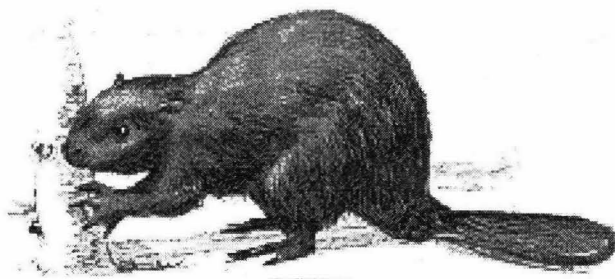




Color

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see page 10



Election

People keep asking me,
Do I know who's running for
ASCIT UD@L?

see page 6-7

The California Tech

VOLUME CI, NUMBER 9

PASADENA, CALIFORNIA

NOVEMBER 19, 1999

TECH, DRUG ABUSE AND YOU: A CLOSER LOOK

DEBORAH SOUTHERLAND, PH.D.

The first time most Caltech students hear about Caltech's Drug & Alcohol Abuse Prevention Program is at Frosh Camp, during Challenges and Choices. Remember the pencil demonstration? The Drug & Alcohol Abuse Prevention Program offers a variety of services to students, besides pencils and statistics about alcohol use on campus. Services include individual counseling, consultation, educational programs, and trainings for student organizations.

Students come to talk to me for many reasons. In certain instances, they may want to explore how drugs work for them, and identify what they get out of their drug use. Some students may be seeking ways to help a friend. Other students may want help moderating their drinking. And still others are dealing with how family alcoholism is currently impacting them.

Consultation is also available to students. For example, some students may want help planning responsible parties and social events. Sometimes students want specific information about alcohol and other drugs, and they may be offered literature, brochures, internet sites, and videos to use as resources.

I am also happy to provide programs for student houses and organizations. I can offer educational programs on a wide range of topics, such as stress management, substance abuse, adjusting to college, and helping a friend who abuses alcohol or other drugs.

Some students may be reluctant to come in to talk to me because they equate talking about their substance use with being a drug addict or alcoholic. The way I think about "use" is that it occurs along a continuum. At one end of the continuum are those people who do not drink or use any drugs. We have a large number of Caltech students in this category. At the other end of the continuum are those who are physiologically and/or psychologically dependent on drugs. Between these two extremes are many possible

PLEASE SEE ABUSE ON PAGE 4

Y2K Problem: Solved?

U.S. gearing up to face end of Millenium hype

BY LEXI BAUGHER

On Wednesday, November 19, Bob Neary gave the latest lecture in the ongoing Watson Lecture series. Neary is the Chief Administrative Information Officer for Caltech, and has been an information technology consultant for more than 17 years. His lecture focused on how ready the world is to deal with the Y2K problem.

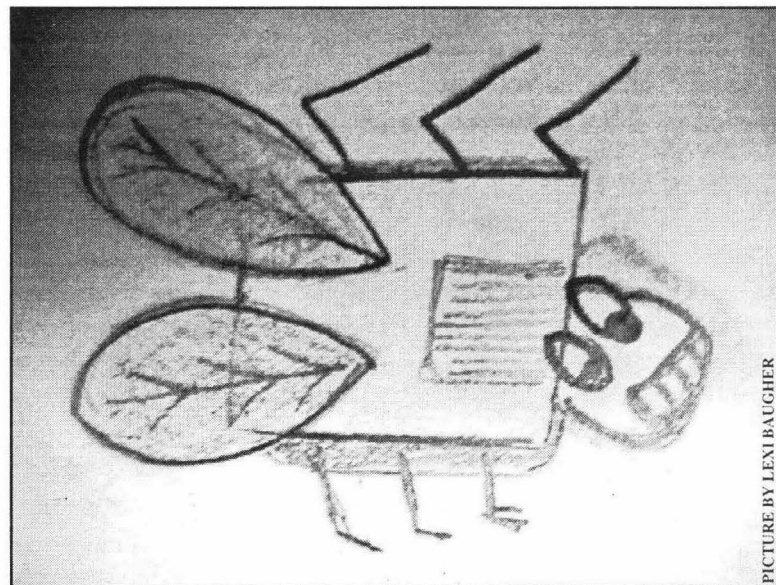
The "Y2K bug" is the possibility that some computers may not correctly read the date on January 1, 2000 (and beyond) because they store only the last two digits of the year and assume the century is 1900. The practice of only storing two digit years dates back to when memory was very expensive and saving that extra byte was necessary to keep the programs smaller. In today's world, where a megabyte of RAM costs two dollars, such space-saving measures are unnecessary.

The reason that the Y2K bug is so serious, according to Neary, is not that the problem is difficult to solve, but is in the sheer scope of fixing every potentially afflicted computer and every

software program. Because our computers are so interconnected, if one computer is not fixed, it may affect others.

The Y2K bug has the potential to affect everyone. The obvious impacts are on the banking industry (to calculate interest, if your credit card has expired), on the manufacturing industry (has food expired yet?), and on the government (social security checks). Some effects of the century change are even not computer related; companies that manufacture tombstones won't be able to use tombstones that have been pre-engraved with '19__'.

Some people have predicted more dire consequences; they suggest everything with embedded computer chips might be affected. Predictions ranging from toasters combusting to elevators crashing to nuclear missiles firing can be found somewhere on the internet. Common sense helps when considering some of these predictions. Your toaster's computer chip does not care what date it is. On January 1, 2000, your toaster will not spontaneously combust in a puff of illogic because it thinks the



PICTURE BY LEXI BAUGHER

A rare fossil of the Millenium bug.

date is 1900 and it hasn't been invented yet. An elevator that thinks it needs to be serviced will proceed at normal pace to the ground floor. Nuclear missiles are not launched based on what date it is. (And, in any case, manual intervention is required to launch missiles. No software glitch could cause global thermonuclear war.)

Neary says that a likely set of problems is the following: ATMs and banks might suffer delays; there might be food and water shortages; electricity and phone services might be tempo-

rarily interrupted; and personal information, like birth certificates, might be temporarily unavailable. Emergency 911 services would not be directly affected by any computer problems (operators could circumvent the computer-aided dispatching system to manually answer calls).

Neary recommends that people prepare for the turn of the millenium as they might normally prepare for a rough winter. Stockpile enough food and water to get through a few weeks

PLEASE SEE Y2K ON PAGE 4

Revel takes on Nature

SUNY-Albany a close third

BY TIM RAUB

Last August, US News and World Report issued its annual college rankings and for the first time placed Caltech at the top of the list. Reverberations were far-fetching. Television crews flooded the campus for a day. The Bookstore stockpiled the rankings issue. Jason Meltzer wrote a bitter article for the Tech.

Still, the reaction from the other ocean came as a surprise when, in its August 26 issue, the British journal Nature criticized Caltech's ranking in its editorial "A cautionary guide to university rankings" (Opinion, Nature 400, 801; 1999). Two months later, Nature published a response written by Dean Revel that attacked the negative stereotypes which

were offered as truth in the original editorial.

The Nature editorial predicted that "there will no doubt be dancing in the streets of Pasadena this week, following the news that the California Institute of Technology has leapfrogged above the usual Ivy League contenders to top the [USN&WR] rankings. Such a party is due not because of the significance of the event itself - which is slight - but because everyone at Caltech seems to need a break."

The editorial then picked specific parts of the the feature US News and World Report article and generalized them to cast a dim light on Caltech: "...classes at the science and engineering school can often last until 2 a.m. One inmate

PLEASE SEE NATURE ON PAGE 4

Sleep studies show lack

Too few hours of sleep equals badness

BY DANA SADAVA

Have you ever wondered why those blocks of naptime in kindergarten were phased out of the curriculum?

With courseloads that challenge the most efficient workers, students at Caltech have trouble scheduling what may be their greatest study tool: sleep.

Recent studies on sleep show that young adults need more

sleep than any other group of people and that the issue of sleep deprivation is a serious one.

A team of researchers at Brown University reported that people of high school and college age need about nine to ten good hours of sleep per night, which is more than children or adults need. Most young adults, however, only get six to seven hours.

PLEASE SEE SLEEP ON PAGE 4

Inside the Tech

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Editorial

My Two Cents

The Great House Barrier

Caltech's House system is unique. Unlike many other colleges and universities, the House is a center of social and academic life, not just a place to live. House spirit and activities provide an excellent opportunity to bond with other students, and family-style dinner forces interaction between otherwise too-busy-to-socialize Techers.

The House system is a double-edged sword, however. Since one spends most of one's time with others of one's House, little time is left for others of other Houses. As our connections with our House-

mates strengthen and we spend more and more time with our House, we edge further away from other Houses. A great barrier is erected between Houses – not caused by distance or rivalry, but by closeness.

Each House is a world unto itself. Members eat together, work together, flick together, spend time together and even sleep together (though usually not in the literal sense). It is mostly effortless to participate actively in one's own House; to participate actively in another House is nearly impossible. Breaking through the great House barrier is much more

difficult than walking across the Olive Walk – it requires breaking into tight cliques of friends and neighbors that spend all of their time together and very little with others.

In addition, time changes scale between intra- and inter-House interactions. The closeness of House members allows for more frequent and hence greatly accelerated interaction. This too is double-edged – interpersonal relationships progress much quicker than those with members of other Houses. The ups and downs of friendship and relationships are more pronounced. Bonds between people grow stronger faster.

The net result is a faster progression from a semi-unified class into a cluster of tightly bound Houses.

As a consequence of House

closeness, individuals tend to develop xenophobic instincts. For instance, let's say Bobby is a member of Booty House, and I'm a member of Yum House. Since I spend almost all of my time with and around Yum Housers, and know very little of Booty Housers, I may begin to stereotype them. It's difficult for me to overcome my House stereotypes, since Bobby, the other Booty Housers and I don't spend much quality time

in and day out. Thus the barrier gets thicker and taller and people spend more of their time within their own House.

The House system has its multitude of pros and cons. It is unique among colleges for its closeness and smallness. We must remember, however, that though the walls of our Houses keep us safe and comfortable among friends, we shouldn't fear leaving those walls to spend time with others. It's hard and it takes a lot of effort. We are nothing if not lazy here at Caltech. I can't solve that problem. But I can say that individual effort – even small effort – will go a long way to breaking down the great House barrier.

Dave Guskin

Editor, California Tech

It's difficult for me to overcome my House stereotypes, since Bobby, the other Booty Housers and I don't spend much quality time together.

LETTER TO THE EDITOR

Dean, Microsoft and You

"The Dean's Random Mumblings" prompts me to wonder (among other less charitable things) how someone could find the "Bill Gates Personal Wealth Clock" and fail to notice the link to "How to Become as Rich as Bill Gates" (www.photo.net/bg/).

To summarize in slightly less humorous language, contrary to popular belief, Bill Gates did not become filthy rich by being an intelligent, hard-working visionary. He did it by being born into a rich and influential family who sent him to an extraordinarily expensive (3 times Harvard tuition)

prep school and then to Harvard where he met more rich and influential people. These natural talents would allow him to do things like convince IBM to use his version of DOS because of superior features like his mother's friendship with the CEO of IBM.

Microsoft gained market dominance not by being innovative and "predicting what tools will be required to run once and future computers," but by reimplementing 20-30 year-old technology poorly and dealing with new ideas by stealing them (GUIs), convincing people they aren't good ideas by implementing them poorly (OLE), buying

them (Hotmail and WebTV) or trying to turn an open standard into a proprietary format and taking the credit (HTML and Java).

I would critique beyond the second paragraph of the article, but

the comparison of the Justice Department to the Nazis forces me to invoke Godwin's Law.

Sincerely,
Kevin Scaldeferri

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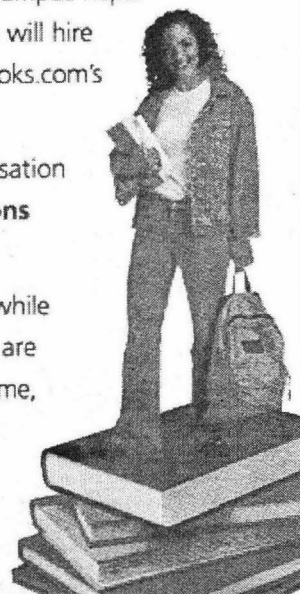
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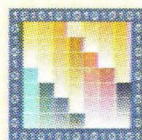
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November 30

Student Center



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Continued

Y2K

Is the trouble worth the hype?

CONTINUED FROM PAGE 1

with no outside help; keep some cash on hand; and have the usual assortment of emergency supplies on hand. For more information on preparing, see the Red Cross's web page at <http://www.redcross.org/disaster/safety/y2k.html>.

The media hype over Y2K has blown the problem to tremendous proportions. Some hype was necessary to convince people that the problem actually existed (and as of August 1999, only 7% of those surveyed thought that Y2K might affect them), but it still seems excessive. Y2K is being used to sell everything from survival gear to sneakers to cars; every news program wants to tell you over and over again how the bug started.

The government, in responding to the hype, has created an Information Coordination Center to process Y2K-related information (the center cost millions of dollars and has no defined mission) and two committees, the President's Committee on Y2K and the Senate Committee, both of which produce various reports on the state of the nation's preparedness. The

President's Committee report indicates that our major trading partners are well-prepared for Y2K, and predicts no major interruption in oil imports. It says that countries with fragile infrastructures, such as Russia and China, are at risk for more serious Y2K problems because they will be less able to quickly respond to the problems as they crop up. The Senate 100-Day Report is less optimistic; it indicates that some major trading partners are behind in their preparations. The Senate predicts a flood of humanitarian requests from less developed countries after the new year, and a possible economic downturn due to reduced trade.

But how prepared is the U.S.? Nealy says the U.S. is pretty well prepared. The government claims that all FAA systems are compliant; the utilities, telecommunications, and financial sectors are ready to go; but the health care industry is lagging behind a bit. The State of California claims to be nearly prepared. These reports are all self-reports, mainly because establishing an agency to oversee the Y2K testing each com-

pany must do is not feasible. Many government agencies have also refined their Y2K testing to only include self-defined 'mission-critical' systems so they can say their computers are prepared. Whether this is adequate preparation remains to be seen.

The cost of these preparations is another issue that experts seem to disagree on. The Gartner Group estimates the total cost of Y2K corrections to be at \$300 billion. That's \$109.48 for every person in the United States, just for testing and debugging. The worldwide tab is estimated at \$600 billion by some, \$1.6 trillion by others. That doesn't even take into account the effects of possible Y2K-related litigation (which might be as high as \$300 billion by itself, according to Software Productivity Research, Inc.).

Neary's conclusion was that people should not panic over potential problems. The world will not likely come to an end (one web site puts these odds at a few million to one) and serious problems are not likely here in the United States.

The next Watson lecture will be on January 12 when Dr. Fred Culik discusses "What Happened in Aeronautics After the Wright Brothers?"

NATURE

CONTINUED FROM PAGE 1

ample of interesting non-curricular activity at the school."

Revel replied, "Sir—I take exception to your unflattering characterization of [Caltech]... This ranking is not a fluke, even if caused by an arbitrary change in the criteria... The ranking signifies that Caltech, even though it is very small, has been, and will be, a power to reckon with. But we do what we do extremely well, and manage to have a rich cultural life (and fun) while doing it."

In closing, Nature recommended that "the youth of America should pause for a

while before making that fateful selection. [In September] the the Princeton Review publish[ed] its own... 'party school' rankings, which are at least based on a survey of real students. Last year, the State University of New York at Albany came on top, whereas Caltech was nowhere to be seen."

Dean Revel proudly replied, "we are, as you note, listed as a poor 'party school' because our students find fun in their own ways. And no one danced in the streets because we were too busy doing what we do best."

SLEEP

FROM PAGE 1

of UCLA Adolescent Health Department Martin Anderson said, "Young people need more sleep because their Circadian rhythms are set differently. Circadian rhythms regulate the brain hormone melatonin, which controls sleep/wake patterns. This regulation in teenagers causes 'phase delay,' or the physiological need for more sleep."

Experts have assessed a wide range of academic and behavioral problems in correlation with sleep loss. In a study conducted by psychiatrists from UC San Diego, a

direct relationship between sleep and grade point average was found. About 40% of students with GPAs less than 3.5 claimed they had trouble staying awake during the day. However, only 20% of students with GPAs greater than 3.5 had similar complaints. Students with higher GPAs slept, on average, a half an hour more than students with lower grades and took fewer naps.

Instead of sacrificing sleep for study time, students must realize that it is in those times of stress and overwhelming work when a good night's sleep can be most useful.

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ABUSE

Don't let drugs rule your life

CONTINUED FROM PAGE 1

kinds of drug use, such as experimental use, recreational use, habituation, and abuse. Sometimes people who abuse alcohol or other drugs also have problems with gambling, shoplifting, and other compulsive behaviors, and I'm willing to talk to them about those issues as well. I will also talk to students who are experiencing problems with addictive behaviors like shoplifting or gambling who don't use alcohol or other drugs. I take an individualized approach with students who visit my office. I

want to know the reasons they are coming in, and how they see their situation. Then together we can develop a plan to meet their needs. Follow-up appointments may be scheduled, and frequently students will walk away with resource information that addresses their questions. In some cases, I may offer referrals to students as a way of helping them find the most appropriate services to meet their needs.

The Drug & Alcohol Abuse Prevention Program is part of the Student Counseling Center

and follows the same guidelines regarding confidentiality. Student information will be kept in strict confidence, even if it is illegal. Thus, a student can feel free to talk to me about his or her illegal use of drugs and related behaviors without fear of consequences.

I welcome visitors! Please come by and see my new office in room 64 of the Student Activities Center. My drop-in hours are on Wednesdays from 5:00 p.m. to 6:00 p.m., and on Thursdays from 11:00 a.m. to 12:00 noon. Appointments are available at other times. I can be reached via phone at 626-395-2961.

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News and Information

The Outside World

by Cheryl Forest

College Station, Texas: The traditional bonfire preparations at Texas A&M University, held for the past ninety years prior to the football game with the University of Texas, went horribly wrong early Thursday morning. The forty-foot structure collapsed in on itself, killing at least nine students, and injuring many others. At least two students are still missing and are presumed dead underneath the pile.

Washington, DC: The US government *almost* has a budget.... The House voted Thursday to pass the current fiscal year's budget, only seven weeks after the year actually began. The House then appropriated enough money to keep the government from shutting down for the next two weeks, giving the Senate enough time to start the debates anew. In this year's fiscal package, the Republicans are able to claim victory in allotting more money for the Pentagon and "politically popular health research and education." Conversely, the Democrats are able to claim victory in gaining more money for more cops and elementary-level teachers and for finally being able to start

paying some of the back dues owed to the UN. Negotiations for this fiscal bill have taken seven months so far.

Somewhere between Cairo, Egypt and Nantucket Island, US: Last week, the flight data recorder for Egyptair Flight 900 was plucked out of the murky Atlantic waters, and was followed this weekend by the cockpit flight recorder. Physically, investigators know what happened to the plane, but have yet to explain exactly why the engines either cut out or were manually shut off as the plane started its first descent. The cockpit recorder has proved even more enigmatic to decode; analysis by Arab officials as well as experts familiar with the typical sounds in the cockpit is ongoing. Diplomatically, Egyptian officials are growing more angry by the (American) assumptions that a common religious phrase uttered by a co-pilot seconds before the descent started indicated that the man was suicidal and was thus responsible for the crash. Although the investigation was slated to be handed off to the FBI, making it a criminal investigation, that move has been put on hold due to Egyptian concerns.

Y news

by Kenneth Kuo

Caltech Y News (11/19/99)

This is going to be the last Caltech Y News blurb for about 2 weeks as "The Tech" is not published on institute holidays such as Thanksgiving. So, I'll take this opportunity to say "Happy Thanksgiving" from the Caltech Y.

The Y would like to get more volunteers to tutor middle/high school students. Remember, if you are on Federal Work Study, you will be compensated at \$12/hour for your services. For more information, please contact the Y at ext. 6163. While you're calling, you can ask about other service activities which we sponsor.

For those who are planning on going camping in the coming holidays, keep in mind that the Y rents out various forms of camping equipment. Contact the Y for more information.

This Week:

As usual, Project Angel Food will be occurring today. The purpose of this program is to deliver food to housebound people living with HIV/AIDS. This project takes but one hour time on Friday and takes place roughly at 12:00 PM. For more information, please e-mail Ying Tian at ying@cco.caltech.edu.

Today, the Caltech Y is pleased to premier its Social Activism Speaker Series. Our first speaker for the series, Dolores Huerta, will be speaking on the topic "Political

Organizing: Key to a Non-Violent Movement." Huerta is renowned for her role in co-founding the United Farm Workers of America (UFW) union with Cesar Chavez, who called her, "totally fearless, both mentally and physically." Her many accomplishments include collective bargaining for farm workers, the banning of dangerous pesticides, and an increase in the Federal Minimum Wage. At current, Huerta holds the position of Secretary-Treasurer of the United Farm Workers of America, AFL-CIO.

Huerta's keynote presentation tonight will take place in the Bechman Institute Auditorium beginning at 7:30 PM. This presentation is free and open to the public.

Next Week:

Pamela Sexton, U.S. coordinator of the largest U.N.-accredited voter observer project for East Timor's historic August referendum, will speak on the Caltech campus on the recent victory of the East Timorese independence movement, the continuing refugee crisis, and the prospects for the world's newest country. Sexton will just be returning from the refugee camps in Indonesian West Timor, where a quarter of the East Timorese people are currently held. Sexton's nationwide tour is being organized by Grassroots International, which provides humanitarian relief to the East Timorese people.

Sexton's talk is entitled "East Timor: Victory of a Lost Cause." Her presentation will be held at 12:00 PM on Tuesday, November 23 on the 2nd floor Winnett Student Center Lounge. For more information, please contact Byron Philhour at (626) 395-2023 or bjp@astro.caltech.edu.

Decompression:

Finals week is fast approaching and that indicates that Decompression is

also fast approaching. Decompression is an event sponsored by the Caltech Y in the weekend immediately before Finals Week. It takes place on Saturday (12/04) and Sunday (12/05). Free food is served to all undergraduate and graduate students who attend.

Beginning next week, volunteer signups for Decompression stations will be posted throughout the Hovses. Various stations are available to select from: grill, bagels, fruits, condiments, chilly, and drinks (sorry, no alcohol). Volunteers should realize that not everyone can get on the early Saturday shift. All volunteers will get a free T-Shirt.

This Decompression, there will be a live band performing on both nights. On one night, the band Dr. Evil will perform various swing music. In conjunction with the band, the Caltech Ballroom Dance Club will give free East Coast Swing Lessons to all who are interested. Keep on the look out for flyers to provide more information as plans are still being finalized as of this writing of the Y News.

General Info:

The Caltech Y holds weekly meetings on Mondays at 12:15 PM in the Y Lounge which is behind Steele House. We welcome anyone who is interested in learning about what the Y does or who wants to get involved. Bring your ideas, your friends, and your lunch.

If you would like to get e-mails about Y-events, Y-outdoor events, or Y-community service events, please e-mail Elisa Chiang at polaris@cco.caltech.edu with the e-mail mailing list you would like to be placed on. Also, if you have further questions concerning any of the activities mentioned above, feel free to e-mail me at dogbert@cco.caltech.edu.

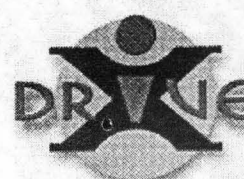
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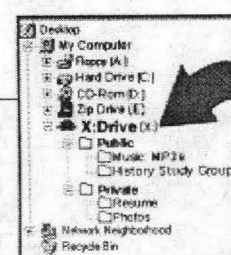
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✓ ASCIT Election ✓

ASCIT UPPERCLASS DIRECTOR AT LARGE

"The Upperclassmen Director at Large is responsible for the management, finances, operation and maintenance of the ASCIT van and copier. The Directors at Large shall in addition perform other duties as specified by the Board of Directors." -- ASCIT Bylaws

Chris Elion

Tom Snyder

Let me clear up a few things. One, I am not a man with a major chip on my shoulder and an agenda. Two,

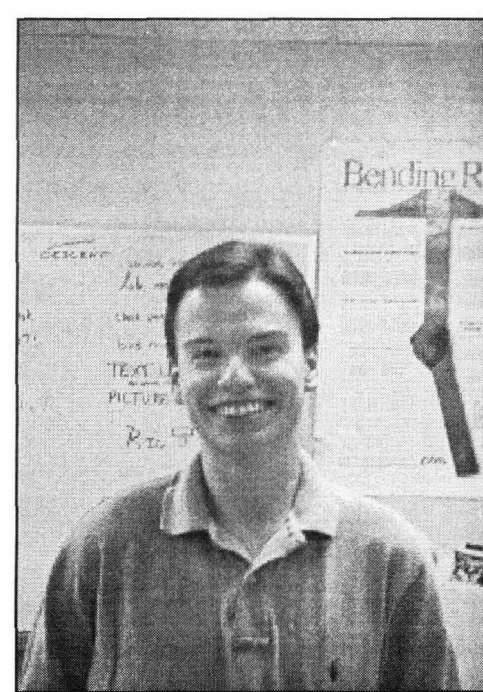
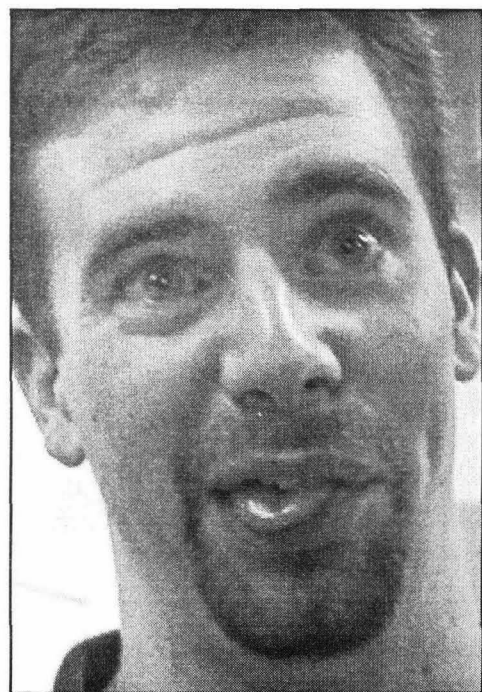
I don't consider the position a stepping-stone to further ASCIT offices and/or total world domination. And three, I am not now, nor have I ever been, Derek Shannon.

The UD@L is only really responsible for two things: the ASCIT copier and other random work that the BoD assigns (alas the ASCIT van no longer exists). Since I'm not a physics major, I'm quite sure that I'll have enough spare time to handle both of these jobs for the ten weeks before the next elections. And unlike certain other UD@L's of the past, I won't run off to Britain.

As Gore Vidal once claimed, "Apparently, a democracy is a place where numerous elections are held at great cost without issues and with interchangeable candidates." Today we have a second chance at electing a new Upperclass Director at Large to serve ASCIT until second term elections; again we have an election where it seems like any candidate could do a fine job.

However, I know that I can do not just a fine job but a great job at being UDL. I have the time, dedication, and responsibility to serve ASCIT well. In an election without issues it may seem hard to differentiate between the candidates but I promise you

that a vote for me is not going to be a wasted vote. Vote Tom Snyder for ASCIT Upperclass Director at Large.



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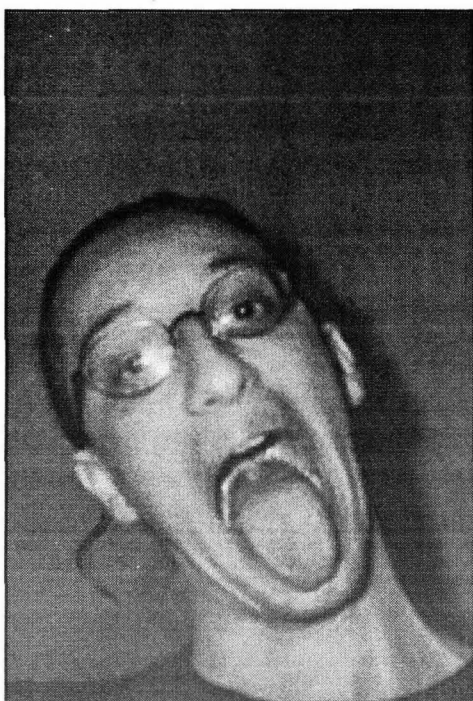
✓ ASCIT Election ✓

Marc Favata

Hello boys and girls. So here I am running for some stupid office that probably doesn't do a whole lot. Why you ask? Well, when you've been at Tech for over 3 years you learn something very important: despite all the "smart" people here, the place still seems to be run at times by a bunch of idiots. Some of these idiots are in the administration (naturally) while some are in the student body. In this upcoming election you have your chance to choose your idiot. Here's why you should choose this one.

What is the ASCIT BoD? It's a bunch of students who are given a butt-load of money (your 20 bucks a term) and whose job is to spend that money on stuff that most benefits as many students as possible.

Did you know that last year, ASCIT was audited by the IRS because they didn't spend all their money (non-profit organizations are supposed to spend all their money). That's retarded. If you guys can't figure out how to spend all your damn money I can certainly think of something. How about giving more money to all the clubs for example.



The thing that really got me peeved about all this wasteful spending stuff is the ASCIT movies. Did you know that in previous years the ASCIT movies had a budget of \$10,000 dollars a year (that's 10^4 dollars / yr). For what? For some old, crappy movie with poor picture quality (assuming the projector works). What's really insulting is that you have to PAY \$2.00 to see this crappy movie.

Recently, ASCIT has cut the movie budget down to around \$4000. This is still a big waste of money. Here's a much more cost-effective solution: simply rent NEW movies from blockbuster and show

them in 070 Moore at no charge. Let's do a little calculation for you folks who know some math:

Bob and Jane want to watch some movies. They have a combined total of \$4000. Let's assume that it costs \$4.00 a day to rent a movie (it's usually less than this). How many movies can they watch?

Answer: $4000/4 = 1000$ movies. That a different movie everyday for almost 3 years.

Let's say that Bob and Jane want to go to the UA Pasadena (the place without the student discount) and watch some movies. Let's assume that they each spend \$10.00 per movie (\$7.50 ticket plus a small popcorn). How many movies can they see together?

Answer: $4000 / (2 * 10) = 200$ movies. Alternatively, if they spent all of their money on one movie, they could take $4000/10 = 400$ of their friends with them (roughly one half of the undergraduates at Caltech).

I hope my point is clear. ASCIT has a lot of money that they could be spending in more sensible ways. Elect me and I'll use my vote and my big-nasty mouth to make sure that your money and mine isn't wasted on stupid schemes.

People tell me that this office involves taking care of the ASCIT copier and selling the van. I'll handle that crap too.

A Bientot (whatever that means)

No

I can't drive, and I can't fix copiers. I won't spend your money, nor will I get on anyone's nerves. I have no physical form, and -- though I'm cute and huggable -- I probably won't win this election.

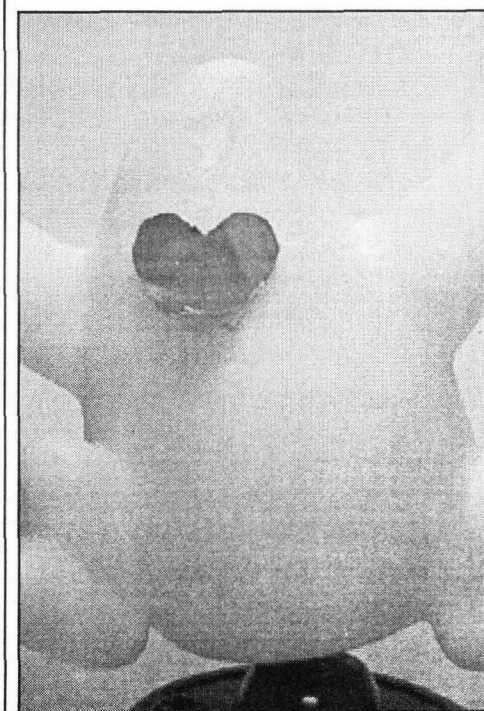
I must get out of here.

I must get free.

And in this election is the key.

My key.

Remember -- a vote for me is a vote for no one.



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November 30, 5-6pm
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pizza, soda, stuff

Free-PC, Inc. is a rapidly growing Internet Company based in Pasadena, pioneering the model of delivering free personal computers, Internet access and e-mail* to a diverse group of consumers. In addition to our meet-and-greet, we'll be interviewing on campus on December 1. We'd really like to meet with you. If you're not available on either date, please contact us directly for other arrangements.

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We have excellent opportunities for C++ programmers with experience in Visual C++, MFC, and object oriented programming. Experience in COM, design patterns and/or UML is considered a plus. You will develop application code used in our web browser to access the Internet.

Perl Programmers

We are looking for Perl programmers with a BS in Computer Science or equivalent experience. You will help create and maintain a large code base used for machine learning and complex stats analysis.

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You will be part of a small, highly motivated very creative team responsible in a large part for the company's success. Please expect to submit samples of your code and to write a sample routine at the interview. We offer a competitive salary, generous stock options commensurate with your skills and the potential for virtually limitless professional growth. Also included are health, vacation, and holiday benefits. To speak to us before or after the 1st, send/fax/e-mail us your resume: Free-PC, 74 N. Pasadena, Pasadena, CA 91103 Fax (603) 372-7980 E-mail careers@free-pc.com

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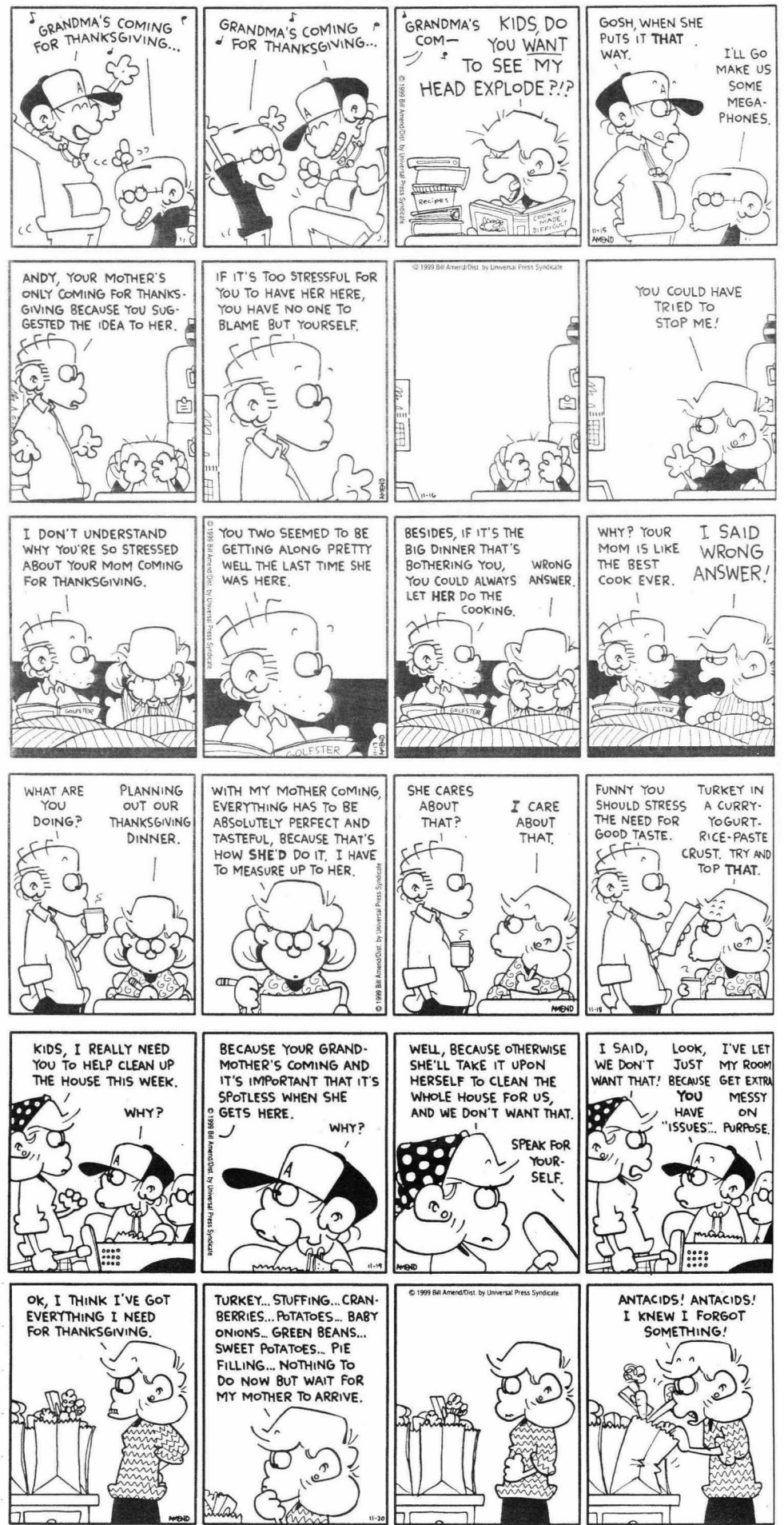
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Sports Special

Eat broom, punk kid!

BY KENNETH KUO

Late last Friday night, roughly 70 warm Caltech affiliated bodies filed into the cold confines of the Pasadena Ice Rink in order to do battle against one another. Shortly thereafter, teams of seven people began rushing at each other armed with brooms and wearing various forms of protection such as helmets and housing towels duct-taped around their knees. And hence began the "Caltech Y Boffo Bonecrusher Broomball"

tournament.

A total of seven teams were present to face off against each other. The teams represented the houses of Blacker, Lloyd, Ricketts (Rowdies and Satan's Minions), Ruddock (Rudd 1 and Rudd 2), and a graduate student team, the Claymations. Of the teams listed, Claymations, Lloyd, Rudd 1, and Satan's Minions advanced to the semi-final rounds. Unfortunately, an overall winner

could not be determined, as the final game could not be played due to time constraints.

Broomball is a game very much like ice hockey and is played with similar rules. However, it is the numerous deviations from ice hockey that makes broomball fun. For instance, how often does one encounter a game in which the players run around an ice rink with brooms in order to hit a softball sized duct tape ball into the goal of the opposing team? Similar to ice hockey, the game can get rough and slippery at times, thus causing those who

play without some form of knee padding to make sure that they have appropriate protection for the next game that they play.

Despite the potential pain involved when playing the game, there exists a loyal following of people. For some, the game is a way to release frustration and stress caused by midterms in the prior weeks. Others such as alumni go for old times sake. From those people, one can hear tales such as "when I was an undergraduate, the Ruddock team was comprised of people who were all 6 feet 4 inches in height - a most formidable

team." Then there are those who enjoy viewing the game from the engineering standpoint of "how to make a better broom." Some players indicate a preference for heavy brooms, which are useful for blocking shots and thrusting shots; whereas, others prefer light brooms to allow for faster running speeds.

All things considered, the primary reason why people are involved is because it is fun. The game also allows for friendly competition between teams to allow one of them to show who is indeed the best team.

Sports Week in Review

BY CHRIS HUGHES

and UCSD (San Diego, Calif., 11 a.m.)

CALTECH ATHLETE OF THE WEEK

Tom Daula, Water Polo (Junior, Glen Rock, N.J./Don Bosco Prep) - Junior Tom Daula tallied 10 goals in the Beavers three games during last weekend's SCIAC Championships. Daula posted four goals in the opening match against Whittier. He also scored three against Occidental and Pomona-Pitzer. In the six SCIAC regular season contests, Daula tallied only seven goals. He is an Applied Mathematics major.

LAST WEEK IN REVIEW

Men's Basketball (0-0)

Head Coach: Gene Victor

This Week: Fri., Nov. 19, vs. Life Bible - Season Opener (Braun Center, 7:30 p.m.)
Sat., Nov. 20, at Chapman (Orange, Calif., 7:30 p.m.)

Women's Basketball (0-0)

Head Coach: Rachel Madsen

This Week: Fri., Nov. 19, at CSU-Monterey Bay - Season Opener (Seaside, Calif., 7 p.m.)
Sat., Nov. 20, at San Jose Christian (San Jose, Calif., 5:30 p.m.)
Sun., Nov. 21, at Mills College (Oakland, Calif., 2 p.m.)

Men's Fencing (3-0)

Head Coach: George Clovis

Last Week: Did not compete.

This Week: Sat., Nov. 20, vs. CSU-Fullerton and UCSD (San Diego, Calif., 11 a.m.)

Women's Fencing (1-2)

Head Coach: George Clovis

Last Week: Did not compete.

This Week: Sat., Nov. 20, vs. CSU-Fullerton

Men's Swimming and Diving (0-0)

Head Coach: Clint Dodd

This Week: Thu., Nov. 18, at Biola - Season Opener (La Mirada, Calif., 4 p.m.)
Sat., Nov. 20, vs. Redlands (Braun Pool, 11 a.m.)
Sun., Nov. 21, at Chapman (Orange, Calif., 11 a.m.)

Women's Swimming and Diving (0-0)

Head Coach: Clint Dodd

This Week: Thu., Nov. 18, at Biola - Season Opener (La Mirada, Calif., 4 p.m.)
Sat., Nov. 20, vs. Redlands (Braun Pool, 11 a.m.)
Sun., Nov. 21, at Chapman (Orange, Calif., 11 a.m.)

Water Polo (0-15, 0-6 SCIAC)

Head Coach: Clint Dodd

Last Week: Whittier 22, Caltech 7 ... Occidental 16, Caltech 6 ...
Pomona-Pitzer 12, Caltech 9.

Caltech concluded its season with three losses in the SCIAC tournament, held in Braun Pool. Junior Tom Daula led the Beavers in scoring (see athlete of the week). Eagle Jones added eight goals while Adam Thomason scored five times for Caltech in the three matches. Goalkeeper Vladimir Federov stopped 26 shots in the three matches.

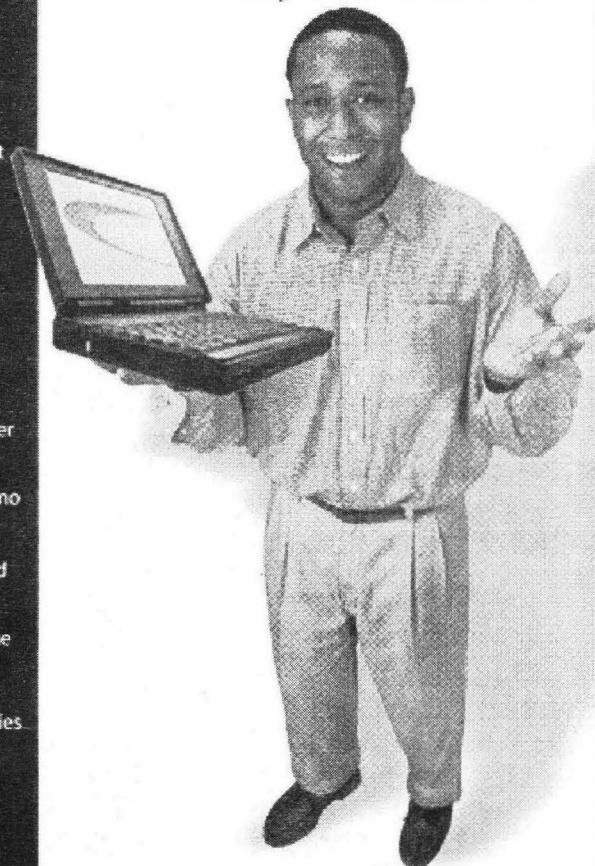
LAST WEEK IN CALTECH ATHLETICS

Sat., Nov. 13 Water Polo at SCIAC Championships (hosted by Caltech)
Whittier L, 7-22
Occidental L, 6-16
Sun., Nov. 14 Water Polo at SCIAC Championships (hosted by Caltech)
Pomona-Pitzer L, 9-12

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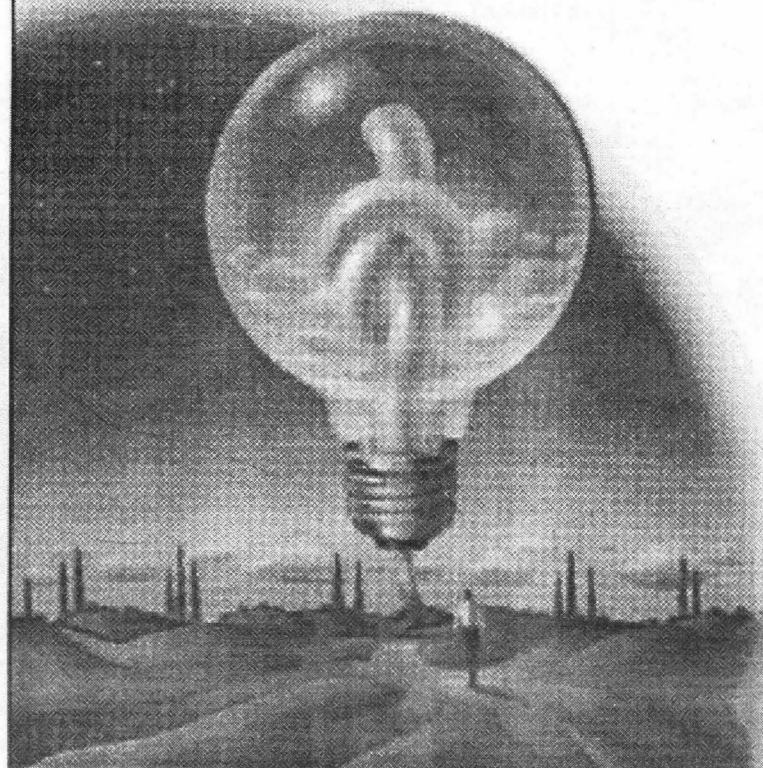
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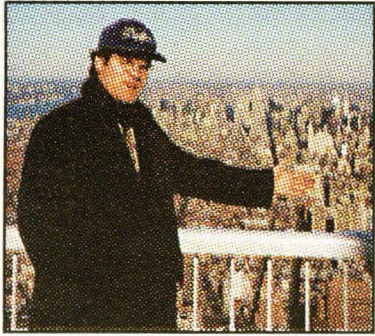
Various Things at LACMA

The star attraction at the L.A. County Museum of Art right now is *Pompeii: Life in a Roman Town*. Making its only U.S. appearance, this large exhibit showcases many artifacts unearthed from the Roman town destroyed by Mt. Vesuvius in 79 A.D., well-organized into sections illustrating Pompeian people, culture, technology, and science. Artifacts range from jewelry and bronze tools to colorful wall-sized frescoes. Their science and technology (even an ingenious odometer and a model of an incredible slave-powered crane) is quite remarkable, especially considering that much of Europe was still barbarian at the time. My only disappointment is that I would have liked to see more on the techniques used to uncover and preserve the items, which are surprisingly undamaged considering the circumstances of their burial.

LACMA is a big museum, and there are plenty of other things to see there, too. One of the more interesting is "Ghost in the Shell"—*Photography and the Human Soul, 1850-2000*, a collection of portrait photography from the its beginnings to the present day. Much more than just a collection of faces, *Ghost* includes a number of bizarre physiognomic studies from the 19th century, as well as contemporary postmodern experiments with the form to show how a photo reveals its subject's inner being.

Less successful is *Around Impressionism: French Paintings from the National Gallery of Art*. I'm no fan of impressionism to begin with, but this isn't particularly well-curated, a seemingly random hodge-podge of secondary paintings by major painters like Monet and Degas that certainly has some nice work in it, but is something like the visual equivalent of a rock group's B-sides anthology.

Geared toward children but still



fun is *Musie for the Eyes: The Fine Art of African Musical Instruments*, which includes several examples of drums, harps, and such sitting around for you to play. In the beautiful Japanese Pavilion, one of my favorite buildings in the city, you can soak up the nothingness/everythingness of *The Art of Twentieth-Century Zen: Paintings and Calligraphy by Japanese Masters* before coming back to the world with the permanent collection of whimsical *netsuke* carvings. The Impressionism exhibit runs through November 29, and most of the other temporary exhibits (including several I didn't mention) close early in January 2000.

Don't Stage Dive

Cult indie power-pop legends *Guided by Voices*, basically songwriter/vocalist Robert Pollard and an ever-changing band of sidemen/drinking buddies, brought their energetic show to the Roxy on the Sunset Strip last Friday in support of their Ric Okasek-produced new album *Do the Collapse*. *GbV* pounded out perfect 2-minute rock songs as if there was no wall between the stage and the ever-appreciative audience, sharing beers and chatting with the crowd, even letting some sit up on the side of the stage. Unfortunately one guy got a little too excited and decided to stage-dive. There being no mosh pit, he hit the floor head first, bringing an abrupt end to the show as paramedics were summoned and he was taken to the hospital (he was released later that night.) So don't be a dork and ruin a great concert; even if you don't hurt yourself you'll piss a lot of people off by kicking them in the head.

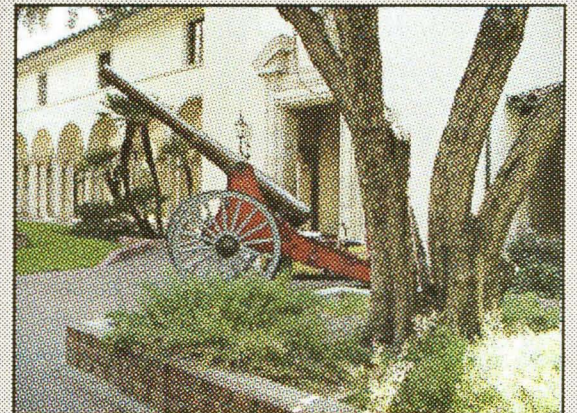
Caltech

now in *Color!*

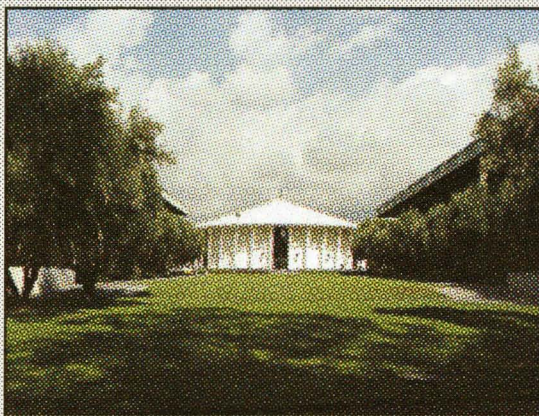
Caltech is something we sometimes take for granted. It's important to slow down and spend a moment enjoying our surroundings every once in a while. Captured below is some of that wonderful atmosphere, printed as never before in the *Tech*.



If stress or hunger are getting you down, there's always the Red Door Café. They offer yummy croissants and coffee.



The Fleming Cannon stands as a tribute to Caltech tradition. When the cannon starts a 'boomin', better start a 'runnin'.



The Court of Man shows a scenic view of Caltech to visitors. Though here obscured by clouds, there are mountains. Really.



When not involved in work or socializing, Techers often waste their time by getting their butts kicked online at Starcraft.



Vertigo strikes on the trip down from Baxter Lecture Hall. Students deal with grueling challenges like these every day.



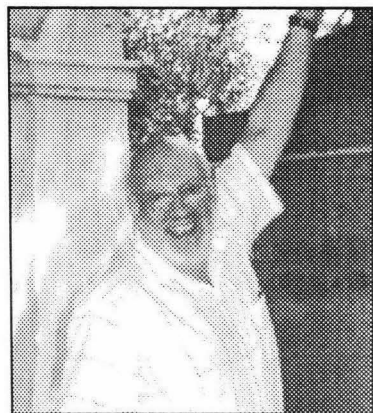
A feline Tech scout out an olive tree. Unlike normal Techers, cats not are not restricted to TFM for sustenance. Mew.

Ten seconds ago,
this was a blender.

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But you can call me.... Dean



Dean's Corner Failure

by Jean-Paul Revel

I recently read of a study in which the researchers analyzed factors that affect the performance of students at college (C. Steele, "Thin Ice," *The Atlantic Monthly* (Aug 1999) pp 44-54). It turns out that given equal brain power, the attitude of learners has a major influence on how well they do. Particularly important are a student's self image and surprisingly, his/her expectations on how they are perceived by others. Let's look at us, numero uno that we are (how come the radio always and only mentions USC's selection as School of the Year by *Time* magazine? Could it have something to do with the fact that it is their radio station?). Anyway, we at Caltech don't need that kind of advertisement to enroll an entering class of absolutely superior people, students who can run rings around almost anyone — with the exception of course, of their professors. Actually, I

believe (but dare not express too loudly) that many of our students can run rings even around their professors. Not all profs, of course. After all, some of them used to be Caltech undergraduates themselves! OK, so everyone here is tops. Yet over the course of the first couple of years, something very strange occurs. Some students, in spite of the promise held out by their high school scores and the evaluations of their mentors, somehow find themselves left behind, struggling to keep up. Now why should that happen to anyone admitted here?

One class of explanations holds that, in a fair number of cases, students find the distractions of college life so enticing that they cannot resist the lure. Instead of doing their homework they immerse themselves in a 1001 non-academic activities, something that does no good to their transcripts. Some of these time killers are frivolous, others important to the welfare of fel-

low undergraduates and the Institute.

Although satisfying, these activities unfortunately contribute little to what the student originally came to Caltech for. These activities are often entered into without a clear understanding that they can become a black hole of a time sink. By the time the student realizes there is a problem, it may require a major effort to repair the damage. It is a bit like an addiction, which is hard to reverse by the time one realizes that one is hooked.

There are other, perhaps more insidious, assaults on scholastic achievement. Besides getting involved over their heads, another reason for poor performance is that the students believe, against all contrary evidence, that they may not be up to snuff. This manifests itself as strong feelings of self doubt, or, more deviously, in the belief that the prejudices of their mentors will prevent them from being judged fairly. It turns out that everyone can fall prey to a "stereotype threat," the fear that one will be judged not by performance, but by what we are, female, or too old, African-American, a foreigner or from

the Midwest, whatever, you name it, all can conjure reasons to feel threatened. Research shows that when people come to imagine that they will be seen through "the lens of a negative stereotype," they don't do well. Yet the same people perform as well as their peers when tasks are presented in such a way that there is no threat of stereotyping. Thus either self doubts, or fears of not being judged fairly leads people to act out their own dire prophecies. A pity, especially when one realizes that the students don't acquire their fear of being judged by stereotype at Caltech; they usually arrive with it already part of their baggage. That means that to perform well enough to be admitted here, they had to be even better than their peers in spite of their efforts at self-sabotage! What a situation to find oneself in!

One way to deal with the problem is to learn to believe that you are as good as the next person. If you should slip, don't take that as confirmation of your darkest fears. Take advantage of every little straw that is extended, and should you nevertheless fall behind, whatever you do, don't give up on your goals. Use your successes to convince yourself that you can, because it is true, you can. Remember that to be admitted here you had to convince us (staff, professors and

upperclass students) that you were Caltech material. Success brings satisfaction and contentment. Do not try to forget your troubles by immersion in the Internet, by escape into the dreamland of novels or, well, you know. Most of these things of course are OK, even recommended, in moderation, but moderation is the word to remember. Also don't try to make yourself feel better by drinking or taking drugs; it does not work. You may forget your woes for a while, but you'll wake up in a worse position than you were before, with even less time to spend on studies or able to enjoy friends while in possession of your faculties.

Have confidence in yourself, and in your abilities. If things go awry, come to the Dean's Office or go to the Counseling Center for help. Trust that your professor (or TA) judges your work not through a distorting prism, which tells him *a priori* that you are a ____ (insert the appropriate category), and therefore no good. He or she probably does not even read the name at the top of the paper, until it is time to enter the grades on the grade sheet.

A bientot

Jean Paul Revel

lead•er (le•dər) *n.* **1.** One that leads or guides. **2.** Fidelity Investments® Congratulates **California Institute of Technology** on being rated the #1 University in the Country by *U.S. News & World Report* (August 1999) **3.** As a leading provider of financial services since 1946, Fidelity® is honored to be included as a 403(b) investment services provider to one of the academic leaders of today.



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Mints

ANNOUNCEMENTS

The Gay/Lesbian/Bisexual Discussion Group: extends invitations to the Gay/Lesbian/Bisexual Discussion group, which meets on the first and third Tuesdays of each month from 8:15 p.m. until 10:15 p.m. in the Health Center lounge. This is a confidential meeting and does not imply anything about a person's sexual orientation. The group usually discusses a particularly relevant topic and then moves on to the general discussion. Refreshments are served. For more information, call x8331.

Standard First Aid training will be offered by the Safety Office for the campus community. The two-day American Red Cross Standard First Aid Course integrates adult cardiopulmonary resuscitation (CPR) with other first aid topics. Participants having valid First Aid certification, but expired Adult CPR certification, can register for recertification. Recertification will be held on the first day of instruction. Classes will be conducted in the Brown Gym Classroom during the morning hours of Wednesday, December 8 and Thursday, December 9. American Red Cross certification will be awarded upon satisfactory completion of the course. The only charge for the course is \$12 for the mandatory text, available at the Safety Office. For more information and to register for the class please contact Caprice Anderson at 626-395-6727.

The Totem, Caltech's literary magazine, welcomes written and artistic contributions and editorial input from students; this year, we are seeking graduate student works in addition to undergrad creativity. Please email totem@jts or mail to Totem Editor, MSC#610 with your submissions, and also to be added to the mailing list

The Caltech Ballroom Dance Club [CBDC] will be starting their next series of classes, i.e. for the second half of the '99 Fall Quarter. For more information, see www.caltech.edu/~ballroom or call 626-791-3103.

H & SS Division offers the following Selected Topic Courses for winter term 2000: H 161 Rethinking the 1960s*, Lit 180 Science & Literature in 19th Century England* Lit 180 Knowing, Madness, and Murder: Selections from American Literature* SES/H 169 Milestones in the History of Astronomy from Late Antiquity to the Early Modern Period* SES/PL 169 Topics in Philosophy of Psychology: The Nature of Intelligence* SES/PL 169 Philosophy of Probability* The HSS division is also offering another section of Hum 7a American Society and Politics - Winter Term. Instructor: Kousser; T 7:30-9:30pm & F 3-4. Copies of HSS course schedules are available in 228 Baxter.

Hollywood Square -- If you have a group of 15-25 people, age 16 and older, you can have fun and earn money by becoming a member of the studio audience. Reservations are being taken for the following dates with arrival times of 10:00 a.m. and 1:45 p.m.: Nov. 6, 7, 13, 14, 20, 21 and Dec. 4, 5, 11, 12. For more information, calls 323-575-2448 and ask for Karen or Heather.

Study Abroad in Cambridge England, come learn about the new Cambridge scholars program, Wednesday, December 1, 1999 12 noon at Winnett Club Room One. Lunch will be provided. RSVP to fellowships@caltech.edu by Nov. 29, 1999. Current Sophomores and Juniors will be eligible to apply for either the 1999 Michaelmas or 2000 Lent terms. Interested applicants should have a 3.3 or better G.P.A. RSVP to fellowships@caltech.edu so that we can

get an accurate count for lunch by Monday, November 29.

Independent Record label looking for part time intern. Duties are based on background skill level. Looking for someone reliable and responsible. If you have a resume please send via email to vrichter@netcom.com. Please also visit our website <http://vr.ch8.net> to learn more about our company

Caltech Hillel has its own web page now. Check it out at <http://www.its.caltech.edu/~hillel>

EVENTS

The Caltech-Occidental Concert Band, directed by William Bing, presents Music of Winds: 1900-2000, a concert featuring Music by Ives, Copland, Holst, Tichelli, at the Beckman Auditorium, Fri., Nov. 19, 8:00 p.m., featuring tuba soloist Brad Dooley, and guest conductors Paul Asimow and Jason Chua. For information, contact 626-395-4652.

Stressed??? Sign up for the Stress Management Workshop. This workshop will include a mixture of informal lecture and experiential exercises focusing primarily on basic relaxation techniques and time management skills. The 4-session workshop will meet on consecutive Mondays (November 8, 15, 22, 29) from 12:00-1:00 p.m. in the Health Center Lounge. Space is limited, so please call x8331 to reserve your place in the group.

A Caltech-Japan Internship Program Information Session will be held on Friday, November 19, 1999 from 12:00 noon to 1:00 p.m. in the Winnett Lounge. Pizza will be provided. All students interested in participating in a summer internship program in Japan are encouraged to attend. Interns who have previously participated will be giving a presentation. Please contact Dr. Kayoko Hirata, ext. 4210, or e-mail hirataja@jts.caltech.edu, if you have any questions.

Dr. Jed Z. Buchwald, Professor/Director - Dibner Institute, Massachusetts Institute of Technology, "Power, Personality, and Optics in Napoleonic France", Room 25 - Baxter Building, Friday, November 19, 1999 at 4:00 p.m. Refreshments will be served. Seminars are on the Caltech campus and are open to the community at no charge. For information, contact Marion Lawrence at (626) 395-4087 or marion@hss.caltech.edu.

Men's basketball, led by long-time southland coach Gene Victor, looks to improve on last year's 2-21 mark. Victor, who enters his 11th season at Caltech and 46th as a collegiate head coach, enters the season with a career mark of 735-480 (.605). Caltech returns three of five starters from last season and have just three seniors on the roster. The Beavers men's hoops team opens the campaign on Fri., Nov. 19, against Life Bible at 7:30 in the Braun Center. **Women's basketball** will have a new coach on the sidelines as Rachel Madsen enters her first year at the helm of the Caltech program. Madsen, who was head coach for the past three years at Wheelock College in Boston, Mass., inherits a young squad with only three returning players from last season's team. The Caltech women's hoops team opens the season with three games in the Bay area Nov. 19-21, before the home opener on Nov. 24 vs. Life Bible. Caltech will host Life Bible, San Jose Christian and American Indian in a four-team tournament in Braun Center on Dec. 3-4.

Study Abroad in Cambridge England, come learn about the New Cambridge Scholars Program, Wednesday, December 1, 1999 12 noon at Winnett Club Room One. Lunch will be provided. RSVP to fellowships@caltech.edu by

Nov. 29, 1999. Current Sophomores and Juniors will be eligible to apply for either the 1999 Michaelmas or 2000 Lent terms. Interested applicants should have a 3.3 or better G.P.A. RSVP to fellowships@caltech.edu so that we can get an accurate count for lunch by Monday, November 29.

Pamela Sexton, U.S. coordinator of the largest U.N.-accredited vote observer project for East Timor's historic August referendum, will speak at the Caltech campus on the recent victory of the East Timorese independence movement, the continuing refugee crisis, and the prospects for the world's newest country. Sexton will just be returning from the refugee camps in Indonesian West Timor, where a quarter of the East Timorese people are currently held. Sexton's nationwide tour is being organized by Grassroots International, which provides humanitarian relief to the East Timorese people. Noon, Tuesday, November 23, at Winnett Lounge, Caltech campus. For more information, please contact Byron Philhour at (626) 395-2023 or hjp@astro.caltech.edu.

SCHOLARSHIP

The Literature Faculty is pleased to announce the 54rd Annual McKinney Competition. The Mary A. Earl McKinney Prize is awarded each year for excellence in writing. Only full-time students officially registered at Caltech as undergraduates are eligible to enter the competition. This year, prizes will be given in three categories: poetry, prose fiction, and non-fiction essays. All submissions must be typed and double-spaced. Include your address and phone number. In the poetry category, entrants may submit up to three poems. Submissions of prose fiction should not exceed 12,000 words. Essays may be ones prepared for a humanities class or any good piece of original writing on a topic relevant to the humanities. The prize in each category will be \$300. Each student is entitled to only one entry in each category. Contestants should submit their work to Professor Jenjoy La Belle, Division of the Humanities and Social Sciences, 101-40, by no later than March 31, 2000. No entries will be returned. Each category will be judged by a committee from the Literature Faculty. Essays will be judged on the quality of thought and the effectiveness of the writing. Winners will be announced in May, and the names of the winners will appear in the commencement program. The Committee may divide the award in each category in case of more than one outstanding submission. Previous winners in any one category are not eligible for the competition in that category. If you have any questions, contact Prof. La Belle, extension 3605, or Barbara Estrada, extension 3609.

Truman Scholarships-Juniors interested in a career in some area of public service (broadly construed) should consider this scholarship. The Truman Foundation seeks students seeking careers in the not-for-profit, government, or education sectors who seek to make changes and influence public policy and programs as professionals. Applicants should have

an excellent academic record and considerable public or community service experience. More information is available in Fellowships Advising and Study Abroad. The campus deadline date is January 10, 2000.

Andover Teaching Fellowships. Seniors, are you uncertain about what to do next year? Would you like a chance to live in a different part of the country in a beautiful setting? Phillips Academy, Andover has ten to twelve fellowships for graduating seniors who would like to teach at Andover for the 2000-01 academic year. They also have a special summer teaching assistant program you can apply for. Applications are available in Fellowships Advising & Study Abroad. Feb. 16 application receipt deadline. Note that Andover is in Massachusetts.

The Jewish Free Loan Association is offering interest-free student loans to qualified individuals for tuition, books and supplies, and living expenses. Applicants must have completed a minimum of one year of undergraduate study and have a 2.5 GPA or above. For further information, please contact the Jewish Free Loan Association at (213) 761-8830 or (818) 464-3331.

The John Gyles Education Fund is offering scholarship awards up to \$3,000 for the 1999-2000 academic year. Applicants must be Canadian or U.S. Citizens, have a 2.7 GPA or above, and demonstrate financial need. Criteria other than strictly academic ability and financial need are considered in the selection process. To obtain an application, send a self-addressed, stamped envelope to: The John Gyles Education Fund, Attention: The Secretary, P.O. Box 4808, 712 Riverside Drive, Fredericton, New Brunswick, Canada E3B 5G4. Filing dates for mailing documents in 1999 are April 1, June 1, and November 15.

The Measurement Science Conference (MSC) has established fund to grant scholarships to students in an Engineering or Science or Quality Assurance degree program. The scholarship program places emphasis on papers or projects that discuss the advancement of measurement science technology. Applicants must be U.S. Citizens, have an overall grade point average of 3.2 or higher, completed at least 24 units of upper division courses in Engineering or Science degree or five courses in a Masters Degree Program in Quality Assurance. Current members of the MCS Committee are ineligible for this scholarship award. Also, applicants must be able to attend the Measurement Science Conference luncheon held on January 20, 1999, at the Disneyland Convention Center in Anaheim, California. Applications are available in the Financial Aid Office. For further information you may contact: Rick Careyette, MSC scholarships Chairperson, Teledyne Electronics Technologies, Marina del Rey Facility, 12964 Panama Street, Los Angeles, CA 90066-6534. Entries must be submitted by Nov. 26, 1999.

Students and faculty are invited to submit proposals to the **National Collegiate Inventors and Innovators Alliance**

(NCIIA) by December 15 to fund student projects and faculty courses and programs that enable students to pursue the development and steps leading to commercialization of their innovations. Two types of NCIIA grants are offered: Advanced grants of up to \$20,000 to student innovators provide support for the development of new products and technologies with commercial potential and Course and program development grants of up to \$50,000 to faculty to provide support for the creation and operation of classes and programs. Please contact the NCIIA to obtain additional information at www.nciia.org or by phoning Phil Weilerstein, NCIIA Director, at 413-587-2172.

The National Academy for Nuclear Training is offering \$2,500 scholarships to eligible students majoring in nuclear engineering, power generation health physics, or chemical, electrical, or mechanical engineering with nuclear or power options. Applicants must be U.S. citizen or U.S. national, considering a career in the nuclear power industry, minimum GPA of 3.0 as of Jan. 1, 2000, at least one but no more than three academic years of study remaining to graduation, and free of post-college obligations or active military service. Applications are available in the Financial Aid Office. For further information you may contact: National Academy for Nuclear Training Scholarship Program, 700 Galleria Parkway, Atlanta, GA 30339-5957 or via e-mail at nanteap@inpo.org. Entries must be submitted to the Financial Aid Office by Jan. 29, 2000

Glamour Magazine's 2000 top ten college women competition has begun. This competition recognizes the exceptional achievements and academic excellence of female college juniors from across the country. It's an ideal opportunity for talented students to be rewarded for their leadership roles on campus and in the greater community. Winners receive \$1000, coverage in the October issue, and the opportunity to meet with top professionals in their field, usually during a few-day stay in the New York City. The competition is open to all full-time juniors regardless of major or GPA. All entries must be postmarked by Jan 31, 2000. Contact the Dean of Student Office, 102 Parsons-Gates, for the application.

The Elie Wiesel Foundation for Humanity announces the Elie Weisel Prize in Ethics Essay Contest 2000, a contest designed to challenge college students to analyze urgent ethical issues confronting them in today's complex world. Juniors and seniors are encouraged to compete for awards of up to \$5,000. Information is at www.eliewiesel.org, or call 212-490-7777.

To submit an event for the Mints, contact mints@tech.caltech.edu or mail your announcement to Caltech 40-58 Attn: Mints. Submissions should be brief and concise. Email is preferred. The editors reserve the right to edit and abridge all material. Deadline is noon Wednesday. Unless specified, all mints will run for two weeks.

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