

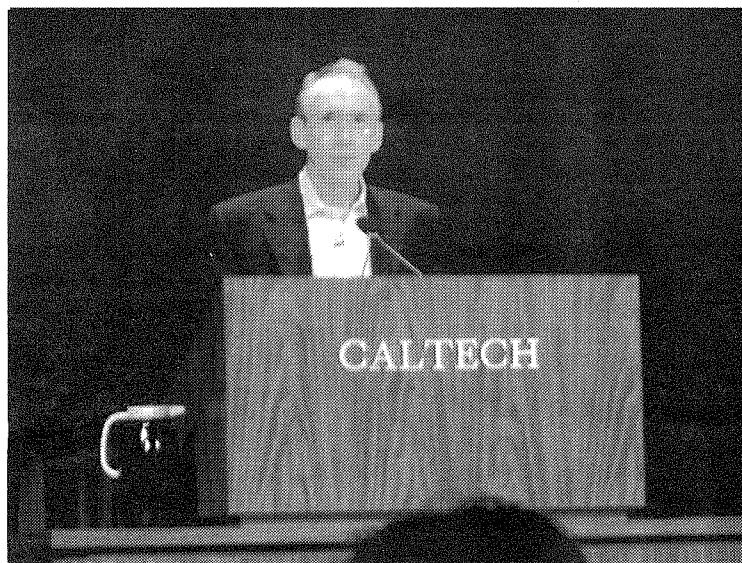


# The California Tech

VOLUME CV, NUMBER 22

PASADENA, CALIFORNIA

APRIL 12, 2004



British author Ian McEwan speaks about his detainment at the border at the beginning of Thursday's talk.

## Truth, Fiction Mixed In Successful Stories

By WILLIAM FONG

On Thursday evening, British writer Ian McEwan gave a talk at the Beckman Auditorium in the continuing Voices of Vision Series. The talk concluded a week of events at Caltech by McEwan as the visiting writer of the Words Matter program.

Earlier in the week, McEwan held a seminar at the Avery House Library entitled "Literature, Science and Human Nature" and attended literature and creative writing classes to provide some insight into the writing process.

Ian McEwan is one of the most

well known and successful British contemporary writers as witnessed by numerous awards and the popularity of his works. McEwan won the Somerset Maugham Award for his short story collection *First Love, Last Rites* (1975), the Whitbread Award for his book *The Child in Time* (1987), the Booker Prize for his 1998 novel *Amsterdam* and the National Book Critics Circle Award for his most recent book *Atonement* (2001). *Atonement* drew many praises from those attending the talk.

Rather than providing a sum-

*Continued on Page 8 Column 3*

## SHC Accepts 'Compromise' Deal: Freshman to Live in Avery in 2005

By KEVIN BARTZ

Riding a last-minute surge of support among moderates, a compromise measure placing freshmen in Avery in 2005 won the recommendation of the Student Housing Committee last Monday in a heavily anticipated 5-2 decision, sending the opposition Interhouse Committee back to the drawing board in its effort to halt the Avery Council-led initiative.

"I think it was pretty much a consensus," said SHC head Kim Border. "There was no one willing to argue strongly for 2004 and I think Campus Life thinks it would be rushed to do it by then. We thought 2005 seems more doable."

The measure's next step is the Faculty Board, which votes in May on whether to approve the SHC's recommendation. They'll introduce and briefly discuss the idea at today's meeting, said Mechanical Engineering Professor David Goodwin, whose steering committee sets the board's agenda. "[Today] will just be a brief summary of the recommendation, five or 10 minutes," he said.

Although most had pushed hard for freshmen next fall, supporters welcomed the 2005 recommendation. "We'll never know whether it could've worked in 2004," said Geoffrey Hom, perhaps the foremost graduate student advocate, "but I can totally understand why people would want to wait until 2005."

Avery councilman and campus pundit Alex Shim '05 was likewise conciliatory, turning an auspicious eye towards improved IHC-Avery relations. "Yes, I'm a little disappointed that it wasn't 2004," he conceded, "but I'm glad that things will work their way out. I think now that a decision has been made, we can work more closely with the IHC."

But while Avery nails down the lingering logistical details that doomed its measure to a one-year delay, the IHC is regrouping for a renewed stand against a plan it has long opposed in either form. "Members of the IHC don't think this is a done deal," said Page President Jason Quimby '05. "This is definitely a fight worth fighting."

The eight-member coalition of house presidents met last night to flesh out plans for a survey demonstrating the extent of undergraduate opposition, added Quimby. "A survey would be the main crux of our next step," he said. IHC Chair Kim Popendorf '06 confirmed last week that the IHC's response to a 2005 recommendation "in large part will depend on the response of the students. Our goal really is to be representative of the students."

It may be true that a recommendation is far from a decision, but whereas the IHC previously had the luxury of scheduled speaking time at orderly SHC meetings, it now must take its case directly to Faculty Board members or

*Continued on Page 2, Column 3*



Professor Kim Border and the SHC listen as the IHC makes its presentation before its Monday meeting when it made its decision.

## Legal Realities, Political Stances Discussed During Lunch Lecture

By IRAM PARVEEN BILAL

On Wednesday, April 7th, the clear and sunny afternoon at Steel House welcomed a discussion on a not-so-clear topic; the topic that has been all over the news recently - Gay marriage. The talk, titled "Gay Marriage: the law, the policy, the politics" was led by Professor Nan D. Hunter and Prof Chai Feldblum, both of whom have a remarkably active history in the gay and civil rights movement.

The talk was divided into the laws behind marriage and then the confusion of the gay marriage issue itself. Feldblum went on to highlight the legal arguments for not restricting marriage to the opposite sex only. She backed her argument with both the federal and state constitutions. The highest court in the state, she informed, was the supreme court of the State and not the U.S. Supreme Court whereas the highest court in the U.S. was the U.S. Supreme Court.

She mentioned this difference to highlight the separate laws of state and country and how cases can be strategically maneuvered to use these differences. For instance, Feldblum, highlighted that the Massachusetts cases were brought under the state court to avoid the interference of the Supreme Court.

She argued for the permission

of gay marriage on the grounds of fundamental rights and equality. She said, "The U.S. court says none of us can be deprived of life, liberty and property without due process of law." This was extended in the 1920s, to the US S.C saying that certain rights could not be taken away, no matter what due process was used. This substantive due process theory included, she argued, the right to marry, the right to raise children, to worship God and all the basic rights that one should have, even if the government desires to the contrary.

In the following years, many other rights like the right to abortion, the right to using contraception, the rights for inter-racial marriage were debated upon. In 1986, the act of sodomy was considered wrong by the U.S. Supreme Court. Feldblum argued that this was only a value judgment of the court because it did not fit the fundamental lists of rights from cases in the past. Massachusetts told the U.S. Supreme Court that the people who were asking for rights to sodomy were in effect asking for the right

*Continued on Page 8, Column 1*



Professor Nan Hunter, center, and Professor Chai Feldblum, right, prepare their talk as Tim Downes looks on.

## Hominid Link Found Under Ethiopian Dirt

By K. SZWAYKOWSKA

This Wednesday evening (April 7), the second lecture of the Leakey Lecture Series was held in Beckman Auditorium. The speaker was Dr. Berhane Asfaw, co-director of the Middle Awash research project and one of the first members of the Leakey Foundation. In a talk entitled, "The transition from Australopithecus to Homo," he talked about his work in the past few years, dealing with the search for one of the "missing links" in human evolution in Middle Awash region in the Ethiopian Rift Valley-about the results that such work brought and the way that it is carried out.

The main topic of Dr. Asfaw's lecture and that of his research for the past several decades, was the search for one of the notable "missing links" in human evolution. The link in question was to be an intermediate species between the earliest (approximately 4.4 mil year old) ape-like hominids, the Australopithecus and the later (approximately 1.8 mil year old) fossils which bear the name of "Homo."

That is, a species which would show intermediate features between the early hominids with small brains and relatively long arms but short legs and more recent human ancestors, whose arms and legs were more similar in proportion to our own and who had developed relatively large brains.

For some years, the question of this connection was thought to have been resolved by the find of Australopithecus Africanus in 1924. This species resembled the earlier hominids in many features, especially its protruding face and relatively small brain; but its spine and femur structure indicated that it was bipedal and its dentition resembled that of humans rather than of apes.

Unfortunately, this promising "link" was discredited in the 1980s by Johansen and White, who suggested that Australopithecus Africanus evolved into Australopithecus robustus and subsequently into Australopithecus boisei, which then died out, becoming one of the historically

*Continued on Page 2, Column 1*



HP chief executive officer Carly Fiorina has been selected as this year's commencement speaker.

## Hominid Fossils Hold Promise for Scientists

Continued from Page 1, Column 5

abundant dead ends of evolution. For the past twenty years, then, the search for a different possible link has been going on.

Since the 1980s, Dr. Asfaw has been leading excavations in the Ethiopian Rift Valley, where a relatively large number of early human remains have been found. Until the early 1990s, however, the team was working on excavations on the West bank of the Awash River, where fossil-containing sediments occur over a relatively small area and all human remains found were very fragmentary; thus it could not be determined whether or not they came from any previously unknown species.

This seemed like nature's mockery of the anthropologists' hard work, as the fossils found were about the right age for the expected transition between Australopithecus and Homo (approximately 2.5-2 mil years old); "It is so frustrating," says Dr. Asfaw, that after so many finds, "we still could not answer the question we wanted to answer."

He described the difficulties of getting across the Awash River to the more sediment-rich East Bank from the West Bank highlands; there was no bridge and only a wooden barge floating on empty oil-barrels, on which it proved impossible to transport the necessary equipment. In the end, the team built its own road across the river and drove over a difficult route to the other side, only to find villages built over the intended excavation sites.

Areas of sediment were combed for fossils by anthropologists on hands and knees, so that even the tiniest fossilized seeds were turned up (together with larger seeds, bones and even fossilized fish). The most exciting find, however, was made while walking around the jaw of a "big-

molared hominid" with large canines, which the team identified as that of a previously unknown species.

Over the next forty days, the area of the find was excavated and carefully sieved, turning up several additional bone fragments of a new hominid, about 2.3 million years old and sharing the features of Australopithecus and Homo. A skeleton of about the same age was found about 20 meters from the skull and was tentatively attributed to the same species, now named Australopithecus garhi. The skeleton shows more human-like proportions between the arms and legs, but the lower arm is significantly longer than the upper, as in earlier species.

Another interesting find was animal bones with cuts and bores made by stone tools, in the "skeleton horizon", thus surprisingly showing the small-brained A. garhi to be the earliest hominid to use stone tools, though tools themselves were not found. As Dr. Asfaw says, the find is significant because it shows that "for the first time, the hominids have left their marks that they used stone tools to access animal flesh."

For the present, A. garhi is accepted as one of the most probable links between Australopithecus and modern human. With further research, one day it may be possible to understand the whole course of human descent, from our earliest roots, through the path of history and of evolutionary dead-end and success. Dr. Asfaw's presentation of the topic was very interesting; his goal, as he said, was "to spend the maximum time to tell [...] how we go to the field and how we find these fossils," and the result was a very enjoyable lecture. A third lecture of the Leakey Series will be given on May 19 and hopefully, it will prove as good as this.



Dr. Berhan Asfaw, left, explains some of the theory behind the search for the intermediate between Australopithecus and Homo.

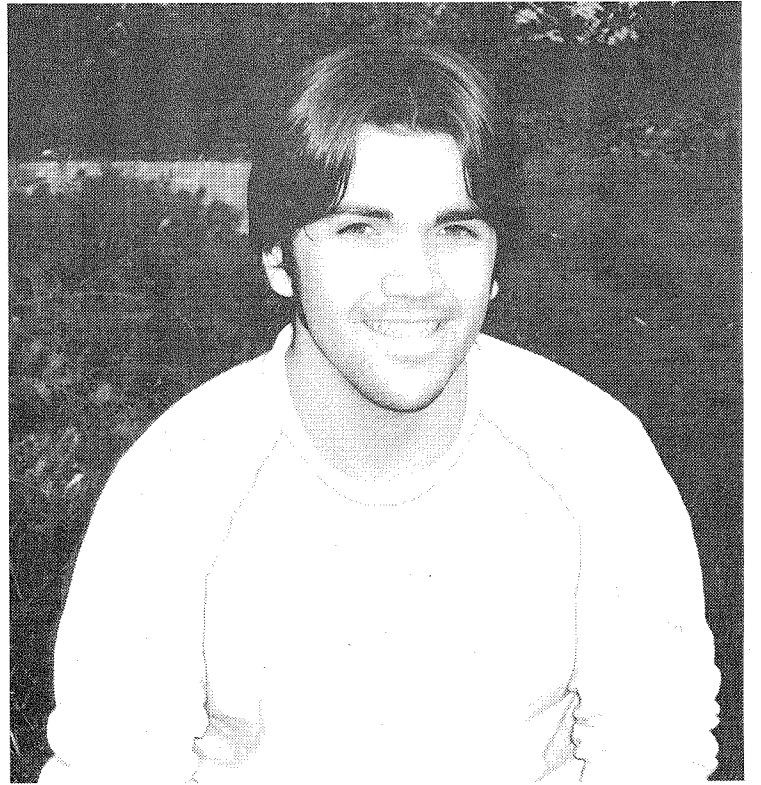
## Commencement Speaker Named

By ROBERT TINDOL

PASADENA--Caltech President David Baltimore announced that Carly Fiorina, chairman and chief executive officer of HP, will be the commencement speaker at the Institute on June 11.

One of the country's most recognizable corporate executives, Fiorina has led HP since 1999 to invent technologies and services that drive business value, create social benefit, and improve the lives of customers.

Prior to joining HP, Fiorina spent nearly 20 years at AT&T and Lucent Technologies, where she held a number of senior positions. Fiorina holds a bachelor's degree in medieval history and philosophy from Stanford; a master's degree in business administration from the Robert H. Smith School of Business at the University of Maryland at College Park; and a master of science from MIT's Sloan School.



Riddock resident Michael Priolo continues to disagree with having freshmen in Avery, but thinks another year could change that.

## Student Poll Thought Unnecessary; Faculty Board Decision Upcoming

Continued from Page 1, Column 5

Student Affairs administrators--a considerably more daunting prospect.

Moreover, if it hinges on a student survey, their pitch may fall flat with faculty. Campus Life Director Tom Mannion said Friday that he didn't think a survey is a good idea. "What would that show?" he asked. "That [students in the on-campus houses] don't like the idea? That's not new news."

Mannion added that while he does not have a strong opinion, he was relieved that the SHC did not recommend freshmen in Avery next fall. "This way, I think everyone will give it their best effort," he said. "I'm glad people are taking time to find a plan that will work rather than rushing forward."

Cooperation from Mannion and Student Affairs Vice President Margo Marshak would be the final cog in implementing the plan in 2005. For her part, Marshak pulled out of commenting publicly because she didn't want to influence faculty voting in May. Nevertheless, Student Affairs vice presidents have a track record of honoring advice from faculty committees, particularly when it's as specific as the SHC's Avery recommendation and few believe Marshak would buck the trend.

A separate IHC approach would be to seek reconsideration from the SHC. Border said Monday, however, that his committee was unlikely to be swayed except by "compelling" new evidence--probably not a survey. "I don't think anyone on the committee is particularly eager to have more meetings," he said, "but I'm not saying we wouldn't look at something compelling."

Furthermore, support for the measure on the committee appears solid. "A lot of us felt this was probably something that should've been done eight years ago," said Border.

Five from his nine-member committee voted Monday to approve the recommendation, which Border and Master of Student Houses Cathy Jurca have gone on the record supporting. Past reporting has suggested that yea votes also came from three of four of the other faculty members on the committee: Geology Assistant Professor Paul Asimow; Ge-

ology Professor Geoffrey Blake, Athletics Director Tim Downes; and Math Professor David Wales.

Along with Chemistry Professor John Bercaw, one of these failed to attend the meeting due to prior commitments, explaining why there were seven--not nine--votes in the final tally. But Border said he'd received e-mail sentiments from both absentees and that their sentiments wouldn't have shifted the balance.

Throughout, the only wild card in the faculty vote was Asimow, who took a surprisingly neutral tone leading up to Monday's balloting. Although he declined to reveal which way he'd voted, Asimow had previously said that although he understood Avery's position, "there may not be time to work out the details," which suggests that he was probably sympathetic to the 2005 recommendation.

That would leave the two nay votes to CRC Co-chair Manny Garcia '05 and graduate student Karen Smith, the only two students on the committee. They have repeatedly declined comment throughout negotiations, but committee sources corroborated that Garcia agrees with the IHC, while Smith has asked pointed questions at committee meetings about whether graduate students would feel welcome in an Avery with freshmen.

For supporters on the SHC, their decision in many ways came down to fairness.

"Everyone on campus seems to agree that Avery is a good alternative for those students who don't like the house system; since there are freshmen who fall into this category, I think it's good to make another option available to them without making them wait two quarters," explained Jurca. "Also, it only seems fair that Avery ought to have the same right of self-determination that the seven houses insist upon."

The 2005 recommendation was largely a compromise that arose after the IHC's March 31 rebuttal to Avery's proposal, in which Pependorf said she'd consider a delayed measure but would continue to "fight hugely" a 2004 measure. The idea quickly caught fire with moderates from both sides such as Asimow and key proponent Ryan Witt '05 as well as SHC faculty anxious to ease student infighting. Moreover,

in Shim's words, "people like to wait," and by Monday, most suspected the SHC would recommend as it did.

IHC chair runner-up and Riddock House member Michael Priolo '05 was not surprised. "That part of it is good," he maintained, "not recommending freshmen for next fall. That would've been a real rush. I still don't like the idea but perhaps a year of thinking about it will change things." He added that the extra year will give students a valuable extra year to seriously contemplate the proposal.

Meanwhile, should the IHC keep up its fight? "If they can muster a strong and unified response to it, they should fight it," he said. "They should just go after it and say 'no.'" Many rank-and-file house residents shared his call for continued IHC opposition. "I think it would be good if they continue to fight it," held Riddock rising star Alex Padilla '07.

Not all supporters were satisfied with the SHC's compromise, either. Some, like Avery rights advocate Neil Tiwari '05, were holding out for a 2004 decision. "But Avery's brave yet endlessly vie," he said. "We fear not as this day is done. Because the victory is nigh: the time of Avery will come."

### The California Tech

Caltech 40-58, Pasadena, CA 91125  
editorial desk: (626) 395-6153  
advertising desk: (626) 395-6154  
editorial e-mail: [tech@tech.caltech.edu](mailto:tech@tech.caltech.edu)

VOLUME CV, NUMBER 22

Tammy Yee Wing Ma Vi Tuong Tran  
Managing Editor Business Manager

Matthew H Walker Circulation  
News Director Natalia Deligne

Tearsheets  
Tim Tirrell

The Tech is published weekly except during vacation and examination periods by the Associated Students of the California Institute of Technology, Inc. The opinions expressed herein are strictly those of the authors and advertisers.

Letters and submissions are welcome: e-mail submissions to [tech@tech.caltech.edu](mailto:tech@tech.caltech.edu) as plain-text attachments, including the author's name, by Friday of the week before publication. Sorry the Tech does not accept anonymous contributions. The editors reserve the right to edit and abridge all submissions for any reason. All written work remains property of its author.

The advertising deadline is five p.m. Friday; all advertising should be submitted electronically or as camera-ready art, but the Tech can also do simple typesetting and arrangement. All advertising inquiries should be directed to the business manager at [business@tech.caltech.edu](mailto:business@tech.caltech.edu). For subscription information, please send mail to "Subscriptions."

# SWE Holds Competition to Inspire Young Girls to Enter Engineering

By KRISTIN SHANTZ

On the morning of Friday April 2nd, 17 8th grade girls toting rubber-band powered airplanes arrived on the Caltech campus. They were about to compete in the 1st annual "Caltech Jr. Engineering Design Competition--Girls Only," an event hosted by the Caltech Society of Women Engineers and made possible by a generous \$10,000 contribution from the Donald Strauss Public Service Scholarship Foundation.

The girls had been anticipating this day for many months. Back in January, all the girls participating in the competition attended an orientation meeting, where they were told what they would have to do to win the competition: working in teams of two or three, they would have to design and construct a rubber-band powered airplane that would fly the farthest and straightest using nothing except a provided kit of parts and tools. The teams were competing for the top prize, an all-expenses-paid trip to the Sally Ride Science and Engineering Camp, a one-week camp at Stanford University for middle school girls.

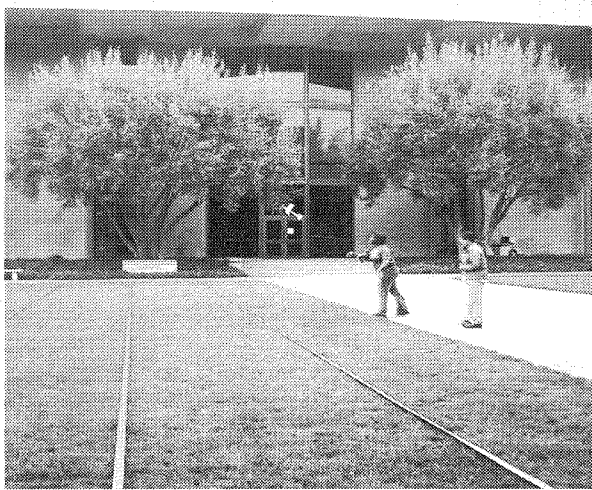
The prospect of winning this prize really excited all the participants, and they anxiously went to work on their planes. Each of the six competing teams was assigned a female Caltech student mentor to help them design and build their plane during regular meetings beginning two months before the competition. Natalie Kruk, Joanna Cohen, Kristin Shantz, Preetha Sinha, Kristen Zortman, and Nyssa Thompson each acted as a mentor for one of the teams. Even though the participating girls were only 8th graders, they were extraordinarily creative and self-motivated with their projects, needing minimal help from their mentors. "These girls are really bright, and have great ideas," Natalie Kruk '06, commented, "They were so enthusiastic the whole time."

After months of preparation, competition day had finally come. The girls arrived at the Court of Man at 9:00 am, where the lawn area was taped off every six feet to make it easy to measure the distances of each flight. Each team was permitted 10 minutes of practice flight time before the actual competition. Many of the

girls expressed feelings of excitement and nervousness, and many teams were using superglue and tape to make last minute repairs and alterations on their planes just moments before the competition started.

In the competition, each team flew their plane five times, and the distances of these flights were averaged to determine the team's final score. The girls were kept in suspense since their average scores were kept secret until the awards ceremony at the end of the day. While the girls enjoyed a free pizza lunch, the judging was conducted for the additional prizes awarded for "Engineering Quality and Style" and "Most Creative Design." Finally, the moment the girls were all waiting for had come, and the 1st, 2nd, and 3rd place winners, as well as the winners of the two design competitions and the "Spirit and Enthusiasm" award, were announced. An incredible selection of prizes, including Caltech sweatshirts and T-shirts, marble roller coaster sets, magnet construction toys, UV spy kits, silly putty, nail polish, candy, and of course the free trips to camp were awarded. At the end of the day, each and every team walked away not only with exciting toys and prizes, but also with a sense of accomplishment and an increased enthusiasm for science and engineering.

This full day of competition was headed up by an army of volunteers from the Society of Women Engineers (SWE). All in all, it was a fun-filled day for everyone involved. SWE works to coordinate many events to encourage girls to become interested in engineering, such as on-campus laboratory tours, hands-on engineering projects and competitions, and engineering presentations and demonstrations at local



The winning team launches their rubber-band powered airplane during the competition.

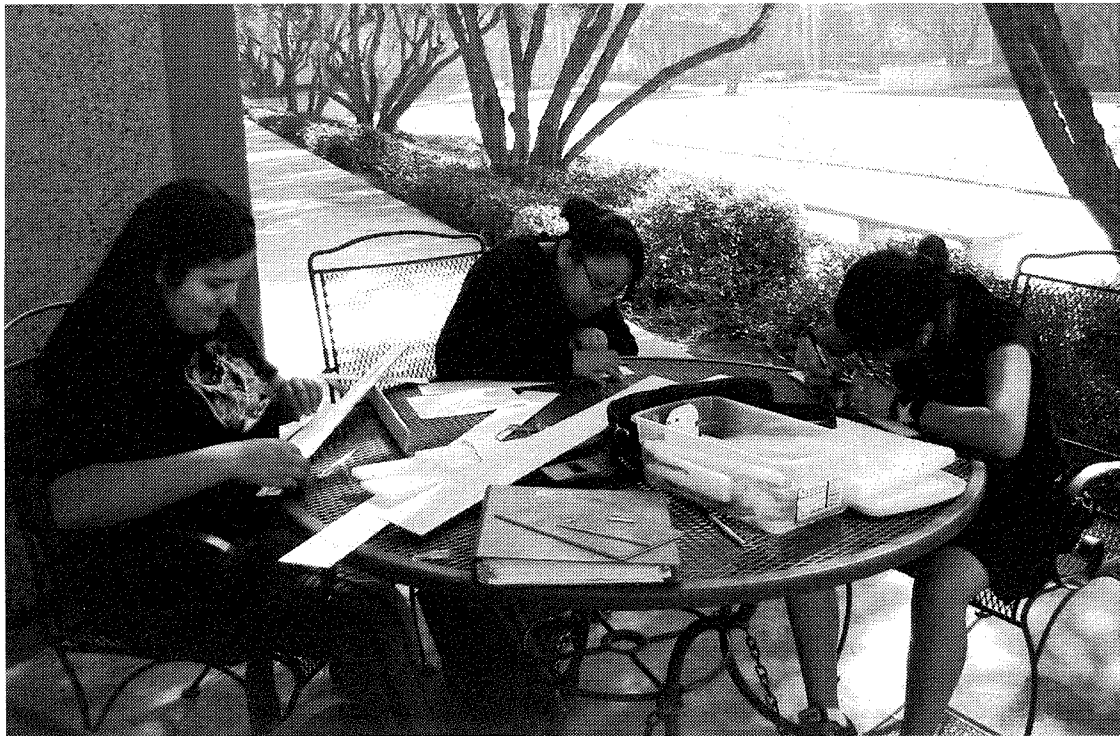
Courtesy of K. Shantz

schools.

Statistics show that girls have a tendency to lose interest in science and engineering in middle school, even though aptitude tests reflect that girls perform just as well as boys in these subjects. A major focus of SWE is to show girls in middle school that engineering is fun and not just for boys during this critical age when they tend to lose interest. This competition not only gave the participants hands-on practice with an engineering challenge, but it also allowed the teams to form on-going relationships with their mentors, who served as inspiring female role models in this male-dominated field.

This competition was made possible thanks to funding provided by the Donald Strauss Public Service Foundation, allowing SWE to provide airplane parts and tools for all the teams and award such generous prizes to the winners. The Foundation awards 15 \$10,000 scholarships each year to fund public service projects that benefit the community.

The Strauss Foundation was created as a memorial to the late Don Strauss, who demonstrated a strong, lifelong commitment to public service and education. SWE hopes to raise money to be able to continue this worthwhile competition in future years. The inaugural competition was a huge success and undoubtedly influenced the enthusiastic participants. One of the girls from the winning team said it best: "I always thought that building things was a man's job, but today I learned that girls can do it too."



One of the six groups of eighth grade girls makes last minute adjustments to their plane during the SWE-hosted engineering contest held April 2nd.

Courtesy of K. Shantz



L. Tran/The California Tech

The IHC is against freshmen in Avery, and here they make a presentation to the Student Housing Committee expressing their views.

## Freshmen in Avery? Spicing Up the Issue

By HAMILTONY FALK

There's been a lot going around about freshman living in Avery (or not), and it's an important issue in the Caltech community. So I'm going to make a mockery of it, because things that aren't boring are always better than things that are.[1] I'll give you the nub of the gist of the Avery/Freshman/Nuclear Arms Reduction issue in just a few words, so you won't have to trouble yourself with what people who know what they're talking about have to say in their long boring statements.

Basically, Avery wants fresh-

men tend Soviet influence in Southern California.

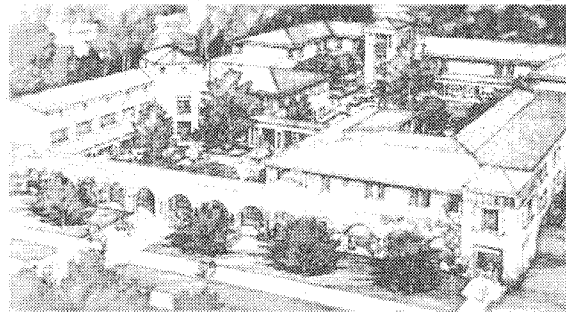
B.F. #2- The IHC is a group that consists of the presidents of the seven houses, as well as elected officials[3] and generally tries to represent student opinion.

I.L. #2- IHC may or may not be an acronym for Illegal Hungarian Coroners, which would be an excellent name for a punk band.

B.F. #3- On June 26, 1834 Mr. Southard, from the Congressional Committee on Naval Affairs, reported the following bill, which was read, and passed to a second

reading: "A Bill For the Relief of Thomas Dornin."

I.L. #3- Avery would react to occupation by a coalition army made up of troops from the seven houses with guerilla tactics against both



Caltech Archives

This is Avery House.

men, because it is a good idea. The IHC doesn't want Avery to have freshmen, because it is a bad idea. Nuclear Arms Reduction was a viable way to reduce cold war tensions. The Avery supporters are mostly the more outspoken Avery council members, and many of the Faculty who are involved with the issue. The supporters of the IHC side include the IHC (house presidents, prime ministers and Lord Admirals of the Ocean Sea) and apparently most of the undergraduate student body. Everyone seems to think Nuclear Arms Reduction was a good idea.[2]

So to sum up the ideas: A) People disagree. 2) This is important. D) But this is also boring.

This leads me to my public service addition of a little information that may help keep the general reader interested in the issue. Since the main problem is that the so called "true" and "relevant" facts are boring, while "exaggerated" or "just plain made up" facts are much more captivating in general. So here's my list of facts, which will be marked by either B.F. for those facts that are less interesting, and I.L. for those more interesting statements that may not be quite as factual.

B.F. #1- Avery is an alternative for students at Caltech who want to live on campus, but not physically in one of the seven undergraduate houses.

I.L. #1- The Avery Council has never publicly denied plotting to invade the Physical Plant using military force, in an effort to ex-

the occupying army and possibly the physical plant.

So, as you can see the issue is still hotly contested. But before I let it rest, I'd like to pose some important questions that both sides seem to be ignoring. First, if Avery became a house, what would we call members? I would have to suggest "Birds," but apparently that only makes sense if the house were renamed Aviary, and that may not be popular with residents. Another choice would be "distinguished and honored residents of the Avery Dormitory" but that's just plain silly. Another important question is if Avery were allowed to have freshmen, would Bush still have been elected president in 2000, seeing as how the vote was so close and all?

Now that you've been given the real facts[4] I think the truth is inescapable. A vote that allows the comunazi block to expand its influence is a vote against democracy. And if you say different you're wrong.

[1] Proof: I like interesting stuff. Also, you like interesting stuff, or I don't care what you think. Therefore (by induction, maybe?) interesting stuff is better. Q.E.D.

[2] Alright, so that joke isn't funny anymore. That's never stopped me before.

[3] These include people like the IHC Chair, the IHC Table, and The Pope.

[4] No, not in this article, but it's bound to be somewhere in the paper.

# Election 2004: Advice for the Kerry Campaign Team

## In Light of Tightening Poll Numbers, Kerry Needs to Articulate Foreign Policy

By PARAG BHAYANI

Since John Kerry effectively wrapped up the Democratic nomination for president, national poll numbers for the race have been tightening. Whereas right after Super Tuesday Kerry was up by eight to ten points in most polls, he and the President are now statistically tied in nearly every nationwide survey. A recent poll commissioned by the *L.A. Times* showed Kerry in the lead by merely three points. What was more revealing about the survey, though, was the attitude of voters towards the war in Iraq and the testimony of Richard Clarke. The vast majority of Democrats and left-leaning moderates opposed the war and believed Clarke; the exact opposite position was taken by Republicans and right-leaners. In the face of such a highly polarized electorate, a few thousand voters could decide the next president. In the eyes of the undecided voters, each candidate retains his "pet" issues. Kerry is almost universally favored on domestic matters such as health care and job creation, while Bush's strength is his national security policy.

Even with the Bush campaign's \$40 million barrage of advertisements over the last few weeks, Kerry retains a ten to fifteen point lead in domestic policy concerns (although this has fallen from the twenty-five to thirty point lead he had immediately after Super Tuesday). Meanwhile, Bush is favored nearly two to one on national security. Kerry will most likely never gain the upper hand on this latter topic (unless, God forbid, another catastrophe like 9/11 happens). But if the Democrat can tighten the poll numbers to even a 45-55 deficit and retain or expand his double-digit lead on domestic policy, he should be able to handily win the election. But, as commentator Ed Cone writes, "National security is the ineluctable issue of the 2004 election...If Kerry has a serious posture on security he can take the fight to Bush, aiming at...[Bush's] palpable weaknesses on domestic affairs."

What the Kerry campaign should do at this point is offer progressive and efficient solutions to problems relating to national security and foreign relations and not dwell too much on past fallacies of the current government. While I feel that the invasion of Iraq was unwise and that the Bush administration could have done a

better job of working to prevent the 9/11 attacks, commentators are correct in saying that these are now moot points. One of the main questions now is not whether or not we should have gone in, but what to do in order to get out as fast as possible. At this point, blaming the other side for unwise actions will only get one so far. Of course, in the game of politics, the winner is often the one who slings the most mud fastest.

Perhaps this is why the incumbent Bush has started his negative campaign so early in the race, while not spending as much time expounding upon his positives. But at this early stage in the campaign, with seven months to go,

**"What the Kerry campaign should do at this point is...not dwell too much on past fallacies of the current government."**

voters in those eighteen or so swing states that are bearing the brunt of the advertising onslaught will grow weary and disengaged from politics. The Democrats must now discuss the inadequacies (and there are many) that can be remedied by a presidency with starkly-contrasting viewpoints, and challenge voters to ask themselves whether or not they want four more years of ideologically-driven imprudence. In December of 2002, the Bush administration announced a bold missile defense initiative, akin to Ronald Reagan's "Star Wars" strategy. When proclaiming the new policy, Bush said, "September 11, 2001 underscored that our Nation faces unprecedented threats...To better protect our country against the threats of today and tomorrow...I have directed the Secretary of Defense to proceed with fielding an initial set of missile defense capabilities."

Unfortunately, this system is faltering and will not serve as an adequate protection from attacks by rogue nations. During Senate hearings last month on the viability of missile defense, Senator Jack Reed (D, RI) asked Thomas Christie, the Pentagon's director of Operational Test and Evaluation, "So at this time, we cannot be sure that the actual system would work against a real North

Korean missile threat?" Christie replied, "I would say that's true." His predecessor, Philip Coyle, went so far as to say, "Ever since the president made his decision, the priority of the program has been on deployment, not on understanding whether the

system works." The president has requested \$10.2 billion for further development for the 2005 fiscal year.

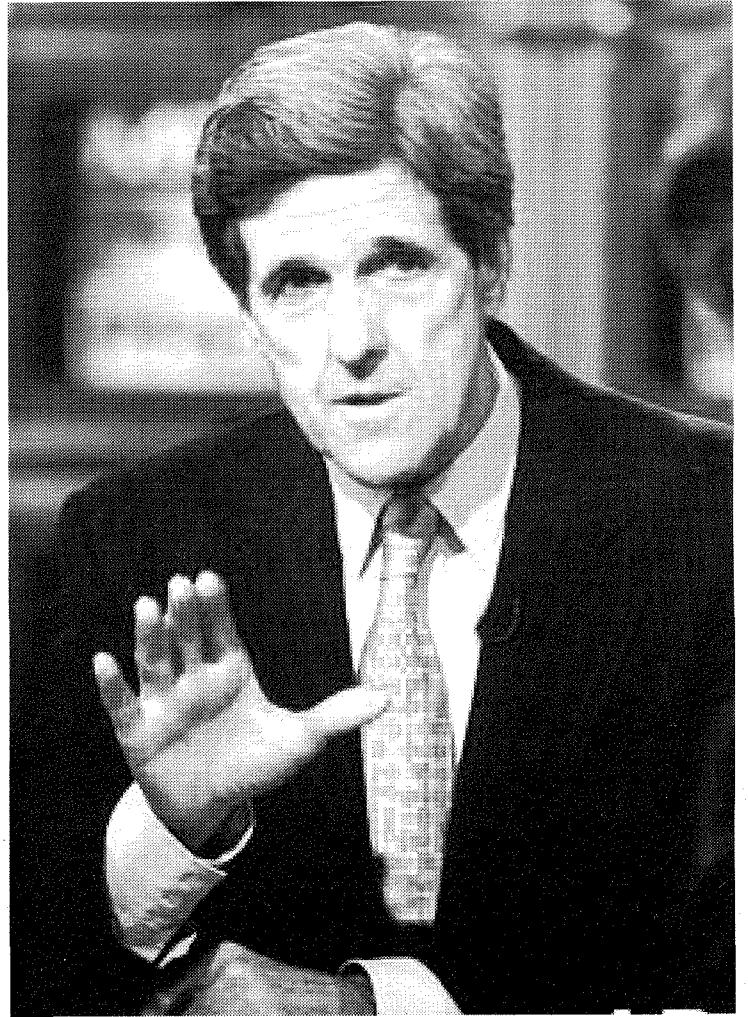
Meanwhile, more direct threats to domestic security are inadequately addressed. In a widely-publicized story, *ABC News* was able to smuggle depleted uranium across Europe and into New York Harbor in September of 2002 and 2003. Tom Cochran, the head of the nuclear program at the Natural Resources Defense Council, which worked with *ABC News*, commented, "The fact that *ABC News* was able to smuggle in what could have been weapons-grade uranium a second time speaks volumes about the failure of the Bush administration to secure nuclear weapon materials." A small amount of potent uranium released on a "dirty bomb" in a crowded location could potentially kill or poison thousands. Despite these failures to detect a dangerous substance, the 2005 federal budget requested a mere \$46 million to improve port security; meanwhile, the National Endowment for the Arts, traditionally maligned by the GOP, was given three times as much. It is clear what procedures a new administration should undertake to curtail

this risk: first, America must work with foreign governments all over the world to limit the proliferation of nuclear materials. This includes putting pressure on the Pakistani government to crack down on people like Abdul Qadeer Khan, the physicist who was found to be running an international black market for radioactive materials and who was later pardoned by President Pervez Musharraf.

On the home front, the bureaucracy must be streamlined to prevent such things as intelligence failures and non-cooperation among government agencies, and effective policies must be enacted with the appropriate funding to ensure a safer nation.

National security is not limited to the war on terrorism and the situation in Iraq, however. Consider a report prepared for the Department of Defense in October of 2003 by Peter Schwartz and Doug Randall of the Global Business Network, a consulting firm that works primarily on future scenario conception and strategic planning. In their piece "An Abrupt Climate Change Scenario and Its Implications for United States National Security," Schwartz and Randall describe an alarming situation that may occur as a result of global warming. "Recent research... suggests that there is a possibility that this gradual global warming could lead to harsher winter weather conditions, sharply reduced soil moisture, and more intense winds in certain regions. With inadequate preparation, the result could be...food shortages due to decreases in net global agricultural production, decreased availability and quality of fresh water in key regions due to shifted precipitation patterns...[and] disrupted access to energy supplies due to extensive sea ice and storminess."

This dearth of resources could potentially lead to mass warfare across the planet, as nations fight one another to control the means of survival. The United States would probably have to create



Courtesy of The Associated Press

**Senator John Kerry may have the Democratic nomination for president in the bag, but the fight for the presidency will be a close one. To strengthen his campaign, Kerry needs to focus on offering progressive solutions to our problems of national security.**

some sort of massive, budget-busting defense policy against its immediate neighbors to protect its interests, leading to pronounced domestic instability. While this is all speculation, it is plausible and necessarily should be a component of the debate on national security. This is one front on which the left can unequivocally trump the right; the Bush administration is strongly opposed to the Kyoto Protocol for reducing greenhouse gases, and has systematically undermined most rules and regulations that the Clinton EPA was enforcing. On the other hand,

**"Riding on a wave of disapproval is not the proper way to assume the nation's highest office."**

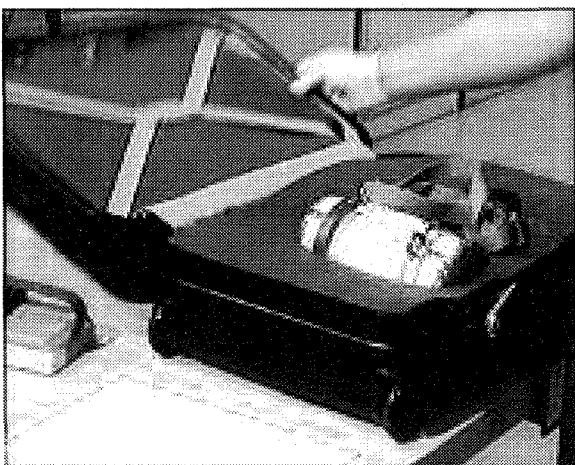
Kerry has pledged his support for environmental regulations and has proposed a plan for alternative fuel development as a way to reduce our nation's dependence upon foreign oil and to help clean up harmful emissions by vehicles and factories. (Lest anyone think that stringent controls are detrimental to the economy, recent studies have shown that the cost of pollution in terms of lost productivity and health problems outpace economic losses to companies by three to five times.)

As the election nears, many questions on international policy are going to arise for both candidates. While Kerry and the other Democrats have been criticizing Bush left and right, merely pointing out problems will not get a man elected. With the chronic problems in Iraq, public support for the war is eroding as rapidly as ever, but riding on a wave of

disapproval is not the proper way to assume the nation's highest office. Instead, novel ideas and resolutions for every major international problem need to be promulgated by the Kerry campaign. The populace will have questions about creating a peaceful solution between Israel and Palestine so that both parties are satisfied, and anti-Americanism is minimized among neighboring Arab states. A feasible solution to encourage nations like North Korea, Iran, and Syria to cooperate with the West will be necessary. Clearly, the hard-line concept of preemption will not work as we have seen with Iraq, but neither will a policy that relies solely on diplomacy and sanctions.

Thus far Kerry has declared intentions to rebuild bridges broken with other Western nations in order to effectively prosecute a global war on terror and has promised to maintain or increase troop levels in Iraq.

Being a self-proclaimed foreign policy wonk, he will likely be able to accomplish the former task, but it is merely a beginning. Additionally, the leaders of Saudi Arabia, great friends to the Bush family, may have close links to terrorists (note that fifteen of the nineteen 9/11 terrorists were Saudis, and so is bin Laden). Governments like those of Saudi Arabia and Pakistan must be held accountable; they cannot be given a free pass for highly questionable actions simply because of some help they have provided to the American government. As a candidate in what looks to be one of the closest presidential elections ever, John Kerry can turn the tide of the electorate in his favor with a well-conceived and well-articulated outlook on foreign policy and national security. Without such a plan, there is no point in running for office.



Courtesy of www.abcnews.com

**To test the threat to national security, *ABC News* intentionally smuggled depleted uranium from Europe into the U.S. The uranium was transported as shown above.**

## ASCIT Minutes: Formal, BBQs, Committee Sign-Ups This Week

April 6, 2004

Present: Ann Bendfeldt, Ryan Farmer, Jenny Fisher, Shaun Lee, Kelly Lin, Galen Loram, Claire Walton, Corinna Zygourakis

Absent: Kim Popendorf (meeting)

Guests: Elin Boyle, Coach Mandy Gamble, Coach Clinton Dodd, Coach John D'Auria, Lydia Ng

Introduction:

1. Call to Order, 12:05 PM

New/Open Positions:

2. The IHC will post committee sign-ups this week for the following committees: Freshman Admissions, Grievances, Scholarship and Financial Aid, Undergraduate Academic Standards and Honors, Upper-class Admissions, Student Housing, Health, and Athletics and PE. Interviews will be held on Sunday, April 18, and Wednesday, April 21.

3. The ARC will post sign-ups for ARC Representative-at-Large and ARC Secretary outside of SAC 33. Interviews will be held on Thursday, April 15.

Upcoming Events:

4. Mark your calendars! The ASCIT formal will be held on Saturday, May 29, at the MOCA (L.A.'s Museum of Contemporary Art). Tickets will go on sale shortly.

5. ASCIT is selling discounted tickets for Yuri's Night on April 12. Email [walton@caltech.edu](mailto:walton@caltech.edu) if you have questions.

Other Business:

6. Elin Boyle, of the Alumni Fund, meets the BoD. Ms. Boyle runs the Student Phone Program, the Student Initiatives Program, and serves as the student liaison to the Fund. The Alumni Fund organizes the Frosh Wrap for the freshmen, the C4 dinner for the sophomores, an event for the juniors, and the class gift for the seniors. Ms. Boyle also mentions that she is happy to help students with fundraising for their events, parties, etc. She can be contacted at [eboyle@dar.caltech.edu](mailto:eboyle@dar.caltech.edu).

7. With Coaches Mandy Gamble, Clinton Dodd, and John D'Auria, the BoD discusses the possibility of BBQs/pep-rallies to increase attendance and spirit at Caltech athletic events.

8. BoD discusses suggestions and ideas that arose from last week's meeting with

the Provost and Division Chairs, including more seminar classes (particularly in the E&AS division) and improved centralized scheduling.

9. Jenny Fisher has posted a survey about course uniting on the donut website. This survey is very short, so please fill it out before April 21!

10. Via email, Kim Popendorf reports that the Student Housing Committee voted to approve a recommendation that freshmen be allowed to pick into Avery in 2005. The recommendation awaits the approval of the faculty board. 11. Kim also notes that the IHC is discussing what to do next, including working with Avery to flesh out the details of its plan. The exact role of Avery in Rotation (whether it will be on equal footing with the seven houses or operate via a different system) remains to be seen.

12. Kim reports that RA selections for several houses are in progress. Candidates will meet with student selection committees from each house this week.

13. Kim also notes that the Swing Housing working group welcomes suggestions about how to house displaced undergraduates during the South House renovations. Current ideas under consideration include modular housing and the central Catalina apartments.

14. Galen Loram notes that he will post a survey about clubs on the donut website.

15. Galen mentions the results of the computer lab usage survey, which shows that only one-third of the undergraduates use either the UGCS or the ITS computer labs on a monthly basis. It seems that students are more concerned with better maintenance of the computers and printers in the houses, rather than the computer labs.

16. The BoD will meet on Saturday, April 10, to set its budget for the 2004-2005 year. The budget will then be posted online.

Money Requests:

17. Coaches Gamble, Dodd, and D'Auria request ASCIT funding of students' athletic jackets as in previous years.

18. Lydia Ng requests funding for Blacker's interhouse party. BoD will vote on funding allocation after this Saturday's budget meeting.

Meeting adjourned 1:00 PM.

Respectfully submitted,  
Corinna Zygourakis  
ASCIT Secretary

written for this competition. No student can submit more than one essay.

All contestants must submit two hard copies of their work to Professor Jenijoy La Belle, Division of the Humanities and Social Sciences, 228-77, no later than April 23, 2004.

Attention Writers! The Literature Faculty is pleased to announce the **58th Annual McKinney Competition**.

The Mary A. Earl McKinney Prize is awarded each year for excellence in writing. Only full-time students officially registered at Caltech as undergraduates are eligible to enter the competition. This year, prizes will be given in three categories: poetry, prose fiction, and non-fiction essays. All submissions must be typed and double-spaced. Include your address and phone number. In the poetry category, entrants may submit up to three poems. Submissions of prose fiction should not exceed 12,000 words. Essays may be ones prepared for a humanities class or any good piece of original writing on a topic relevant to the humanities. The prize in each category will be \$500. Each student is entitled to only one entry in each category. Contestants should submit hard copies of their work to Professor Jenijoy La Belle, Division of the Humanities and Social Sciences, 228-77, by no later than April 30, 2004. No entries will be returned. Each category will be judged by a committee from the Literature Faculty. Essays will be judged on the quality of thought and the effectiveness of the writing. Winners will be announced in May, and the names of the winners will appear in the commencement program. The Committee may divide the award in each category in case of more than one outstanding submission. Previ-

Continued on Page 6, Column 1

## Eternal Sunshine's Twisted Logic, Warm Characters, Entertaining

By ANDREEA BOCA

The latest recipe for critical acclaim these days seems to be casting against type. Take for instance Bill Murray in *Lost in Translation*, Charlize Theron in *Monster*, and now



Jim Carrey in Charlie Kaufman's latest creation, *Eternal Sunshine of the Spotless Mind*. We feel like giving extra credit to one who made an excruciating effort to distort him or herself: acting becomes a matter of heroics, and not one of how convincing the final product turns out.

The most remarkable thing about Jim Carrey's performance in *Eternal Sunshine* is that it's Jim Carrey who delivers it. I wouldn't rush the Oscar to him just because it's the same guy who did *Bruce Almighty* a short while ago. Nevertheless, he gives us an entirely credible character in Joel Barish, a downbeat, withdrawn, cautious man, who serves as a contrasting gray background for the intensely colorful female character, played by Kate Winslet. She carries most of the movie's weight as Joel's lover Clementine, whose personality is as brilliant, lively and unpredictable as the often-changing colors of her hair.

Joel and Clementine's love story is followed along an unconventional, memory-driven timeline reminiscent of movies

like *Memento* or *Solaris*; but mercifully, it doesn't take as much mental contortionism to reassemble the plot in its proper time order. While the writer's previous scripts, *Being John Malkovich* and *Adaptation*, may have been more shockingly original than *Eternal Sunshine*, the characters there came off as cold, cynical, alien and just plain weird. In contrast, Joel and Clementine are plausible and pulsating with life, and thus the warmest and most relatable of Kaufman's characters so far.

Director Michel Gondry uses his camera in sleight of hand fashion, to achieve low budget, yet persuasive special effects. No *Matrix*-type, digitally enhanced, or glossy props are used here. Instead, there's real ice and snow, a cat-scan helmet copying a real device used by neurosurgeons, and even an elephant parade that was not commissioned but just happened to be in town during the shooting. This lack of premeditation allows the movie to flow naturally and to focus on the characters and their internal struggles.

*Eternal Sunshine* is entertaining in the same way that a Magritte painting might be: most of the fun comes from buying into its twisted internal logic and the paradoxes that follow from it. The movie was probably intended as a romantic comedy, though the outcome is closer to a meditation on the value of remembrance and on fate. All that comes with a pinch of sci-fi, in the premise that memories can be selectively erased. Is it possible to find forgetful bliss? If our memory were wiped clean of the painful past, would we be able to start on a different path? If you believe the answer is yes, check out the affordable holiday specials for the memory-deleting procedure at <http://www.lacunainc.com>.

## Be A Hometown Hero



### Bring your meetings home to Pasadena!

If you belong to an association, corporation or other group that holds meetings or conventions, why not bring them home to Pasadena?

Pasadena's accessibility, first-class meeting facilities and renowned leisure pursuits make it the ideal meeting destination. You will be a hero for suggesting Pasadena to your group. Additionally, your meeting will generate tax revenues for our city's general fund, which benefits everyone. But how can you get the ball rolling?

Just call Matt Hourihan at (626) 795-9311 or e-mail him at [mhourihan@pasadenacal.com](mailto:mhourihan@pasadenacal.com). If your group decides to meet in Pasadena, you could be eligible to receive one of several fabulous prizes!

**Pasadena: The city that feels like a village.**

Pasadena Convention & Visitors Bureau  
171 J. Los Robles Avenue  
(626) 795-9311 (800) 307-7977 [www.pasadenacal.com](http://www.pasadenacal.com)



**Attention all undergraduate students on Financial Aid:** The last date to request any adjustments of loan to work study, or work study to loan, for your 2003-04 financial aid award, is Friday, May 7, 2004. Requests for 2003-04 changes made after May 7 will not be considered. Please contact the Financial Aid Office at ext. 6280 if you have any questions.

**Meet Your Elected Officials Day** on Saturday, April 17 from 1:00 to 3:00 p.m. Hosted by Pasadena Young Democrats, this free, non-partisan event provides an opportunity for Pasadena-area youth and young adults to meet their elected officials, including California Congressman Adam Schiff, Pasadena City Council Members Chris Holden, Steve Madison, Joyce Streater, Steve Haderlein, and Paul Little; and Pasadena City College Board of Trustees Jeanette Mann and Geoffrey Baum. Event to be held at 561 Bradford Dr., Pasadena, CA. RSVP required to [pasadenayoungdems@yahoo.com](mailto:pasadenayoungdems@yahoo.com) or (626) 666-5889. Visit [www.geocities.com/pasadenayoungdems](http://www.geocities.com/pasadenayoungdems) for more details.

The Literature Faculty is pleased to announce the Annual **Hallett Smith Competition** honoring the finest essay devoted to Shakespeare. Only full-time, officially registered undergraduates are eligible to enter the competition.

All submissions must be typed and double-spaced and should not exceed 4,000 words. The essay may be one prepared for a literature class or may be specifically



Continued from Page 6, Column 2

ous winners in any one category are not eligible for the competition in that category. If you have any questions, contact Prof. La Belle, extension 3605, or Barbara Estrada, extension 3609.

This year's prize will be \$350, though the judging committee may divide the award in case of more than one outstanding submission. For more information, contact Prof. La Belle, extension 3605, or Barbara Estrada, extension 3609

**The next deadline for MHF funds: April 15**

In 2002-2003 the Moore and Hufstедler funds were established to enhance the quality of student life at Caltech. Approximately \$180,000 is available each year to fund qualified proposals. All members of the Caltech community are encouraged to submit proposals for events, equipment, and other projects aimed at improving student life at Caltech. For more details and guidelines for proposals, visit our website at: [www.its.caltech.edu/~mhf](http://www.its.caltech.edu/~mhf). You can also view a list of previously funded projects on this website. If you have any questions, you are also welcome to e-mail us: [mhf@its.caltech.edu](mailto:mhf@its.caltech.edu).

**The Collegiate Inventors Competition 2004**

Call for Entries  
Download the application packet from: [www.invent.org/collegiate](http://www.invent.org/collegiate)  
To recommend someone for the award E-mail [collegiate@invent.org](mailto:collegiate@invent.org) or call 330-849-6887  
The Grand Prize Award is \$50,000. The Deadline for the 2004 competition is June 1, 2004.

**The Hawaiian Club is offering hula (traditional Hawaiian dance) lessons again this term!** Class will be held in Winnett Lounge on Saturdays from April 10 - May 29, 2-4 PM (with the exception of 4/24 and 5/1: these classes will be held on Sunday, 4/25 and 5/2). The cost is \$5/class for Caltech community members; \$12/class for all others. For more information, see our club website at <http://www.ugcs/~lilinoe> or email us at [maruchan@its](mailto:maruchan@its).

**Humanities and Social Sciences Seminars for this Term:**

16-17 April Conference: Consumption, Modernity, and the West

21 April (Wednesday) Harris Lecture Dan Kevles (Yale). Science, Arms, and the State: J. R. Oppenheimer and the Twentieth Century

29 April (Friday) Munro Seminar Carl Hoefler (Barcelona). "Chance, Time and Causation"

3 May Joshua Greene, Princeton University. "Cognitive Conflict and Control in Moral Judgment"

7 May (Friday) Munro Seminar Maria Farland (Fordham). "Decomposing City: Walt Whitman's New York and the Science of Life and Death."

14 May (Friday) Munro Seminar Clementine Oliver, Caltech/Huntington Fellow. "Where Do Pamphlets Come From? Political Writing in Late Medieval England"

21 May (Friday) Munro Seminar Justin D'Arms (Ohio State). "Objectivity in Taste and Emotion"

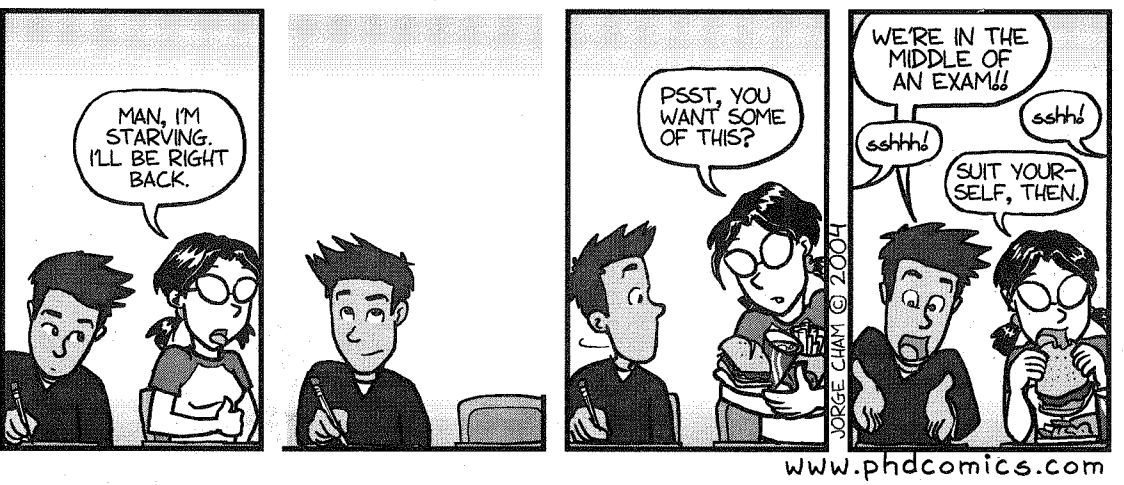
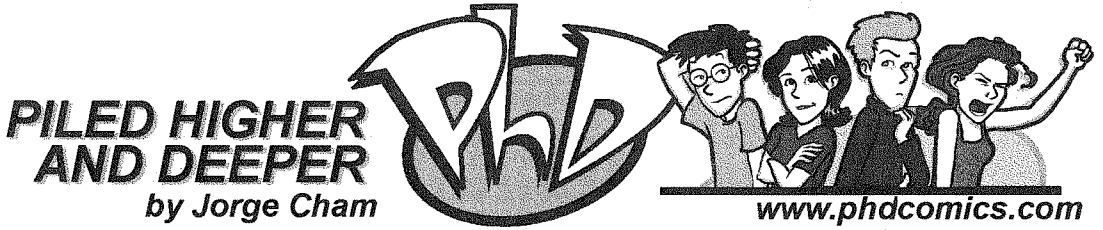
28 May (Friday) HPS Seminar Brian Copenhaver (UCLA). "From Magic to Science: Seeing a Way Out"

**Dance Classes**

All classes meet in the Braun Gym multipurpose room. There are 8 classes in each series. No special clothing or shoes are required for the beginners' classes. RSVPs required only for the bellydancing class. To be added to our mailing list, go to <https://utils.its.caltech.edu/mailman/list-info/troupe-list>. All classes are co-sponsored by the GSC and ASCIT, with additional funding from Campus Life and Graduate Housing.

1) Beginning Bellydancing  
Saturdays, 12:45-1:45 PM, begins 4/3; Professional Instructor: Leela; Trial class fee: \$5 for students, \$8 for others; Caltech students full term fee: \$20 (\$2.50 per class!). Other Caltech community members full term fee: \$50 (\$6.25 per class!) CLASS SIZE IS LIMITED so RSVP to Kathy. [Kelly@caltech.edu](mailto:Kelly@caltech.edu)

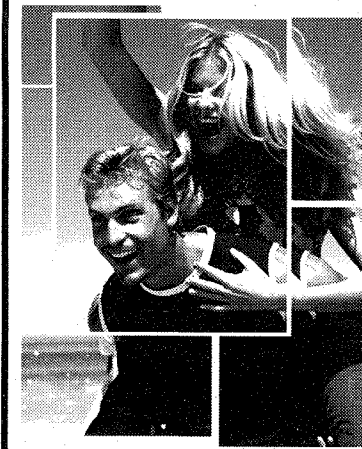
2) Hip-Hop for Advanced Beginners; Thursdays, 9-10 PM, begins 4/1; Professional Instructor: Collette Sibal; Trial class fee: \$5 for students, \$8 for others; Caltech students full term fee: \$20 (\$2.50 per class!). Other Caltech community members full term fee: \$40 (\$5 per class!)



Pasadena Duplex for Rent. 3-bedroom, 1.5 bath, Oak floors, 2 Stories, Yard. For \$1995/month. 543 S. Hudson (626) 786-2787

Toyota, Cressida, '89, D.Blue, loaded, snrf, xclnt condit., new tires, 156 K, \$3695 obo. Ph(626) 296-8567

**Excitement. Adventure. Surprise. Thrills.**  
This ain't your parents travel agency... it's yours.



Paris.....\$467  
London....\$426  
Madrid...\$602  
Fiji.....\$765

Air, hotel & transfers:  
**HAWAII**  
5 night accomm.  
From: \$454 **LOS CABOS**  
4 night accomm. From: \$464

Fare is round trip from LAX and prices are per person. Subject to change and availability. Tax not included. Restrictions and blackouts apply. Fares are valid for students, faculty and youth under 26.

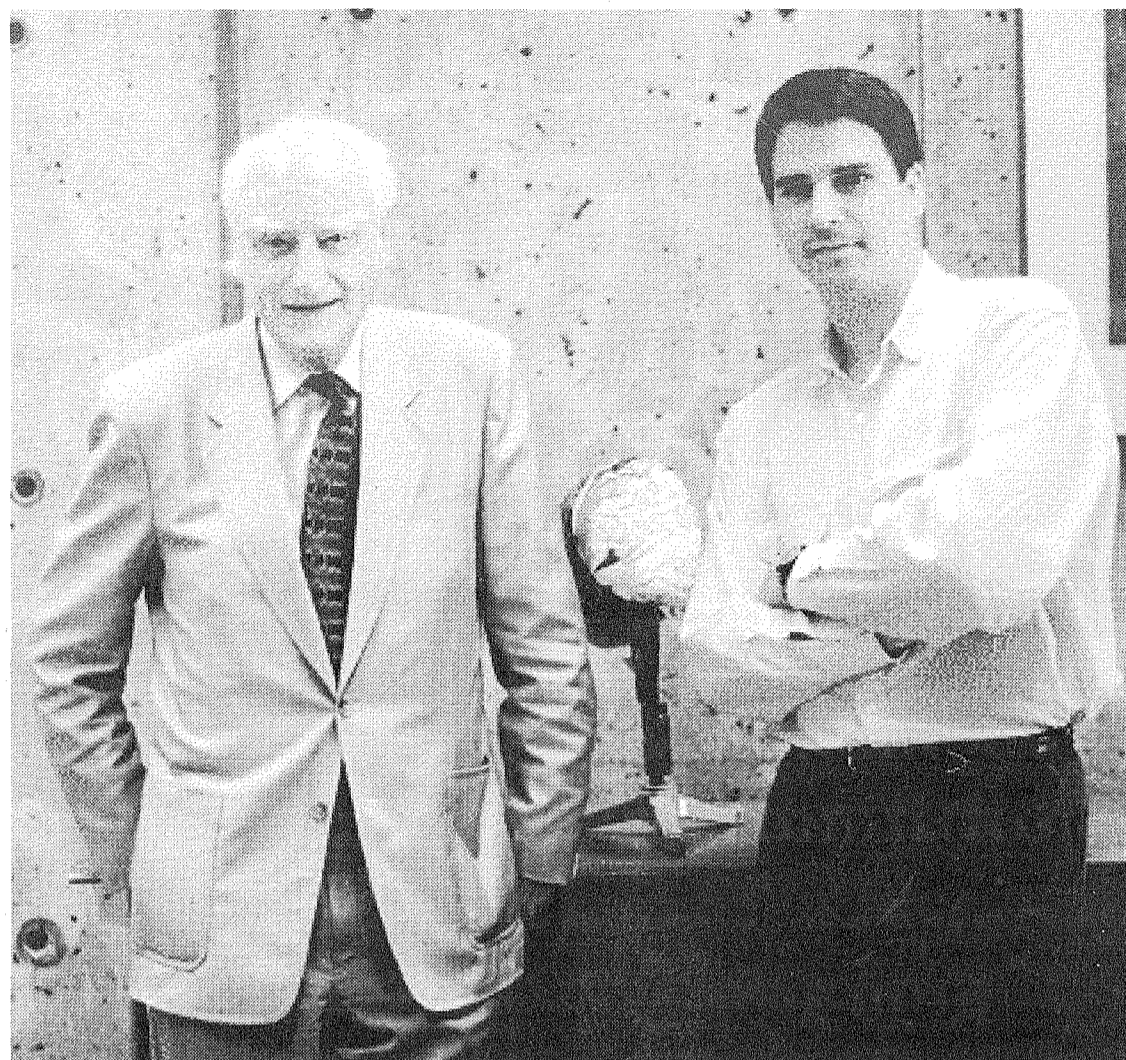
One stop. No hassles.  
We've got everything you need for your next trip.  
54 South Raymond Ave  
**(626) 793.5595**

**STA TRAVEL**  
[www.statravel.com](http://www.statravel.com)

**BAMBOO TEA HOUSE**  
Tea as a way of life  
700 E. Colorado Blvd.  
Pasadena  
Across from Vromans Bookstore  
(626) 577-0707

**COMPARE TEXTBOOK PRICES!**  
• Search 24 stores with 1 click!  
• Save up to 70%  
[www.bookhq.com](http://www.bookhq.com)  
**bookHQ**

**Your sperm can EARN**  
Become a sperm donor and earn extra income  
• Make even more money by referring your friends to be donors  
• Convenient Pasadena location  
• Help people create families  
It's a smart way to make extra money that takes very little time.  
You need to be 21-35, healthy and able to make a 1yr. commitment  
**Pacific Reproductive Services**  
626.440.7450



Francis Crick, left, and Christof Koch have collaborated for the last 13 years on the study of human consciousness. A recently published book outlines what they have learned so far.

Courtesy of klab.caltech.edu

## Philanthropist Honored for The pH Meter That Built his Fortune

By MARK WHEELER

PASADENA, Calif. -- In the mid-1930s, Arnold O. Beckman, then an assistant professor of chemistry at the California Institute of Technology, solved a problem confronting the California citrus industry: how to get a rapid and accurate measure of the acidity of lemon juice. His pH meter--a faster and simpler acid and alkaline measuring device--revolutionized instrumentation.

On Wednesday, March 24, the development of the Beckman pH meter was designated a National Historic Chemical Landmark in a special ceremony at Caltech. The American Chemical Society, the world's largest scientific society, is sponsoring the landmark program. Charles P. Casey, president of the society, will present the bronze plaque to David A. Tirrell, chair of the division of chemistry and chemical engineering at Caltech.

The Beckman pH meter was the first commercially successful electronic pH meter. Beckman soon discovered there was a market for the instrument, which he manufactured on the side while he continued his academic career. Strong sales led Beckman to leave his teaching post in 1939 and devote his full attention to the company.

Beckman Instruments went on to become a leader in manufacturing instruments used in medicine, industry, and scientific research. Now called Beckman Coulter, it is a multinational company with sales in excess of \$2 billion last year.

Later in his long life (he will be 104 in April), Beckman turned to philanthropy. The Arnold and Mabel Beckman Foundation--established in 1977--has donated more than \$350 million to support scientific research and education. The foundation provides ongoing research support to five Beck-

man centers and institutions in the United States, including one at Caltech (which is in addition to numerous other generous gifts by the Arnold and Mabel Beckman Foundation to Caltech).

The American Chemical Society established the chemical landmarks program in 1992 to recognize seminal historic events in chemistry and increase public awareness of the contributions of chemistry to society. The program began at 2 p.m. in the Beckman Institute auditorium on the Caltech campus. Speakers included John D. Roberts, institute professor of chemistry, emeritus, Caltech; Gerald Gallwas, the Arnold and Mabel Beckman Foundation; Arnold Thackray, the Chemical Heritage Foundation; and Harry Gray, Arnold O. Beckman Professor of Chemistry and the founding director of the Beckman Institute.



Courtesy of stoltz.caltech.edu

Arnold Beckman left his academic position at Caltech after his pH meter business took off. Since, he has donated over \$350 million to scientific research, as evidenced by the buildings bearing his name.

## Koch and Crick Study Zombie-like Behavior

By ROBERT TINDOL

PASADENA, Calif.--When you're close to that woman you love next Valentine's Day, her fragrance may cause you to say to yourself, "Hmmm, Chanel No. 5," especially if you're the suave, sophisticated kind. Or if you're more of a missing link, you may even say to yourself, "Me want woman." In either case, you're exhibiting a zombie behavior, according to the two scientists who pioneered the scientific study of consciousness.

Longtime collaborators Christof Koch and Francis Crick (of DNA helix fame) think that "zombie agents"--that is, routine behaviors that we perform constantly without even thinking--are so much a central facet of human consciousness that they deserve serious scientific attention. In a new book titled *The Quest for Consciousness: A Neurobiological Approach*, Koch writes that interest in the subject of zombies has nothing to do with fiction, much less the supernatural. Crick, who for the last 13 years has collaborated with Koch on the study of consciousness, wrote the foreword of the book.

The existence of zombie agents highlights the fact that much of what goes on in our heads escapes awareness. Only a subset of brain activity gives rise to conscious sensations, to conscious feelings. "What is the difference between neuronal activity associated with consciousness and activity that bypasses the conscious mind?" asks Koch, a professor at the California Institute of Technology and head of the Computation and Neural Systems program.

Zombie agents include everything from keeping the body balanced, to unconsciously estimating the steepness of a hill we are

about to climb, to driving a car, riding a bike, and performing other routine yet complex actions. We humans couldn't function without zombie agents, whose key advantage is that reaction times are kept to a minimum. For example, if a pencil is rolling off the table, we are quite able to grab it in midair, and we do so by executing an extremely complicated set of mental operations. And zombie agents might also be involved, by way of smell, in how we choose our sexual partners.

"Zombie agents control your eyes, hands, feet, and posture, and rapidly transduce sensory input into stereotypical motor output," writes Koch. "They might even trigger aggressive or sexual behavior when getting a whiff of the right stuff."

"All, however, bypass consciousness," Koch adds. "This is the zombie in you."

Zombie actions are but one of a number of topics that Koch and Crick have investigated since they started working together on the question of the brain basis of consciousness. Much of the book concerns perceptual experiments in normal people, patients, monkeys, and mice, that address the neuronal underpinnings of thoughts and actions.

As Crick points out in his foreword, consciousness is the major unsolved problem in biology. *The Quest for Consciousness* describes Koch and Crick's framework for coming to grips with the ancient mind-body problem. At the heart of their framework is discovering and characterizing the neuronal correlates of consciousness, the subtle, flickering patterns of brain activity that underlie each and every conscious experience.

## Childhood Expert To Discuss Being Playful

By JILL PERRY

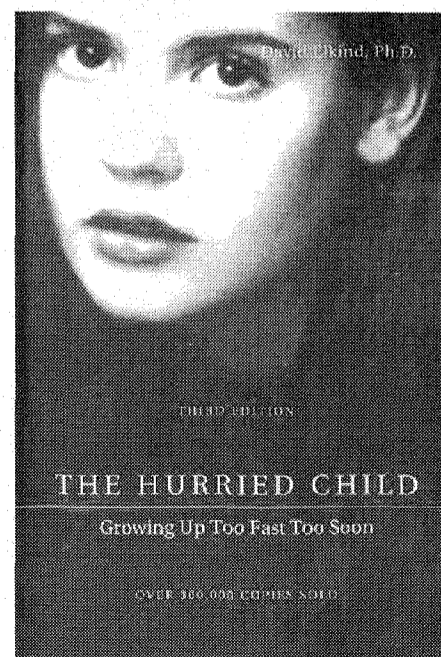
PASADENA, Calif. - David Elkind wants to play.

The Tufts University professor of child development will give a speech titled "The Disappearance of Play" at 7 p.m. on April 21, in Ramo Auditorium at the California Institute of Technology. Admission is free and is open to the general public.

Elkind has written 13 books, including the upcoming *No Time for Play: Growing Up Stressed Out*, as well as *The Hurried Child*, *All Grown Up and No Place to Go*, and *Miseducation*. He is the author of more than 400 articles and book chapters, as well as several children's stories published in *Jack and Jill* magazine. In addition to appearing in academic texts and journals, his work has been published in *Good Housekeeping* and *Boston Globe Magazine*. He was profiled in *People* and *Boston Magazine* and is a contributing editor to *Parents Magazine*. He lectures throughout the United States, Canada, as well as and has appeared on *The Today Show*, *The CBS Morning News*, *20/20*, *Donahue*, and *The*

Oprah Winfrey Show.

The presentation is sponsored by the Child Educational Center, Caltech, and the Jet Propulsion Lab, and cosponsored by Bank of America, Chandler School, and Kidspace Children's Museum, in recognition of the National Association for the Education of Young Children's Week of the Young Child.



Courtesy of www.ncmsalliance.org  
Dr. David Elkind has written several books about stressful childhoods.

# Marriage Amendment

Continued from Page 2, Column 3

to marry but the Supreme Court declined, contending that this was not the case.

Also, the S.C. argued that gay people had the right to marry like everyone else, but not to the same sex! Massachusetts, on the other hand, argued that marriage is the intimate, exclusive union of two people and that it does not need to be between a man and a woman.

In addition to the fundamental rights argument, Feldblum highlighted the justification through equality. Quoting Massachusetts, she said that one couldn't be denied equal protection under law. Since opposite sex couples were allowed to benefit from the institution of marriage whereas same sex couples were not, they were in clear violation of equality. However, she did mention that this rhetoric had other consequences but did not elaborate on them.

The talk continued with Prof Hunter elaborating on the confusion around the issue. "My co-speaker has just clarified the issue but I am here to confuse you again!" she playfully remarked. This confusion had to be a part of the issue, she argued, because of the implications of allowing gay marriage in the future.

There was no jurisdiction currently in the U.S. law, Hunter informed, for same sex couples to marry until May 17th, when the MA law takes effect. She said, "There is confusion in terms of the law. How do we want to structure the future?"

The first confusion, she stated, would be in the recognition of marriages. Owing to different state laws, a marriage license issued in one state, for instance Massachusetts, would not be recognized in other states. She gave examples of current laws with such nature. She mentioned that Vermont adopted a legislative scheme of the "civil union" which is a scheme that provides for all the rights of marriage and can be dissolved only by divorce. She said that if a person under civil union died in a car accident in another state, for instance New York, that state should consider that person's partner as his legal spouse. New York said that civil union was so close to marriage that they would consider it under their state laws.

Hunter commented on President Bush's recent announcement for a constitutional amendment. She informed the audience that Bush was proposing to assert that marriage is "only between a man and a woman". Hunter claimed that it is a fair bet that there would be a vote for the amendment this summer. She remarked, "This has sent this issue into the stratosphere of politics, where it has never been before. Bush has just entered it into his presidential campaign."

She commented on the existence of confusion even if the amendment passes Congress, as it

would have to go on to the States after that. She said that the main argument of the opposition to gay marriage was that "it was confusing" and countered it by saying, "That is baloney! It would be nice if everything was clear under the law but it is not. Civil rights movements in the past have not been clear on numerous occasions."

She also emphasized Feldblum's earlier point of equality. "The most important is the condition of equality. What is the definition of marriage? This question gives us the opportunity to think about the law of personal relationships. We all live in different family structures and hence, the law should be as flexible as it can be. It can be flexible without losing clarity. The clearest law would be to allow lesbian/gay marriages."

She continued, saying that the primary issue was that of choice. As long as one was excluded from an institution that has benefits, one was being treated as a second-class citizen. Hunter said that everyone should have the choice of who their closest relationships are, who they want to be their guardian and so on and so forth. She remarked that for most people these questions were answered by marriage but what about other people. She claimed, marriage does not work for everyone but people who don't choose to be married should not be penalized for it.

The talk was followed with numerous questions and answers ranging from the difference between state and federal law to the existence of trans-genders. With reference to different laws, Feldblum remarked that the default rule was "if valid where enacted, then we will recognize it." An interesting question posed was about the proposition that marriage should be divided as a religious and a civil institution to better solve the issues that Hunter addressed. Her response was, "I like it!"

Nan D. Hunter is Professor of Law at Brooklyn Law School. She is the co-author with William N. Eskridge, Jr. of the casebook *Sexuality, Gender and the Law* (Foundation Press 2nd ed. 2004) and the author of numerous articles in the areas of constitutional law, civil rights and health law.

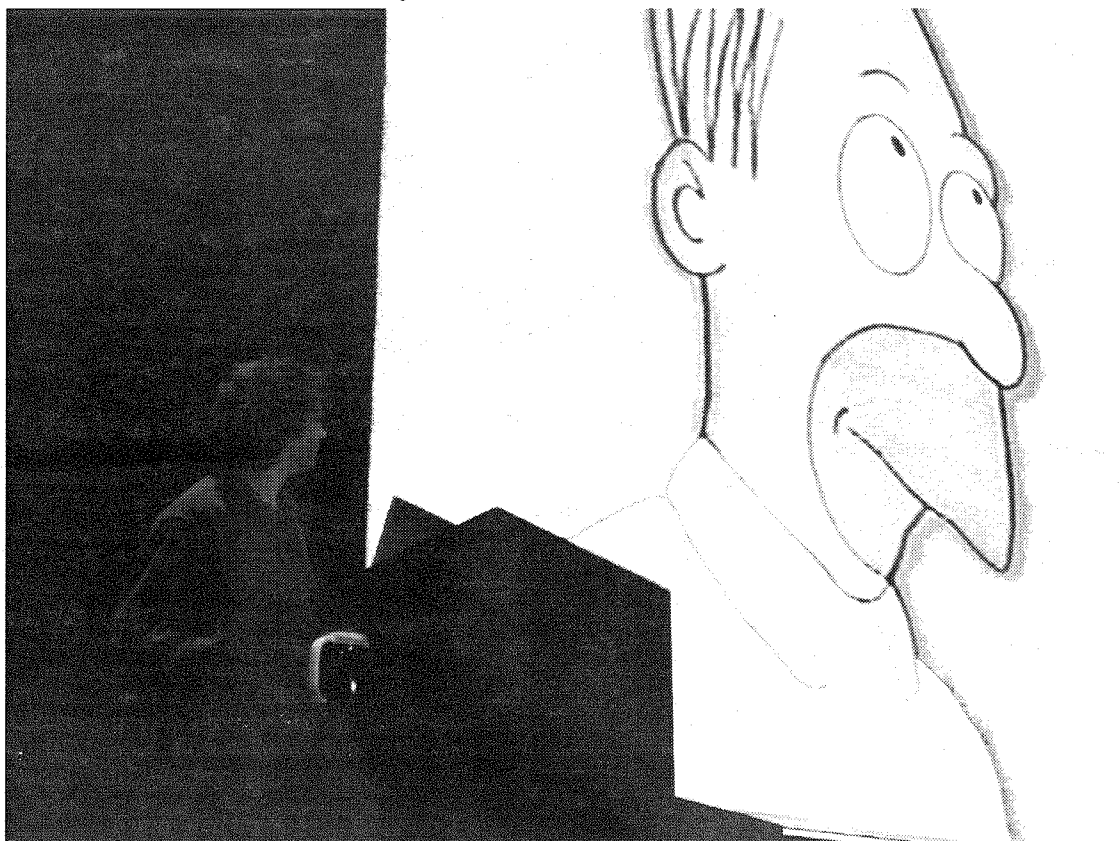
Chai Rachel Feldblum is a Professor of Law and Director of the Federal Legislation Clinic at Georgetown University Law Center in Washington, D.C. Professor Feldblum graduated from Harvard Law School in 1985, clerked for Judge Frank Coffin on the First Circuit Court of Appeals and for Justice Harry Blackmun on the U.S. Supreme Court, served as the lead lawyer drafting the Americans with Disabilities Act from 1988-1990, and joined the Georgetown Law faculty in 1991.



L. Tran/The California Tech

Students, faculty and staff enjoy lunch before the talk.

# Simpsons Creative Development Outlined by Animation Director



D. Korta/The California Tech

David Silverman, Animation Director for the Simpsons, displays an earlier animation of Homer during his lecture last Wednesday.

# McEwan Shares Excerpts, Ideas; Fields Questions, Praise for Work

Continued from Page 2, Column 2

mary of his life and work, McEwan eloquently delivered a talk that discussed the interplay of fiction and non-fiction in his writing. The talk itself reflected this theme as McEwan cleverly combined his commentary with excerpts from his works to produce a surprisingly coherent presentation.

He started by citing a question posed by an audience member from one of his previous talks. When asked whether he was a novelist who wrote fiction or non-fiction, McEwan answered that he wrote in both genres and that the distinction between one and the other was not as clear as their literal meanings would imply.

McEwan spent most of his talk presenting examples of his use of real-world experiences in his works of fiction. Two such examples are afflicting one of his fictional characters with vascular dementia, an ailment that took the life of McEwan's mother and having a neurosurgeon in his current novel after observing an actual neurosurgeon at work.

Pointing at these cases, McEwan argued that non-fiction is often incorporated in fiction, giving the writing a sense of reality yet allowing the author the chance to include surreal elements.

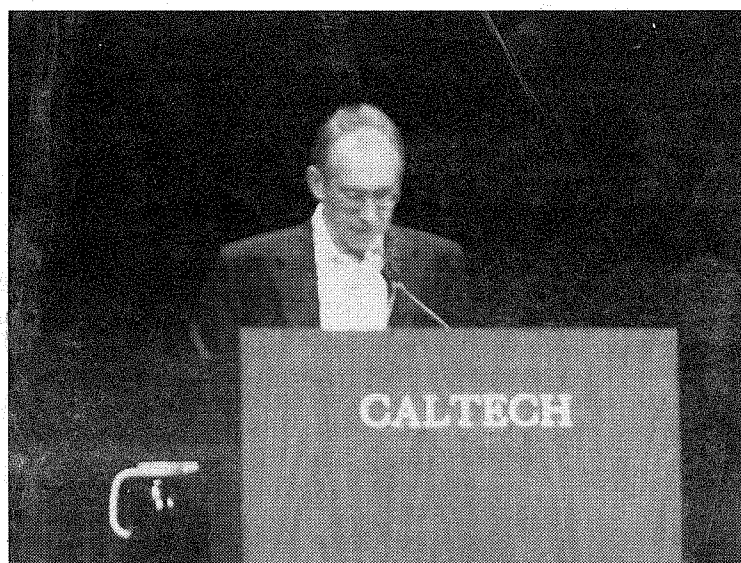
Towards the end of the talk, McEwan turned his focus to writing in general. He said that the novel provides a medium through

which the writer can give a personality, life and mind to a character but yet incorporates many of the features seen in the real world. He also emphasized that the novel presents an opportunity to connect the inner self to the outside world, to connect the private with the public.

After his talk, the floor was opened for questions and comments and one member of audience told McEwan that the ending of *Atonement* surprised him. In jest, McEwan replied, "I'm glad you're surprised; I'd hate to fulfill your expectation."

However, the evening was not

without its controversy. At the very beginning of his talk, McEwan discussed his incident at the U.S.-Canadian border. He was apparently detained briefly regarding some improper paperwork for his visa. McEwan stated, rather insensitively, "The border guards are making the U.S. borders safe from British writers." Though eliciting some laughs from the audience, the timing and use of this topic did not seem appropriate for such an occasion. Nevertheless, the audience was undeterred, as many stayed and attended the book signing by McEwan that concluded the evening.



L. Tran/The California Tech

Ian McEwan explains his method of combining non-fiction with fiction to give stories a sense of reality.

The California Tech

Caltech 40-58

Pasadena, CA 91125