

Construct Quake Maps Caltech Researchers

[CNB]—A Caltech seismologist has produced the first earthquake hazard maps of the state of California based on the geologic record of prehistoric earthquakes that occurred as far back as 100,000 years ago. Previous maps have been based principally on the historic quake record, a record that is at best complete for only the last century or so.

Steven G. Wesnousky, who did the work as a postdoctoral research fellow at Caltech's Seismological Laboratory, will publish his results in the November issue of the *Journal of Geophysical Research*. An account of his research also appears in the September issue of *Engineering and Science* magazine. Wesnousky is now at the Tennessee Earthquake Information Center at Memphis State University.

According to Wesnousky, the maps may prove useful in deciding where to concentrate seismic instrumentation and efforts to mitigate earthquake hazard.

Wesnousky's research shows that the communities most at risk lie along the San Andreas and San Jacinto faults. Although two of the most highly populated areas of the state—the Los Angeles and Ventura basins—are *not* traversed by such major faults, they are shot through with a myriad of lesser faults. These faults are subject to only moderate slip rates, but there are so many of them that the hazard in these regions is relatively high.

In constructing these maps, Wesnousky had to determine both the magnitude and the rate of occurrence of earthquakes that rocked the state well before there were any human observers. To determine magnitude, he relied on the observed relationship between the size of modern earthquakes and the length of the ruptures they produce along faults. The larger the earthquake, the longer its fault rupture, so by collecting information on fault length, Wesnousky is able to determine quake magnitude.

Wesnousky obtains estimates of the rate of occurrence of prehistoric earthquakes using data derived from two different sources—a direct method and an indirect one. In the direct method,

researchers examine sediments that were ruptured by a fault. When the ages of those sediments are known, investigators can often determine when prehistoric earthquakes have occurred.

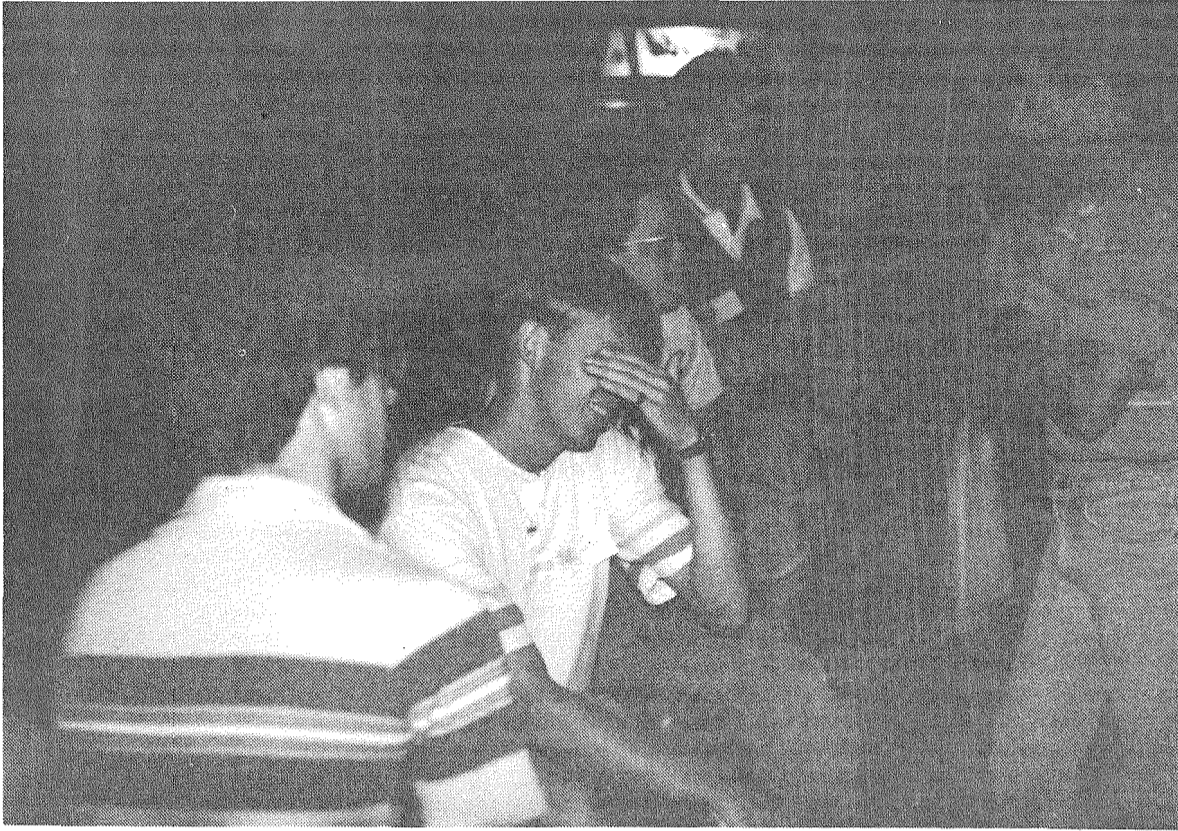
In the indirect method, researchers look for rock formations on either side of a fault that were once adjacent but have become separated by a succession of earthquakes over the eons. By determining the age of the formations and the degree of separation, investigators can compute the "slip rate" of the fault. This is a measure of the average rate of strain accumulation on the fault, and from this it's possible to determine how often strain-relieving earthquakes must have occurred.

With this information in hand, Wesnousky constructed a series of California maps detailing different aspects of earthquake hazard. One shows the number of faults in a given area that might be expected to produce damaging earthquakes. Another shows how frequently, on average, severe shaking can be expected. Still another series of maps shows where in California severe shaking is most likely during any random 50-year period.

In the accompanying map all these data have been combined with information on recent quakes. This map shows the estimated probability that mapped on-shore faults will produce damaging earthquakes during the next fifty years.

While the map highlights areas of high hazard, other areas of high hazard may yet remain unrecognized. An area can appear to be a low-risk area for two reasons: either the risk really is low, or there simply haven't been enough geological data collected there to determine the actual risk.

But this lack of data can be remedied. Says Wesnousky, "I think the primary result of this work is that it provides a framework for taking an active approach toward assessing seismic hazard. Rather than waiting until an earthquake occurs to modify our understanding of seismic hazard, we can look for faults and the features associated with them and gather information about slip rates and prehistoric earthquakes."



"What's your favorite shoe size?" Another frosh breaks under the hideous ordeal of upperclass questions.

Rotation 1986



President Sam Weaver welcomes Shubber the Nerd (note Hat of Ridicule) to Ricketts House festivities.

Commentary: A Frosh View of Life At Caltech...So Far

by Amanda Heaton
and Shubber Ali

Welcome to Tech? Arrive at 12 o'clock on Wednesday, registration from 1 to 4, dinner (find an upperclassman, but be *sure* to pay your own way), sleep (if you can make up a bed with two sheets and a pillowcase), and catch the bus by 7am Thursday morning. Three days of the infamous "Frosh Camp" and we were all set; except, of course, for the week of Rotation that followed.

Despite these hazards, most of the freshmen have survived. Camp provided several benefits. Firstly, those of us who tried made a good headstart on meeting the upperclassmen, fulfilling some of our rotation duties. Introductory speeches showed at least the rudiments of survival. And after the food on Catalina Island, BC doesn't seem to stand for the prehistoric age, and we've actually enjoyed our first week of this gourmet fare (when liberally

seasoned with "sparkling apple cider.")

For those of you who are starting to wonder about whether you should be here, it's too late! Stanford, MIT, and all those other "institutions of (lower) learning" don't want you anymore! But don't worry...73 units a term never hurt anybody—well, at least not the Health Center. If the course load doesn't kill you, however, the "low" textbook prices might. Although a few of the costs are justifiable, the price of the Bible *has* gone up, and thirty dollar paperbacks can be hard on the pocketbook.

But what really bothers us? Camp? Classes? Textbook costs? No. The true test of a freshman's stamina is Rotation; or, more specifically, the original questions we hear from each upperclassman:

"Hi, where are you from? What are you interested in? Why did you come to Caltech? What are you looking for in a house? What is your favorite (color/subject/water-

fowl/Bulgarian folkdance?) Would you rather shave your head or eat a gallon of Cool-Whip in one sitting?"

(At this point the upperclassman stumbles off, overwhelmed by the quality information you have imparted him...)

But giving credit where credit is due, we would like to thank the following houses... (And include some much needed information for



the other freshmen, as none of the upperclassmen can say anything.):

To Ruddock, for their creative use of the visual medium and extreme use of the "in the past" clause, and the (almost perfect) music that accompanied it.

To Ricketts, for their never-ending games of four-court (oh, four-square, sorry) where even innocent bystanders are part of the

game (yes, I'm a wall; oh, you object to my helping the other teams? no, that's ok, I like being a wall. where's the beer?)

To Page, for Clea, sports and bridge games, and for diversity in spite of adversity.

To Lloyd, for TROPICALLY and Valhalla, for an atmosphere where it is possible to work, and for having been the noisiest of the North Houses at dinner with the least alcohol.

To Fleming, for its comradie, napkin fights, and spirit; for the "Men are Men, Giants walk the Earth, and the Thundering Herd is real..."

To Dabney, for their hot-tub, graffiti (may it never die), intolerance of intolerance, and hand-dipped parking walls.

To Blacker, for its general insanity and great bar—(what is that thing, Nancy?)

[Please note—the above comments were written by freshmen, contain only facts, and

are not intended to be derogatory. The houses were listed in reverse alphabetical order] If you haven't yet picked a house, pay close attention at dinner tonight—tomorrow's the day of reckoning.

Of course, the final day of reckoning comes over two months from now, when we take our first college finals. Along the way, however, we do have options. Add some classes: Pa 15, for example, is worth 3 units of credit, and it only requires 176 hours of work each week. Participating in sports gives both PE credit and pain. And for the less unit-inclined, Caltech has opportunities to participate in ASCIT movies, bridge games, guitar classes, and a variety of other clubs. Remember, it's your money, and your time. And if you spend enough of it, UASH might even let you flame out more than once!!

Photo by Shubber Ali

Photo by Josh Kurutz and Shubber's camera

ENTERTAINMENT

Record Review Woodentops: Giants of Pop

by Peter Alfke

**Giant
The Woodentops
Rough Trade/Columbia**

I have been accused of listening to a lot of weird music, and these accusations are probably true. Let me state right off, then, that the Woodentops do *not* fall into this category. My tastes find room for the Beatles, the Stones, the (English) Beat, and of course XTC, and it is within this rough category that the Woodentops fall. *Giant* is a pop masterpiece that deserves to sell millions of copies. It won't, of course, and there's a story behind that, which I'll get to in a bit.

The word "pop" means many things, so let me clarify that the brand of pop the Woodentops practice is one that looks back to the '60s; not psychedelic, mind you, but a hook-laden, tuneful guitar-based rock music exemplified by the Beatles' middle period. That the Woodentops' music encourages such comparisons does not mean that they are as seriously retro as, say, the current bands of the "paisley underground", but merely that they pick up on the *feel*, the *spirit* of such music, and to an extent the sound inasmuch as the two are linked.

Yes, *Giant* consists of intelligent, happy, hummable music. The Woodentops have a keyboard player, but synthesizers are not a primary feature of this music. The Woodentops have a guitar player, but crash-and-burn feedback *a la* the Jesus and Mary Chain or (god forbid) Boston is almost invisible. The Woodentops use some horns, some strings, and even accordion on their album, but their music is never sappy. (The well developed smarm detector in the pit of my stomach was never once turned.) At a time when so much of the best current rock music is lyrically rather bleak and depressing, it's nice to see that good use can still be made of the lighter emotions.

Take a listen. The album starts with the knockout punch of "Get It On," "Good Thing," and "Give It Time," three of the best and most exhilarating pop songs of recent years. "Get It On" opens with acoustic guitar, brings in a sweep of that classic '60s organ sound, and has you hooked by the time the bass and drums tumble in, accompanied by maracas (you remember

maracas, they're what Davy of the Monkees played). The rhythm is fast and two-beat, accentuated by the bassline. Singer Rolo exhorts us to "get up, fall down, mess around," his voice in counterpoint with bits of xylophone, strings burst in on the choruses... there's even some buzzsaw electric guitar halfway through that in its brief foray sidesteps every hard-rock cliché. Did I say exhilarating? Like the best XTC songs, it's virtually impossible to listen to without moving along, tapping your fingers or toes if not getting up and dancing, which is after all part of what pop music's about.

"Good Thing," like the other songs on the album, remains true to the manifesto of sound declared by "Get It On"; it is, however, less frantic, a bit softer in tone, acoustic through most of its length with wonderful guitar bits and a truly lovely acoustic solo, before building to a climax featuring what on close inspection turns out to be an unexpected feedback screech straight out of recent King Crimson.

These unexpected touches are quite typical of the Woodentops. Contemporary pop music that rejects "Rock-of-the-80s" digital technology while simultaneously staying out of the ghettos of '60s revivalism and back-to-rockabilly rootsiness, is rare indeed; the Smiths are perhaps the Woodentops' best-known neighbors in this regard. And for a band to use lots of acoustic guitar, maracas, xylophone, and for god's sake *strings*, and not only pull it off but also fit in shards of fuzzi-boxed electric guitar... we're looking at serious talent here, campers. (And I haven't even mentioned the groovy electric sitar on "Love Affair With Everyday Living"!)

And of course there's Rolo's voice. It's entirely pleasant without dazzling you with prowess (if you need the latter, put on some Kate Bush), and what's most important is the sense of fun: it's obvious that Rolo is having a great time singing these songs, and yet his ever-so-slightly ironic tone assures you that he realizes they're just pop tunes unladen with terribly artistic profundity. His voice is an absolutely essential part of the mood created. I haven't made a big deal about the lyrics; they're in no way

bad, but not really worthy of quotation and analysis. (There's also no lyric sheet, and I haven't deciphered too many of the words yet.)

It's essential in erudite rock criticism to bring up references and comparisons to other groups, the more obscure the better. I'll limit myself to three: first, the overall air of manic quirkiness marks the Woodentops—in my eyes at least—as spiritual brethren of the early XTC. Their instrumental sound is perhaps closest to Lloyd Cole and the Comotions (remember "Perfect Skin" from a few years back?), and Rolo's voice and tone remind me of the Jazz Butcher, another great current English band that may or may not make a mark on these shores.

Giant is a great album, my favorite of the year so far. You have probably not heard of it before, but that's not the music's fault. If intelligent, upbeat pop music agrees with your tastes, I enthusiastically recommend the album to you; you can pick it up at most better record stores. That's the good news.

Now we move from criticism into industrial politics. The Woodentops, and their fans, are being screwed over by the forces of evil, represented here by CBS records. The Woodentops are from England, where they have achieved popularity and critical acclaim and an U.S. deal with CBS. *Giant* was released early this summer, but CBS in its infinite marketing wisdom decided to hold off releasing it in the U.S. until only a month ago, well after the group's U.S. tour. Fine, you say. The people who heard of or saw the Woodentops could just find the record as a British import. After all, that's how groups as big as the Police, the Cure, Depeche Mode and Duran Duran were first heard of over here.

But that's not what happened. CBS saw small importers bringing Woodentops singles and albums into the country, and saw small quantities of these records being sold at trendy record stores to people who couldn't wait for CBS to get around to releasing *Giant*. CBS saw tiny fractions of a percent being chipped out of its massive profit margins. CBS slapped a lawsuit upon those who would dare to im-

port records by groups with whom CBS had U.S. contracts.

The result? The importers couldn't afford to challenge CBS and backed down. No one could find *Giant* (I spent a month looking for it) until CBS released it. The momentum that could have been started by the tour wasn't, for this reason, and now CBS is doing little or nothing to promote the record.

What's more, it should now be impossible to find imports by other CBS groups like the Psychedelic Furs. If other major U.S. labels follow suit, it may become equally impossible to find imports by

any foreign group with a U.S. major-label deal, and eventually perhaps any imports at all, which would have a crippling effect on the spread of music into this country from the rest of the world. Aren't trade sanctions wonderful?

End of digression. In one sense, there is a happy ending, for you can walk up to your favorite record vendor, say, "Sir, please sell me a copy of the Woodentops' fine album, *Giant*," and walk out with one of the best albums of the year. I heartily recommend you do so; such free trade may not remain possible for very much longer.

Film Review Gotta Have It

by Josh Kurutz

**She's Gotta Have It
Island Pictures**

Writer/director/actor Spike Lee cooked up one of the best films of the year when he made *She's Gotta Have It*. The movie is rich in a rare pizzazz that engrosses the audience with energy, humor, and honesty.

The show is billed as "a seriously sexy comedy," and lives up very well to those expectations. It takes a hard look at black relationships and reveals several truths that could be considered universal. At the same time, it is filled with some of the freshest humor today. (It doesn't even insult your intelligence!)

Nola Darling, played by Tracy Camilla Johns, is the central figure of the story. She is in love with three men: Mars Blackmon (Spike Lee), Jamie Overstreet (Redmond Hicks), and Greer Childs (John Canada Terrell). She feels that she should be able to have relationships with all of them since it is socially acceptable for a man to see many women. The conflict arises when each of the men makes it clear that he wants her for himself.

Lee justifies Nola's position in many ways. For example, each of the men represents a part of a whole that Nola rightfully seeks to have. One reviewer accurately described the male leads as "Mr. Good-time (Mars), Mr. Commitment (Jamie), and Mr. Handsome and Successful (Greer)."

The film is as much about the ways the men deal with their predicament as Nola's fight for her

rights. Greer egotistically places himself above the others; Jamie offers commitment and intolerance for its non-reciprocation; Mars eventually agrees to partially accept Nola's demands. ("Tell you what, Jamie...you get Nola four days a week, I'll get her three." Jamie responds: "That's mighty black of you.")

Most of the humor in the movie comes from Mars, a man who refuses to take off his expensive high-tops for anything or anyone. This fast-talking cyclist would be considered off-beat if he didn't have so much beat to him. Nearly everything he says has a rhythm, such as his semi-famous deadpan, "Please, baby; please, baby; please, baby; baby, baby, please!"

Some of this character's comedy derives from the stories he tells, like "How I got Jesse Jackson to run for president," and "About when I was a superhero." A large part of Mars' funniness results from his forthright honesty. At one point, the audience is confronted with Jamie's mediocre poetry; the scene is followed up by Mars reflecting the audience's thought, "That's the worst piece of crap I ever heard!"

The very fact that *She's Gotta Have It* made it to the screen is a great achievement. It was shot in twelve days around New York and had a budget of less than \$200,000. This is quite an accomplishment considering the money used by other movies - \$32 million for *Legal Eagles*, for example. The success means still more to Lee,

continued on page 5



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OLIVER? DID YOUR MOTHER TAKE MY CAR?
I TELEPORTED IT, DAD.

YOU TELEPORTED MY NEW JAGUAR XJS TO WHERE?
THE OTHER SIDE OF THE GARAGE.

IT'S NOT THERE!!
IT IS TRUE THAT THERE WAS AN UNFORTUNATE MISCALCULATION.

OLIVER... WHERE?
ORBITING PLUTO, I THINK.

MILO... THERE'S A PROBLEM. I TELEPORTED MYSELF ACROSS THE LAB TODAY.
SO?

BILL THE CAT WAS HIDING SOMEWHERE IN THE TELEPORTER SMOKING A CIGARETTE...

I THINK OUR DNA MOLECULES WERE MIXED. I'M AFRAID I'M SLOWLY TURNING INTO A CAT.
GOOD HEAVENS... WHAT'S HAPPENING TO BILL?

ONE COPY OF "EBONY," PLEASE.

OLIVER! HOW DID BILL THE CAT GET INTO THE TELEPORTER WITH YOU?
IT'S MOOT. WE NOW SHARE DNA. ACTUALLY THE NOTION OF BECOMING A CAT INTRIGUES ME.

YEAH? DOES SCRATCHING AT FLEAS INTRIGUE YOU? DOES--
WHAT'S WRONG?
I... ER...

ACK

HOW CAN I HELP?
QUICK! TENDER VITLES!

DAD, DID WE NEED TO HAVE A FATHER/SON CHAT.
DAD, YOUR BOY IS NOT GOING TO BECOME A STAR HALFBACK FOR THE DENVER BRONCOS. HE IS, HOWEVER, GOING TO BECOME A CAT.

DAD?... DID YOU HEAR ME?
I KNOW, DAD, BUT WE'RE ON TO A NEW CRISIS. I NEED KITTY LITTER IN THE BATHTUB...

IT'S HAPPENED! OLIVER HAS COMPLETELY TURNED INTO A CAT!
ACK! ACK! ACK!
ACK!

AAIGH!!

HMM. I'M NOT A CAT AFTER ALL. IT WAS ALL JUST A HORRIBLE DREAM.
NOW, IF THIS WAS "THE TWILIGHT ZONE," THERE'D BE A STARTLING TWIST ENDING TO ALL THIS.

OLIVER, I HAD SOME TROUBLE WITH YOUR TELEPORTER THIS MORNING.
MY JAGUAR XJS IS ORBITING PLUTO.

WELL... I'M GLAD YOU CAN SLEEP. GOOD GOSH... THE CAT IS GONNA BE THIRTY SOON...

...DON'T YOU THINK IT'S HIGH TIME MICHAEL JACKSON WENT ON A DATE?
GO ON.

HERE IS THE OFFICE OF THE NEW CARTOONIST OF THE "BLOOM PICAYUNE." HIS NEW COMIC STRIP STARTED TODAY...

UNFORTUNATELY TODAY'S STRIP INCLUDED THE WORD "FRIT" WHICH MANY CARTOONISTS DON'T REALIZE IS A RACIAL SLUR TO MOST TAHITIANS.

THE "TAHITIAN DEFENSE LEAGUE" IS OUTSIDE THE BUILDING PICKETING AND GETTING RILED UP. ONE MIGHT WONDER WHETHER THE CARTOONIST IS AWARE OF THIS.

...AGAIN, ONE MIGHT WONDER WHETHER THE CARTOONIST--
HE IS AND A STATEMENT IS BEING PREPARED.

TELL THEM I'M INDISPOSED.
YOU TELL THEM YOU DREW THE CARTOON.

I DIDN'T MEAN TO INSULT THEM WITH A RACIAL SLUR. THEY'RE VERY FORGIVING.

THEY'RE THE AMERICAN PUBLIC... THEY'RE VERY FORGIVING.

THEY'RE HAVING A CAMP FIRE!
THEY'RE BURNING YOU IN EFFIGY.

GET BACK OUT THERE!!
I'M VERY INDISPOSED.

OPUS... IT'S 4 a.m.
I... I THINK I FINALLY GOT IT...

ANOTHER NEW COMIC STRIP?
I THINK THIS IS THE BIG ONE.

"GOOFY GILBERT..."
SIGH... IT'S ABOUT AN OVERWEIGHT BUT LOVABLE SMART ALECK.

HE'S A SLUG?
WHADDYA WANT? CATS HAVE BEEN DONE!

MILO... I DON'T LIKE THE EXPRESSION ON YOUR FACE...
UH... THE LAWYERS WOULD LIKE TO DISCUSS THE CARTOON YOU SUBMITTED FOR TOMORROW.

LAWYERS? NOT THE LAWYERS!! PLEASE, GOD, NOT THE LAWYERS!!

YEEK!

-LEGAL DEPT.-
ABANDON ALL HOPE YE WHO ENTER HERE!

UH... YOU CALLED YOUR ROYAL LAWYERSHIPS?

YES. APPARENTLY YOUR CARTOON REFERS TO TED KOPPEL WEARING WOMEN'S UNDERWEAR.
IT WAS A LITTLE JOKE.

WE WOULDN'T WANT TO USSET MR. KOPPEL INTO A LAWSUIT WOULD WE? FORK IT OVER.

PLEASE DO NOT FEED LAWYERS RAW MEAT.

UH...

WE'LL JUST CLEAN IT UP A LITTLE.
YOU'RE DRIPPING SLIME ON IT.

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ENTERTAINMENT

Book Review

A Future That Never Was

by Nick Smith

Futuredays
A Nineteenth Century View of the Year 2000.

Text by Isaac Asimov
Illustrations by Jean Marc Côté
Holt, Rinehart, \$12.95

Even as you are reading this, Isaac Asimov is probably finishing another book. It may be on history, philosophy, science, theology, a mystery, or even another science fiction novel. Whatever the subject, rest assured, he is probably writing, and almost as fast as you are reading this review.

Futuredays, Asimov's 337th book (we think), is a mixture of several of the fields named above. The illustrations are a collection done in 1899, commissioned by a French cigarette company. They were part of a series that was to be distributed as cigarette cards (the forerunner of the bubble gum cards you know and love). Unfortunately, the company went out of business before the series was complete, so only these fifty survive.

What Asimov has done is provide a running commentary that links the pieces together, providing a historical perspective for these odd views of the then-distant future.

Côté's illustrations show such things as helicopters, armed dirigibles, dictating machines, audio language labs, military armored cars, ultra-light aircraft, scuba gear, mobile homes, high-speed electric trains, aerial smuggling, hydroplanes, and automatic chicken incubators. Of course, he also portrayed such things as underwater croquet and efficient mail service, but nobody's right all the time.

The whole point of *Futuredays* is that it's fun to take a look at the future, and instructive to take a look at the past's view of the present, or in this case the near future. Côté showed considerable foresight, and most of the things he failed to foresee were things that involved major breakthroughs that changed the physical forms of the items he sought to portray. For in-

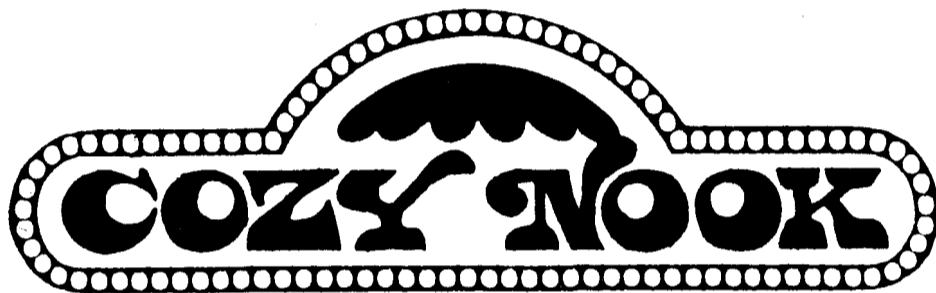
stance, he thought that news would be listened to at home, rather than read from a newspaper, but he did not foresee radio and television, so he had "newspapers" delivered in the form of records, to play on the record player.

Some of the illustrations are deliberately whimsical, such as scuba-divers coming to the surface to fish for seagulls, or other underwater dwellers being transported by whale-bus. Overall, though, the drawings provide some interesting looks at the year 2000, and many of the things predicted have come to pass.

Futuredays is a fun book, and Asimov's commentaries help fill in any gaps in the reader's knowledge of the contexts. I recommend it to anyone who likes Jules Verne or other futurist science fiction of the past. I also recommend it to anyone who wants to look into our own future, since it presents some good examples of technical extrapolation and outright dreaming.



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Subs

Frozen Yogurt

Public events a-plenty! Friday, Queen Ida and the Bon Temps Zydeco Band will perform Cajun folk music. Saturday, the Berkeley Shakespeare Festival presents Shakespeare's *The Tempest* in a Caribbean interpretation.

And Thursday, back by popular demand, those masters of comedy, magic and awesome juggling: The Flying Karamazov Brothers! An event not to be missed.

All these events take place at 8PM. Student tickets are \$7.50 (\$10 for the Bros.), available from the Ticket Office. Have Fun!

Gotta Have It
from page 3

who is fresh out of film school, because the film is not only critically acclaimed, but is also breaking box office records in New York and is currently selling out in West L.A.

Lee has expressed the hope that his film has opened the door for many young, struggling filmmakers who were under the impression that they required millions of dollars to put a movie together. Lee has directed this message primarily to black directors and producers and appears to want to set an example for black youth in general. *She's Gotta Have It* is laden with black messages; the production company is Forty Acres and a Mule Productions; there are many insults to the Boston Celtics, a predominantly white team; the show starts with a series of photographs of blacks in ghettos.

Sometimes audiences can be deceived by the show. Many people go in expecting strictly a comedy and wind up laughing during serious scenes, such as one involving rape. Others miss the central point of the work - that Nola is not a freak, but a normal woman - and leave the theater saying, "What a nympho!" A couple of hints for the moviegoer are 1) let the show convey what it intends to and not to make premature judgements, and 2) ignore the color dance scene in the middle of the movie - it has no importance and is rather boring.

By no means is this a perfect movie. The flaws, however, are superficial, and can almost involuntarily be overlooked. Spike Lee is a name to look out for; future movies by him should also be "must-sees."

She's Gotta Have It will start its engagement at the Colorado Theatre (within quick driving or half-hour walking distance) tonight and will probably be showing there for a long time to come.

CALTECH
public events

MAGIC MOMENTS

Enchanting Excursions into the Realm of Entertainment

<p>QUEEN IDA and The Bon Temps Zydeco Band Friday, October 3, 1986/8 p.m. Beckman Auditorium \$15.00-12.50-10.00</p> <p>Exotic rhythms are the foundation of the bewitching sound of Zydeco. Reggae out of Jamaica and calypso from Trinidad, country and western swing are woven with Dixieland jazz, blues, rock and a Latin pulse into a provocative zigzag beat against driving Acadian-French melodies. Queen Ida is the first female band leader in the zydeco tradition, but she is the spiritual descendant of the great female Blues artists of the '20s and '30s.</p>	<p>BERKELEY SHAKESPEARE FESTIVAL "The Tempest" Saturday, October 4, 1986/8 p.m. Beckman Auditorium \$15.00-12.50-10.00</p> <p>Banished to an enchanted Caribbean island, the Duke of Milan weaves magic spells over his shipwrecked enemies, his innocent daughter and a fascinating assortment of buffoons, beasts and spirits in Shakespeare's final magnificent fantasy. Colorful masks, puppets and an original score add special touches to this immortal tale of exile, anger and forgiveness. Made possible, in part, with the support of the California Arts Council.</p>	<p>FLYING KARAMAZOV BROTHERS Juggling and Cheap Theatrics Thursday, October 9, 1986/8 p.m. Beckman Auditorium \$20.00-17.50-15.00</p> <p>Five very different brothers work together to create real magic; not the trick kind, but their own kind of mad juggling magic where no illusion is involved. Fire and fear, joy and merriment are guaranteed fun in this comedy meltdown for the whole family, mixed with music you have to see to believe. Not only that, but the Brothers will demonstrate their considerable skill in the very difficult art of spoken mime.</p>	<p>BURL IVES Saturday, October 11, 1986/8 p.m. Beckman Auditorium \$22.50-20.00-17.50</p> <p>With his twinkly blue eyes, gray-white beard and mellow sound, America's master of folk song leads a spellbinding pilgrimage through the rich realm of balladry. His pure, gentle voice and guitar have made Burl Ives a legend in his own time. This familiar and beloved image of American popular life will bring back memories in an evening of family entertainment.</p>	<p>COMPAGNIE CLAUDE BEAUCLAIR "Le Misanthrope" Saturday, October 18, 1986/8 p.m. Beckman Auditorium \$12.50-10.00-7.50</p> <p>Experience the unforgettable magic of Molière's comedy, performed entirely in the 17th century classical style and in French. This remarkable company from France transcends language to bring you the essence of this classic tale.</p>	<p>DICK CARY BIG BAND with Tommy Newsom Saturday, October 25, 1986/8 p.m. Beckman Auditorium \$12.50-10.00-7.50</p> <p>Relive the captivating big band days with the musicians who made them. Dick Cary has joined artists from the bands of Glenn Miller, Lionel Hampton, Benny Goodman, Alvino Rey and Bob Crosby for a mesmerizing night of nostalgia, jazz and original music.</p>
<p>ANNA RUSSELL In her Pasadena Farewell Performance Saturday, November 1, 1986/8 p.m. Beckman Auditorium \$22.50-20.00-17.50</p> <p>Described as the "world's funniest woman," Anna Russell is the prima donna of parody, an offbeat phenomenon who eludes conventional description. She combines in one statuesque person Brunnhilde's presence and Mime's mockery. Musical history is starred with great Wagnerian sopranos, but only she can give "The Ring" that zing. She'll leave you spell-struck!</p>	<p>THE MOVING PICTURE MIME SHOW "Passionate Leave" Friday, November 14, 1986/8 p.m. Beckman Auditorium \$15.00-12.50-10.00</p> <p>A living comic strip in the style of commedia dell'arte, "Passionate Leave" is the enchanting tale of an ordinary Englishman abroad. On vacation at a small Italian resort, Morris Traveller discovers a new passion for life and the need to keep a tight hold on his wallet. The Moving Picture Mime Show's portrayal of characters and inanimate objects is vivid, versatile and outlandishly funny.</p>	<p>THE NEW CHRISTY MINSTRELS' CHRISTMAS SHOW Friday, December 12, 1986/8 p.m. Beckman Auditorium \$17.50-15.00-12.50</p> <p>Take a break from the hustle and bustle of the holiday season and revel in the spirit of Christmas with the New Christy Minstrels. Join these electrifying young musicians as they bring their inimitable singing style to holiday favorites. Their infectious vitality will bring tidings of good cheer, comfort and joy to your holiday season.</p>	<p>EMANUIL SHEYNKMAN Balalaikist Saturday, January 17, 1987/8 p.m. Beckman Auditorium \$15.00-12.50-10.00</p> <p>Whether performing in recital or as soloist with orchestra, Emanuil Sheynkman is dazzling. Drawing upon such diverse sources of repertoire as Russian folk music, Beethoven sonatas and even Scott Joplin rags, Mr. Sheynkman's outstanding technical and interpretive skills are sure to amaze you.</p>	<p>MORCA DANCE THEATRE Saturday, January 24, 1987/8 p.m. Beckman Auditorium \$15.00-12.50-10.00</p> <p>You'll marvel at this extraordinary company, which exemplifies Flamenco, the art, music, song and dance of Southern Spain. Over the centuries this area has been the melting pot of many fascinating and exciting peoples who have blended their cultural and artistic heritages into one of the most unique art forms in the world.</p>	<p>TAPESTRY Rella Lossy, Actress Judith Nelson, Soprano Anna Carol Dudley, Soprano Laurette Goldberg, Harpsichord Saturday, January 31, 1987/8 p.m. Ramo Auditorium \$15.00</p> <p>Capturing the spirit of the 16th and 17th centuries in a series of deft, dramatic scenes, Tapestry fuses song, drama and music in a magnificent blending of setting and artistry. A humorous look at an opulent century abundant with excess, grandeur and passion.</p>
<p>TANNAHILL WEAVERS Thursday, February 5, 1987/8 p.m. Beckman Auditorium \$12.50-10.00-7.50</p> <p>Since first turning their acoustical excitement loose on the United States, Scotland's Tannahill Weavers have performed their unique and charming combination of traditional melodies on pipes and flute, and driving rhythms on guitar and bouzouki, to electrifying effect.</p>	<p>JULIE HARRIS "Brontë—A Solo Portrait of Charlotte Brontë" Saturday, February 7, 1987/8 p.m. Beckman Auditorium \$20.00-17.50-15.00</p> <p>Julie Harris delicately explores the loneliness, humor, tragedy and irony of Charlotte Brontë's life. The haunting author of "Jane Eyre" proves to be an intriguingly multifaceted personality, every component of which Harris portrays beautifully.</p>	<p>DUKES OF DIXIELAND Friday, February 13, 1987/8 p.m. Beckman Auditorium \$17.50-15.00-12.50</p> <p>A rousing celebration of New Orleans music that's sure to astound you. For over three decades the Dukes of Dixieland have been renewing this tradition with their distinctive blend of traditional dixieland, blues, pop and innovative jazz stylings. "These cats can jam!"</p>	<p>CLEO LAINE and JOHN DANKWORTH and the Dankworth Quartet Saturday, February 21, 1987/8 p.m. Beckman Auditorium \$22.50-20.00-17.50</p> <p>Cleo Laine sizzles on stage with her captivating four-octave range and crossover style of singing. Complemented by her husband's mastery of the woodwind, her performance of selected pieces from scat impressions to arrangements of Dankworth's film scores is absolute dynamite!</p>	<p>AFRICAN AMERICAN DRAMA COMPANY "High John De Conqueror" Friday, February 27, 1987/8 p.m. Beckman Auditorium \$12.50-10.00-7.50</p> <p>High John was as alive and mystical as any folk hero could be and "walked" from plantation to plantation whenever he was needed by the low in spirit, the downtrodden and the weak. Black history month is celebrated by this accomplished company in a weave of fantasy, music and confrontation that will leave you spellbound.</p>	<p>MR. JACK DANIEL'S ORIGINAL SILVER CORNET BAND "Hometown Homecoming" Saturday, February 28, 1987/8 p.m. Beckman Auditorium \$20.00-17.50-15.00</p> <p>All the enthusiasm of a turn-of-the-century small town brass band is conjured up by some of the finest musicians in the country. The joyous emotions of a family reunion party are recreated around the gazebo bandstand of tiny Lynchburg, Tennessee (pop. 361). If you listen closely you can even hear a distant dog barking and the blacksmith's anvil ringing a final evening cadence.</p>

MISSISSIPPI JAMBALAYA
 Saturday, March 7, 1987/8 p.m.
 Beckman Auditorium
 \$20.00-17.50-15.00
 Come on down to the levee and join us for this all-singing, all-dancing and all-American revue. Relive the excitement along the rivers each time the calliope sounded as the Showboat came to town! This intriguing show combines New Orleans Jazz, Memphis Blues, St. Louis Ragtime and Dixieland with Red Hot Mamas, Riverboat Gamblers and dancing floozies to capture the true spirit and roots of Americana.

SUPERCUSSION with Steven Traugh
 Sunday, March 8, 1987/2 p.m.
 Beckman Auditorium
 Adults \$8.00; children \$5.00
 Steven Traugh's superb band lights up the stage with an exotic array of voices, brass, synthesizers and percussion. Elements of jazz and classical music are woven into tapestries of sound that are imaginative, uplifting and ultimately satisfying experiences. A great "new class" of big band with an entrancing, irresistible Afro-Latin beat.

LIONA BOYD Guitarist
 Friday, March 13, 1987/8 p.m.
 Beckman Auditorium
 \$17.50-15.00-12.50
 Acclaimed throughout the world for her superlative performances on classical guitar, Liona Boyd brings a smooth and singing technique to her playing. This spellbinding young artist has been praised for her "flair for brilliance" and "breathtakingly beautiful playing."

MUSIC AND DANCE FROM LHASA, TIBET
 Tuesday, March 31, 1987/8 p.m.
 Beckman Auditorium
 \$15.00-12.50-10.00
 A taste of the rich culture of this remote area is given by Tibetan opera, unusual musical instruments indigenous to the region and virtuoso tap-like dancing, traditionally performed by men. You'll also experience fascination with the earthy and moving folk singing of Tibet, usually performed by women at festivals. Dressed in authentic costumes, this troupe of seven musicians, dancers and singers performs dances never before seen in the United States.

ANDREA ANDERSON Pianist
 Saturday, April 4, 1987/8 p.m.
 Ramo Auditorium
 \$12.50
 Ms. Anderson's captivating expressiveness at the keyboard continues to delight audiences from Carnegie Hall, New York to the Great Hall of the People, Peking. Her performances are marked by stunning ease, clear projection and considerable sophistication that bring a remarkable energy and sensitivity to the music.

RUTH GOLDEN Soprano
 Saturday, April 11, 1987/8 p.m.
 Ramo Auditorium
 \$12.50
 Ms. Golden displays a maturity and skill beyond her years and an artistry and presence reserved for the very few only. Her stylistic versatility, skill with language and enviably even, fine-grained voice have gained her wide recognition as one of today's enchanting young artists.

HUDSON VAGABOND PUPPETS "Story Theater with Puppets"
 Sunday, April 12, 1987/2 p.m. & 4 p.m.
 Ramo Auditorium
 Adults \$8.00; children \$5.00
 Bring the kids and enjoy amazing puppet wizardry with creatures as tall as 10 feet! Watch the stage burst with excitement as giant puppets frolic in song and dance. Who can resist such favorite tales as The Three Pigs, The Three Bears and Little Red Riding Hood?

LANDIS & COMPANY THEATRE OF MAGIC GREAT VAUDEVILLE MAGIC SHOW
 Saturday, April 25, 1987/8 p.m.
 Beckman Auditorium
 \$17.50-15.00-12.50
 The classical tradition of vaudeville is combined with the most modern magic of today's stage—that's new vaudeville—that's the Great Vaudeville Magic Show. Landis Smith will truly enchant you. His graceful art of illusion will leave you spellbound and full of wonder. And you'll never forget his dazzling classical illusion using modern laser technology. A great evening of entertainment for the whole family.

THE CAMBRIDGE BUSKERS
 Saturday, May 2, 1987/8 p.m.
 Beckman Auditorium
 \$15.00-12.50-10.00
 Michael Copley and Dag Ingram are two English virtuoso musicians. Starting their musical careers on the street, they have developed a most startling and nutty show that uses an accordion plus twenty other wind instruments. It's a hilarious show you won't want to miss.

PETER MACK Pianist
 Saturday, May 9, 1987/8 p.m.
 Ramo Auditorium
 \$12.50
 Hear a mesmerizing performance by one of the most promising young pianists on the musical scene today. First place winner of the 1985 Sherman Clay Piano Competition. Peter Mack has concertized throughout Europe and Canada, gathering for himself an international following. Don't miss this Los Angeles debut!

CALTECH/JPL FACULTY & STAFF TECHTIX 1/2 PRICE TICKETS
 Now you can purchase tickets at 1/2 price the day of the show or on Friday for weekend events by visiting the Ticket Office in person between noon and 4:30 p.m. Your discount of \$2.00 off still applies to advance single ticket sales. Limit 2 tickets per CALTECH/JPL I.D. Subject to availability.
CALTECH STUDENTS
 You can purchase tickets in advance for 1/2 price or rush tickets at \$6.00 each 1/2 hour before the show. Subject to availability.
 These discounts apply only to events on this page.
 For INFORMATION, call the TICKET OFFICE on extension 4652.

THE MYSTERIOUS WORLD OF MAGIC AND ILLUSION
 Produced and directed by Chuck Burnes
 Saturday, May 30, 1987/2 p.m. & 8 p.m.
 Beckman Auditorium
 Matinee: Adults \$8.00; children \$5.00
 Evening: \$12.50-10.00-7.50
 Adults and children alike will love this imaginative show of magical tricks and illusions performed by some of the best magicians around. Astounding and mystifying feats of legerdemain and sleight of hand promise to make this an unforgettable event.

THE ROYAL LICHTENSTEIN QUARTER RING SIDEWALK CIRCUS
 Saturday, May 30, 1987/3:30 p.m.
 Ramo Auditorium
 Adults \$8.00; children \$5.00
 An action-packed, lightning-paced potpourri of magic, juggling, mime, storytelling, small animal acts, funambulism, comedy and clowns. It's the world's smallest complete circus, a total entertainment experience.



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Signature **X** _____
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SPORTS

Water Polo Tops .500

-Bruno Recovers From Bout With Water Foul

by Skip Schotte

The past three weeks have seen the beginning of yet another year of water polo. This year's team is composed mainly of returning players, with a few frosh beginning to make their mark. After losing the first two games to UC Riverside and Redlands, the team has come back to achieve a 4-3 record,

surprising both ourselves and the coach.

The first victory came against Dominican College (from somewhere up north). The game was well out of reach as soon as the first half had ended, and almost everyone got lots of playing time.

Our next game was against PCC, whom we defeated last year.

After three quarters we were down by only two goals in a very close battle. But in the last quarter, the swimmers from PCC out-lasted us and out-scored us 9-1 to insure their victory.

Our next two games were somewhat easy victories over Chaffey and Rio Hondo J.C.'s. Following this 3-3 pre-season,

many of us ventured to Frosh Camp where even Warren Emery was kind enough to join in a passing drill. (Boy does he look great in a Speedo!)

Our game this week was against Chapman College from somewhere in Orange County. After a close first quarter, we were down 3-2, but came back in the second quarter to take a 6-3 lead into the half-time break. During the third quarter, David "Bruisin' Bruno" Bruning managed to jam his eye into someone's foot, thereby giving himself a nice little gash and prompting several people to change his nickname to "Bruised Bruno." After three quarters, we were up 11-5. By the fourth quarter, everyone had gotten some playing time in the tank.

This coming week we play PCC at home on Wednesday and then the alumni on Saturday. Rumor has it that the alumni are the best team we will play this year, so come out to both games and cheer us on!

Special praises should go to Eric Christensen who has played remarkably well in the goal, making many outstanding saves. Other notable performances have been Bruno with 32 goals, including a 9-goal game, and Vito with 28 goals (two 6-goal games). The whole team would also like to thank Jeanine Hopkins for making the season much more fun and enjoyable.

Since there is not enough space to mention everyone here, tune in next week for the continuing saga of the Mikasa.

Volleyers Struggle to Bounce

by T. A. Chikara

The Caltech women's volleyball club has opened the fall season with two tough losses against probably the strongest teams on its schedule.

A week ago Tuesday the team opened its season against Occidental, which has one of SCIAC's strongest volleyball programs. Perhaps being a bit rusty in this first match, Tech started out slowly and lost the first game 15-3. However, the club pulled together later in the match, building strong early leads before finally succumbing to Oxy in Games 2 and 3 by scores of 15-7 and 15-9 respectively.

This past Wednesday night, the volleyball team traveled to Brentwood to face a powerful Mount St. Mary's squad. Despite the absence of several key players, Caltech performed admirably in a 15-4, 15-5, 15-3 defeat. Mt. St. Mary's experience and bench depth helped it to simply overmatch Tech's small squad made up mainly of freshmen and sophomores.

So far this season, standout performances have been turned in by senior Linda Schlueter, an excellent hitter and superb all around player, as well as by grad student Lynn Hildeman, whose experience and setting ability have greatly helped the team's cause. Other important members of the club are grad students Julie Moses and Chris Wilson.

Volleyball's undergrad contingent features the following players: senior Nancy Drehwing; junior Nicole Vogt; sophomores Carol Choy, Betsy Andrews, Kyuson Yun, and Karen Oegema; as well as freshmen Jeannette Woo and Margie Pollack. Laurianne Williams is again coaching the club this year.

Caltech's volleyball season is now in full swing, as is evidenced by the fact that the team has four games scheduled next week. On Monday they have their rematch against Oxy at Caltech at 4 pm. Wednesday, they travel to Claremont to face Claremont-Mudd-Scripps at 7:30 pm, and on Friday they have another away game against Redlands at 6 pm.

The club wraps up its busy week by returning to Caltech to play Pacific Christian at 2 pm a week from this Saturday. If you can find the time, try to give the volleyball club some fan support by coming out to watch their matches. Your attendance would be greatly appreciated by the team, since turn-outs have been sparse thus far.

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SPORTS**WEEKLY SPORTS CALENDAR**

Day	Date	Time	Sport	Opponent	Location
Sat.	10-4	10:00 am	Cross Country	Pepperdine	Christ College
Sat.	10-4	10:00 am	Soccer	Claremont-Mudd	Caltech
Sat.	1:30 pm	Football	Eagle Rock Ath. Club	Caltech	
Sat.	10-4	4:00 pm	Women's Volleyball	Occidental JV	Caltech
Sat.	10-4	All Day	Water Polo	Chapman Tournament	Chapman College
Sun.	10-5	All Day	Water Polo	Chapman Tournament	Chapman College
Mon.	10-6	7:00 pm	Soccer	La Verne	La Verne
Wed.	10-8	3:00 pm	Soccer	Christ College	Caltech
Wed.	10-8	4:00 pm	Water Polo	Pasadena City College	Caltech
Wed.	10-8	7:30 pm	Women's Volleyball	C.-M.-Scripps JV	C.-M.-Scripps
Fri.	10-10	3:00 pm	Soccer	Whittier	Whittier
Fri.	10-10	6:00 pm	Women's Volleyball	Redlands JV	Redlands
Sat.	10-11	9:30 am	Cross Country	Pomona-Pitzer & Whittier	La Verne
Sat.	10-11	10:00 am	Water Polo	Alumni	Caltech
Sat.	10-11	1:30 pm	Football	Riverside Rams	Caltech
Sat.	10-11	2:00 pm	Women's Volleyball	Pacific Christian	Caltech

Caltech Soccer Boots Redlands

- Othmer, Frosh Tops

by Buster Dover

The Caltech soccer team defeated Redlands 4-3 in an exciting match at Redlands on Wednesday. Redlands started the scoring with a lucky goal in the first half.

Early in the second half, Konstantin "the Barbarian" Othmer waded through the Redlands defense and put a beautiful shot into the corner of the net. Shaken up by this brilliant play, Redlands immediately gave up another goal on a free kick by freshman Kleber Camacho.

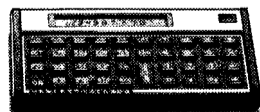
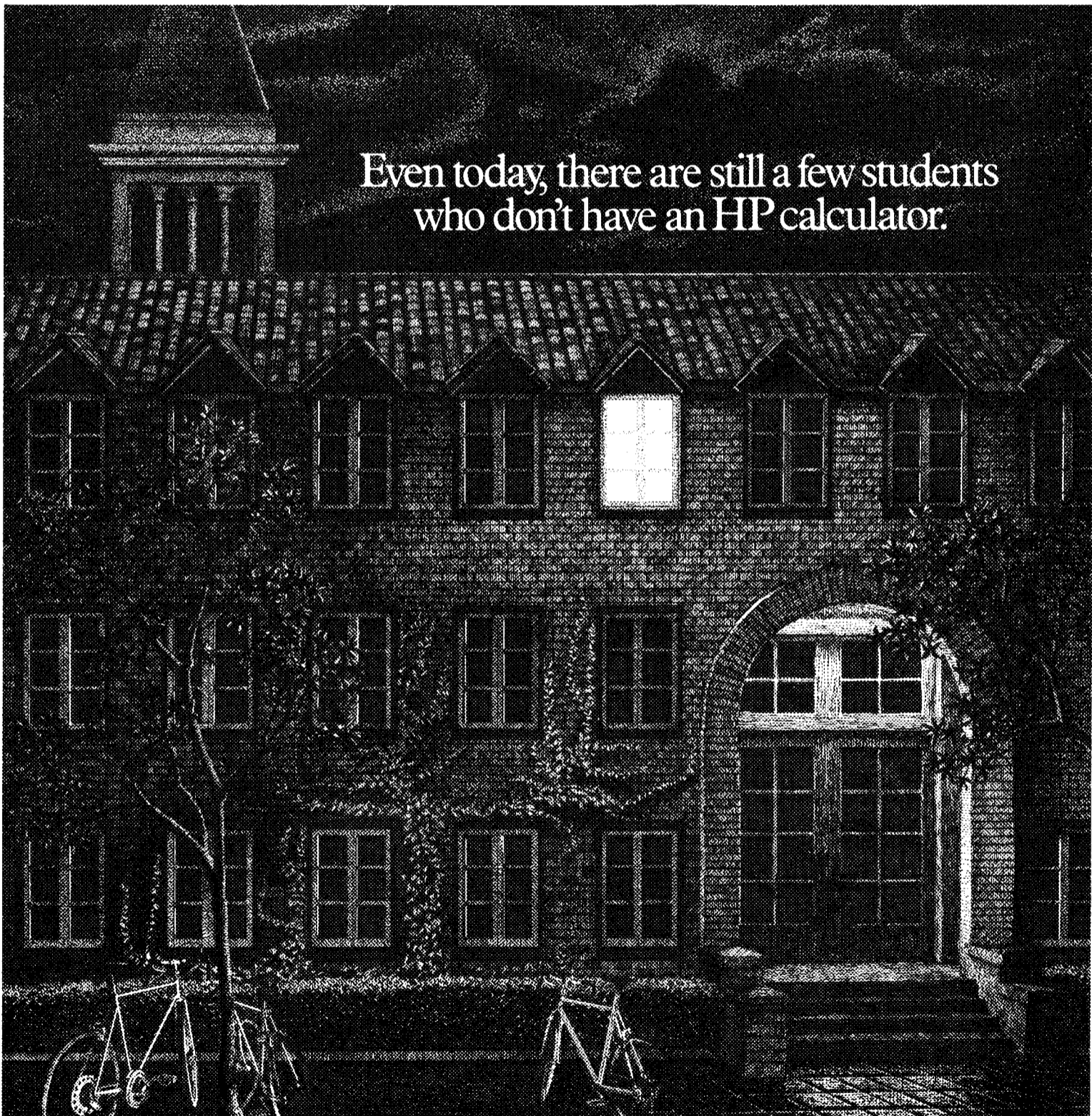
Redlands managed to slime a pair of goals to bring the score to 3-2 in their favor. Freshman James

Ibbetson then demonstrated some fancy footwork to even the score at 3 apiece.

With only six minutes remaining, Othmer — Page House's brilliant right halfback — put Caltech on top by rocketing a full-volley into the upper left corner of the net. With five minutes remaining, Redlands was given one last chance to tie by a lousy call by the referee, who implicated Othmer in a capital crime. Fortunately for the booting Beavers, goalie Van Eric Stein made an excellent save on the penalty kick.

Caltech plays Claremont in a home game Saturday morning at 10:00 am.

Even today, there are still a few students who don't have an HP calculator.



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 **HEWLETT
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WHAT GOES ON

Fine Women and Song

There is still time! The Women's Glee Club is looking forward to enthusiastic new members. YOU COULD BE ONE! Only 2 rehearsals a week entitles you to an "almost" all expenses paid trip (Concert Tour) to Colorado during Spring Break, plus limitless fun all year. Please join us on Monday, Oct. 6 at 7:15 in Fleming House basement. Questions? Call Leslie McCaffree at 578-9454.

Food Service Committee

After a long summer and the start of classes, end of rotation and a week of food, the first weekly food service committee meeting will be held at 7:30 pm in the Master's Office. Everyone is invited to attend, contribute, and report back to their house. More involvement will make for better food this year. Refreshments provided by the MOSH.

College Fiction Contest

Playboy magazine is now accepting entries to its annual College Fiction Contest, open to all registered college undergraduate and graduate students. The writing competition offers a cash prize of \$3,000 and publication of the winning short story in the October, 1987 issue of Playboy magazine.

Entry deadline is January 1, 1987, and full rules are available in the October issue of Playboy, and may also have been sent to the Humanities office (there is some doubt at this writing).

Amateur Radio Club

This coming Tuesday, October 7, at 8 pm in the Y Lounge (upstairs Winnett) the Caltech Amateur Radio Club will have its 1986-87 organizing meeting. Free pizza and cold drinks will be provided to accompany a talk on the history of and plans for the club in the upcoming year. If you are a licensed "ham" or if you are just interested, please drop by. Bring your ideas and your two-meter handhelds.

Regular club meetings are scheduled on the 1st and 3rd Tuesdays of each month at 8 pm and are held in the Y Lounge. People who cannot make the meetings should call the club secretary to schedule classes at their convenience. Further information about the club may be obtained from Dave Hodge, the club president at x6825 or from Dave Ritchie, the club secretary at 449-7371. Membership is open to all members of the Caltech community including undergraduates, graduate students, staff, faculty, alumni, jpl-ers, and hangers-on. Anyone interested is encouraged to get in touch with Dave Ritchie—demonstrations and tours can be arranged at any time.

Musical Meeting

This year's lavish Caltech Musical is *How To Succeed In Business Without Really Trying*. The first Drama Club meeting and organizational meeting for the musical will be held Sunday, 12 October at 2pm in Winnett Lounge. We need/want/crave students to help with fund-raising, producing and planning.

How To Succeed... has won the Tony and New York Drama Critics Circle awards, as well as a Pulitzer Prize. Liz Oberstein will be choreographing again this year.

This looks to be a great show—get involved now!

Bridge, Bridge, Bridge!

Bridge is back! At least the Bridge Club is. Here's your chance to have fun, meet new people and play. We play duplicate at 7:00 pm on Monday nights in the Red Door Cafe. Beginners to experts, faculty, staff and students all welcome. We are ACBL sanctioned, so you can earn master points! Don't miss out on the game of the '80s: Bridge! Questions: Call Jeffrey (x4544, 793-0814) or Jennifer (x4302) or write Jeffrey Pugh, 205-45.

Jazz Improv Class

There is going to be a jazz improvising class. It will be taught by a woodwind player who has agreed to teach the class on a "pay as you go" basis. This non-credit class will meet Saturdays from 10 am to noon, in the Instrumental Music Office. The office is located in the basement of Winnett Student Center, just across from the Student Shop. All members of the Caltech community are welcome. All levels of proficiency are encouraged to attend. For further information, please call Bill Bing at (213) 684-8964, or just attend the first class which will be on October 11.

Global Peace Prayer

On December 31, 1986 at noon Greenwich time (4 am Pacific time) millions of people worldwide will be gathering to unite for one hour to visualize, pray, and meditate on world peace.

We at Ancient Friends Bookstore and New Age Center are joining this worldwide event by hosting a one-hour vigil in the heart of Pasadena. We are in the planning stages of this project, and need your support to bring it to fruition. All those interested are invited to our first organizational meeting on Monday, Oct. 6 at 7:30 pm. The store is at 38 East Holly Street in Old Town Pasadena. Call 304-0589 for information.

GEM Fellowships

The National Consortium for Graduate Degrees for Minorities in Engineering, Inc. (GEM) is accepting applications for its fellowship program which will provide 125 fellowships to minority students in engineering for 1987. Application is open to those falling into the groupings of American Indian, Black American, Mexican American or Puerto Rican, who are U.S. citizens. At the time of application, the minimum academic requirement for the student is enrollment in the junior year of undergraduate study in one of the engineering disciplines. Those presently in their senior year or recently graduated are also encouraged to apply.

Each fellowship participant must work as an intern for a member employer in the program and must complete the academic work for the master's degree at one of the member universities. There are 50 member employers and 50 member universities in the program at this time. The fellowship includes a stipend of \$5,000 per academic year plus a salary for summer internship as well as free tuition.

Applications must be received by December 1, 1986. Awards will be announced by February 1, 1987. Information and applications may be obtained from: GEM, P.O. Box 537, Notre Dame, IN 46556.

CIC Fellowships

The Committee on Institutional Cooperation Minorities Fellowship Program is offering 40 fellowships to members of underrepresented minority groups seeking PhD degrees in a wide variety of fields in the areas of Social Sciences, Humanities, Sciences, Mathematics and Engineering. The member universities are the midwestern Big 10 plus the University of Chicago. (If you don't know who's in the Big 10, find a sports section—this is football season).

Each CIC Minorities Fellowship is for four academic years. For 1987-88, each award will pay full tuition plus a stipend of at least \$7,000. The eligibility is kind of complicated, so contact them as early as possible. Application deadline is January 7, 1987. Write: CIC Minorities Fellowships Program, Kirkwood Hall 111, Indiana University, Bloomington, IN 47405, or call toll free (between 6 am and 1 pm Pacific time) (800) 457-4420.

Want to Join a Band?

In case you haven't heard, the Caltech Jazz Bands and Wind Ensembles have started to rehearse. But there is still time to join these groups. Just call Bill Bing at (213) 684-8964 for further information.

Tennis Tournament

It's time for the third annual XHMEIA (pronounced "Kem-ee-ah") Single Tennis Tournament! It's a round-robin tournament open to the CIT/JPL community, with a wide variety of categories and levels of competition. All entries are broken up into small groups to play round robin matches, and those with the best records will advance to a finals round. The main matches will run from October 20th to November 23rd, with the final matches to be played on December 6, 7, 13 and 14. There is a small entry fee and trophies will be awarded. Contact Dan Zirin (356-6011 or mail code 127-72) for more details. Entry deadline is Wednesday, October 15.

Expensive Lunch

Art Direction and Design in Orange County (ADDOC) is presenting a Future Style conference on October 18, including a keynote address by Ray Bradbury, and talks by other notables, including JPL's Dr. Jim Blinn. The guest presenters will explore future directions in their areas of communications. The conference will address changes that are occurring in graphic design, advertising, computerized animation and music.

Future Style will take place on the campus of U.C. Irvine at the Nelson Research Auditorium and costs \$60 general admission, including lunch. There is a \$5 discount for pre-registration before October 6.

Art Direction and Design in Orange County, P.O. Box 7584, Newport Beach, CA 92660. (714) 675-3269.

Undergrad Check-In

All undergraduate students living on On-Campus Houses, Off-Campus Houses, Marks House, 150 South Chester, and 1170 East Del Mar are required to check in with the Housing Office no later than October 6 (Monday) or the housing contract may be cancelled. Students should plan on checking in with the Housing Office upon their arrival to campus. Continuing students (students who were here during the summer period) are welcome to check in immediately.

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

Thank you for your cooperation!

Food In Review

WHAT!!! Are you tired of the food already? After only the first week? Fortunately, now you can do something about it! A box for your comments about the food, or complaints about a meal, or ideas on special meals, etc., is now located in the Master's Office.

WHAT GOES ON continues on page 8!

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OCCASIONAL CHILD CARE for asthmatic kindergartener. Must be available for 4½-hour days during work week. Prefer my home; other arrangements considered. \$3.50/hour plus \$20/month retainer. (213) 684-3712, please leave message.

EXCELLENT INCOME for part-time home assembly work. For information, call (504) 641-8003, ext. 8738.

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CALTECH BOOKSTORE—


ASIMOV'S LATEST: *Foundation and Earth*, 40% discount at the Caltech Bookstore. Plus Piers Anthony's latest, *Wielding a Red Sword*, 25% discount at the Caltech Bookstore.

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.

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