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The California Tech

VOLUME CI, NUMBER 16

PASADENA, CALIFORNIA

FEBRUARY 11, 2000

**BIZARRE BUT
TRUE: BOY IN-
TERRUPTED:**

BY MOHI KUMAR

Size 10 Asics DS Trainers. Slightly tattered; dirty off-white with blue criss-crosses splashed on the sides. Frayed black shoelaces. A pair of typical, ordinary, men's tennis shoes. But for Senior and Math Major Troy "Duckie" Lee, these shoes almost got him arrested.

While walking home late Saturday night from a twilight showing of the new release *Girl Interrupted*, Lee himself was interrupted by the Pasadena Police.

"It was about 12:20 am. I was walking back to campus from the AMC in Old Pas, heading east on Cordova, when I saw a police car on the side of the road, with its headlights on. Another police car drove by, headed west. It slowed down as it passed me," Lee recalls, adding that he turned back a couple times while walking to see what was going on. "I didn't think about it. I didn't expect them to be following me."

Oblivious to the aroused suspicions of the police officers, Lee walked back to his off-campus house next to the Financial Aid Office. "I went in, got some vitamins, and left," he explains. Lee then headed to Robinson to study.

On the Bechtell Mall in front of North Mudd, Lee heard a man's gruff voice bark, "HEY, STOP!"

"At first I thought it was someone I knew," Lee chuckles. "Then I turned and saw two cops approaching from either side. I thought they were looking for someone else behind or beside me, or maybe they'd ask if I'd seen someone or something."

The police officers continued to step closer. "Get your hands out of your pockets," one commanded. Lee complied.

"Put your bag down."

Lee complied again. "It was funny," he remembers. "They clearly thought that I had actually done something."

The police came closer, stopping right in front of him. "Turn around. Put your hands on your head." The befuddled Lee complied, asking, "What's going

PLEASE SEE ARREST ON PAGE 2

Teachers Sell for Billions

BY TECH STAFF

Ortel Corporation (NASDAQ: ORTL) became the latest jackpot in the internet game when Lucent Technologies (NYSE:LU) announced this week a \$3 billion acquisition deal for the optoelectric company. Ortel is the pioneer in semiconductor laser and fiber optics technology. Its technology allows cable TV suppliers to build high-performance systems using fiber optics. The deal will give Lucent state of the art communication technology, giving it a large advantage in the lucrative online access market.

Under the terms of the deal, each share of Ortel will be bought for 3.135 shares of Lu-

cent. Based on Lucent's closing price last week, the deal is valued at approximately \$2.95 billion.

Ortel Corporation was founded by three people from Caltech. Israel Ury, who had just finished his Ph.D in applied physics, Nadav Bar-Chaim, who was then a post-doc, and Dr. Amnon Yariv, who is still at Caltech, founded the company in 1980. The company stemmed from research in semiconductor laser at Caltech.

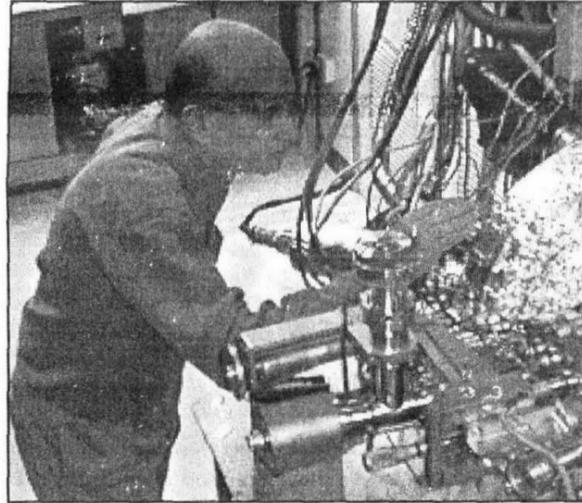
Around 1980, using optical

methods for communication became widely known. Semi-

and powered electronically, and can be fabricated to emit

lights of any wanted wavelength, became the obvious light source for fiber optics.

"All of a sudden, the ability of the laser to turn itself on and off with current became an important issue," said Dr. Yariv, "and we got involved in that issue." In the ensuing race to modulate lasers at higher and higher speed, the Caltech



Caltech professor Amnon Yariv is one of the co-founder of Ortel corporation

conductor laser, because they are small, can be controlled

team achieved results that

PLEASE SEE ORTEL ON PAGE 3

Sampling the Universe: the Future of Exploration

BY JUSTIN KAO

"Sampling is going to be an important part of the future of exploration." Speaking to a

full house in Beckman Auditorium on Wednesday night, Dr. Edward Stone, director of JPL and vice president of Caltech, outlined JPL's explo-

ration of the solar system.

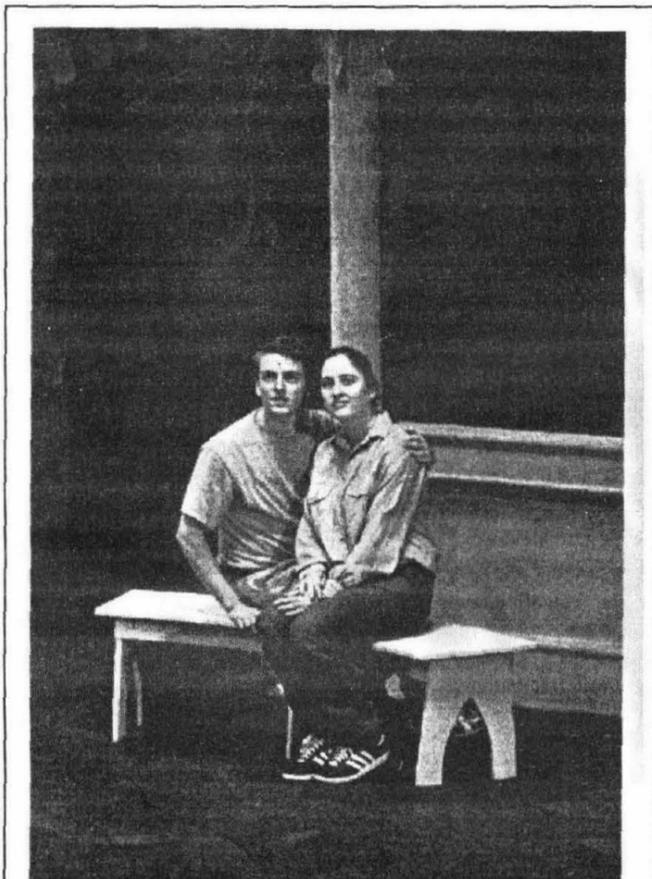
He began his talk with a summary of JPL's current research in the solar system. According to Stone, one of the most important questions that JPL is trying to answer is, "where was the water, and perhaps, where is the water?" since where there is water, there can be life.

As a planet with a known history of large amounts of liquid water, Mars is one focus of JPL exploration, with a mission planned every two years. Stone summarized past missions to Mars and gave an overview of recent findings concerning water on Mars, mentioning theories that the Martian riverbeds were formed from water that "burst from underground," since

these riverbeds have no tributaries and begin and end abruptly. This indicates that Mars once had a strange water cycle, probably involving water emerging from underground with local heating and then returning underground again.

According to altitude data from Viking and Mars Global Surveyor, the northern half of Mars is several miles lower than the southern half. Combined with "very very smooth" terrain features and other indicators, this points to a large mass of water in the northern hemisphere. Stone showed several slides showing possible oceans and shorelines. He cautioned however, "there's a lot of debate about

PLEASE SEE SAMPLING ON PAGE 3



Swinney and Fox embrace as onstage lovers Lorenzo and Jessica in TACIT's presentation of "Merchant of Venice" - Page 7

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News

ARREST: Caltech Student Falsely Accused

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on?"
"Spread your legs."
Lee, frustrated now, complied. "Then one of the police officers kicked my left foot out farther, raised my hands higher over my head, and painfully brought them down behind my back,"

Lee re-

counts.

"And then he cuffed me

tightly. That was the most

traumatic part. I was thinking, "Hey, buddy, this is really not necessary."

The police officer then frisked Lee, putting his hands in Lee's pockets. "That also was pretty traumatic," Lee adds.

Four more Pasadena Police officers arrived, barricading Lee within a circle formed by their bodies. One of the officers then asked if he could search through Lee's backpack.

The bag was opened, yielding such nefarious items as a quantum mechanics book, a clipboard, some binders, and his wallet, which the police officers then thumbed through.

"Then he asked to look at the bottom of my shoe. I thought it

was strange." He lifted it and looked at the black heel covered with randomly oriented rubber treads that comprised the underside of his shoe. The officer allegedly commented, "The tread on the forefoot doesn't look right, but the pattern on the heel matches."

The officer with the radio then reported back to the group that it was a false lead.

The man who had cuffed Lee looked slightly sheepish. "He asked me how long I had been at Caltech, what I was studying, when I was graduating - it was amusing that now he was being

nice," Lee remembers.

The officer took

of

Lee's handcuffs, finishing lamely with, "Sorry about all this." And then the police left.

"I don't feel wronged," Lee explains. "It is good that they were actively pursuing different leads, even if that lead caused them to suspect me because of my shoes. And I realize that as a procedure, they probably need to first cuff the person, but having been in that situation ... it's like you can't walk around the streets at night without being hassled."

"But most of all, I am amused," commented Lee. "I was just wearing these shoes because I had Chem 3. They are not even mine. I borrowed them."

"They thought that when I went inside my house and left four minutes later, I had completed another job."

"One of the officers pulled out his radio and reported on their findings," Lee recalls. "Another turned to me and asked if anyone had explained anything." When Lee indicated that they had not, the officer described how they had followed him from Cordova and Los Robles while investigating a rash of break-ins in the area.

"They thought I was a burglar," Lee laughs. "They thought that when I went inside my house and left four minutes later, I had completed another job."

By this time, about three Caltech security guards and four more Pasadena Police Officers arrived on the scene, Lee says.

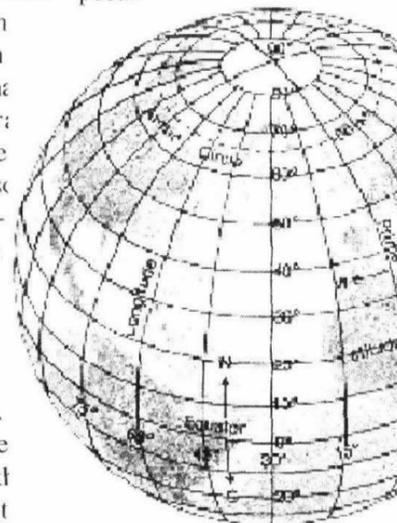
The Outside World

by Katharina Kohler

Bogota, Colombia—The Colombian government made an effort to reduce the dependence of the farmers on illicit drugs. By giving out millions of dollars in aid to make the farmers raise cattle, coffee and cotton instead. Most of the money though will be spent on destroying the coca crops and fighting the left wing rebels. The US will spend money on training counternarcotics battalion the southern state of Putumayo. President Andres Pastrana wants US taxpayers to help lower the social problems, so that it won't help to just destroy all the plants, but a change in the social situation of the people who don't see another chance than to grow plants that can be used for drug production.

San Francisco, CA—After a three day string of attacks, there were no confirmed assault ports on Thursday. The first attack happened earlier in the week when the Yahoo! site crashed, because it couldn't handle the amounts of data that were coming in. On Tuesday other sites like Amazon and Buy.com were the victims of similar attacks. There is no ob-

vious motive for the deed, and nobody knows from where the attacks originated. The FBI is working with intelligence services in the country and abroad to solve the case. Hackers had jammed the websites with useless material to slow down the server. Nobody claimed responsibility yet and there are no suspects.



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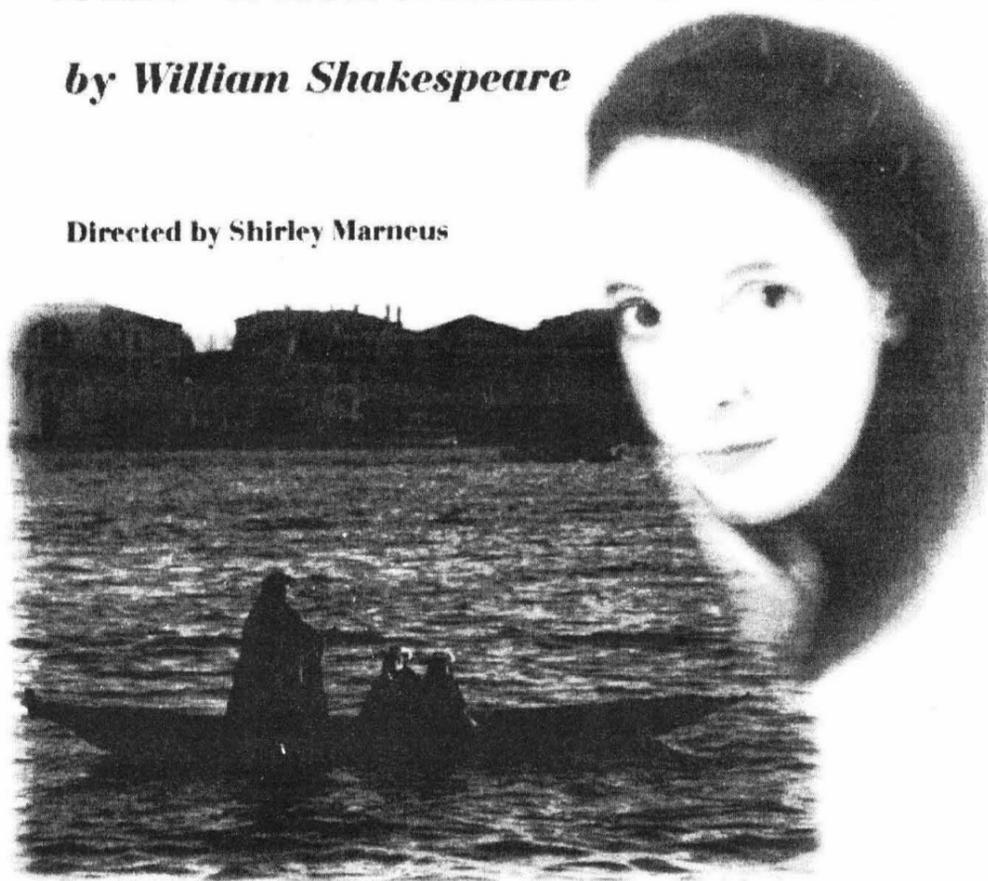
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News

SAMPLING: JPL and Mars

CONTINUED FROM PAGE 1

whether there ever was a standing ocean" on Mars-examination of high-resolution photos of the would-be shorelines has not revealed any evidence of an ocean, suggesting that it might have been a lot of permafrost. Mars Pathfinder, which landed near one of these shorelines, did however, find evidence that Mars was once "warm and wet."

If Mars once had water, where did that water go? Stone explained that when Mars cooled off, the "magnetic field decayed away and the solar wind started carrying off the top of the atmosphere bit by bit, until today, there is very

little atmosphere left, and it is no longer possible to have liquid water on the surface of Mars." In the higher, older southern hemisphere, there are records of a global magnetic field record in the rock. In newer impact craters, the rock recorded no magnetic field as it resolidified.

Although a large part of Stone's talk was about Mars, he also devoted time to Europa and the future Europa Orbiter mission, Jupiter's icy moon Titan, where the Huygens probe will drop in 2004, and comets, from which the Star Dust mission will collect and return a sample by 2006.

ORTEL: \$3 Billion Deal

CONTINUED FROM PAGE 1

were leaps ahead of the competition. "We ended up having the world's fastest laser, by a big factor, and only we knew how to make them," said Dr. Yariv. They were able create laser that modulate at 10 gigahertz, which is the performance of modern commercial grade laser, twenty years later.

Initially, interest in such high frequency laser came mostly from the aerospace and defense sectors, in massively reducing wiring by transmitting data over optical fibers. It was with a few such government contracts that Ortel Corporation was founded. The company was initially funded by a million dollar invested by a group of twenty Houston doctors. Interest in the technology Ortel develops roared when cable TV cables became a vi-

able route to the Internet. Almost all major cable distribution routes are currently optical cables.

Ortel, whose staff consists of the most brilliant minds in laser research, applied its expertise to designing telecommunication lasers and receivers. In the meanwhile, it became apparent that coaxial cables were the best available access route to the internet.

"Ortel joined the internet explosion through two doors, by producing telecommunication equipment, and the telecommunication industry moved over and joined with cable, and that was the beginning of the big move. It started happening about half a year ago," said Dr. Yariv.

The other two co-founders were unavailable for comments.



by Kenneth Kuo

The bulk of most everyone's midterms for second term should hopefully be over by this point in time. In that case, take a break from your studies today at noon to enjoy a Noon Concert featuring a black a Capella group which performs for the opening of the show "Jack and Jill." This performance is one of the featured events for Black History Month.

Alternative to Spring Break
For those people who are plan-

ning to stay at Caltech during Spring Vacation, consider doing a community service activity far, far away from this intensive mental institution. This year, participants have an opportunity to choose from two locations — namely Arizona and Mexico. An information session for interested students will be held next Wednesday,

February 16. The trip to Arizona will be held from March 16-20 and will be limited to 7 or 8 students. The trip to Mexico will be held from March 23-26 and will be limited to 15 students. To obtain the location and time of the meeting contact the Caltech Y at ext. 6163.

The Tigger Movie:

The "The Tigger Movie" is currently playing at the El Capitan Theater. We have obtained tickets for the Sunday,

February 13th 12:00 PM performance and the Sunday, February 27th 2:30 PM performance. Tickets are only \$4.00. For more information, please contact the Caltech Y at ext. 6163.

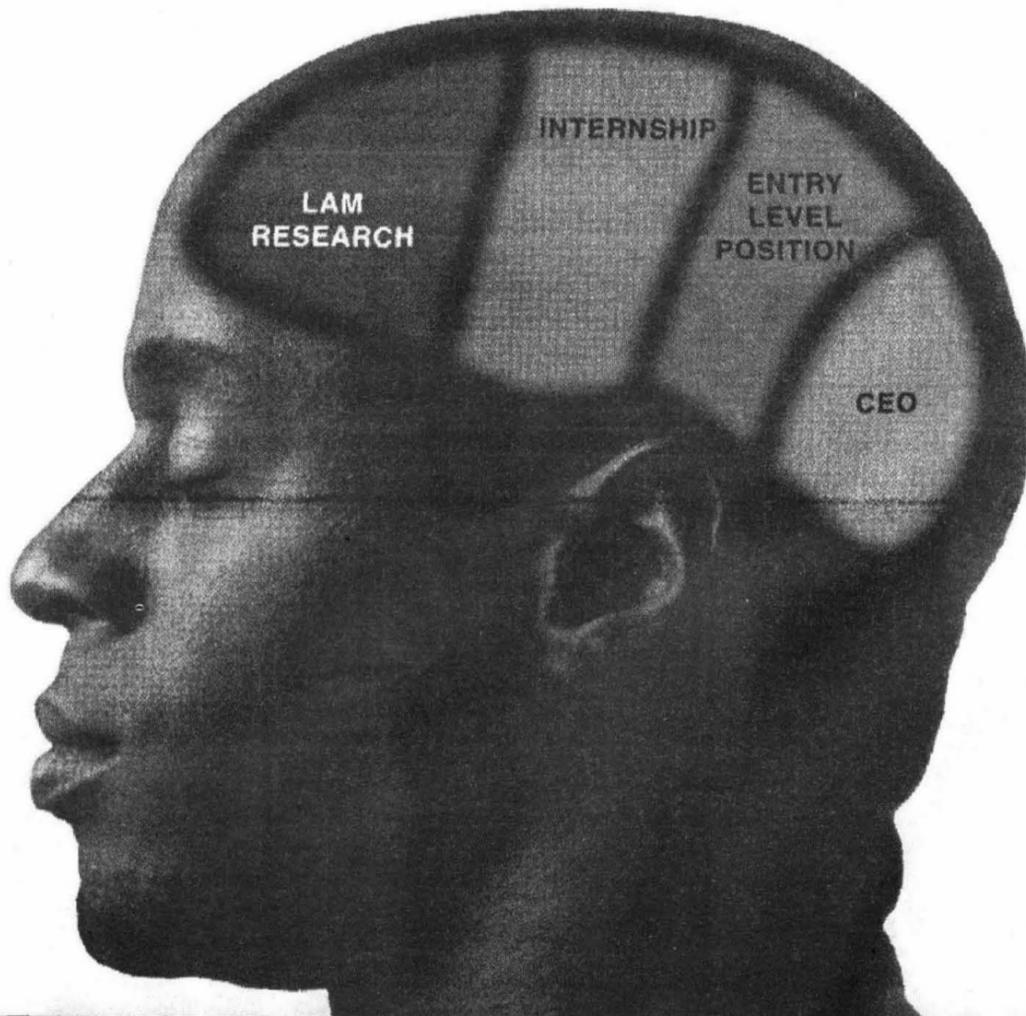
General Info:

The Caltech Y holds weekly meetings on Mondays at 12:15 PM in the Y Lounge 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 Andrew Hafer at hafer@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 atdognbert@cco.caltech.edu.

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Write for the TECH

1. It's good for your GPA
2. I'm almost up to a 3.0
3. I got paid last week
4. My checks from the Chemistry Department are gonna start coming
5. I need some inorganic solvents to clean the wax off this table.
6. "Lunch! It's Luunch!"

TECH meets every Monday 9 p.m. in SAC 40. Grasp the Power of the Press!

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ASCIT Election Results

Sure, you can see who won the elections last Monday, but for some people, *that's just not enough*. Crave more ASCIT-bylaws-goodness then the little box to the right can provide you? Read on, and soak in the obsessively detailed full numerical results goodness!

Votes cast 368 Error points 3

Turnout by house:

Blacker	67	Page	41
Dabney	28	Ricketts	36
Fleming	84	Ruddock	68
Lloyd	44		

"WI" indicates write-ins. There were never enough to merit separate columns, although we salute the valiant efforts of Jamie Walls and Jasmine Sekanina in various elections. "AM" indicates Absolute Majority, the first integer larger than half of all non-abstaining votes plus half the error. Once a candidate has at least that many votes, they win.

ASCIT Secretary

CARDEMA	Crosby	Shannon	Wexler	NO	WI	Abstain	AM
116	56	49	56	55	6	30	171
118	59	49	58	—	9	73	150
118	59	49	58	—	—	84	144
139	65	—	71	—	—	93	140
174	—	—	84	—	—	110	131

ASCIT Treasurer

Bande	Ahmadi	McHUGH	West	NO	WI	Abstain	AM
108	111	34	54	8	53	160	
109	112	35	—	13	99	137	
110	113	36	—	—	109	132	
118	125	—	—	—	123	125	

BoC Secretary

Fassler	HONG	NO	WI	Abstain	AM
122	143	40	11	52	160
124	145	—	13	86	143

The New Victims Officers

ASCIT Secretary - Jason Cardema

ASCIT Treasurer - Sean McHugh

IHC Chair - Chris Elion

BoC Secretary - Betty Hong

Dir. Academic Affairs - Emma Kang

Dir. Social Activities - Melinda Turner

Upperclass Dir@Large - Meghan Smith

Freshman Dir@Large - Martha-Helene

Stapleton

Tech Editors - Jon Foster

& Jong Oh

& Dana Sadava

IHC Chair

ELION	Lawton	Meltzer	Sih	NO	WI	Abs	AM
87	90	47	86	33	8	17	178
87	90	47	88	—	10	49	162
87	90	47	90	—	—	57	158
97	94	—	97	—	—	83	145

Notice that, within the error, all three remaining candidates are tied. This makes it impossible to determine which to redistribute out next, so the only solution is to redistribute all three individually and hope it doesn't form a condorcet cycle. This is all spelled out in the bylaws, though all of you that have taken PS 12 are probably wincing at painful memories right now.

ELION	Lawton	Sih	Abstain
—	118	143	107
122	—	114	132
118	114	—	136

Since Elion can defeat both Lawton and Sih, he is the winner of the election.

Director of Academic Affairs

KANG	Srinivasan	Tran	NO	WI	Abstain	AM
163	27	80	46	9	43	165
164	27	80	—	11	86	143

Director of Social Activities

Danakian	Jou	TURNER	NO	WI	Abstain	AM
34	92	137	50	9	46	163
37	93	141	—	—	97	138

Upperclass Director at Large

Payne	SMITH	Swanson	NO	WI	Abstain	AM
83	93	75	54	10	53	160
84	94	77	—	11	102	135
84	94	77	—	—	113	130
97	139	—	—	—	132	120

Freshman Director at Large

STAPLETON	NO	WI	Abstain	AM
235	68	8	57	158

Tech Editors

FOSTER, OH, SADAVA	NO	WI	Abstain	AM
254	58	9	47	163

Remember, the excitement of ASCIT Election Chair *can be yours!* Look for signups for a multitude of ASCIT appointed offices, coming soon. If you crave still more action and adventure, there's always IHC appointed committees coming third term. After all, if you don't do some job, there's a good chance no one else will either.

A.S.C.I.T. Minutes

Minutes of the ASCIT BoD Meeting January 25, 2000

Present: BoD minus Alan.

Meeting called to order at 19:42.

Project Reports Gurt will arrange for movies to be shown on Fridays in Moore.

Nominations for the offices of BoC Secretary, Tech Editor, ASCIT Treasurer, ASCIT Secretary, IHC Chair, ASCIT Academic Director, ASCIT Social Director, Ascit Upperclass Director, ASCIT Freshman Director will close on Tuesday, February 1 at 5pm.

Gurt will also begin arrangements for all of the newly elected members of the BoD.

The BoD decides to hire Jonathan Dama to work on specific parts of the Web Project.

Jaideep reports that the CRC will select a new co-chair by tomorrow afternoon and representative interviews will be completed later this week such that the student representatives for the CRC will all be chosen by the end of the week.

A survey on the board plan in coordination with the remodeling of the kitchens will come out next week sometime. One plan is to shut down the South House kitchens for remodeling at lunch and set up stations in the North House kitchens like in Avery for lunch. IHC would like to keep lunch the same in the houses and put

lunch on the declining balance system so that people could use their board money at various venues such as the Red Door Caf or the Coffeehouse. The survey will also include a couple of questions about off-campus room-picks.

BoD votes to allot \$500 per house to buy a DVD player and security needed for it as well as one for the Coffeehouse. Each house will have the option of simply taking the money if it already has a DVD player. The BoD will make the purchases after Gurt does some comparison of prices. \$1000 is allotted for buying movies for the movie library as well. This movie library will make movies and DVDs available to ASCIT members from the Coffeehouse. Meeting adjourned at 20:32.

Respectfully submitted,
Hanna Kim ASCIT Secretary

Minutes of the ASCIT BoD Meeting February 8, 2000

Present: Old BoD minus Jaideep, new BoD, Audrey Lee, Jaime Bresson.

Meeting called to order at 22:10. Dealing with Guests Audrey and Jaime requests funding for the Taiwanese Student Association (TSA) which has newly become active. Project Reports Gurt reports that the Mann's Chinese Theater donated a 35mm projector to Caltech which donated it to ASCIT. A group of students from Blacker, who apparently requested the 800-pound projector to begin with, are going to pick it up.

Elections for BoC Secretary, Tech Editor, ASCIT Treasurer, ASCIT Secretary, IHC Chair, ASCIT Academic Director, ASCIT Social Director, Ascit Upperclass Director, ASCIT Freshman Director were on Monday, February 7, 2000. The newly elected officers, if there is no protest, are:

BoC Secretary

Betty Hong

Tech Editor

Jon Foster

John Oh

Dana Sadava

Treasurer

Sean McHugh

Secretary

Jason Cardema

IHC Chair

Chris Elion

Academic Director

Emma Kang

Social Director

Melinda Turner

Upperclassmen Director-at-Large

Meghan Smith

Freshman Director-at-Large:

Martha-Helene Stapleton

Housing/Board surveys for all undergraduates are due on Thursday, February 10. DVD players have been purchased for the houses that indicated they wanted them. Garrett will still be looking into the locks they will need.

ASCIT BoD installations will be Monday, February 21, 2000. Details to come, right Garrett? Chris reports that the IHC met with the Dean to discuss the new system for alcohol approval for parties. The new system involves a spreadsheet that uses the estimated number of people that will be in attendance and assumes thirty percent of them will be over 21. From that number, it assumes that seventy percent of them will drink and that each person who drinks will have four drinks. This calculates the amount of alcohol that will be allowed at that party. Concerns have been raised questioning the inclusion of graduate student attendance at these parties, the length of the parties and other issues.

Meeting is closed at 22:35. The BoD approves \$50 for the Taiwanese Student Association with the annual ASCIT budget meeting coming up soon. Baldeep encourages the old and new members of each office to discuss and mingle. Meeting is adjourned at 22:44.

Respectfully submitted for the very last time,
Hanna Kim ASCIT Secretary

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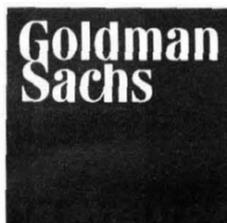
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10:30 a.m. - 2:30 p.m.
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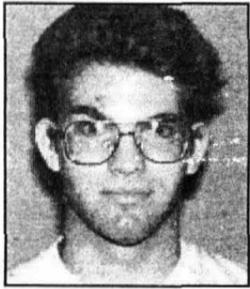
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The Once and Future Villani



BY ADAM VILLANI

I am Media Guy

It's the middle of Oscar season right now, so there's a big bunch of movies out there for me to write about. Here's a small bunch:

All About My Mother

This Golden Globe Best Foreign Film winner from Spain's Pedro Almodóvar is a real gem. Without giving too much of the plot away, it's about a group of women bonding through tragic and trying circumstances. But the tone of the film is miles away from the treacle of *Steel Magnolias* or *The Joy Luck Club*. A better description might be Fellini-esque; Almodovar's women feel the pain, but they can look beyond it and still smile through their tears. Of particular note in the stellar cast are Cecilia Roth as a grieving mother who forms the stable link between her friends; and nightclub performer Antonia San Juan, a real blast as a sassy trans-

sexual. [ed note: bad columns!]

Boys Don't Cry

Hilary Swank came out of nowhere (actually, TV movies and *The Next Karate Kid*) to give the best heart-wrenching female performance of the year as the sexually confused Brandon Teena, a real-life young Nebraska woman who posed as a man and fell into the wrong crowd. This script written and directed by Kimberly Peirce is a little vague and wandering at first, but everything pulls together by about the halfway mark. Throughout, though, Peirce shows an uncanny ability to evoke the environment Teena lived in, both the physical Nowheresville location and the dead-end losers with whom she surrounded herself. Chloe Sevigny (*Kids*, *The Last Days of Disco*) is quite moving as Teena's morose girlfriend, and Peter Sarsgaard and Brendan Sexton III are positively frightening as the scuzzy ex-cons who

befriend Teena and then turn on her.

Cradle Will Rock

Writer-director Tim Robbins' ensemble piece revolving around the struggle to stage a pro-labor play for the Federal Theatre Project during the Great Depression isn't really a fantastic piece of cinema, but I certainly enjoyed watching it. The actors involved (like Angus MacFadyen as Orson Welles, John Cusack as Nelson Rockefeller, Cary Elwes as John Houseman, and Bill Murray, Susan Sarandon, Hank Azaria, Emily Watson, John Turturro, and Joan Cusack as less famous or fictional characters) all seem to be having a good time, and that feeling, along with Robbins' unapologetically left-wing politics, is very successfully transferred to the screen. But the historical characters remain more interesting than the weakly-written fictional ones, and even many of those come off as mere sketches. Standing above the others, however, are Cherry Jones as Hallie Flanagan, the fiery FTP director defending the organization against accusations of Communism, and Ruben Blades as Diego Rivera, the artist hired by Rockefeller but steadfast in his refusal to alter

his mural to appease his boss's sensibilities. Also, it's certainly a letdown when the play everyone fought so hard to produce turns out to be so ham-fisted and melodramatic.

Titus

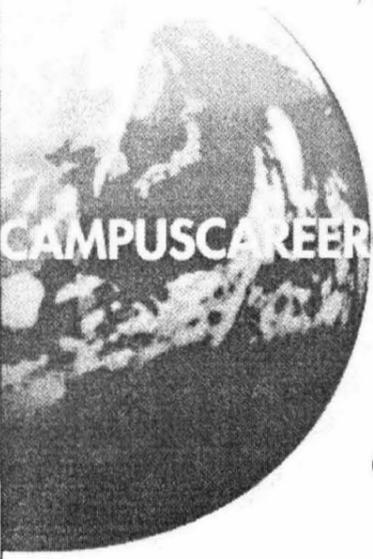
Director Julie Taymor, who successfully brought *The Lion King* to the Broadway stage, here takes on Shakespeare's *Titus Andronicus*, and the results are mixed at best. The production certainly looks stunning, but the mix of the historical with 20th-century fascist in this tale of Roman Empire murder and betrayal is awfully derivative, most obviously of Richard Loncraine's *Richard III* (Orson Welles did it first in his 1937 stage production of *Julius Caesar*). Taymor doesn't seem to know when to hold back; the acting stretches from expressive to ridiculous, and there are several pointless bizarre impressionistic scenes that seem taken out of *Altered States*. The biggest problem, however, is with the source material; *Titus Andronicus* is one of the earliest and one of the least of Shakespeare's plays. It is unceasingly violent and vulgar, and while eloquent in parts it contains none of the psychological insight of later tragedies like

King Lear or *Hamlet*.

Topsy-Turvy

British filmmaker Mike Leigh is best known for gritty urban dramas like *Naked* and *Secrets and Lies*, but he proves to be surprisingly adept here with a lighthearted yet detailed look behind the scenes of Gilbert and Sullivan's operettas. The plot centers around librettist W.S. Gilbert (Jim Broadbent) and composer Sir Arthur Sullivan's (Allan Corduner) efforts to rekindle their creative spark after accusations of being stuck in a rut. The result is the wildly popular *Mikado*, set in Japan, which, though ghastly condescending by modern standards, was an exotic treat for 1885 audiences and is still a lot of fun today. *Topsy-Turvy* gives us more than just a glimpse into the goings-on at the Savoy Theatre; it's the richest look at the creative and collaborative process involved in bringing a play to the stage I've ever seen. Sullivan gets something of a short shrift in the script compared to Gilbert, but every member of the ensemble cast is excellent. The movie's longer than it really ought to be, but the bright tone and rich attention to detail make *Topsy-Turvy* one of the most rewarding films of the year.

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Shakespeare

TACIT brings *Merchant of Venice*, Shakespeare to Caltech

BY MOHI KUMAR

Theater Arts at the California Institute of Technology (TACIT) invites you to mix the splendor of the Italian Renaissance and the genius of Shakespeare with the talent of the Caltech community's actors and artists. Their production of *The Merchant of Venice*, directed by Shirley Marneus, opens tonight at 7:30 p.m. in the Ramo Auditorium, located at the south end of Baxter Hall.

Strict attention to detail is evident in the production. The night before the show, actresses, with pearls and ribbons threaded into their hair, practice courtly curtsies in their voluminous Renaissance costumes. Actors, with heavy capes and feathery masks, practice walking comfortably in their rich velvet and brocade doublet and sheer hose. "Wearing tights feels awkward," confided 2nd year aeronautics graduate student Jimmy Fung, who plays Leonardo and a carnival extra. "It's like second skin." The play's set has also

been meticulously crafted. The elegant arches and pillars have been painstakingly dabbed with cream and buff-colored paint, lending a marbled texture to what will become the streets of Venice and the estate of Belmont. Benches and stools have been streaked with brown paint to give it a wooden appearance. "The actual set is borrowed from past TACIT Shakespeare productions; each play is like variations on a theme," said Eric H. Warren, the professional set designer who has worked with Marneus for the past 25 years. "But this set has particular relevance for this production, since it calls to mind the Doge's palace in Venice."

The production's musical score is entirely original. "I composed it specifically for this production," explained Robert Parker, the husband of a Caltech Staff Member. Parker plays the role of the Duke of Venice, and Shylock's friend Tubal. "It is inspired by music of the Italian and English Renaissance."

Actors have spent more than a

month studying *The Merchant of Venice*, fastidiously memorizing and interpreting their lines. Sophomore Robert Swinney commented, "Shirley left it totally, up to me about how I wanted to portray my character, Lorenzo. Typically, Lorenzo is portrayed as a playboy and a gold-digger... an insincere character. I read it differently, and she let me play it." This freedom for character interpretation is Director Marneus' goal. "I give the actors as much opportunity to discover and explore their character within the text and within themselves, so that they can really connect with the character they are portraying," she explained. Swinney agreed. "The details and emotions I pick up as an actor brings the story to focus as a student. You don't get all the emotions of the characters when reading the text. Hearing it is completely different. Shakespeare is always better heard than read." *The Merchant of Venice* is a challenging play," observed Marneus, explaining her reasons for its se-

lection. "It is generally misunderstood. In light of the Holocaust, many directors have cut the play to distort Shylock's importance and to diminish the love story of Bassanio and Portia. I took a conservative approach to bring back a sense of balance." She added, "I am more interested in what the play means than in making it popular or palatable."

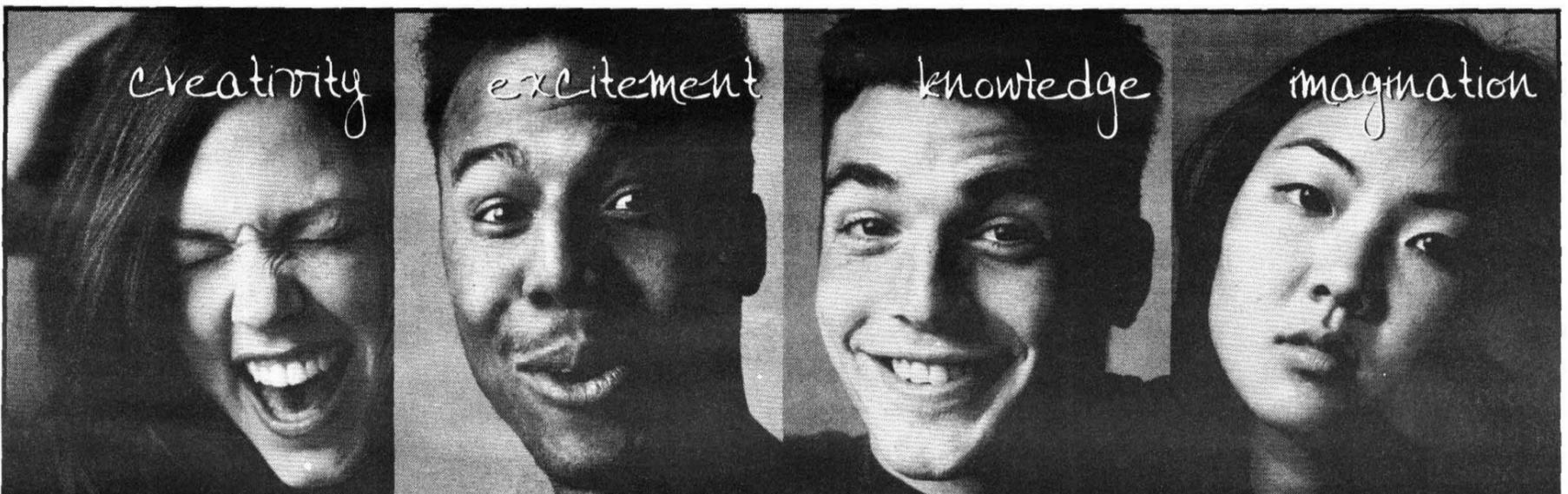
Marneus believes that theater is a vital aspect of any university education. "But especially here, where scientists are dedicated to discipline, theater complements science, it's the other side of the same coin," she stated. "We have been recently named the Number One university in the country. We have a responsibility to balance scientific sophistication with cultural sophistication, and increasingly, this campus is looking towards art for that balance."

The show runs for the next three weekends with performances on Friday and Saturday at 7:30 p.m. and Sunday matinees at 2:00 p.m. Tickets are

\$5.00 for Caltech students, \$10 for all other students, and \$15 for general admission. Tickets are available through Ticketmaster and the Caltech Ticket Office. Tickets will also be sold in Ramo Auditorium one hour before each performance.

"Past TACIT productions of Shakespeare have been very masculine - with fighting and swordplay," recalled Allen Corcoran, a Caltech Alumnus and veteran TACIT member who plays the title character of Antonio. "They were histories or historical tragedies, swimming in testosterone. This is the first time in a long time that we're doing a comedy."

Marneus is pleased with the enthusiasm and dedication of her 34-member cast. She predicts, "It will be a wonderful production. So come," Marneus invited. "See the theatrical talent that exists on this campus. Come support your friends and colleagues. Most important, come see Shakespeare whenever you can."



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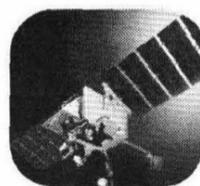
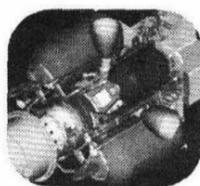
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Cheer!

Cheerleaders take Caltech Beavers by the tail

BY MAYANKA PRASAD

"We'll up the scoring at Caltech" their T-shirts cleverly announce. Doesn't it just give you a sense of nostalgia for your old high school days? There were football players, pep rallies, posters, spirit gifts, and of course there were those perky girls in cute skirts with pom-poms. And you left it all behind to come to Caltech....

Well, worry not, my friends.

The new Caltech cheerleading squad is ready to bring it all back right here. How

did this all get started? It began with two freshman girls who thought Caltech needed a little pep to spur some excitement onto campus. Nikki Eber and Teresa Gonczy wondered whether they would be able to gain any enthusiasm for the squad. However, what started as two girls became four, then eight, then twelve. Before they knew it, they had enough people for Caltech to consider them a legitimate organization.

Their problems didn't end there, however. When the girls began to look around for funding, they were faced with skepticism. Until the squad could show that this idea wasn't a joke, and that Caltech cheerleading would become a permanent team, they could get no money for uniforms or anything else. Dissatisfied, but determined, the squad went to work.

First, the girls had a carwash

to raise money. Next was a bake sale on the Olive Walk that reaped tremendous profits. This money in addition to

their T-shirt sales gave the squad almost enough to pay for uniforms. Not only that, but the hard work and dedication the squad showed through their fundraising efforts finally gained them recognition. Many people wonder what the cheerleaders hope to accomplish. Well, a lot of students appreciate the fact that they can play on Caltech sports teams, whereas if they had gone to a larger, more athletically competitive college

they would never have had a chance to play. Similarly, the Caltech cheerleading squad gives girls the chance to do something that they probably hadn't been able to do in high school.

The squad consists mainly of beginners, but that doesn't stop their enthusiasm. These peppy girls say that the thought of cheerleading practice helps

them get out of bed in the morning. These days, coaches are asking the cheerleaders to come to their games. The Caltech frisbee team even offered to provide the cheerleaders with transportation for their away games. Currently the squad has plans to cheer at basketball games on February 16 and 24. In addition, the girls say they have big plans for a performance during

Prefrosh Weekend in April.

The cheerleading squad is still open for membership. Cheerleading is already being offered as a PE class, and there are already about 20 people interested. Choreography will be designed by ex-choreographer from the LA Clippers. For more information, check out the Caltech Cheerleading website at www.cco.clatech.edu/~cheer.

'Many people wonder what the cheerleaders hope to accomplish.'

sale on the Olive Walk that reaped tremendous profits. This money in addition to



Caltech Cheerleader Nitzan Roth dons her beaver garb in service of the team, depicted here at their recent fundraising car wash.

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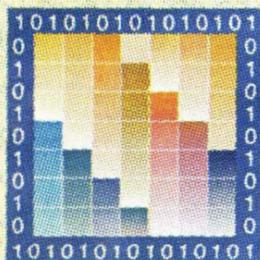
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WOW! YOU'VE DEVELOPED EIGHT PATENTABLE IDEAS, ASOK.

WE'LL HAVE TO BURY THEM OR ELSE IT WILL LOOK LIKE WE HAVE TOO MUCH FREE TIME.

THEN I SAID, "LITERALLY?" AND THEN HE SAID...

COME TO THE VP'S OFFICE WITH ME. YOU NEED TO GET SOME FACE TIME.

WHAT IS FACE TIME?

IT'S VERY IMPORTANT.

AND THIS IS YOU ASKING FOR A RAISE.

I'LL GET THIS INFORMATION FOR YOU.

NO YOU WON'T. YOU'LL WAIT UNTIL I HUNT YOU DOWN AND THEN YOU'LL SAY YOU WERE TOO BUSY.

TODAY I STARTED HATING PEOPLE IN ADVANCE.

IT SAVES TIME.

DILBERT, YOU'VE BECOME TOO AWARE OF REALITY. I'M SENDING YOU TO "CYNICS ANONYMOUS."

A HIGHER POWER WILL HELP YOU REGAIN THE NAIVE OPTIMISM THAT ONCE MADE YOU A PERFECT EMPLOYEE.

WHY CAN'T THE HIGHER POWER CHANGE ME WHILE I'M SITTING HERE?

FLUORESCENT LIGHTS BLOCK HIS POWER.

CYNICS ANONYMOUS

MY COMPANY SENT ME HERE TO REGAIN MY NAIVE SENSE OF TRUST.

ALL IN FAVOR OF USING DILBERT'S COMPANY-PAID DUES ON BEER, SAY AYE.

MAKE SURE YOU SIGN UP FOR OUR GAMBLING CRUISE.

FoxTrot by Bill Amend

YOU WANT TO WHAT?!

INSTALL LINUX ON THE IFRUIT.

ABSOLUTELY NOT! I LIKE MY COMPUTER THE WAY IT IS!

I CAN PARTITION IT. YOU WON'T EVEN NOTICE.

HOW CAN ANYONE NOT NOTICE, JASON?!

OPEN SORES! YUCK!

SOURCE, MOM. OPEN SOURCE.

SO WHAT IS THIS, EXACTLY?

I HAVE NO IDEA. WHAT'S THE MENU SAY?

"BEEF STU..."

THEN THAT'S WHAT IT IS.

SOMEONE SPELLED IT WRONG.

THAT'S OK. WE PROBABLY MADE IT WRONG.

WHOEVER SAID HONESTY WAS REFRESHING...

WAIT. YOU FORGOT YOUR KORN MUPHIN.

I FINALLY FIGURED OUT WHY MY MOM DIDN'T WANT ME SEEING "MAGNOLIA."

WE'RE IMPRESSIONABLE YOUTHS, DON'T YOU KNOW.

AAAAAAA!

FSHLINK!

I CAN SEE WHY TARZAN OPTED FOR VINES AND NOT VENETIAN BLIND CORDS.

IT DOES LOOK A LOT BETTER THIS WAY.

THIS IS THE LAST TIME WE'RE RENTING AN IMAX MOVIE.

DANG. THE PICTURE'S ALL SNOWY.

SCRAPE SCRAPE SCRAPE

THERE. THAT'S BETTER.

ONE OF THESE WINTERS I'M GOING TO MAKE MOM RAISE THE THERMOSTAT.

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Daily [11:30] 2:05 4:40 7:15 9:50

Directed by Pedrow Almodovar
ALL ABOUT MY MOTHER
Daily [12:30] 3:00 5:30 8:00 10:20

Based on the novel by Jane Austen
MANSFIELD PARK
Daily [11:30] 2:10 4:50 7:30 10:00

Starring Ralph Fiennes
ONEIN
Daily [11:30] 2:05 4:40 7:15 9:50

Directed by Tim Robbins
CRADLE WILL ROCK
Daily 1:00 4:00 7:00 10:00

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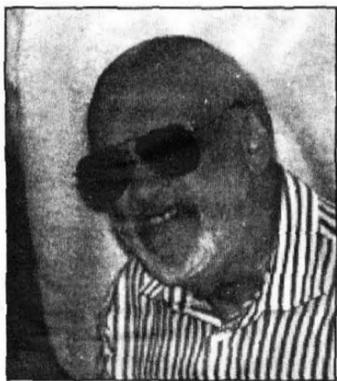
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Dean

Dean's Corner

When Do You Think?

by Jean-Paul Revel



College is a special time in a person's life, marking the passage from one's mostly dependent teenhood, into one's first steps into adulthood. It offers many wonderful opportunities for personal development and many students remember the times fondly, long after graduation, although perhaps more fondly as graduation recedes further in the past. But it does not take a dean to realize that all is not always roses for you, the wizards we call students at this institute. Being intellectually gifted and having breezed through High School, some of you are shocked to discover that your learning skills, which never had to be invoked before, are not what they need to be. It can also be difficult to learn to deal with other people. Not all of you have had that much practice at it. I often hear that Caltech provided you with your first opportunity ever to interact with peers.

When you get here you are suddenly placed in the Houses, together with all of your classmates. Social interactions are pretty much a must,

if only for mundane things like common meals and sharing rooms. Although things go smoothly by and large, there are daily interactions, collisions, with other students or with existing groups of students. We try to ease the frictions, make collisions less frequent and less painful. The critical stage in your lives at which you find yourselves and the sometimes difficult adjustments that have to be made, are made even more difficult by the rigors of the curriculum. Although we try to provide multiple safety nets, there is sufficient rough and tumble to cause some wear and tear.

There are many ways in which you are encouraged to interact. Groups have many advantages, such as providing ready companions, emotional support, and efficiency in carrying out scholastic and various other tasks. So we encourage their formation. The Y hike, Frosh camp, the selection of entering students into the houses, their segregation into alleys, Interhouse and Intercollegiate sports, the common evening meals (although in some cases dining room practices act more as repel-

lent than a binder), all can be seen as part of group building. In the end no one among you acts only as her/himself, but also is a cog that meshes, with more or less grinding noises, with your peers in various groups.

But the formation of groups also has very serious drawbacks, in particular the appearance of an "us vs. them" psychology. In his book "On Aggression", Konrad Lorenz, winner of the Nobel Prize in Physiology, imagined an observer from Mars dispassionately studying human affairs. This Martian, said Lorenz, would unavoidably draw the conclusion that "man's social organization is very similar to that of rats which, like humans, are social and peaceful beings within their clans". So far so good, if you don't mind rats (from personal experience I know that young rats are actually very personable).

But, Lorenz goes on, rats are, "veritable devils towards all fellow-members of their species not belonging to their own community". Like rats, humans have a communal response and can, in crowds, "become excitedly aggressive and lose all rationality and moral inhibitions". This, Lorenz postulated, was a relic of behavior from our prehuman ancestors, a behavior encountered in many animals and one

which apparently persists.

Like rats and like other humans, students in their groups protect their territory jealously. Each has (or claims) its prerogatives and you show a strong loyalty to your own house and classmates. For humanity at large, the development of such loyalties has led to wars between rival groups (countries). Surprisingly, here at Tech, the outright hostilities that are predicted by the "Martian Observer" are rare (I guess the influence of our pre-human ancestors is not felt so strongly at this pinnacle of superhuman achievement). But even here, in our peaceful village dedicated to scholarship, things sometimes go far, too far, in that direction.

One of the benign expressions of "us vs. them" is to be found in pranks, a form of good spirited warfare, carried out by one or another group at the expense of "them". For those prankish interactions that are all in fun—Hurrah! But it seems to be surprisingly difficult to stay within bounds. Immersed in the activity, some of you have been known to lose individual control and, as part of a group intent on its goal, be led to extremes they would never have dreamt of in other circumstances. I am quite sure that you student readers can insert here any number of pranks, activities etc., in which some of the participants have been carried away by the "group psychology".

In the world at large, the balance between individuals or groups is maintained by laws that prescribe which behaviors can be tolerated,

and which are unacceptable. Here at Caltech, not only must we respect the rules imposed by society at large, we must also evaluate our conduct in the light of our one commandment, "Thou shalt not take unfair advantage" We have mechanisms in place to neutralize any advantage gained by transgressors, and to insure the safety of others in the community.

One must think (something Techers should be good at) in order to avoid running afoul of the system. Thoughtful conduct will allow "fun" without endangering others. One activity that must be thought about carefully is the use of carts without prior permission of their owners. Even then the vehicles are not for careening about, an obvious invitation to disaster. Any careening, even on bikes or roller blades, carries with it a disproportionate chance of accidents. If the idea of potential danger is not seen as a breach of the Honor Code, consider that restrictions might have to be applied to all, because of careening by a few. That certainly can be seen as a taking of advantage.

It is great for students to release tensions and reinforce bonds with their close colleagues. It is however clear that a serious effort is required to control excesses. Without that, our cherished values will sadly go by the wayside. Think!

A bientot.

 Jean-Paul Revel

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Mints

ANNOUNCEMENTS

The California TECH is experiencing technical difficulties. Please forward all mints to tech@ugcs. The editors apologize for any inconvenience.

Got questions? Need answers about FINANCIAL AID? A representative from the Financial Aid Office will be outside of WINNETT. Tue., Feb. 15 from 11 a.m. to 4 p.m. Now is the time to file your FAFSA for 2000-2001. Take advantage of the convenient location and stop by to ask your questions and/or visit.

Congressman James Rogan seeks to fill two internships with Caltech students for service during this exciting election year. These would be paid jobs, and would share in the joy and labor of the political campaign. To apply or for information email vvveysey@its.caltech.edu or phone x9570.

Be a part of the earthquake team. The U.S. Geological Survey (on campus) is looking for a part time intern for ongoing monitoring and programming of an automatic, web-based system for gathering post-earthquake shaking and damage data (see <http://pasadena.wr.usgs.gov/ciim.html>). Summer work also possible. More info thru Carrer Center. Email wald@gps.caltech.edu.

Caltech guitar classes for the winter quarter will meet on Tuesdays in SAC Room 1, starting on January 11 as follows: Beginning Guitar Class 4:30 - 5:30 p.m.; Intermediate Guitar Class 3:00 - 4:00 p.m.; Advanced Guitar Class 5:30 - 6:30 p.m. Classical and flamenco repertoires are explored, but techniques transfer to other styles of guitar. The Beginning Class includes a jazz/folk chord system. Classes are free to Caltech students and other members of the Caltech community (space permitting). Undergrads can receive 3 units of credit. The instructor, Darryl Denning, has an international background in performance, teaching and recording (two of his CDs are available in the Bookstore). Mr. Denning can be reached at 323-465-0881 or by email at ddenning@caltech.edu. The guitar home page is at www.cco.caltech.edu/~musicpgm/guitar.html.

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EVENTS

John Astin is Edgar Allan Poe in *Once Upon a Midnight* on Fri., Feb. 11 at 8 p.m. in Caltech's Beckman Auditorium. With flashes

and humor, Astin takes the audience through Poe's life and his frequent battles with himself. Oscar and Emmy-nominated Astin is best known as the original Gomez, patriarch of *The Addams Family*. Tickets are \$25, \$18, \$14; youths 12 and under receive \$4 off. Student and senior rush tickets will go on sale for \$10, beginning one-half hour before the performance. Tickets can be purchased at the Caltech Ticket Office, and all Ticketmaster Ticket Centers. For more information, call 1-888-2CALTECH.

The Merchant of Venice, Ramo Auditorium, Feb. 11, 12, 18, 19, 25, 26 at 7:30 p.m. and Feb. 13, 20, 27 at 2 p.m., presented by Theater Arts at Caltech. Admission to be determined, for more information, call 1-888-2CALTECH.

Cellist James Wilson and pianist Joanne Kong will give a free concert on Sun., Feb. 13 at 3:30 p.m. in Caltech's Dabney Lounge. This is a Paco A. Lagerstrom Chamber Music Concert. The program will feature Boccherini, Bolcom, Ginster, and Chopin. The concert is open to public and free of charge. For information, call 1-888-2CALTECH.

"The Struggle for Gender Equality Doesn't Have to Be A Battle Between the Sexes," presented by Alan Johnson, Ph.D. Noon, Feb 14 at the Women's Center. Dr. Johnson has worked on issues of gender inequality since receiving his Ph.D. in sociology from the University of Michigan in 1972. Please call x3221 for a reservation or email beverlyk@caltech.edu.

The vocal ensemble Anonymus 4 will perform on Fri., Feb. 18, at 8 p.m. in Caltech's Beckman Auditorium. The program for this concert is entitled *The second Circle -- Love Songs of Francesco Landini*. Anonymus 4 is renowned for its astonishing vocal blend and technical virtuosity. Tickets to this performance are \$25, \$21, \$17; youths 12 and under receive \$ off. Students and senior rush tickets will go on sale for \$10 beginning one-half hour before the performance (subject to availability). Tickets can be purchased at the Caltech Ticket Office and all Ticketmaster Ticket Centers. Call 1-888-2CALTECH for more information.

The Caltech-Occidental Concert Band, directed by William Bing, will perform in Thorne Hall at Occidental College on Saturday, February 19, at 8 p.m. For further information about the band concert at Occidental College, please call (323) 259-2785.

Soweto Street Beat Dance Theatre will perform on Sat., Feb. 26, at 8 p.m. in Caltech's Beckman Auditorium. This all-mail South African dance company melds African contemporary, neo-African, modern African, Afro-fusion, and new traditional dance. Tickets are priced at \$25, \$21, and

\$17, youths 12 and under receive \$4 off. Tickets can be purchased at the Caltech Ticket Office and all Ticketmaster Ticket Centers. Call 1-888-2CALTECH for more information.

Caltech Folk Music Society presents William Pint and Felicia Dale, at 8 p.m. on Feb. 12 in Dabney Lounge, on Caltech. William Pint and Felicia Dale, of Seattle, sing a variety of music relating to those who live and work on the sea. More information of the duo is available at <http://members.aol.com/Pintndale>. Tickets are available in advance and at the door, \$12 for adults and \$4 for Caltech students and children under 12. For additional information, call 1-888-2CALTECH.

Earthquake preparedness training will be offered by the Pasadena Fire Department through the Safety Office. Training will be from 9:00 a.m. to 12:00 noon in the Baxter Lecture Hall on Thu., Mar. 9. Learn what to do before, during, and after an earthquake. The session is limited to the first 100 people who sign up. For reservations call Caprece Anderson at x6762.

SCHOLARSHIP

The Jewish 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 American Chemical Society Scholars (ACS) Program will award approximately 100 scholarship awards to undergraduate students interested in four-year degrees in the chemical science. Applicants must be African-American, Hispanic, or Native American and be U.S. citizens or permanent residents. These scholarships are valued at up to \$2,500 for the academic year. To apply, applicants must submit an application form, a current academic transcript, and two letters of recommendation. Applications are available in the Financial Aid Office. Entries must be submitted to ACS by February 15, 2000.

The American Society of Naval Engineers (ASNE) is offering scholarship awards to \$2,500 for undergraduates and \$3,500 for

graduate students for the 2000-2001 academic year. Applicants must be an U.S. citizen and demonstrate a genuine interest in a career in naval engineering. Selection criteria will be based on the candidate's academic record, work history, professional promise and interest in naval engineering, extracurricular activities, and recommendations of college faculty, employers and others. Financial need may also be considered. All graduate students must be members of ASNE or SNAME. Applications are available in the Financial Aid Office. For further information you may contact: The American Society of Naval Engineers, 1452 Duke St. Alexandria, VA 22314 or phone 703-836-6727. The website address is www.navalengineers.org/. Entries must be submitted to ASNE by February 15, 2000.

The Korean American Scholarship Foundation (KASF) is accepting applications for scholarship awards ranging from \$1,000 to \$5,000. Applicants must be full-time students of Korean American heritage enrolled in at least their second year of undergraduate, graduate school or professional school in the Western Region. To apply, applicants must submit application form; a current official transcript; two letters of recommendation; one picture of applicant taken within the last year; and a copy of the student's and parent's 1999 Federal Income Tax returns. Applications are available upon written request by writing to Scholarship Committee, KASF Western Region, 3435 Wilshire Blvd, Suite 2450, Los Angeles, CA 90010 or via the web at www.ksaf.org. Entries must be submitted to KASF by February 15, 2000.

The American Meteorological Society is pleased to invite applications for the 2000-01 AMS/Industry Undergraduate Scholarships in the atmospheric and related oceanic and hydrologic sciences. Prospective candidates from the fields of earth sciences and related fields who intend to pursue careers in the atmospheric and related oceanic and hydrologic sciences are encouraged to apply. The award is based on merit and awarded to students who demonstrate potential for accomplishment in these fields. Applicants must have successfully completed two years of study by August 2000 at an accredited institution with a minimum G.P.A. of 3.0 on a 4.0 scale and be U.S. citizen or hold permanent resident status. The scholarships are available to students who will be juniors in the fall of 2000. The

award is renewed for the senior year based on the recipient's performance and recommendation of a faculty advisor. Applications can be obtained from the AMS web site at www.ametsoc.org/AMS. Any questions may be directed to Donna Fernandez, 617-2272426 x246, dfernand@ametsoc.org; or Stephanie Armstrong, 617-227-2426 x235, armstrong@ametsoc.org. Applications must be submitted by February 25, 2000.

The Dennis W. Cabaret Scholarship Committee is pleased to announce the availability of scholarships for students whose permanent address is in Orange County. Applications must have completed at least one year of college, have a 3.0 or higher GPA, be currently enrolled in an institution of higher education, and clear roots of activism in the Orange County lesbian and gay community. The applicants is advised that the Scholarship Committee may call him or her for a personal interview. Applications are available in the Financial Aid Office. Completed applications should be sent to Dennis W. Cabaret Scholarship, c/o Thomas J. Peterson, 2821 Cassia St. Newport Beach, CA 92660. Entries must be postmarked by February 29, 2000.

The Coalition of Higher Education Assistance Organizations (COHEAO) will award six scholarships to eligible undergraduate students for the 2000-01 academic year. Applicants must be U.S. citizens; have a 3.75 or above GPA; enrolled at a COHEAO member school; must be entering their sophomore, junior, or senior year at the member school; and only one scholarship per family per academic year will be awarded. Further information about the COHEAO scholarship is only available via the web at www.coheao.com/scholarframe.html. To apply, applicants must submit a typed application, 300 word or less typed essay response, academic letter of recommendation, and seal official copy of your most recent transcript. Please send application materials to COHEAO Scholarship Committee, 809 S. Marshfield Ave. M/C 557, Chicago, IL 60612. Application materials must be submitted by March 1, 2000.

To submit an event for the Mints, contact tech@ugcs.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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