is so much less than that over the Vietnam War in the 1960's, Scheer replied that while the resistance to the Vietnam War was largely based on the draft, the Reagan Administration's attitude in foreign policy sounds tough but does not seem to carry a price.



by Berke Breathed



WHAT GOES ON

Free Intro to TM

A free public introductory lecture on the Transcendental Meditation Program founded by Maharishi Mahesh Yogi will be held on Thursday, May 21 at 7:30 pm at the Lamanda Park Branch Library, 140 S. Altadena Dr. (about a mile east of Caltech, just north of Del Mar). The Transcendental Meditation Program is a program for promoting better health and unfolding your full potential. For more information, please call (213) 459-3522 or (818) 789-3480.

CALTECH public events

MAGIC SHOW AND CIRCUS PROMISE FUN IN MAY

The Mysterious World of Magic and Illusion is returning by popular demand Saturday, May 30 with performances at 2 p.m. and 8 p.m. Magic, sleight of hand and legerdemain will be showcased in this spectacular show.

Featured will be Kevin James' "Magic of the '80s," Glenn Falkenstein with E.S. Pecially Yours, the Magic Castle's "Parlour Magician of the Year" Tom Ogden, Frances Willard's "The Spirit Cabinet," and "Master Magician and Illusionist" Chuck Jones and Company.

The 2 p.m. show has been specially designed for children as part of Public Events' Family Faire series. This performance will be approximately 70 minutes in length.

CIT student tickets are priced at \$4.00 for the matinee and \$6.25-5.00-3.75 for the evening show; \$6.00 rush tickets go on sale the day of the show. The CIT/JPL faculty and staff ticket price is \$6.00 for the matinee and \$10.50-8.00-5.50 for the evening performance. They can also purchase TECHTIX, for the price of CIT student tickets, Friday, May 29 between noon and 4:30 p.m. at the Caltech Ticket Office.

Also appearing on Saturday, May 30 will be the Royal Lichtenstein Quarter Ring Sidewalk Circus. Performances will be held at noon and 3:30 p.m. in Ramo Auditorium. A potpourri of magic, juggling, small animal acts and more will be featured.

Ticket prices and discounts are the same as those for the matinee performance of The Mysterious World of Magic and Illusion.

Caltech's Glee Clubs will perform Saturday, May 16 in their annual Spring Concert. It will begin at 8 p.m. in Beckman Auditorium. Under the direction of Donald Caldwell and Monica Hubbard, the glee clubs will perform music by Brahms, Britten and Copland as well as barbershop quartets and hit tunes from the 1930's. Admission is \$6.00; \$4.00 for students and Caltech/JPL faculty and staff; \$2.00 for Caltech students.

Caltech's Wind Ensemble and Jazz Bands will combine forces on Friday, May 22 at 8 p.m. in Ramo Auditorium for Bandorama. Featured will be Jim Self on the tuba. Mr. Self's tuba was the "voice" of the mother ship in the movie "Close Encounters of the Third Kind."

An additional attraction will be the visual presentation by James Blinn who created the computer graphics for "The Mechanical Universe." Bandorama is directed by William Bing and is open to the public, free of charge.

Tickets to all Caltech Public Events can be purchased at the Caltech Ticket Office, located just north of the Beckman Auditorium parking lot. For further information about the exciting Public Events scheduled this season, call campus ext. 4652.

Church-And-State Conflict?

Church-State issues are one of the areas of most intense debate in our society. In a lecture to celebrate the upcoming bicentennial of the Constitution, Harry V. Jaffa, Ph.D. (Henry Salvatori Professor of Political Philosophy at Claremont Graduate School) will address the "original intentions" of the framers of the Constitution in 'Religion and the Founding'. The lecture begins at 8 pm in Winnett Lounge and is sponsored by the Newman Center and the Caltech Y. All are welcome. Date: Tuesday, May 19.

Forward With Science Fiction!

Dr. Robert Forward, senior scientist at Hughes Research Labs and noted science fiction author, will speak at 8 pm on Wednesday, 20 May 1987, in 22 Gates. The title of his talk is "Future Magic, or Six Impossible Things Before Breakfast." Dr. Forward's visit is co-sponsored by the Caltech Y and S.P.E.C.T.R.E., the Caltech Science Fiction Society.

Tarred & Fossilied

"Los Angeles 40,000 B.C.: The Legacy of the La Brea Tar Pits," will be the subject of a FREE lecture and slide presentation on Tuesday, May 19 at 8 pm at the San Marino Women's Club, 1800 Huntington Dr., San Marino. The lecture, one of a series sponsored by the Foothills Council of the Natural History Museum of Los Angeles County, will be presented by George Jefferson, Paleontology Curator, George C. Page Museum of La Brea Discoveries. The La Brea area is one of the world's richest deposits of "Ice Age" fossils, the incredible record of over 565 species of plants and animals that lived in the Basin between 4,000 and 40,000 years ago. The origin of the asphalt deposits themselves, and how the fossils came to be preserved and then discovered and extracted will be described. Refreshments will be served. For more information, call (213) 744-3438.

Learn Around the World

Learn in Kenya, Australia, the Virgin Islands, Costa Rica, Ecuador, Panama, Switzerland, Germany, or various United States locations. The School for Field Studies has environmental field research courses around the world for a semester, a January term, or next summer. For more information about this opportunity, come by the Career Development Center, 08 Parsons-Gates, and look at their 1987-88 Course Catalog.

Essay Contest

Students enrolled in senior high school, college and continuing education are eligible to enter the National Organization for Women's essay contest on the topic: "Do We Need An Equal Rights for Women Amendment to the Constitution?". Winners will be awarded scholarships starting at \$1,000. All entries must be received by September 30, 1987. For information, write the NOW Foundation Essay Contest, 1401 New York Ave., N.W., Suite 800, Washington, D.C. 20005.

Vets Memorial Scholarship

Applications for the 1987 Coors Veterans' Memorial Scholarship are available in the Financial Aid Office, 12-63. To be eligible you must be 22 years old or younger as of July 1, 1987; you must have a cumulative GPA of at least 3.0, have completed freshman year, and be a dependent of Honorably Discharged American service personnel, or a dependent of Active Duty or Reserve military personnel, or a dependent of personnel Killed in Action, Missing in Action, or who have Died in the Line of Duty. Application deadline is July 1.

Northrop Scholarship

The Northrop Corporation is once again offering a \$3,000 scholarship to a Caltech junior for the 1987-88 academic year. The scholarship is open to current sophomores in Electrical Engineering with at least a 3.3 GPA and a career interest in the defense aerospace/electronics industry. The applicant must be a U.S. citizen, a resident in geographic proximity to a Northrop facility and must not be a concurrent recipient of another company's scholarship.

Applications are available in the Financial Aid Office, 12-63. The deadline is 4:00 pm Friday, May 29. A representative from The Northrop Corporation will be on campus the first week of June to interview the applicants.

Miss California?

The Miss California State Scholarship Association, Inc. is sponsoring a program which offers \$20,000 in educational scholarships ranging from \$200 to \$8,500. Further details are available in the Financial Aid Office, 12-63.

Do You Want Money?

Positions are available for work study (\$5/hour) or volunteers at the Red Door Café. Inquire or leave message at the Red Door (x6158) or x6692.

Yosemite Yosemite

The Yosemite Association is offering interesting and challenging outdoor field seminars at Yosemite for summer and fall, 1987. The non-profit organization has been operating the field program for the past 16 years, and welcomes those who wish to learn more about Yosemite, while enjoying its spectacular scenery.

The current seminar catalog includes outings which start in May and run through October, some offered for college credit. The Association offers backpacking trips led by experienced naturalists for participants of varying degrees of ability from beginners to the more experienced. Several trips are for women only, others invite both men and women such as Backpack Yosemite's Northern Canyons (August 17-23), a strenuous eight-day trip.

For more information, write to: Yosemite Association, PO Box 545, Yosemite National Park, CA 95389.

Chess Tonight

The Caltech Chess Club meets tonight. In fact, it meets every Friday night at 7:30 pm in 27 Gates. Bring your chess equipment (boards, sets, clocks) if you have any. All in the Caltech community are welcome. For more information call 578-9294 and ask for Huy Cao.

More Holes In Your Head

Ear piercing is now available (for students only) at the Health Center. This service is offered on Monday, Tuesday, Thursday and Friday evenings by appointment only. To schedule an appointment please contact Linda Pinson, L.V.N., after 5:30 pm (except Wednesday) at x6393. The cost (including earrings) is \$5.

Melee The Day Away

The Caltech Medieval/Renaissance Society is holding fighting practice and armoring workshops again. If you would like to learn the techniques of Medieval-style armored combat and armor-making, we meet Sundays at 1 pm outside Winnett Student Center. (Just listen for the clank of armor and the thump of weapons...)

Need Your VCR Repaired?

Well, the East Los Angeles Skills Center VCR repair training class will repair any VCR for \$8.00 plus parts. Call (213) 263-6903 or bring it to: 1260 Monterey Pass Rd., Monterey Park, CA 91754. Monday-Thursday, 8:30 am to 4:00 pm. This is a non-profit training center operated by the Los Angeles Unified School District.

Summer Research At Hughes

A SPECIAL summer job opportunity has been made available for a Caltech undergraduate. Work with top scientists at the Hughes Research Laboratories in Malibu, California. The research activities at the laboratories are largely experimental, with an emphasis on microelectronics, sensors, electro-optics, plasmas, and information sciences.

A highly competitive salary will be provided, and housing will be arranged. Students in physics and engineering who plan to pursue graduate school will be the strongest candidates. For more information, come by the Career Development Center, 08 Parsons-Gates.

Attention Hungry People

The Red Door Cafe's staff is happy to announce that the Cafe will now be open on Saturdays from 12 to 5 pm to serve its traditional fresh coffee, teas, espresso, juices, and delicious baked goods and bulbous bagels. So come bring your appetites and ideas to the Red Door Cafe.

Money for Men

Seniors planning on attending graduate school in California or current graduate students can apply for the Jake Gimbel Scholarship Loan. It is a 10-year maturity loan for \$2,000. To be eligible you must be male and a U.S. resident. Applications must be returned to the Financial Aid Office, 12-63, by today, May 15. Further information is available.

Summer Research at ASU

Arizona State University is accepting applications for their NSF sponsored summer research program. This year's research themes is electronic materials. Students who will be completing their junior year are urged to apply promptly. Come by the Career Development Center, 08 Parsons-Gates, for more details and an application.

Darkroom Users

The South Houses Darkroom has been demolished, and most equipment was moved to the North Houses darkroom. However, the big Beseler 4" by 5" enlarger that used to be in the South darkroom has vanished. If anybody out there knows its whereabouts, please call Mark Looper at 304-0006 so we can move it North.

Big Brothers Needed

As the waiting list of fatherless boys grows, Big Brothers of Greater Los Angeles will again hold Big Brother orientations in the area. The nearest one will be on Wednesday, May 20 at 7 pm at 1486 Colorado Blvd in Eagle Rock.

Big Brothers of Greater Los Angeles is a private, nonprofit, nonsectarian agency that matches a carefully screened adult male volunteer with a fatherless boy, ages 6-12, to become the boy's role model and friend. The two spend approximately one-half day per week together sharing activities typically shared by fathers and sons.

For more information about how to become a Big Brother, please come to the meeting or call (213) 258-3333.

Grant & Fellowship Directory

A directory of grants and fellowships compiled by the Graduate School of the University of Massachusetts at Amherst is now available at the Career Development Center. We have also received the latest of Peterson's Guides to Engineering Science and Computer Jobs. Visit the Career Development Center for more information.

Change in Fall Courses

The following courses will not be taught in the Fall:  
 SS 28 Selected Topics in European Medieval History  
 H 111a The Italian City-State  
 Lit 108 Creative Writing  
 PI 182 Ethics and International Relations  
 Art 101 Selected Topics in Art: The Renaissance

The following courses will be taught in the Fall:  
 Ec 126a Money, Income and Growth (Border) MW 1-2:30  
 PS/SS 122 Noncooperative Games in SS (McKelvey) MW 2-3:30  
 HSS 150 Problems in the History of English Law and Society W 2-5:00

WHAT GOES ON

Announcements for *What Goes On* must be submitted on an announcement form (available outside 107 Winnett) or on a plain piece of paper. Please indicate the date(s) you want the announcement to run. Send announcements to 107-51, or put them in the mail slot in the door of 107 Winnett.

Announcements must be received by the Tuesday prior to publication.

CLASSIFIED

HELP WANTED-

**BANANA REPUBLIC** seeks kindred spirits. If you'd like to work in a challenging environment where innovation walks hand-in-hand with tradition, please inquire about the following positions: • Store Manager, responsible for all operations and merchandising. Must have previous experience in managing stores over \$2M annual sales volume (3-4 years). • Associate Manager, Must have previous retail supervisory experience (1-2 years). • Full/Part-Time Sales, Previous sales experience desired. • Cashiers, previous experience necessary. Competitive benefits package, career growth potential. Apply in person or send resumes to: Banana Republic, 370 S. Lake Ave., Pasadena, CA 91101. (818) 796-0935.

**C PROGRAMMER** needed to write graphing routines and printer drivers IBM machines in the Microsoft Windows environment. Call 213-278-8000. Ask for Tim or Steve.

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**SIERRA MADRE.** 2 bedrooms, 2 baths, living room, dining, laundry, fireplace, yard. \$990/month. Unfurnished. No pets. 818-798-1327 or 213-559-9152.

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HOUSING WANTED-

**ACADEMIC COUPLE** with two children, 10 and 14, seek a 3 (or more) bedroom furnished home to rent for the 1987-88 academic year; preferably in South Pasadena, Arcadia, La Canada, Flintridge, or San Marino. Please telephone Kip Thorne or Pat Lyon 356-4598, or write them at 130-33 Caltech.

**VISITING FACULTY** desires house for family of five, 6/29-9/1. Call (517) 349-9140.

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**YOUR "THE TRUTH SHALL rape you over" T-shirt** has arrived. If you ordered one, please pick it up at Blacker 31. If you didn't order one, you have to wait until Wednesday when we start selling shirts that haven't been picked up. \$8 each, cash only please. Bengt Magnusson/Bruce Tiemann.

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CALTECH BOOKSTORE-

**WELCOME CALTECH ALUMNI:** In your honor the bookstore will be open this Saturday, May 16 from 8 to 5. Caltech sweat-shirts and mugs, faculty publications, and more.

LOST & FOUND-

**FOUND: 5 VCR TRAVEL TAPES** from around the world in front of bookstore. Call bookstore 356-6161.

**RATES:** . . . \$2.50 for first 25 words; . . . 10¢ for each additional word. Send written ad with payment to 107-51. No charge for on-campus lost & found.

On-Campus Summer Room Pick

Summer room picks for all on-campus student houses will be held on Thursday, May 21st. Consult the summer R.A. of the house you wish to live in before that date regarding card draws and the time of the room pick.

Fall Off-Campus Waiting Lists

Please sign up at the Master's Office for Fall Off-Campus Housing on Monday, May 18 from 8AM to 5PM. Applications for all available spaces received that day will have priority determined by lottery. The lotteries for the 1170 Del Mar and Marks House singles will be by class—seniors having priority over juniors, juniors over sophomores. All applications after May 18 will be on a first come, first served basis.

Caltech Vice?

The GSC is sponsoring a public discussion of present and future campus security issues. The meeting will be held in 153 Noyes at 7:30 pm on Tuesday, May 19th. James Minges, Director of Business Services, and Harold Ginder, Security Office head, will be present to speak and answer questions, along with ASCIT and GSC representatives. The new parking structure, parking lot security, lighting and campus rekeying are among the topics to be discussed. Please attend and help contribute to the improvement of campus safety. For further information, call Craig Steele, x4840.

Summer Employment

Summer employment available in the Housing Office. 20-40 hours a week, flexible work schedule. \$5.50/hour. Free housing during summer. To apply, contact Chris Mihos by today, May 15, at 356-6174 (office) or 440-9442 (home).

Help Memorial Day

Please contact Nancy Drehwing (x3691) if you are interested in helping with a Memorial Day Picnic at the athletic field on May 25. (when else?) Duties to be assigned include organization and officiation of soccer, softball, inner tube water polo, and clean-up.

Be A Part Of The Fun

KELROF's coming once again! KELROF is a race with 10-person teams which compete by running consecutive miles for 24 hours. This year's KELROF will be from 9:00 am May 16th to 9:00 am May 17th. Get together with your 9 favorite runners (or people) and give a list of your team to James Shih (1-60, 578-9370). All members of the Caltech community are encouraged to participate. It's real, it's fun, it's exciting!

BUSAC Nominations Due Today

This is just a reminder that nominations close today for BUSAC representatives. Ballots will be sent out next week and will be due Friday, May 22. Send nominations and ballots to Darin Takemoto (1-53).

Gay/Lesbian Discussion Group

The next meeting of the Gay/Lesbian Discussion group will be May 21. This meeting will be Guest Night—members are encouraged to bring a guest to the Discussion Group. New members are also encouraged to attend.

Hewlett-Packard Product Show

Hewlett-Packard will hold a computer and instrumentation product show on Thursday, May 21 from 10 am to 3 pm in Winnett Student Center. The entire Caltech community is invited.

Attention Pre-Med Students!

Harvard medical student (M.D., Ph.D.) will be visiting the Caltech Health Center (tentatively) May 18 at 4 pm. If you are interested in this meeting please call the Health Center (x6393) and leave your name and phone number in case of date and time change.

Don't Leave Home Without It

Travelling abroad? Don't leave home without an International Student ID Card. You can obtain it from Ingrid, International Desk, 105 Winnett Student Center, x6330.

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Play It Again, Sam

TACIT presents Woody Allen's *Play It Again, Sam* as its spring production. Performances are 8 pm Friday, May 22nd and 29th, and Saturday, May 23rd and 30th, with 2 pm matinees on Sunday, May 24th and 31st, and Monday, May 25th. Tickets are \$6.00, \$4.00 for students and are available at the Caltech Ticket Office, north of Beckman. All performances are in Dabney Hall Lounge.

Club Information Due

Club representatives, we need information from you in order to update the club section of the *little t*. Send a brief description (50-100 words) of the activities of your club along with the name, mail code and phone number of a contact person to *little t*, 107-51. Remember, 200 new freshmen will consult the *little t* for information about clubs. If we do not receive a response from your club then we will not repeat the entry from last year.

Caltech Merit Awards

Each year the Scholarships and Financial Aid Committee awards a number of Merit Awards to the most academically talented of the Institute's freshmen, sophomores and juniors. Merit Awards are based on outstanding scholastic achievement as demonstrated by exceptional performance in formal classes and/or in independent research, and not on financial need. Last year the Committee recommended 36 Merit Awards at \$8,000 or \$10,000 each. This year the Awards will range from \$8,500 to \$11,000 each.

Applications are available in the Financial Aid Office at 515 S. Wilson. The deadline for submitting completed applications to the Financial Aid Office is today, May 15, 1987.

15,283 Days After 'Trinity'

The documentary film *The Day After Trinity: Dr. Robert Oppenheimer and the Atomic Bomb* will be shown on Wednesday, May 20 at 8 pm in Baxter Lecture Hall. This film examines the life of Oppenheimer and the development of the bomb from its beginnings as the weapon to defeat the Nazis through the awful aftermath of its use on Japan. Finally it focuses on Oppenheimer's fall from official grace resulting from his opposition to the continued development of nuclear weapons.

*The Day After Trinity* was nominated for an Academy Award for Best Documentary in 1981. Its Caltech showing is sponsored by the Space Weapons Study Group, the Caltech Y and the GSC. For information call Jonathan Nagler, x4699.

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Chamber Music Tonight

At 8 pm in Dabney Hall Lounge, there will be a series of performances by some of Caltech's finest student musicians. Program highlights will be the beautiful "Trio in D Minor" for piano, violin, and cello by Mendelssohn, as well as a delightful trio for flute, viola, and piano by Martinu. In addition, there will be a performance of Ingolf Dahl's exciting "Music for Brass Instruments," a quartet by Teleman and trio by Damase.

Ametek Luncheon

Mr. Dennis Stanfill, who heads Stanfill, Doig & Co., will speak on "Leadership: Can the Force be with You?" at the AMETEK Leadership Luncheon to be held at the Athenaeum on Thursday, May 21 at noon. The hosted luncheon is the first of a series of events, sponsored by AMETEK Corp., aimed at developing the leadership potential of Caltech students. It will be followed by workshops, roundtables and possibly internships.

Please sign up as soon as possible at the Caltech Y as there is room for only 100 students (graduate & undergraduate).

Ex-Money?

The May 20 meeting of the Caltech-JPL Numismatic Society will feature a talk titled "Obsolete Currency of Louisiana." Larry Henling of the Caltech Chemistry Department will show slides and samples of bills issued by the state and banks before about 1860 in denominations up to \$1,000.

The last meeting before the summer break on June 17 will be an auction of coins including silver and items no longer in use.

All students, faculty and staff along with their families are welcome to attend meetings held the third Wednesday of each month at 7:30 pm in room 168 of the Church Lab on campus.

Accidental Nuclear War?

On Monday, May 18 at 8 pm in 24 Beckman Labs, STRIVE (The Society to Reduce International Violence on Earth) and the Graduate Student Council (GSC) will present Clifford Johnson of Stanford University speaking on his suit against the Department of Defense, which answers the question "Is Launch on Warning Constitutional?" in the negative. Many experts consider "Launch on Warning" a hair-trigger defense which can easily lead to accidental nuclear war. Johnson's case has been written up in the *New York Times*, *Newsweek*, the *Computer Professionals for Social Responsibility Bulletin*, and elsewhere. He will discuss current U.S. nuclear policy, the Constitutional issues concerned, and safer alternatives to the current policy. For more information contact Michael Lichter, x6767.

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