

INSIDE :

Remembering the early days of GSIA, page 8

Middle East conflict echoes across campus, page 11

FOCUS

FOCUS — in seven issues a year — is a publication of the faculty and staff of Carnegie Mellon University. Volume 31, No. 6-7, Summer 2002

Passwords in Andrew easy to crack

Perhaps you've received it. If you have an Andrew account, there's a one in three chance you did.

"It" is an e-mail with the subject, "Andrew account password insecure!" that claims your password has been cracked. The message goes on to say that in addition to the risks they pose to personal account security, slipshod passwords are a potential threat to the entire Andrew system.

John Lerchey, computer and network security coordinator for Carnegie Mellon's Computing Services, is the man responsible for these messages. He's also the one who cracked your Andrew account.

But relax — he did it with good intentions.

Last fall, Lerchey reinitiated the practice of running a password cracking program against all of the nearly 30,000 Andrew accounts. Of those, approximately 10,000 were compromised. While he calls the number of cracked passwords "very significant," Lerchey is quick to point out that the figures are preliminary.

Lerchey intends to run the cracking program at the beginning of every semester, then again two weeks later. The first instance is meant to serve as a wake-up call to the vulnerability of a password. The second run will either be a reminder to those who have not changed their passwords or a notice that the second password choice was also cracked.

Over time, he is interested in gauging the effectiveness of passwords and "whether or not raising people's awareness ... has a definite positive impact on the number of accounts that get cracked."

The cracking program, which is freely available, uses a combination of "dictionary lookup" and "brute force cracking" techniques to guess passwords.

Using the first technique, the program matches passwords with lists of dictionary words. "That doesn't mean they come out of Webster's," Lerchey says. Rather, the lists originate from various online databases that

continued on page 3

Formula racer built from scratch by student crew

When NASCAR team owner Chip Ganassi came to Carnegie Mellon to inspect the latest project by the Society of Automotive Engineers (SAE), junior Mechanical Engineering major Bill Maurer found himself taking a surprise shower as Ganassi broke a bottle of champagne to christen Tessa, the car designed and built by a team of undergraduate students.

Maurer happened to be sitting in Tessa's driver's seat during the christening. A car enthusiast since he was a child, Maurer this

continued on page 4



Angela Meyer compares the first installment of the revised Domestic Mail Manual with the old manual. Photo: Brian Connelly

Design group revamps postal manual

Last year the U.S. Postal Service approached Dick Buchanan, head of the School of Design, about a \$50,000 project he thought would only last for a summer.

Instead, this spring the school signed a one-year contract for \$1 million — expected to extend to three years and \$3 million — to revise a document called the Domestic Mail Manual.

The DMM is a legal document with all of the rules and regulations relating to sending mail in the United States. It's about a thousand pages, and weighs several pounds, not counting the Post-It notes that mail clerks typically stick all over it.

Theoretically, the DMM is a resource for anyone who uses the post office — employees, individuals, small and large businesses. The manual's current format, however, makes the information almost completely inaccessible.

"It's like technical writing gone terribly, terribly wrong," says Tim Fife, a master's student in the joint Design and English program.

Fife, who's worked on the project since last summer, says that the excitement to see the finished product keeps him interested in a project that could easily grow tedious.

Last summer, the original plan was for a small group of graduate and undergraduate students to spend 10 weeks designing a prototype for a revision. No one involved really expected the prototype would lead to a larger contract. But within a few weeks of presenting their results, the team heard back from the Postmaster General, urging them toward immediate production and a longer-term contract.

To keep such a substantial undertaking organized, Buchanan and project manager Angela Meyer worked together to set up a

system for about a dozen faculty advisors, doctoral students and master's students to work together in "task teams" on the manual. The team broke the manual up into smaller documents instead of keeping all the information in one huge document.

The new manual is separated into documents for the type of user: individual, small business and large corporation.

The old manual, on the other hand, was organized by the type of information: for example, how to mail a letter, a parcel, a hazardous substance, a living creature.

Rewriting the actual text of the manual has proven to be very difficult. Throughout the document, group members have placed Post-It notes with questions about the exact meaning of a sentence or phrase.

Jason Schaaf, a graduate student in Design who worked on the project last summer

continued on page 4

Do the math: Economy down, grad applications up

Businesses worldwide have endured the crippling effects of a shrinking economy in the past year, but like many universities that have waded through application season, Carnegie Mellon has experienced the upside: dramatic jumps have been noticed in graduate school application numbers, as waves of paperwork have coursed through admissions offices over the past half year.

Earlier this year big-name universities such as the University of Pennsylvania, Yale University and the University of Chicago, among others, reported astronomical jumps in applicants to their graduate school programs. Most significantly, the business school at the University of Chicago reported a 100 percent increase in applicants.

While the boosts in applicants at Carnegie Mellon haven't been quite as pronounced, they are by no means insignificant.

Final application numbers for the Master of Business Administration (MBA) program at the Graduate School of Industrial Administration (GSIA) are more than a third from last year's numbers, with about 1,800 applications received, versus 1,300 last year.

Pinning the 37 percent surge on the struggling economy isn't conjecture on the part of admissions directors — students have spoken for themselves.

"We've talked to several candidates who have decided to apply to school this year because their job situation has changed recently, or they think having additional edu-

cation and credentials is even more valuable in a tightening economy," said Laurie Stewart, director of MBA admissions.

American applicants are mainly responsible for the increased numbers — international student applications have remained at roughly the same number as in previous years, according to Stewart.

Other business-oriented graduate programs at Carnegie Mellon have also reported significant growth in application numbers, and in each case admissions officials readily credited economic slowdown for the surges.

The Heinz School's master of science degree in Public Policy and Management

continued on page 12

James Crumley returns for Adamson Awards

It's more than a departmental ceremony. It's more than an end-of-the-year celebration. It's tradition. Every year on the last day of classes, the English department holds its Adamson Awards. Intended both as a culmination of the year's writing endeavors and as an excuse to bring together everyone in the department — in some cases — for the last time, the Adamsons are the year's most celebrated event.

In 1983, Carnegie Tech alumnus Clarence H. Adamson gave several gifts in loving memory of Pauline, his wife. Amongst these was the Adamson Scholarship for undergraduate women English majors. Another was the Adamson Awards for Writing in addition to funds to support lectures by distinguished authors.

Held in the Adamson Wing, the awards give graduate and undergraduate students the chance to compete for individual awards in nonfiction, fiction, poetry, screenwriting and playwriting. Additionally, a guest speaker is brought in to lecture and read from his or her own work.

This year's guest speaker, James Crumley, read fiction to a standing-room-only crowd of nearly 200. Crumley taught at Carnegie Mellon in the early '80s and his reading managed even to attract a few alumni and former students.

"I'm a big fan of Jim's work. I came just to see him. Well, for that and the party," joked Noah McGee, who graduated last year in Creative Writing.

The evening, while designed to be fun and relaxing, still served as a learning experience for all who attended.

"One of the best parts is that there are writers everywhere. It's as good a place to network and learn more about writing as it is to shoot the breeze," said junior Creative Writing major Emily Green.

It appeared that the night's lessons were not lost on the guest of honor, either.

"If you see any of those goofy kids who won prizes," Crumley said afterward, "please remind them that when I wished them 'good luck,' I meant it. Being back at CMU was very funny for me. The kids hadn't changed — still smart, funny and hard-working. When I suggested that they made me almost believe in education once more, I meant it."

Sharon Dilworth, associate professor of English, who spearheads the event every year, said, "It was great to have Crumley, who had at one time taught at Carnegie Mellon and then left teaching to devote himself full-time to writing. I think it was good for the students to see people who have devoted themselves to the craft of writing."

Outside judges, some of them Creative Writing alumni, are called upon for the award presentations.

"The judges are given the submissions without names so they know nothing about the author," Dilworth explained. "And of course, there are always surprises, which is both a good thing and a negative one — unfortunately it's the greatest lesson for the young writers — judging is subjective."

At the end of the evening, some students went home with awards and prizes, some went home empty handed, but any who will be returning went home already thinking about what to submit next year.

SEAN MINTUS

Adams, Caldicott headline "Dialogue for Democracy"

On April 29, several hundred people filled the University of Pittsburgh's David Lawrence Hall Auditorium for "Dialogue for Democracy," a panel discussion featuring social activists from around the country. The event was sponsored by the Thomas Merton Center, a Pittsburgh center for peace and justice, and Zi, a student activist organization at Carnegie Mellon and University of Pittsburgh.

The first speaker was Dr. Hunter "Patch" Adams, director of the Gesundheit! Institute,

More Talkers, page 14

a non-profit health care community in Boise, ID. Members of the audience who had wisely managed to avoid seeing the movie "Patch Adams," starring Robin Williams, might have been surprised by the appearance of the real Adams, a physician who also performs as a professional clown. Adams has long gray hair, and the hair on the right half of head was dyed blue. He was wearing a neon flower-print shirt, and bright, multi-colored striped pants.

Adams talked about his recent work with starving children in Kabul, Afghanistan, and strongly criticized the Bush administration for its war on terrorism. Adams, who says he has been intensively studying political systems the way a doctor studies physical systems, predicted in his speech that human beings would be extinct within 50 years, unless there is major social change.

Michael Parenti, author of "The Terrorist Trap: September 11 and Beyond," spoke about democracy in America, which he believes is controlled by a small number of wealthy elites. "Workers organize to protect their interests. Farmers organize to protect their interests. Why do we believe that the leaders of multi-national corporations are not also organizing to protect their interests?" he said.

Dr. Helen Caldicott, founder of Physicians for Social Responsibility, spoke about the dangers of nuclear war. "On September 11, 5,000 hydrogen bombs pointed at the Soviet Union were placed on hair-trigger alert, when 100 hydrogen bombs aimed at various cities would be enough to create a nuclear fallout that would block out the sun for over a year," Caldicott said. She called for immediate nuclear disarmament.

Other speakers included David Korten, author and founder of the People-Centered Development Forum; Frances Moore Lappe, author of the bestseller "Diet for a Small Planet"; and composer, playwright and poet Susan Parenti who founded The School for Designing Society, where she teaches courses on creativity and activism.

Members of the audience also had the opportunity to speak briefly, ask questions, or engage the panel in discussion. Topics included the conflict between Israel and Palestine; fears of personal safety in activism; racism among social movements; and a poem written by a high school student from Mt. Lebanon.

According to the organizers of the Dialogue for Democracy, the purpose of the panel was not to represent a cross-section of American opinion, but to provide a place for views which they believe are rarely found in mainstream discussions and to create a dialogue among differing opinions.

ROB CULLEN

Architect digs with his eyes

The spring's Pittsburgh Architecture Lecture Series came to a close April 30 when architect and educator Raimund Abraham spoke at the Carnegie Museum of Art. Abraham, a professor at Cooper Union and principal of New York City's Raimund Abraham Architects, gave a passionate lecture, "Eyes Digging," to a crowd of about 50 architects, professors and students. Abraham touched on architecture education, the corporate spirit's effect on architecture and several of his projects, including his ideas for a future World Trade Center memorial site.

The graying, heavily mustached Abraham alternated between readings from his lecture, speaking freely on the slides of his work, and interjecting humor through such statements as, "I think the last time I was in Pittsburgh was when Casey Stengel was playing for the Pirates."

In recent months he has received critical acclaim for his 24-story Austrian Cultural Forum that was completed in lower Manhattan. The Austrian-born architect has lived and taught in New York City for more than 30

years but has never had one of creations built in the city. In 1992 he won the competition for the Forum project and has spent the following 10 years reworking the project and building plans, a time he described as full of stress and "desperation."

He worked through this time by returning to writing and drawing his own personal projects, including plans for his retirement home, which is currently being built by hand in Mexico. He continually expressed his passion for experimenting with his own architectural forms and vocabulary after the draining building experience, revealing a "desire to return to a place where only a pen and a piece of paper is needed."

With the events of Sept. 11 and the subsequent debate over the future of the former site of the World Trade Center, Abraham was provided with another outlet for his architectural experimentations. In October, Abraham was included among the 60 artists and architects to be commissioned by New York gallery owner, Max Protetch, to submit proposals for the site of the World Trade Center. His proposal, titled "Zero Zones," consists of three large slabs stretched over the length of the site. The slabs are then sliced by four lines, each representing the angle of the sun at the exact times when the planes crashed into the two towers and their ultimate collapse.

"I saw the towers get built, and I saw them collapse," Abraham said. He described these cuts as an abstract representation of the results of the events. These lines cut through the slabs in order to evoke a feeling of loss, their resulting negative spaces, a memorial.

Abraham concluded his lecture with a heartfelt discussion on the future of architecture. He characterized the current atmosphere being ruled by "corporate spirit and strategy," which has produced the "invention of the star architects."

"There are very few with the integrity necessary to make important architecture," Abraham said, "just as there are few clients willing to let crazy architects build."

In the end he urged the crowd that anything was possible if each person did their part. In a tone neither optimistic nor pessimistic he professed the future's need for more than just hope. "We each must take personal responsibility, rather than waiting for a collective movement to guide us."

JIM GORHAM

Photography innovator collects Dickson Prize

On March 19 in McConomy Auditorium, Carver Mead received the \$47,000 Dickson Prize in Science for contributions to digital photography, microelectronics and other fields. After the ceremony, Mead spoke on "The Coming Revolution in Photography."

Mead began his lecture with a brief history of photography back to 1837 and the Daguerreotype. He explained the evolution of photographic processes, pointing out some of the major milestones such as George Eastman's development of the first Kodak box camera in 1888. Mead laughed while commenting on Kodak's old advertising campaign, "You press the button, we do the rest. It's great to see things haven't changed."

Mead then turned to 20th century technology by explaining the current functions and characteristics of the digital camera. Current digital technology uses a mosaic color image sensor to detect the colors red, green and blue. One pixel in a digital image is the combination of red, green and blue color information. The mosaic filter limits each pixel to color information for one color, which means the technology must guess the information for the other two colors. This leads to a lower quality image and possibly the color artifacts or errors appearing on the pictures.

Foveon, a company founded by Mead, has developed a new digital technology for photography. The Foveon X3 is a prism-based color camera, measuring full color in a single chip. Each pixel has color information for all three colors because wavelengths are absorbed as different functions of depth in silicon. Detecting the photo current at different

depths in the silicon provides color information for red, green and blue. The process uses all of the photons, which results in higher quality images. The Foveon X3 has three times the color information and three times the photons; it eliminates color artifacts, and makes possible new classes of camera design. The quality of the X3 images surpasses 35mm film and equals the quality of medium format or 120 film.

The first digital camera to use the technology is Foveon's Sigma SD-9 SLR camera, which Mead said should be available by the end of this month. The cost of the camera is estimated to be around \$3,000.

"It is literally a large historic breakthrough in the same league as Kodachrome film," explained Mead at the conclusion of his lecture. He listed the Foveon X3 as one of the photographic milestones with the likes of the Daguerreotype, dye sensitization of silver salts and Kodachrome film.

Preceding the lecture, President Jared Cohon explained to a full auditorium that the Dickson Prize is an annual monetary award given to people who have demonstrated excellence in the science and technology fields. Funds for the award come from the estates of Joseph Dickson, who was once a prominent physician in Pittsburgh, and his wife. A committee of University professors nominates and selects the winners. This year University professors Dana Scott and Jay McClelland nominated Mead.

MELISSA CLARK

Ridge speaks about innovation

(From the commencement address on May 24 by Tom Ridge, director of Homeland Security)

"...A generation ago, CMU graduates helped unleash a period of unprecedented innovation in spite of economic uncertainty. Now we face a new challenge: homeland security. An enduring vulnerability to the possibility of terrorist attack. Another revolution in research and technology in its service can re-ignite that engine of innovation.

"The opportunities, ladies and gentlemen, are endless.... Software that can mimic a terrorist attack on a major city, so officials can test their response. And the list of opportunity goes on and on.

"Your education has prepared you for this moment. You know that creativity, whether it's artistic or technological, is the vanguard of liberty. You know that the ability to dream — and to realize the fruit of your labors in pursuit of those dreams — are among this country's most precious gifts.

"At this moment, you have the opportunity not just to do well with your talents, but to do good...."

FOCUS — in seven issues a year — is a publication of the faculty and staff of Carnegie Mellon University. Many of the articles in FOCUS express the opinions of individual members of the Carnegie Mellon community; unless so indicated, they should not be construed as reflecting university policy. In the spirit of the fairness doctrine, FOCUS seeks a variety of opinions.
 Editor: Jim Davidson
 Managing Editor: Brian Connelly
 Reporting and Writing: Rudy Ash, Betsy Bialon, Duke Britton, Christina Chong, Christopher Chung, Melissa Clark, Andrea Georgiana, Jonathan Griffin, Jim Gorham, Brad Grantz, Sebastian Habr, Jacqueline Jenkins, Elsie Lampl, Sean Mintus, Jay Nickell, Aimee Pi, Emma Rehm, Gregory Schmutz, Laine Towey
 Photography: Brian Connelly, Ken Andreyo, Andrea Georgiana
 Production: Donna Badger, Mildred Palmer, Robert Pfaller, Melissa Stoebe
 Founding Ed: David Demarest (English)
 FOCUS Management Committee: Pat Imgrund (Staff Council); Toby Davis (SDS), chair; Jay Kadane (Statistics); Vic Mizel (Mathematics); Dan Nagin (Heinz School); Teddy Seidenfeld (Philosophy); Susanne Slavick (Art)

Class builds Herb Simon memorial at Mall corner

An outdoor teaching area in memory of Herbert A. Simon is still scheduled for a fall opening, despite bad weather that slowed construction on the Mall near Baker Hall.

"We're a few weeks behind. We've been hampered badly for three weeks by rain," said Larry Cartwright, principal lecturer in Civil and Environmental Engineering and a frequent sight this spring in his yellow hardhat, working with a student crew.

The memorial will have granite benches arrayed inside a 51-foot perimeter. The top of the stone will be flush with the existing ground level, with earth mounded around the stone.

"We're not going to open until September," Cartwright said. "We need people to stay off the grass for two to three months. If the grass doesn't take hold, it's going to be a mud wrestling pit."

Simon, a Nobel Prize winner in economics, died last year on Feb. 9. He was on the faculty for more than 51 years, and at age 84 was still working full-time as a professor and researcher.

"We wanted to remember him by something more than a plaque," said Hilary Masters, professor of English, explaining the genesis of the project.

Masters began this task by speaking with Robbee Baker Kosak, vice president for University Advancement, regarding a memorial. They considered several concepts and secured support from the administration in Warner Hall.

Masters credits Meg Stanko, executive officer of the Faculty Senate, with the original idea. The Faculty Senate discussed a Simon memorial and decided that it should become a fixture on the university grounds, rather than inside a building.

"I had seen some of the terrific work Larry Cartwright had done on campus and I immediately thought of him," added Masters.

Cartwright used the memorial as a project for his senior design and construction class. Cartwright is also a personal friend of the Simon family.

"It's going to be an amphitheater, with tables and chairs for students and professors. There will also be a raised mound, a place to sit and relax."

Simon joined the Carnegie Mellon faculty in 1949. His research included computer science, psychology and economics. He was widely considered the father of artificial intelligence. Born in 1916, in Milwaukee, he received his bachelor's and Ph.D. degrees from the University of Chicago in 1936 and 1943, respectively. He held research positions at various universities and was awarded more than 20 honorary doctorates. In 1978 he received the Nobel Prize in Economic Sciences, and in 1986 he was awarded the National Medal of Science.

"I enjoy working on the project because, of course, it's my major, but I'm also honored to help build a memorial for Dr. Simon," said John Paul Giunta, a senior Civil Engineering student. The memorial had been slated for completion by commencement ceremonies, but rainy weather has pushed the project approximately a week behind schedule. "It'll be nice to come back here a few years from now and see a memorial for an outstanding professor, and know that I had a hand in it," added Giunta.

"We want the Simon memorial to serve as a meeting place for students and educators alike to discuss, debate and learn," said Masters.

Look for it in the fall, once the grass grows.

JAY NICKELL



Photo: Brian Connolly

Students Joan Gariano and Matt Coelho reinforcing the molds for the concrete

Campus safety warnings fizzle in wake of incidents

A rape, two attempted assaults and an armed robbery on campus this past winter produced a flurry of e-mails and fliers from the Campus Police, warning the community of the recent bout of personal crimes.

Members of the community complained about the crimes, wondered how they could protect themselves and wondered why police were not doing more to protect people on campus. While there were no immediate arrests in the four high-profile cases, the Campus Police took several steps to heighten women's awareness of crime, including a novel experiment by a plainclothes officer.

Police put on several kinds of presentations for women to learn about personal safety, such as Rape Aggression Defense (RAD) classes and informational presentations. As the time passed, attendance at these presentations decreased, programs grew smaller and the community started to become less interested. There were approxi-

mately 10 presentations this year.

Officer Leon Mickens, who heads most personal safety presentations, shows frustration over the lack of attendance. Mickens says that campus police cannot solve all the personal crimes without the help of the community. Personal awareness and safety are necessary for women to be safe while on the campus. "The only time that people really worry about their personal safety is when something actually happens. We cannot do this by ourselves as police officers, we need assistance to make fighting crime a community effort."

Chief Creig Doyle talks about the ignorance of women on campus. On March 1, following the two attempted assaults that took place on campus, the police sent out a plainclothes officer to perform an experiment to gauge women's awareness of suspicious behavior.

This male officer, who is about 6-foot-3

and 300 pounds, stood at the back of Morewood parking lot near Devonshire road, where one of the attempted assaults took place. He took three positions after dusk: Standing next to a fence, peeking out from behind a tree, and crouching in a bush. When people passed, the officer would try to look as suspicious as possible.

More than 30 women passed without looking threatened, only two seeming to pick up their cell phones. No one called the CMU Police or the Pittsburgh Police to the suspicious behavior. After the first 30 people, the officer started to stop people after they passed him, identifying himself as an officer and asking if they actually felt safe or threatened by his presence.

As Doyle says, their general apathy does not help the police fight crime in the university.

According to the police, their personal safety presentations teach that personal

safety is composed of three different elements: avoidance, recognition and awareness. These different keys make up 90 percent of keeping oneself safe.

Mickens says, "In order for there to be a crime there must be a victim, a bad guy and an opportunity. If people are aware of their safety, then there is no opportunity and the crime is taken away."

Mickens also insists that community members need to work hard to assist the police in property crimes. If people reported any kind of suspicious activity, he says, then it would allow the police to do their job even better.

"It's a challenge because we're here to do what we can do as police to make the community safe. If you [the community] do not make that phone call, then the process is missing a link."

ELSIE LAMPL

Andrew passwords easy to crack; many users ignore warnings

continued from page one

include foreign words, proper nouns and science fiction terms. Rule sets such as reversing words, combining them and randomly placing numbers in their midst are then applied in an effort to find a match.

Brute force cracking, on the other hand, is a method of plugging combinations of numbers and letters into a set character length.

Another variation of brute force cracking that Lerchey describes as "surprisingly effective," involves building passwords based on any available personal information such as names and addresses.

The program works rapidly, considering the number of accounts it attempts to crack. Typically it takes between six to eight hours

to scan the entire kerberos database of passwords.

Account holders have a range of reactions to the news that their passwords have been cracked, Lerchey says. Some are outraged by the violation. Others express genuine thanks for pointing out a flaw in their account security. But feedback generally falls into one of two categories — disbelief or indifference.

Regarding the first view, Lerchey declares, "Trust me. If I say I cracked your password, I got it."

The second view, he says, is the more harmful one.

"The bottom line there is that they're really posing a potential danger to others by

refusing to set a decent password." After entering the network through someone's cracked account, for example, a hacker could then use it as a gateway to other, more sensitive regions like the payroll or student information systems.

The potential for legal liability is higher for those who ignore Lerchey's warnings. In cases of piracy, the warning makes a difference.

"If we've told you that you have a bad password and you ignore it, you may be negligently responsible," Lerchey says.

To anyone concerned about increasing his or her account security, Lerchey has a few tips to keep in mind when selecting a password.

- Choose one that has more than eight characters, preferably, but make sure it has at least six.

- Avoid passwords that are actual words, as well as passwords composed of all numbers or all letters.

- For maximum effectiveness, sprinkle numbers and punctuation marks throughout a password that also uses both upper and lower-case letters.

Additional information on building an effective password can be found at www.cmu.edu/computing/documentation/passwords/Password.html.

GREG SCHMUTZ

Formula racer built from scratch by student crew

continued from page one

year joined the SAE chapter in doing something they had never done before: Designing and building a scaled-down formula race car to be used competitively.

The idea was the brainchild of Peter Castelli, a sophomore Mechanical Engineering major who last fall proposed it to SAE advisor John Wiss. Castelli spent the semester refining the design and working on the engine, and his efforts sparked the interest of several other SAE members who signed up to work on the project for independent study credit.

A team of six regulars, sometimes joined by a few others, built the car this spring. The group was all male, and they consider Tessa — named after Ganassi's daughter — a female. She is a completely student-built vehicle. The SAE members welded the frame, installed the engine and did everything else. Tessa has wings on the back, is lightweight, and has been designed to reach speeds of up to 120 mph. Essentially, she is a scaled-down version of the Formula One race cars used in such professional races as the Indianapolis 500.

The CMU team competed in Formula SAE from May 15-19 in Pontiac, MI, placing 101st among 125 entries after wrecking the car on the first day of competition.

"We were able to get our car up and running for the second day," Castelli said. "Unfortunately the weather didn't permit and we never got a chance to compete."

Castelli added, "We didn't do as well as we hoped, but we learned a great deal and have begun next year's cars."

Funding for the project came largely from a \$20,000 grant from Ford. The group was also able to use parts that had accumulated in the mechanical engineering shop over the years.

Wiss, who has been SAE advisor for the past 20 years, has a great deal of faith in this year's team. He said, "This is a great crowd, these guys — it's not easy to take a bunch of guys and efficiently build a car and make it run, but Pete is a great project manager, and the others work well together."

SAE is a national foundation that promotes continuous learning and opportunities to its members in the field of automotive engineering. At the collegiate level, universities compete against each other in a variety of events. In the past, CMU's SAE chapter has participated in the Mini Baja East competition in West Virginia, where students build off-road vehicles that will survive rough terrain and water.

The FormulaSAE event, widely regarded by many as the top college engineering competition, has students designing and constructing small formula-style race cars.



Peter Castelli and Bill Maurer planning modifications to Tessa's rear axle

Photo: Brian Connelly

Restrictions are put on the car frame and engine in order to test students' knowledge, creativity, and imagination. The vehicles are judged in three categories: static inspection and engineering design, solo performance trials, and high-performance track endurance. The organizers were expecting an international field of more than 120 schools.

CMU's own entry for the event was designed for structural stability. Because this was a first attempt, the car was not meant to be especially innovative or dynamic.

"We're just trying to make sure that everything runs and runs well," Maurer said. "We wanted to make it durable enough to get through the events. Honestly, our best asset is logic."

Castelli added, "Our car is built to be simple, but reliable. It's not designed to be highly competitive. Since this is our first car, it has been very much a learning experience for us. We're just trying to keep it simple."

In order to prepare for the competition, Ganassi was invited to inspect and name the vehicle. Ganassi, a Pittsburgh native whose appearance brought TV station FOX 53 to campus, is also part owner of the Pittsburgh Pirates. He is a former professional driver himself, having raced in the Indianapolis 500. Today, his NASCAR team is arguably

one of the top three in the nation.

SAE members said Ganassi has been important to this project, helping them financially as well as providing contacts with his engineers. During his visit, Ganassi offered the group constructive criticism about the vehicle, suggesting possible changes.

Building this car has been no small challenge to Castelli and his peers. Finding adequate workspace has been an ongoing problem. The group worked on the car in the mechanical engineering engine lab in Hamerschlag Hall while looking for garage space elsewhere on campus. Besides time and space limitations, the team has also faced the roadblock of not having the resources of a larger university, such as Penn State.

"We're a first-year team, so we are just beginning to form a foundation for greater things," Castelli said. "We're building momentum to catch up to top-tier teams. Because of our limited experience, this project is a massive learning experience, and I'm hoping that doing this leads to more school recognition. I'm hoping the building continues to grow after we've all graduated, and that it keeps growing."

Team members repeatedly stressed the importance of working together, saying the project strengthened their friendship and taught them how to compromise. Wiss,

Castelli and Maurer all acknowledged that the team helped them to develop social and negotiation skills.

Small mishaps — one individual nearly electrocuting himself, and another who nearly caught on fire as he was welding — have left many memories and private jokes within the close-knit team.

"We have a blast," said Maurer, who lives with several others on the team. "We're good friends and enjoy working together a lot. We're in the final stages of getting the car together, but we get into ruts sometimes — it's all been one long roller coaster ride."

To start building next year's car, several SAE members are staying in Pittsburgh this summer.

"Every day is a learning experience," Castelli said. "This project is giving us firsthand real world experience, as well as technical expertise."

"And that's really what this chapter is all about — gaining real-world experience. Being a mechanic where you repair things is totally different than actually building a car. We work together as a team, and learn from each other all the time. The trick is learning the knowledge you need to do something, and then knowing when to apply that knowledge."

AIMEE PI

Design group revamps Domestic Mail Manual

continued from page one

mer, points out a major difficulty in rewriting legal documents. Rewording an unclear phrase can mean inadvertently changing the law, if the project members didn't correctly interpret the phrase.

The group had made a solid start on the project when things changed slightly because of the Sept. 11 attacks. Buchanan says the group thought at first that the project might be stopped immediately so the USPS could focus on more pressing matters.

The anthrax scares, as it turned out, propelled revision of the mail manual forward, as the USPS found it imperative to improve its image. Customers and employees were afraid of what might be coming and going through the mail, and the Postal Service was losing business.

The CMU team's revisions came to be seen as a way to not only keep the information organized and accessible, but to make the USPS seem more friendly and safe.

While helping to improve the postal service's image, the School of Design is clearly boosting its own credentials. The USPS had originally considered asking a

private contractor to do the job, but decided against it because they wanted to have more input in the final product.

In fact, the Postal Service had looked specifically at Enron auditor Andersen Consulting; backing out of private contracting

an end and a means — the program's strength was good enough to draw a major client, which will in turn provide opportunities for students to become better designers.

In addition to being the financially largest project the School of Design has ever se-

established, and has a built-in customer base. Although FedEx and the United Parcel Service dominate package delivery, the post office has complete control over regular personal mail. The potential audience for new documentation is vast.

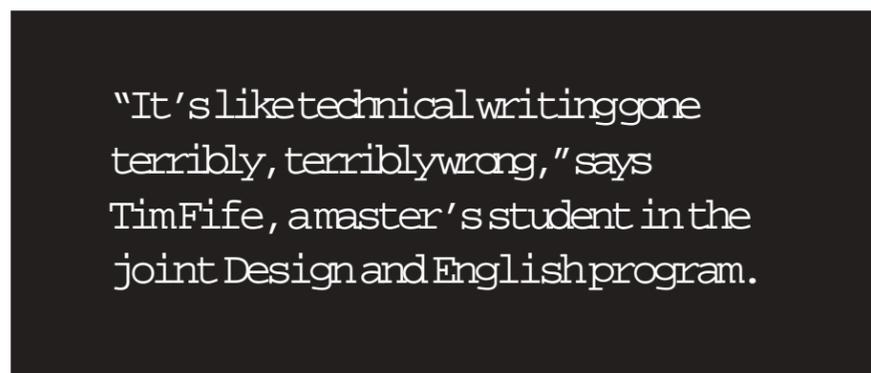
With such an enormous project in their hands, the group members are slightly apprehensive.

"We're making some pretty big promises about what we can deliver," says Meyer, acknowledging that design students rarely have the opportunity to take their projects past the prototype stage and into a marketable product.

"It's not often that you have a chance to be so close to the impact," Buchanan says, echoing a point expressed by students involved in the project.

Beginning in October, phase one of the project will be in print and available in any post office, anywhere. Fife looks forward to being able to say, "See that right there? I've got a copy on my computer at home. I can print you out a copy."

EMMA REHM



was perhaps a better decision than the USPS had imagined.

The Postal Service considered several universities before deciding on Carnegie Mellon. Buchanan sees this decision as both

cured, the mail manual revision project also has the potential to affect a large number of people.

The post office, as Buchanan points out, predates even the U.S. Constitution. It's old,

University adopts sweatshop code of conduct

In the past five years, sweatshops have become a major issue on college campuses. Students at the University of North Carolina, University of Michigan, Duke, Georgetown and dozens of other universities around the country have staged protests and sit-ins in attempts to get university administrations to adopt codes of conduct — legal documents that regulate the behavior of the manufacturers of a school's licensed apparel, and help prevent manufacturers of products with a school's logo on it from using sweatshop labor. This April, Carnegie Mellon officially adopted its own Code of Conduct for licensees, helping to ensure that products made with the Carnegie Mellon logo are made under decent working conditions.

Work began on the Code of Conduct in Spring 2000 when administrators in the

trademark licensing office, who had become aware of the anti-sweatshop movement on other campuses, formed a task force to draft a code for Carnegie Mellon. The original task force included administration, two faculty representatives, two undergraduate and two graduate students. According to John Soluri, assistant professor of History and a member of the task force, the group spent the next year reviewing codes of conduct from other schools, educating themselves on the issues and potential problems with implementing codes. "It was quite a bit of revising and redrafting to arrive at a code that we were satisfied with," Soluri said.

One of the biggest decisions the task force had to make was to choose a monitoring group. A code of conduct outlines very specifically the labor, environmental and

health practices that the manufacturers of a university's apparel must follow. Monitoring groups travel to the factories where products are made to ensure that the manufacturers are adhering to the practices outlined in the code of conduct.

At the time the task force was making its decision there were two major monitoring groups, the Fair Labor Association (FLA) and the Workers Rights Consortium (WRC).

The FLA was established by the Clinton administration and comprised representatives from various labor and human rights groups as well as representatives from corporations in the apparel industry, like Nike.

The WRC was formed as an alternative to the FLA by United Students Against Sweatshops (USAS), a coalition of student based groups across the United States. Unlike the FLA, the WRC does not include corporate representatives.

The FLA has drawn criticism from many people in the student movement who believe because the FLA has representatives from corporations on its board and because it gets part of its funding from corporations and is therefore not a truly independent monitor.

Some critics of WRC, meanwhile, believe it is too small to be effective.

In the end the Carnegie Mellon task force decided to join both the FLA and the WRC. The task force finished a code last spring and sent it to the administration and the university's legal staff for review.

Last spring two of the students from the task force, Shivdev Rao, a senior BHA student, and Brad McCombs a graduate MFA student, started a student group that was a member of USAS, called People for Workers' Rights (PWR).

"The student group was formed to bring more attention to the subject of the Code of Conduct and to deal with other issues relating to sweatshops," McCombs said.

Last semester, student and faculty members of the task force who were waiting for the university to approve or reject the Code of Conduct began to feel that progress on the code had stalled, and PWR began to take action.

According to Matt Toups, co-leader of PWR, "One of the challenges this year has been to figure out exactly what was happening with the Code, and how to move progress on the code from the outside."

They wrote several letters to all levels of the administration but received little response. The group circulated a petition last semester asking the university to adopt the code and collected more than 250 signatures, and met with President Cohon and other members of the administration.

"Could it have been done faster? That's not clear," said Neal Binstock, assistant vice president for Business Services, who served as an administrative liaison to the task force. "Drafting a code is not a small or easy process."

According to Binstock, the code had to go through a legal review, and changing each word of the code could potentially change the meaning of the document. He believes that the extra time was necessary. "We had to present the best possible code of conduct to represent Carnegie Mellon University."

This semester the trademark licensing office sent a revised draft of the Code of Conduct back to the members of the original task force who are still at Carnegie Mellon. On March 18 the task force made some small changes to the Code, and sent a finished version to the President's Council. At the April 12 meeting, nearly two years since the anti-sweatshop task force first met, the President's Council voted to approve the finished Code of Conduct.

Now that the Code is approved, language will be drafted into Carnegie Mellon licensing contracts insisting that the 95 licensees that make products with the Carnegie Mellon logo on it, as well as any new ones must endorse this code in the manufacturing of their products.

According to Binstock, "Our objective was to have a code of conduct acceptable to all of the people involved, and I believe that's what we have achieved."

Members of the task force feel that the move to adopt a code of conduct, although it has been a slow process, has been successful, although there is more work to be done.

Soluri said, "I think it would be misleading to say that students have driven the move to adopt a code, but I have not a doubt that students will have to drive the enforcement of the code by making fellow students, staff, and faculty aware that we need to buy our consumer goods from companies that respect workers' basic rights."

ROB CULLEN

Living on \$1.25 per day

Nearly 200 students and faculty filled McConomy Auditorium on March 27 for "Starving for the Swoosh," an interactive multimedia presentation on working conditions in factories overseas. The two presenters, Leslie Kretzu and Jim Keady, spent the month of August 2000 living in a factory worker's slum in Tangerang, Indonesia, on \$1.25 a day, the typical wage paid to a Nike worker in a shoe factory.

Kretzu and Keady talked about the workers they lived with who worked up to 15 hours a day, six or seven days a week, sometimes putting in two 24-hour shifts in the same week to make quotas. The presentation touched upon abusive managers, dangerous working conditions and pay that many times is not enough to meet workers' basic needs.

Keady is a former soccer coach at St. John's University who was forced to resign for refusing to wear Nike soccer equipment. He says that during the month living on \$1.25 a month in Indonesia he lost over 25 pounds, and was unable to lift even a water bottle without his hands shaking violently. "I was literally starving, and my body was fighting it."

The presentation was sponsored by People for Workers' Rights (PWR), a student group that deals with sweatshops and other issues relating to workers' rights. The group was formed in February of last year, originally as a way to bring more attention to the code of conduct, but the group has since begun to deal with other issues as well. This year the group has organized a "sweat free T-shirt" fundraiser, in which the group sold union made T-shirts which they silk-screened themselves. Also, they've been working with other groups at University of Pittsburgh and Duquesne and with local union members in a campaign to urge the Pittsburgh Pirates to adopt a code of conduct for its merchandise, similar to the codes of conduct that many universities have begun to adopt.

This year the group has also been organizing its own trip to visit factories in Honduras next spring.

"We want to see their culture," says Matt Toups, a sophomore Physics major and co-leader of PWR, "and to see firsthand how our consumption affects their lives."

ROB CULLEN

Film highlights Jamaica's losses in global economy

I attended the critically acclaimed film, "Life and Debt," shown on April 23 in McConomy Auditorium. The film begins by placing you behind the eyes of a tourist visiting Jamaica for the first time on a holiday. The narrator takes you on the vacation, first landing in the airport, exchanging your American \$20 for a big pile of Jamaican money, imagining all of the ways that you may spend your newly acquired riches. You are excited thinking about the possibilities for your vacation, not thinking about what life is really like in Jamaica, but only about how you have never seen anything so absolutely beautiful. You ride the tour bus, seeing the gorgeous scenery mixed with signs for McDonald's, Wendy's and Burger King. This is just one sign of what the U.S. economic powerhouse is doing to the Jamaican market.

A crowd of about 125 consciously minded individuals quickly settled in to absorb the colorful scenery and the upbeat tunes, appreciating the spirited variation from traditional documentaries. Filmmaker Stephanie Black tells the story of Jamaicans, whose struggle for survival rests in the hands of the U.S. and other foreign economic agendas. The film is an 86-minute documentary, using excerpts from the poetic text of Jamaica Kincaid's award winning non-fiction novel, "A Small Place," as voice-over narration.

An in-depth interview with former Prime Minister Michael Manley describes

Jamaica's troubled economy as stemming from a long-standing debt to lending organizations, such as the International Monetary Fund, the World Bank and the Inter-American Development Bank. These loans started after 1962 when Jamaica gained independence from Great Britain.

Black then turns to farmers and workers who explain that the high interest rates of these organizations cause the currency rate to become devalued, forcing farmers to raise prices of their produce. This makes imports far cheaper than local products. This, in turn, jeopardizes the livelihoods of the Jamaican farmers, who as poor consumers, are forced to participate in foreign exchange.

The film also focuses on free trade zones in Jamaica, through which American corporations set up heavily secured factories that provide jobs with sub-standard working conditions at the absolute minimum wage, \$30 per week, as allowed by law. No unionization is permitted, and workers are fired for complaining about conditions. These jobs, though grim, are highly valued.

A particularly gruesome part of the movie for me, being a vegetarian, tells the story of a chicken plant that produces high quality chicken for the Jamaican market. That is, it did until the U.S. began exporting low-grade chicken parts to Jamaica, under the pretext that NAFTA and the Caribbean Basin Initiative enforce what goods come into the U.S., but not what come out of it. The

Jamaican milk industry was also greatly hurt a few years ago when taxes on the importing of U.S. and European milk solids were cut. These imported milk solids suddenly became cheaper to Jamaicans than local farm-raised milk. Subsidies to the Jamaican milk industry were also taken away, forcing Jamaicans to dump millions of dollars worth of fresh local milk and prematurely slaughter hundreds of cows. The milk industry in Jamaica has been downsized nearly 60 percent since this liberalization.

This film brings a renewed meaning to the term "globalization." Globalization usually has a positive connotation to us in the United States, referencing freedom, the spread of culture and even equality. But Black has been successful in showing the negative effects of globalization in Third World countries. Increased unemployment, sweeping corruption, higher illiteracy rates, increased violence, unreasonable food costs, dilapidated hospitals, and increased disparity between rich and poor are all part of the current economic crisis.

I have done some research and found that voting power at the IMF and the World Bank is determined according to a country's monetary contribution ability. Of course the U.S. and larger countries such as Germany, Japan, the United Kingdom, Canada and Italy have the most generous share by far, and can easily veto a policy decision. So, according to the film, in not so many words,

the economies of Jamaica and its fellow Third World countries are being held captive to these rich nations that quietly enforce slave labor and destroy their local market.

Black succeeds in addressing a somber topic in a lively, engaging manner. The harsh realities presented are counteracted by the cool, ironic lyricism of the narration. The soothing tone of the tour guide takes the edge off the human suffering that follows globalization in this beautiful land. The interviews with the locals are diverse and powerful as they offer the reality of life in Jamaica, particularly when juxtaposed with images of jolly American tourists sedately drinking beer and eating luxuriously without a care. Add to this an outstanding reggae soundtrack, and you get a brilliant, enlightening documentary.

This evening of discussion and film was supported by Local Currents; Mudge House; Indira Nair, vice provost for education; PWR-United Students Against Sweatshops (USAS); Alliance for Progressive Action; Metro Pittsburgh Labor Party; Mon Valley Unemployed Committee; Pittsburgh Labor Action Network for the Americas (PLANTA); Students in Solidarity; Thomas Merton Center; United Electrical Workers, District 6; and the United Steelworkers of America (USWA).

ANDREA GEORGIANA

Kino festival brings the Berlin Wall down again

The Berlin Wall fell in Germany more than 12 years ago, but this spring it made a mysterious reappearance on campus. If you were walking by Doherty Hall in late April and wondering why the Iron Curtain had risen again, the answer is Kino.

Carnegie Mellon's fourth annual H&SS film festival — held April 25-28 in McConomy Auditorium — was a rare glimpse into an emerging contemporary film culture in Germany.

Entitled "Kino: Beyond the Wall" ("Kino" is the German word for cinema), the festival focused on German films that were made after Nov. 9, 1989, the day the Berlin Wall came down.

According to Thomas Brussig, a young German novelist and screenwriter who kicked off the festival on Thursday afternoon, the Berlin Wall was such a touchy subject that no television or movie sets of the Wall had been built in Germany prior to the production of his 1999 film "Sonnenallee" (Sun Alley).

Not every film dealt directly with the Berlin Wall, but all were a response to the culture that emerged after its fall — a culture that has gone largely unnoticed in the United States. The primary exception to this was Tom Tywyker's popular "Run Lola, Run" which hit American theaters in 1999, but was not shown during the film festival.

Stephen Brockmann, a professor of German language who led this year's film festival, believes the festival was particularly successful because it gave exposure to several films that had never before been screened in Pittsburgh. There were 15 films, including four shorts and a free Monday night bonus screening.

"I count eight Pittsburgh premieres, which is a wonderful accomplishment for a student-run and organized film festival," Brockmann said.

The festival was also expecting an appearance by cinematographer Michael Ballhaus, who has worked on dozens of American films including "The Legend of Bagger Vance," "Air Force One," "Goodfellas" and "The Last Temptation of



The Berlin Wall rose again this spring along the sidewalk near Doherty Hall

Photo: Brian Connelly

Christ." Unfortunately, he was forced to cancel at the last minute to work on a Martin Scorsese film in Italy.

Still, Brockmann was pleased with the film festival overall, as was cinematographer/director Robert Tregenza.

Brockmann said, "When he left on Sunday, Tregenza said that he thought small festivals like this may be the wave of the future for screening challenging, commercially unviable art films."

The idea of an annual Carnegie Mellon film festival was hatched four years ago by a group of faculty in the College of Humanities and Social Sciences. Through a course offered once a year (which rotates between the departments of English, History and

Modern Languages), students from all disciplines are given the opportunity to plan and promote a film festival with a theme selected by the professor.

Brockmann left the planning to students. "All of the films but one ["Sonnenallee"] were chosen and all the publicity was created by the students. My role was as organizer, administrator, cheerleader and provider of necessary information."

Because German film has a more limited appeal than last year's rock 'n' roll film festival, students had to be especially creative in promoting the festival. Looking for ways to create a buzz on campus, the students erected a mock Berlin Wall outside of Doherty Hall with the word "Kino" on it.

Passers-by were encouraged to spray paint their own graffiti messages, but with one rule. "No censorship," said sophomore Stephanie Natale.

"Like the Berlin Wall. People wrote all over that, stuck notes in it ... and if you noticed on Sunday [the last night of the film festival] it happened to have been knocked down. We're not sure if it was the wind or some unknown conspirators, but it's kind of symbolic," Natale said.

Perhaps. Except when the wall fell in Germany, it signaled the beginning of something good. This time, it marked the end.

JONATHAN GRIFFIN

The art of turning McConomy into a 450-seat weekend moviehouse

In all likelihood, you haven't seen the movie "My Five Wives," or at least you weren't one of the 69 people who saw it at McConomy Auditorium.

One reviewer called the movie "so completely dumb that it's impossible to be offended by it, or so completely offensive that it's just dumb."

Movies like "My Five Wives," which features Rodney Dangerfield as a real estate developer who buys a piece of land in Utah and acquires five wives with it, illustrate how difficult the job of film chair for Student Dormitory Council, held by David Lagattuta, can be. "It's not an exact science," explains Lagattuta.

Every weekend hundreds of students, faculty and outsiders stop into McConomy, which by day serves as a meeting place, but by night is transformed into a 450-seat movie theatre. Students seeking refuge from a long week of work can see a movie for only \$1 a show (\$3 without a student ID).

But while most students and many staff and faculty have seen a movie at McConomy,

few know about the process that brings recent releases here. This work falls into the hands of SDC and AB Films.

At the beginning of each semester, SDC and AB draw up a tentative list of the movies they hope to show. They pick films by looking at box office grosses and through plain intuition. And for the first time last semester, the audience was encouraged to play an active role in selecting movies for the coming semester through an online survey form that asked people to rank recent releases. More than 600 people responded — a huge turnout for such a survey.

Movies for McConomy are acquired through the distributing company Swank Motion Pictures, Inc.

Paying \$500 to \$2,000 per film per evening, SDC and AB try to book a diverse range of movies. SDC usually plays mainstream blockbuster movies on their designated night, Saturday, while AB Films shows mainstream movies on Fridays and more obscure and sometimes older films on Thursdays and Sundays. All movies are usually

shown three to four times a night, depending on the movies' running times.

And while SDC and AB Films are two distinct campus groups, "We're doing the same thing," explains Lagattuta.

"Monsters Inc.," was surprisingly the most popular film this spring, drawing 1,507 people. Lagattuta explains its popularity by its short running time. "Movies will do well, but if they're really long, people won't go to the late show." So although "Lord of the Rings" was very popular, few turned out for the 1 a.m. showing of a movie nearly three hours long.

The usual turnaround for a film to come from the movie theater to McConomy is about four months from its release date. So holiday movies from December usually come to campus in April. It's also not uncommon for movies that are still playing in the theaters to make it into McConomy at the same time, although last-minute delays do happen if a movie is still in its first run. It all depends on the individual film companies says Lagattuta.

Film companies can choose to delay releasing a movie to campus distributors if has won an award, if it is scheduled for re-release or for no reason at all.

This happened with the movie "Memento." The film was released by an independent company that gave distributors the runaround. And once the movie came out on VHS, it was too late for campus screenings.

"We don't like showing movies that are already out on VHS," says Lagattuta. The groups want to get as many people as they can to see the movies, and VHS release takes away much of the potential audience.

In the future, groups of students may be able to see movies at half price. Resident advisors can take a floor of a dormitory to see a movie for 50 cents a person.

Next fall, Lagattuta will be aiming to hit the DD-Zone — a new term he coined to stand for the Rodney Dangerfield ticket sales zone of 69 people. "My goal is for every movie to be at least twice that," he says. "I've been successful so far."

CHRISTINA CHONG

Campus Police, EMS receive training on defibrillator device

This spring four CPR instructors in Carnegie Mellon Emergency Medical Services taught a CPR refresher course to Campus Police to renew their certificates. Four new guards took a full eight-hour course.

The EMS courses concentrated on using the automated external defibrillator (AED), a potentially life-saving device that distinguishes Carnegie Mellon's police and EMS from most universities.

An AED is a portable device that can deliver an electrical shock to correct lethal heart rhythms that have stopped a patient's pulse. When used quickly and combined

with early CPR, the AED greatly improves the chances of the patient surviving.

Carnegie Mellon owns five AEDs. One is behind the athletic equipment desk in the University Center, one stays at the National Robotics Engineering Consortium in Lawrenceville, one with the athletic trainer and two travel in Campus Police cars.

"It is pretty standard for university police to be trained in CPR, but both the collaboration between Carnegie Mellon's EMS and police and our extensive use of AEDs sets us apart," said Bryan Kaplan, operations manager of EMS.

Carl Peterson, executive director of EMS, was in charge of the trainings. He believes that knowledge of CPR and the use of AEDs is necessary for the police to serve the community to the best of their abilities.

"These trainings give a higher level of experience than most CPR trainings because often there are times when police are in life and death situations."

The AEDs have been used twice since their purchase in 1998. The most recent was last July 15, when the campus police dispatch center received a call about a possible cardiac arrest. Police arrived at the scene

and immediately started CPR. After Kaplan arrived, they deployed the AED. The patient was transported to a local hospital where he received further treatment. Ultimately, the patient survived.

"It is important to the people in the CMU community to have the AEDs on campus because they provide an additional level of treatment available to victims of sudden cardiac arrest," said Kaplan.

"Though they are rare, situations like these are what these trainings and classes are for," said Peterson.

ELSIE LAMPL

Israel, Palestine backers maintain uneasy truce

Day-to-day developments in Mideast conflict reverberate among campus groups

This spring the international and U.S. media have had their cameras pointed toward Israel and the Israeli/Palestinian conflict. From the "Passover Massacre" to the siege in Ramallah to more suicide bombings to the allegations about the Israeli attack in Jenin, that region seems to turn upside down on a daily basis.

Yet this is not something new to the Middle East. What is new is the fervent political rallies and rhetoric that have inundated talk shows and now Carnegie Mellon's campus, which has long had a reputation for student apathy.

Needless to say, the subject matter for the conflict has emotional strings attached for many students who have visited the Mideast or who have family and friends there.

I visited Israel over winter break on a trip organized through Hillel called "Birthright Israel." Over the course of 10 days, I was exposed to various parts of the land and to the political, cultural, social and philosophical ideologies of Israel. I went into Israel wary about the physical dangers and also wary of nationalist causes, but I entered with an open mind about the conflict.

Unfortunately, as I would find out later on this campus, a liberal opinion is not popular on either the Israeli or Palestinian side. There is no trust. As Salma Zahr, the president of the Arab Student Organization (ASO) told me, "If you're not going to trust the other person you're dealing with, how are you ever going to expect peace?" Upon returning to campus, I felt disheartened this spring as the situation in Israel deteriorated. I also came to feel alienated from those who professed a love of Israel.

My goal was to talk about Israel without using the loaded political rhetoric. I had heard all the terms before: suicide bombers, occupation, terrorism, aggression, plight, Arafat, Sharon, and I felt as if they got people nowhere.

In an already bleak situation, those terms provoked anger and hatred and more distrust. Few people wanted to speak about the possibility of peaceful co-existence; those who did were forced to revert to divisive rhetoric and contentious facts about the history of the conflict. With my increased interest in everything related to Israel, I found company among those with a deep emotional and intellectual interest in the outcome of campus forums and debates.

Students from the ASO and from the Hillel Israel group were the most active on campus in promoting awareness of the Israeli/Palestinian conflict. For a while, both groups maintained a working dialogue with each other. They showed up at each other's events and even hung out over coffee, according to Ruthie Esses, a sophomore Math major and the president of the Hillel Israel group.

The ASO organized events for National Palestine Week from April 8-12. They included: a talk by a Presbyterian minister who visited the occupied territories; a vigil at the Fence for victims of the occupied territories; and a teach-in featuring Amer Zahr, a politically active graduate student at the University of Michigan who appeared in December on ABC's "Politically Incorrect with Bill Maher."

Meanwhile, the Hillel Israel group put together newsletters called "This Week in Israel" that highlighted anti-Israeli attacks. The group also organized a campus visit by an official from the Israeli Ministry of Foreign Affairs.

Soon after the ASO and the Hillel Israel group promoted their individual causes, the two groups bumped heads, stirring the campus community into providing a series of meetings, forums and gatherings in various efforts to educate, promote solidarity and ease tensions on campus.

Opposing camps

On April 12, tensions flared between the two groups. ASO planned and organized a

Nimrod Barkan from the Israeli Ministry of Foreign Affairs delivered a cynical note on how to distinguish between reliable and unreliable sources, to tell the difference between propaganda and the truth.

"Whatever one side says is the truth and the other side is propaganda," he said.

vigil to mourn the victims of the "occupied territories" from noon to 1 p.m. at the Fence. While ASO was setting up for their vigil, the Hillel Israel group set up a vigil of its own, mourning "victims of terror." At an area next to the tennis courts, students read the names of people who died in the terrorist attacks on Sept. 11 and in suicide bombings in Israel.

For those people not involved in either group, it appeared as if the groups were battling each other for the attention of the rest of the campus community. The situation became so hostile and charged at one point that two faculty members verbally assaulted those gathered for the Israel group's vigil. Although the Israel group's vigil was supposed to end before the start of ASO's vigil, several ASO members said that a few students from the Israel group arrived early and disrespectfully interrupted their vigil.

Both sides used strong rhetoric that added to the tension. Students who supported Israel felt personally attacked by posters that dehumanized Israelis, and students who supported Palestine felt attacked by posters that dehumanized Palestinians.

Personal stories, political activism and fear

Zahr spoke to me about visiting family in the occupied territories and witnessing their dire economic and political situations firsthand. She also spoke about her own mission of political activism. "The pro-Palestinian organizations are not going to stop their activities until there is a just peace in the Middle East," she said.

Esses and Zahr said separately that they were glad to see that the campus has become more politically active. Both of them attended political rallies in Washington, D.C. to support their causes.

Esses also spoke about her connection to Israel. By going on an "activism trip" to Israel over winter break, she had come back to campus with an agenda to educate others about the situation in Israel. She also spoke about the growing fear of anti-Semitism in relation to the events in Israel.

Recent news articles have documented an increasing rise of anti-Semitic incidents in Europe. Pro-Palestinian rallies had also correlated with anti-Semitic incidents on other college campuses such as UC Berkeley. News of anti-Semitism hit closer to home on April 25 when a man vandalized the Jewish University Center on Forbes Avenue by drawing a Nazi swastika with a black marker on the front of the building. Although, according to President Jared Cohon in a message posted to the electronic bulletin board cmu.misc.news, "There was no reason to believe that this incident involved university members," the act did

affect Jewish students.

"It frightened me," Esses said.

Students gather to promote non-violent dialogue

In an effort to calm intense feelings and provide a forum for those people who felt polarized by the two groups, Mark Egerman, a sophomore Computer Science major and Alisha Bhagat, a first-year Materials Science and Engineering major, arranged what they termed an "Islamic/Jewish Gathering" held on April 16 in Rangos 3. In a post to the electronic bulletin board cmu.misc.market, Bhagat stated "The hope is that this meeting will provide a chance for people to open a new dialogue in a non-violent setting."

Stephanie Hepner, a junior International Studies major, who is an active member of the ASO, in a separate interview, later echoed the sentiments expressed by Egerman and Bhagat.

"People keep asking me if I'm pro one side and it seems to imply that I'm anti the other," she said.

Among the 25 students at the gathering, there was fair representation from the ASO, but students from the Israel group were noticeably absent. The meeting focused on the vigils and on posters hung up on campus by the Israel group — posters that members of the ASO felt were offensive and anti-Palestinian.

One such poster stated "Want to make \$27,000?" and then followed with an order to contact Saddam Hussein and Yasser Arafat, stating that those leaders had promised financial compensation to families of suicide bombers.

Toward the end of the gathering, progress was made toward bringing Hillel and the ASO together in a joint effort to promote public awareness of the Palestinian/Israeli conflict.

Israel town hall meeting

Continuing the flurry of campus events related to Israel, on April 22, Hillel sponsored a town hall meeting in Rangos 3. The meeting was called "United We Stand: Students Against Terror" and featured a short documentary on Palestinian violence followed by a panel of three speakers: Kobi Wimsberg, a doctoral student in behavioral decision research; Laurie Eisenberg, visiting associate professor of History; and Nimrod Barkan from the Israeli Ministry of Foreign Affairs.

On April 12, the Arab Student Organization planned and organized a vigil to mourn the "victims of the occupied territories" at the Fence. While they were setting up their vigil, the Hillel Israel group set up a vigil of its own, mourning "victims of terror" as students read the names of people who died in the Sept. 11 attacks and in suicide bombings in Israel.

Wimsberg related his experiences as a soldier in the Israeli Defense Forces while he was living in Israel. He spoke about the contradiction between a humanitarian cause and fighting terrorism.

"You have to pity the poor," he said, "but you also have to protect Jewish lives."

Eisenberg spoke about both sides of the conflict and the evolution of the peace process. She said that both sides had responsibility in the conflict. On the one hand, she questioned the leadership of Israel in that recent prime ministers have come from across the political spectrum, thereby preventing any continuity in the peace process. On the other hand, she also criticized Palestinian leadership and specifically the Palestinian Authority for not financially supporting the Palestinian infrastructure that desperately needs economic support.

Barkan spoke about a two-state solution as the only viable solution at this point in time. He also delivered a cynical note on how to distinguish between reliable and unreliable sources, to tell the difference between propaganda and the truth.

"Whatever one side says is the truth and the other side is propaganda," he said.

Building bridges

April ended with yet another meeting on the Middle East organized by Student Affairs. Michael Murphy, dean of Student Affairs, moderated the forum.

At first it seemed as if the hostilities between the pro-Palestinian side and pro-Israel side would provide the same tension that I had felt over the past few weeks. Both groups spoke about their negative reactions to campus posters. Cooler heads prevailed though, sparked by LaRita Hamilton, a senior Creative Writing major, who spoke up when she felt the tension reaching a boiling point.

Raising her hand and loudly interrupting the conversation, she said, "I feel alienated right now," speaking toward members from both the pro-Palestinian and pro-Israeli sides.

When the two groups subsequently turned down the volume, I felt the tension drain from my body. Dean Murphy continued the meeting by stressing the importance of free speech and the difficult decisions to make in determining what is offensive to one party and free speech to another party. He also emphasized the importance of "building bridges" between the two groups.

With representation from both the ASO and Hillel, both sides brainstormed collaborative ideas that could help promote education about the conflict. Some of the ideas tossed around were developing mutual ties between the organizations and organizing a mini-library of books related to the conflict that could be agreed upon by both organizations.

Hope for the future?

As May went on, the conflict in Israel seemed to ease up with the release of Yasser Arafat from his compound in Ramallah and the agreement for ending the standoff at the Church of the Nativity in Bethlehem. The tension on campus has seemed to ease up as well. Stay tuned.

RUDY ASH

FOCUS
welcomes letters.
Email davidson+orbclz@andrew.cmu.edu

GSIA hosted rare group of talents in early years

In 1961, when the School of Computer Science was still a gleam in the eye of Herbert Simon, doctoral candidate Yuji Ijiri would shimmy through a basement window on a beam of moonlight to run punch cards through a computer in the School of Industrial Administration.

Lee Bach, the founding dean of the business school, had locked all the doors to the school and the computer room. In 1961, faculty and students only had limited access to Tech's only computer — an 8-foot IBM machine — remembers Ijiri, now an accounting professor in GSIA.

"He was very strict about GSIA."

The computer was part of the Computation Center, a division that would evolve into the School of Computer Science. That grand experiment was another four years away, but a revolution in business education had already occurred under the pensive watch of Bach and his young professors.

Twelve years after its founding in 1949, GSIA had significantly changed the model employed by the country's top B-schools to educate business students and was now one year from a monumental change in leadership; one that would have an unbounded impact on Carnegie Mellon.

Bach had created arguably the preeminent business school in the country. Trained political scientists were developing mathematical models on computers. Corporations were yearning for GSIA's research. With Bach's guidance, faculty in the 1950s produced some of the decade's most important research in organizational behavior, quantitative analysis and economics through the vein of business; theories that would have a lasting impact not only at CMU, but other institutions as professors left to achieve greater fame at Harvard, Stanford, MIT, Chicago and other institutions.

But the school was one year removed from losing an accomplished economist and in the midst of a minor struggle between Simon and the remaining economics faculty. Regardless of the magnitude of the scuffle, why would star junior faculty want to leave a place where research grants from the Ford Foundation were rolling in?

Bach's research and doctoral program approach differed from Stanford Business School, which was staunchly vocational and had few expectations about faculty research; and from Harvard Business School, which had already developed its case study method to educate executives and master's students about real-life business scenarios.

It wasn't until a fiscal crunch in the '70s and '80s that GSIA would increase in size and milk the cash cow of master's students — curiously, the approach founder William Larimer Mellon had in mind when he endowed the school with \$6 million in 1949.

Mellon died shortly thereafter and with the retirement and subsequent passing of Carnegie Tech president Robert Doherty, Bach was virtually free to pursue his unique prototype of business education.

That's according to Steven Schlossman, professor of History, who in 1995 co-wrote a profile of Bach for "Selections," a publication of the Graduate Management Admission Council. Schlossman found that Bach, by drawing on the large endowment and research grants from the Ford Foundation, was able to cultivate an interdisciplinary culture that still exists today, albeit in a university-wide Petri dish.

"Bach saw the tremendous opportunity that could come from blending together a Chicago-style academic department ... and a practically oriented professional school of management," Schlossman wrote in the 1995 article.

Doherty hired Bach to rebuild an economics department that had been decimated by faculty departures during World War II. The president wanted to continue his "Carnegie Plan," an educational philosophy that proposed engineers should receive a broad education in liberal arts and business. Doherty had pushed Bach toward taking the oft-neglected undergraduate industrial engineering and business "programs," much to Bach's initial dismay. The programs had



Richard Cyert



Herbert A. Simon

a reputation as salvage yards for students who couldn't navigate other engineering disciplines. But Bach leveraged his position to gain additional faculty in the social sciences who shared his interests in organizational behavior, quantitative analysis and economics.

Bach brought in young, bright minds. There were quantitative analysts from several government agencies: William Cooper, who would later become dean of Carnegie

no individual departments. Professors could be entrepreneurial in their management science research.

Cooper, for example, arranged for a team of GSIA faculty to study optimal production plans for a Gulf Oil refinery. How appropriate, given that Gulf was started by Mellon.

Regardless, Cooper joined with Abraham Charnes of the Mathematics department to create what came to be known as linear programming. Their work sowed the seeds of production planning and operations research, areas in which Carnegie Mellon continues to excel.

Simon and Cooper didn't always disagree. When Bach hired several mavericks from Harvard to legitimize the GSIA revolution and provide a dash of case study and contemporary business practice to the school, Simon and Cooper weren't exactly ecstatic.

"We were against that," Cooper says.

While Simon and Cooper maintained respect and admiration of each other's work, several economists had grown weary of Simon's sometimes cantankerous behavior. Holding to his ardent skepticism about classical and rational economics, Simon wrote that he would "heckle the GSIA economists about their ridiculous assumptions of human omniscience and they increasingly viewed me as the main obstacle to building 'real' economics in the school."

Franco Modigliani was one economist with whom Simon could get along.

"I had some disagreements with Herb Simon, but I still loved him dearly," says Modigliani, who came to regard his GSIA colleagues as "exceptionally lively and sort of a frontier faculty."

Modigliani taught at GSIA from 1952 until 1960 before moving on to MIT and later winning a Nobel Prize for his work on firm valuation and household savings (the life-cycle hypothesis) that would have applications for macroeconomics. He teamed with Merton Miller, a GSIA professor (1953-1960) and another Nobel laureate, to develop the widely practiced M&M firm valuation theory that states that a company's financing structure (debt or equity) has no bearing on its value or its rate of return for shareholders.

Miller, who passed away in 2000, described GSIA in his autobiography as "the first and most influential of the new wave of research-oriented U.S. business schools."

Faculty in the 1950s produced some of the decade's most important research in organizational behavior, quantitative analysis and economics.

Mellon's School of Urban and Public Affairs; and a political scientist from the University of Chicago named Herb Simon. By the time Bach retired in 1962, GSIA had a faculty of 35 presiding over doctoral and master's classes that together yielded 26 graduates per year during his tenure as dean. And meanwhile, GSIA under Bach had gained immense credibility in the area of management science.

Life at GSIA under Bach's keen leadership was never dull. Co-workers challenged one another. Simon would describe GSIA as a "three ring circus" in his autobiography, "Models of My Life."

"The interactions were very vigorous, to put it mildly," says Cooper.

In the early 1950s, Cooper, Simon and Bach had already formed the guiding triumvirate for the school. But Bach was skillfully moonlighting as the referee in a fight between the intellectual heavyweights Cooper and Simon.

Cooper, now a professor emeritus at the McCombs School of Business at the University of Texas-Austin, recalls pushing for greater quantitative analysis work in the school, while Simon was demanding a greater emphasis upon research into human behavior and organizations. Cooper and Simon walked away in ideological disagreement but content with Bach's blend. Bach had arranged the school so that there were

Despite the "close-knit" faculty, Modigliani wasn't entirely comfortable.

"The main reason I left is I felt a bit lonely," says Modigliani, who left on amicable terms. "I wanted some other outstanding economists to be hired [at GSIA]."

"I felt there was a need. When I didn't get anywhere and got a very good offer from Northwestern, I decided to try it out."

Their B-school didn't have the same atmosphere as GSIA. He lasted only a year before moving to MIT, where today he is a professor emeritus.

Once Modigliani left, Simon became more fractious toward the economists, who began leaving en masse. Not until 1963, when Richard Cyert became dean of GSIA, would the school replenish its economics department. Cyert would hire, among other notables, Bob Lucas who would win the Nobel Prize in 1995 at the University of Chicago.

"Cyert built from almost nothing an amazing group of economists in those three years," says Tim McGuire, who was member of the economics faculty during Cyert's years. He would later become the deputy dean under Betsy Bailey in the 1980s.

He says that Cyert's economists created an "interesting phenomenon," by which walls were built between disciplines, mainly by the economics group.

"The nature of the school changed and for a while there was a 'we-they' culture."

When McGuire returned to the school in 1981 after a two-year absence, he noted that the finance professors had even begun to function as a department. After so many years, the school no longer offered a single Ph.D. in industrial administration, but separate Ph.D.s in economics and IA.

The segregation of disciplines also didn't lend itself to the same interdisciplinary approach of the Bach years. In addition to the barriers departments were building within GSIA, the Ford Foundation had largely curtailed its funding of B-school research.

"We had to change the whole master's program from just a few elite people who we actually paid to come, and we had to start recruiting students," says Gerald Thompson, who was an operations research professor from 1959 until last year. "I came in a golden era. I didn't know it until it was over. We didn't like it [shifting our focus] but we had to change."

GSIA tried to interest the MBA flock in research, while still preparing them for new realities of the job market. No longer were the MBA students the nation's elite absorbing the latest theoretical approaches to business; they had turned into suits and stuffed shirts who expected a lucrative position upon graduation.

The change in emphasis had some advantages, however. For the first time, for example, GSIA addressed the fact that its graduates had remained grossly inept in interpersonal communications.

At many universities, the business schools serve as "cash cows," feeding the insatiable appetites of other less lucrative departments.

At Carnegie Mellon, however, GSIA has never had the fiduciary might to finance these other ventures. Facing its own cash flow crunch during the 1980s, GSIA doubled the size of its MBA program. And with an increase in size comes the obvious issue of how to maintain the school's small size advantage yet serve the broader needs of MBA students.

Richard Green, a finance professor and editor of the Journal of Finance, says today there exists a "healthy tension" between departmental specialists and the factions pushing for a do-it-all B-school.

Departments, once the bane of Bach and the mantra of Cyert's economists, have become more prevalent in GSIA. And because of the de facto departmentization and other changes, "GSIA has become a lot more like MBA-oriented schools," says professor John Hooker.

Green, like most who have traveled the halls of the austere building adjacent to Schenley Park, thinks GSIA won't be able to recreate the "hustling" ambiance of the 1950s and '60s. It's still a "freewheeling" place, a result of the "reverse snobbism" promoted by Cyert, but the school must seek its comparative advantage.

It isn't exactly clear what that advantage will be tomorrow. The e-commerce program started during the Internet boom has run into troublesome times, just like its subject. Several departments, such as Finance, have grown at a faster rate than the school. Or maybe GSIA's advantage will be the interdisciplinary research that has led the rest of the university to prominence. GSIA also is considering a rebranding campaign that may finally put to death Bach's confusing moniker: the Graduate School of Industrial Administration. A more cosmetic alteration, but no doubt a necessary one.

For Hooker, GSIA is a premier place to be an entrepreneur because of its small size and disdain for bureaucracy. Researchers can delve into their interests by forming centers much more easily at Carnegie Mellon than at other universities.

"Here you do it and hope you get away with it." A professor making his or her own decisions is one of the school's great comparative strengths and it helps the school grow more rapidly, he says.

If GSIA must struggle to find its current niche, then the question first asked after Cyert moved from dean to president is particularly apt today. McGuire remembers

continued on page 9

Cooper's Rome mural project takes shape for next year

Next summer, Architecture professor Douglas Cooper will work with the Modern Languages department to create a mural for the city of Rome.

Four Carnegie Mellon students will assist with the project by interviewing residents of Rome while improving their Italian language skills.

Cooper is responsible for completing the 200-foot-long mural of Pittsburgh that is permanently exhibited on the second floor of the University Center. He has also completed murals in other sites that include New York, Philadelphia and Frankfurt. This is the third mural Cooper will work on with students.

The idea for the mural in Rome stems from work Cooper completed in Germany. "I want to use artwork as a vehicle for foreign language instruction," he says. In Italy, students will be responsible for interviewing and collecting oral histories. "The immediacy of creating an artwork makes the use of the language come into focus," he explains, and this allows for richer communication.

In 1999, Cooper began thinking about an Italian mural while flying from Paris to Florence and listening to passengers speaking Italian.

"These words started occurring to me. Words I hadn't heard for years."

After two more trips to Italy, Cooper finally found a potential client group for his mural. "The agreement I had with them was, if I raise the money, they will do it with me."

Carnegie Mellon internal funds, the Roy A. Hunt Foundation, and the Olivetti Foundation will fund the project.

Janice Vairo, a member of the instructional staff in Modern Languages, will teach Italian to Cooper and the four students. Vairo signed on for this project after seeing Cooper's mural in the University Center.

"I was simply fascinated," she says, "how he gathers all of the information to reproduce something of that magnitude."

Next year, the preliminary work for this project will begin under Vairo's instruction. "The entire year will be intensive language



Doug Cooper and his students will make a mural in Esquilino, not far from the Colosseum Photo: Tracey DePellegrin Connelly

preparation," she says. Vairo will also be going to Rome with Cooper and students next summer to assist with oral histories that will contribute to the project.

"I really want the students to have a command of the language," she says. The students will need to understand Italian well enough to identify with the Romans. Vairo knows that the stories people will tell will be emotional. "The Italian that I am, I will prepare by stocking up on Kleenex."

Cooper will be interviewing students from different disciplines before deciding which will make the trip. "I need a mixture of skills," he explains.

The mural will be located in a technical school in the Esquilino region of Rome, an

area fraught with ethnic tensions. The mural in Rome will be smaller than his University Center mural, but Cooper expects it to be his most difficult because of the space. "The mural will go all around the entrance hall, 360 degrees."

Cooper says the location in the school's entrance is important because people will have to walk past the mural to reach an auditorium that is open for public lectures.

Cooper, Vairo and the students will spend next June in Rome, interviewing, sketching and collecting material for the mural.

"It will depict the whole city," explains Cooper. The work will continue through the following year, in Pittsburgh, before its installation in the summer of 2004.

Cooper has enough money to pay the four students for two months. "I need to have the clarity of an employer and employee relationship," he explains, stressing how this relationship differs from a student/teacher connection.

For Cooper, personally, the most important aspect of this project is the end product, "the way the mural responds to sight lines and the way the people move around the space," he explains, exhibiting his training in architecture.

Cooper and Vairo both stress the learning the language as a key element in the project. Cooper says, "Whatever Italian we bring to it will be the Italian we use."

MELISSA CLARK

Student aid complicated by drug regulation enforcement

From the ballooning tuition rate, to academic rigors, to the sunlight deprivation that comes with living in Pittsburgh, there are countless reasons for a prospective student not to choose Carnegie Mellon as his or her school.

Unfortunately, money — or a severe lack thereof — consistently determines whether or not a student can attend CMU, and there are consistently more undergraduates who receive at least some federal aid. Lately, however, the terra firma of federal aid has become a little less secure.

In March 1998, Congress approved an amendment to the Higher Education Act that requires applicants for federal student aid to answer FAFSA Question 35, which asks whether or not the student "has ever been convicted of selling or possessing drugs (other than tobacco or alcohol)."

In the following two years, this provision was rarely enforced by the Clinton administration. The Bush administration has made it a convenient point to follow the letter of the law, and some student groups estimate the carnage in excess of 60,000 students.

Touted as the next big step in the war on drugs by Rep. Mark Souder (R-IN), this provision — which has cost many students all or a portion of their financial aid — has now been officially addressed by four schools.

Western Washington University, Hampshire College, Swarthmore College and, most recently, Yale University have all adopted policies wherein the university will pick up the cost of federal aid stripped from students due to a drug use or possession conviction, as long as he or she enters a drug rehabilitation program.

"It comes from a desire that Yale students not have their education interrupted because they could no longer afford school," said Yale spokesman Tom Conroy in an April interview with the Hartford Courant.

Darrell Rogers, the national outreach coordinator for Students for Sensible Drug Policy, cheered Yale's policy as "a message [sent] loud and clear not just to the education community, but also to the law-making community."

In an era where drug use among college-

age students is rapidly rising, universities will have to address such an issue sooner or later. Colleges with higher tuition rates will most likely be at the center of these debates in the future, as a great many of their students depend heavily on federal aid to pay for school. Whether or not Carnegie Mellon will address this issue remains to be seen.

According to Michael Steidel, director of undergraduate admissions, "The enrollment strategy team has not discussed this formally since we've not actually had a case present itself."

Perhaps Carnegie Mellon will take its cues from schools that have already adopted official policies regarding this provision.

Steidel added, "I'm sure we'll be likely to discuss the implications this summer. Until then, our policy is always to review circumstances surrounding special situations which arise on an individual basis. There are obviously financial implications to the university and the viability of the individual student to consider."

While Steidel's statement might lead one to believe that Carnegie Mellon will take a

progressive stance on the issue, other parties are not so reassuring.

"We simply don't have the money. To do this would necessitate taking funds from a separate operation," said Bill Elliott, vice president of Enrollment, who said he would rather see the money used in different areas.

"I'd much rather use supplementary funds to reduce loans for other students," said Elliott, "but we don't have the money."

Elliott, who said that the issue has not been brought to the table yet, added that he doesn't expect to have to deal with it any time soon.

As it stands, Carnegie Mellon does not possess the funds to take any action against this federal mandate. Given the size of the endowment and the university's reliance on federal grants to subsidize so much of the campus' research, it seems even more unlikely that the university will stand against this federal war on drugs, even in the face of an issue that could haunt universities and their students for some time to come.

SEAN MINTUS

GSIA hosted rare collection of talents in early years

continued from page 8

hearing again and again, "What was it that enabled GSIA to be so unique and so great in its early years?"

Cooper reasons that the period during GSIA's founding was perhaps the greatest causer of the change in management education. McGuire describes the field of business as "backward" after World War II. Bach had convinced the Ford Foundation and government outfits that research in business practicum would not only strengthen American industry, but national security.

Cooper says the "precipitous" era, the newness of the school, and the collection of talent bestowed GSIA with a once-in-a-lifetime opportunity.

And Schlossman points out that production planning and resource allocation research could be used in Cold War mobilization efforts.

Economists are fond of the first-mover advantage theory, which says the firm that first introduces a new product or innovation has the best chance to succeed. While GSIA may have been the first school to offer the

fruits of management science research to American business, it was an easily adaptable technology — one that Harvard, Stanford and other well-endowed schools had little problem using.

For Modigliani, MIT replicated Carnegie Mellon's scholarly and active atmosphere, not to mention the school had more economists. If GSIA's scientific approach to business could be replicated and its faculty raided by other schools, GSIA would then have to carve its own niche. It could never match the sheer size, in enrollment, faculty or cash of

the Harvards and Chicagos of the country.

For the university, GSIA's progeny included the School of Computer Science, SUPA (now the Heinz School), and the two icons — Simon and Cyert — who were Carnegie Mellon.

If you speak to Yuji Ijiri today about the early days at GSIA, his voice swells with pride. The man speaks with a reverence of his research performed with Simon and Cooper. "I didn't realize until I left how significant the '50s and '60s of GSIA was."

BRAD GRANTZ

Swinging and dancing through virtual worlds

A Carnegie Mellon student stands on the McConomy Auditorium stage attached to dozens of wires, a wiffle-ball bat in hand. “Left! Right!” screams the audience as the student, who is wearing a virtual reality headset, swings wildly in the air with his bat. Each time, he connects with nothing, but 20 feet above him, on a large screen, an animated piñata is systematically being destroyed, limb by limb.

All of a sudden, the piñata on the screen starts moving faster. Its eyes glow red. The student begins to thrash his bat harder and faster until finally, onscreen, he deals a crushing blow to the piñata. It breaks apart and the crowd goes wild. Suddenly, I have four Tootsie Rolls in my lap as the first 10 rows are pelted with candy.

The piñata and his destroyer were just part of 17 “worlds” on display at the April 30 program Building Virtual Worlds. The annual event was a showcase of work from the “Building Virtual Worlds” course, taught by Randy Pausch, who is also the co-director of Carnegie Mellon’s Entertainment Technology Center. The course, which is given through the ETC, is also cross-listed in Architecture, Art, Design, Drama and Human-Computer Interaction.

This year, 60 students participated in the event, which drew a huge, standing-room-only crowd to McConomy. Students worked in four-person teams, each person from a different discipline. The projects required two or three weeks to complete, so students were able to work on five projects apiece during the term.

Each project was completely interactive and rendered in real-time. Pausch, who acted as emcee, stressed that the final worlds produced by the students were all created using reasonably inexpensive technology.

This fact only served to make the student’s worlds more impressive. There were simulations of “The Lion King,” featuring realistic — almost too realistic at times — renderings of bugs being eaten by Simba, the main character. “X-Men” was an exciting journey into the comic book, brought to life even more by a dramatic performance by the student running the simulation.

Shawn Patton, a first-year master’s student in Entertainment Technology, was responsible for a white-water rafting simulation that was so realistic that it was almost stomach churning. I later learned that he turned down a summer internship with Pixar



Volunteer flails at a virtual piñata at the Virtual Worlds show at McConomy

Photo: Michael Haritan

to work for Walt Disney Imagineering, designing online games.

So why does he think that Building Virtual Worlds was such a success?

“Lots of people from a lot of different majors come together, and we all have fun!” Patton said enthusiastically. “I think it was awesome — none of my worlds crashed, so I’m really happy about that.”

Fear of technological glitches was on people’s minds throughout the evening. Pausch warned the audience at the beginning not to be surprised if some worlds failed, but assured them that every world that was being shown had a back-up videotape that would be played in case of emergency. While there were delays, only one world — “Roller Ninja” — wouldn’t run. Even in that case, the videotape, which depicted a world similar to the movie “Crouching Tiger, Hidden Dragon,” was exciting.

“It’s been nothing but technical night-

mares for the past few days,” said Cort Stratton, a teaching assistant in the course. “It’s a blessing that nothing happened.”

The students’ worlds ran the gamut from humorous (in “Voodoo,” a student plays with a virtual reality voodoo doll, only to have it gain a life of its own) to serious and sad (“Loss of Innocence” featured a virtual reality tour of a bombed-out town with dead bodies strewn everywhere, and ended with the death of a child.)

Through it all, the Virtual Worlds students in the first five rows of McConomy showed their intense enthusiasm for their projects and each other.

For “Raver Nation,” a girl danced to trance music with glowsticks in her hand. On screen, colorful star trails traced her hand movements. Meanwhile, the other 60 students waved their own glowsticks in the darkened auditorium, creating even more of a realistic sense of the world up on the screen.

The enthusiasm wasn’t limited to the stu-

dents, either. At the beginning of the show, a competition between the left and the right sides of the audience was set up with a bouncing ball on the screen. By using their own hand and arm motions, members of the audience would attempt to “hit” the ball on the screen, and try to get the onscreen ball to touch the bottom of the screen on the other side of the audience. It seemed bizarre at first, but before long, the whole audience began to get into the competition.

Building Virtual Worlds never ceased to be entertaining, but it was also nice to see students doing what they loved and receiving such a warm reception.

Asked why he wanted to TA the course, Stratton responded, “This was the course that introduced me to what the Entertainment Technology Center was, and showed me what I wanted to do with my life.

“I wanted everyone to have a world in this show that they could be proud of.”

LAIN TOWEY

Undergrad research grants continue to surge

At a university known for the quality of its research, many members of the Carnegie Mellon community might be more than a little bit surprised to learn how thriving undergraduate research is. One needs to look no further than this year’s “Meeting of the Minds,” the undergraduate research symposium where almost 500 Carnegie Mellon undergrads from all disciplines presented their research.

Projects for “Meeting of the Minds,” which took place this year on May 7 and 8, were incredibly varied. Even the titles demonstrated the incredible variety of majors and interests of the students presenting their work: “Production and Deployment Scheduling for H.J. Heinz Company,” “Exploring Identity in Pittsburgh’s Ukrainian Community,” “Urban Search and Rescue Robots,” and “Nexus (Silent Mouth),” in which William Kofmehl III, who achieved fame through his project of living outside of Doherty Hall, dressed in lobster suit, presented his research.

Approximately half of the students presenting at the symposium have received grants from the Undergraduate Research Initiative (URI), an organization that operates through the office of the associate provost for Academic Affairs, and is directed by Janet Stocks. The Initiative gives three kinds of grants to students: Small Undergraduate Research Grants (also known as SURG grants), which are up to \$500 for single projects and \$1,000 for group projects;

summer fellowships, which provide students with \$3,000 to do 10 weeks research over the summer, and presentation awards, which give students up to \$350 to travel to conferences and present their research.

Stocks estimates that the URI funds about 125 projects a year, giving 175 to 250 students a chance to engage in research that they might not normally do, since about a third of the projects funded are group projects. “Last year, we gave away \$162,000 in funds,” she says. “The year before that, it was around \$200,000.”

This is a major change from the considerably humbler beginnings of the URI, which began in spring 1990, and gave away eight grants to students. Barbara Lazarus, the associate provost for Academic Affairs, and the first director of the URI, had definite goals in mind when she began it.

“It became clear to me that research and undergraduates were much further apart than they might be,” she says. “Research for undergraduates seemed to focus on seniors honors projects, and opportunities for science and engineering. Students’ complaints about Carnegie Mellon would say ‘Faculty members spend so much time on research that they don’t have time for me.’ Research was the enemy for many undergraduates.”

Lazarus wanted to give undergraduates from all disciplines the opportunity to find their own research projects. “If research is so much fun,” she says. “Why didn’t undergraduates get to play?” It was also a goal of

hers to bridge the gap that she saw between faculty and students — if students were encouraged to find their own projects, faculty members would be more than happy to work with them, she theorized.

Interestingly enough, Lazarus’ work study at the time was an undergraduate named Jessie Ramey, who had a lot of ideas to help develop the fledgling program. After her graduation, she stayed on to help the URI, and ended up heading it before Stocks took over in 1998. “Jessie knowing what would and wouldn’t work for undergraduates was very successful,” says Lazarus.

In the beginning, the money for the URI came completely from external grants. In contrast, half of the money given away today comes from the Carnegie Mellon annual budget, and half comes from fundraising done by the URI. Stocks says that the money received from external sources is evenly spread among corporations, alumni and foundations. There are also outside funders like Donald and Peggy Stitzenberg, who have given more than \$100,000 to the URI over seven years. Stocks estimates that 10 percent of her time is spent on fundraising activities — she works very closely with the Development office at Carnegie Mellon. “They’re very good at helping me find people who want to contribute,” she says.

About 70 percent of the proposals received by the URI are funded; “Our philosophy is to try to help all undergraduates on campus who want to do research do it,” says

Stocks.

The interdisciplinary bent of the URI is also important to them. “We feel very comfortable and we’re proud of ourselves for funding arts and humanities and social sciences,” says Stocks.

“We always said that we’d fund interdisciplinary and group research,” says Lazarus, echoing those sentiments. “I have particularly enjoyed watching the growth in group projects. While I think that working on your own project is wonderful, there’s something uniquely Carnegie Mellon about bringing people together from different disciplines to work on the same problem.”

“It’s a great experience for graduate school,” says Kristin Lala, a junior majoring in Psychology and English. Lala received a presentation award from the URI, and traveled to the Eastern Psychological Association (EPA) Conference in Boston to present research that she did at Penn State last summer on family studies and verbal ability.

“It’s really great because a lot of students put all their time and effort into doing research and conducting projects, and this gives them a chance to present their work,” says Lala.

“The best thing about this program,” says Lazarus “is that it shows that we value undergraduates. They are full-fledged members of our research community.”

LAIN TOWEY

Bread and Puppet Theater keeps agitprop alive

Whoever says the spirit of the '60s political activism is dead hasn't been to a show of the Bread and Puppet Theater, a 30-year-old Vermont-based artistic collective that does non-profit theater productions.

Advertised as "a large spectacle performance incorporating large puppets, movement and music," the show began March 23 when the theater troupe, composed of 35 Carnegie Mellon student volunteers and seven cast members (half carrying real musical instruments, the other half cardboard cutouts resembling musical instruments) marched into the University Center gymnasium and announced they were the "Damnation Army Band."

Bread and Puppet Theater took center stage in front of what cast member Clare Dolan called "a family audience" of 350 people. Typical Pittsburgh weather moved the performance indoors from its scheduled location on the Cut.

Inside the gym, the performers' energy and the papier mache puppets elicited oohs and aahs as skit after skit produced a variety of characters that burst forth from behind a large makeshift cloth curtain.

The puppets ranged from a pink elephant that the audience was told represented the economy to "Uncle Fatso," a giant grotesque head with a patriotic-colored hat, who satirized Uncle Sam. In addition to the puppets, there were musical accompaniments, a cappella voices, an accordion player and a variety of dissonant noises.

The show also incorporated current events in a skit with a tiny hand puppet named Kenneth Lay, former CEO of the much maligned Enron Corp. The puppet sang a song that he devoted to the "poor bastards" who worked for him, using lines such as "my pension is bigger than your pension." Dolan said afterwards that the cast generally spends a lot of time researching current events before adding a skit to their show.

The fine print warning on the posters advertising the Bread and Puppet Theater said "Suited for (not totally conservative) families." There were many parents with children listening to political and at times adult material. In one recurring skit, a cast member with the aid of a cartoon strip narrated the life of Solomon Grundy, a proletarian worker who started his week on Monday and "was no more" by Sunday.



The ringmaster of the Bread and Puppet Theater introduces the Economy—played by a pink elephant Photo: Brian Connolly

One of the Grundy skits had him buying a gun on Friday, killing people on Saturday and being executed on Sunday. The satire was apparent.

"Theatrically, I thought the show was rough and raw, not your typical theater production," said Claudia Duran, a first-year Drama major, "and politically, it taught me that I'm not as knowledgeable as I should be."

The purpose of Bread and Puppet Theater, according to Vasilios Gletsos, one of the seven full-time cast members, is to "use art creatively and actively engage intellectual and political beliefs."

Dolan admitted that the theater group does not "fit into the normal theater matrix" and said that Bread and Puppet does perform for a variety of audiences, including elementary school children.

Another staff member, Susan Hirschmugl, pointed out that Bread and Puppet is one of the surviving remnants of political theater that once flourished in the 1960s and '70s.

The theater, which now tours in the fall and spring and performs in Glover, VT, during the summer, used to be more active in the '70s and '80s when they attended protests over Vietnam and the Nuclear disarmament.

Bread and Puppet's founder, Peter Schumann, a German-born sculptor and painter, moved to New York City in the 1960s and began experimenting with animating his paintings and sculptures. He soon found a large audience for his work at Judson Church, which in the mid-'60s became a major venue for experimental, avant-garde artists.

Schumann and the Bread and Puppet Theater seem to inspire anyone who comes in contact with them.

Ben Jordan, a graduate student in Drama who lobbied for Carnegie Mellon to bring Bread and Puppet to campus, interned at the theater for two weeks in the summer of 1998. He found the work "pretty grueling, but definitely worth it."

Gletsos, meanwhile, defined his work as "very holistic."

Jordan found support for bringing Bread and Puppet to campus through a variety of Carnegie Mellon organizations. After raising the necessary funds, Jordan and junior Design students Delia Hauser, Jeff Hinchee and Ryan Kravetz e-mailed everyone on several CFA distribution lists to find volunteer help for the performance.

Bread and Puppet often relies on the volunteers, who do not need any prior theater experience.

"If there are not enough volunteers, the show looks weak," Dolan said. "Luckily, we got a great group of volunteers. They learned the show in one day."

After the show, when the cast members whipped out and served homemade sourdough bread and a sharp garlic spread to all those who stayed around, Jordan spoke about his next project, getting CFA to offer an independent study in puppetry.

RUDY ASH

Physicist explains dark energy is pushing universe apart

Good food, plenty of folks, and stars. Too bad the stars were exploding.

Oscar Night?? If only.

The annual Buhl Lecture went off without a hitch. It was standing room only at the Mellon Institute Auditorium on March 28 as Saul Perlmutter, leader of the Supernovae Cosmology Project at Lawrence Berkeley National Laboratory, got more laughs than he did confused stares. The audience was split between a younger crowd and an older one. All seemed to experience the vibe that Perlmutter exuded. A brief question-and-answer period seemed to explain that he knew what he was talking about, and for those who didn't, that he had also gone to finishing school. This was something that I didn't expect.

"We're measuring light from around the time our solar system was born," he started. "It takes that long for it just to get here." This is probably what he said at Harvard doing his undergraduate work, or when he advises the U.S. government. Breaking down an expanding universe to the sound of a car horn makes it easy for even bureaucrats to understand.

"This is perhaps the earliest question. They had one tool, to ask the philosophers. It's a fairly sophisticated argument. We now live in a unique time. We have both the questions and technology in the same framework."

Perlmutter has tools at his disposal. His group recently designed a space-based telescope, which hobbles the Hubble. As with

Saul Perlmutter explained that the thing making the universe fly apart is a repulsive force that comprises 65 percent of the entire universe. "We're calling it dark energy because we don't know what it is, and we simply want to express our ignorance."

us all, they only need the cash to build it. Currently his group has to "hang out in a desolate region of Chile, about 300 miles north of Santa Diego."

Booking time on any other telescope takes six months. "You call up the observatory. You explain that there might be a supernova. You explain that it may, or may not happen in May. Then you ask, 'May I?' We're talking about things that happened billions of years ago. So it's difficult to predict what the message in a bottle will be in May."

So what is the question? The Big Bang sent all of this stuff out into the universe. It all has gravity, so eventually it should draw back into itself. We can go through Newton's laws to find that objects attract (or are acted upon by other objects with mass). We can look at Einstein's frozen clock and see that everything is relative, but the fact of the matter is, that this stuff is fun. The '70s were

a good time, but this is fun.

According to Perlmutter, the Big Bang was a little more powerful than needed. Although he avoided sounding like the Oxiclean guy on TV commercials, he did say that light shifting indicates that the universe is expanding far faster than conventional physical analysis would suggest.

"We're not the only group getting these results." The entire nature of creation is being rewritten. He explained that the thing making the universe "fly apart," is a force called Dark Energy. It is a repulsive force that "comprises 65 percent of the entire universe. We're calling it dark energy because we don't know what it is, and we simply want to express our ignorance."

Einstein called it "the Lambda," in 1917 and later dismissed it along with Hubble. This is not to be confused with the lambda, the "dirty dance." Uncle Al did use it in his formulas to "even them out." It turns out that it is a constant, and Perlmutter's team is exploring its parameters.

Perlmutter dismissed contentions that there is a unified field theory, an attraction between sub-atomic particles. "This is one of the first things [supernova plotting] that doesn't fit with particle mechanics."

The Doppler effect, or stretching of light from blue to red in the electromagnetic spectrum, is the telltale sign of the movement of stars. By gauging the explosions of stars, from long ago, specifically type Ia supernovae, Perlmutter's group is able to determine that not only is the universe ex-

panding, but that it is doing so at regular intervals. Although his research isn't done, the current findings would indicate that the universe doesn't feel like coming back together on the spot of its origin, as previously thought.

Whatever happens, the human race won't have to worry about it for billions of years. So take a deep breath, this isn't an Armageddon warning. Perlmutter's studies of our own sun, a G-series star, indicate that yes, the light bill is all paid up, and it won't be going out anytime soon. By the way, the sun doesn't have enough mass to supernova, so we don't have to worry about that, either. Something interesting that Perlmutter discussed is that most of the supernovae he has been looking at have a companion star orbiting them. There's that whole mass thing again.

After the lecture there was a very nice reception in the rotunda. Perlmutter was surrounded by a thousand people, with a thousand questions. So I made my way through the chafing dishes. After a short time he was whisked away by his hosts like a rock star. (pun intended.)

As always, I'll give you the bottom line. You don't need a pocket protector or a quick draw holster for your slide rule. For those that don't think physics is fun, you've never heard Saul Perlmutter speak. For those who have, we'll keep him our little secret.

DUKE BRITTON

Preschoolers say thank you for the daffodils



Ella Rosenblatt and her friends in the preschool two room at Cyert Center painted these flowers to thank Margaret Shadick Cyert for her gift of daffodils to the center. The painting was exhibited at the UC Gallery in early April during the Week of the Young Child. Photo: Brian Connelly

Do the math: Economy down, grad applications up

continued from page one

has "blown past" last year's total of 230 applicants, according to Ann English, director of admissions at the Heinz School. Total applications at one point were running 55 percent ahead of last year.

In technical fields, the trends seem to be the same.

In the Computer Science Department (CSD), in the School of Computer Science, Ph.D. program applications shot up considerably, with roughly 40 percent more applications over last year.

"We had a lot more applicants to choose from and there were some really good ones in there," said Martha Clarke, graduate admissions coordinator for the CSD. "It made it a lot more competitive."

Clarke said she was informed of a noticeable number of "dot-com applicants" — potential students who once worked with an Internet start-up company that went under.

This year yielded 1,332 total applications, compared with 944 last year — an increase of 388 applications, a number so significant that Clarke's office required additional manpower.

"This is the first time I had full-time help," Clarke said of her clerical assistant. "His idea of taking a break was getting a drink of water and coming back. It was pretty hairy in here for a month, but we managed."

One reason behind the rise in MBA applications, according to Laurie Stewart, is the high ranking Carnegie Mellon achieved in business school rankings in *The Wall Street Journal* and other publications.

The College of Fine Arts, too, has seen increases in its master's programs applications, including a 15-20 percent jump in the MS program in Architecture.

The Ph.D. program in the physics department has also experienced a significant increase in applicants, although the reasons aren't absolutely clear — the 41 percent jump over last year's numbers is made almost completely of applicants from China. U.S. applications also went up, from 35 last year to 44 this year.

"I suspect with the U.S. ones it's probably related somewhat to the economy," said Curt Meyer, a professor who is in charge of graduate applications in the physics department. He also said that the large number of Chinese applicants is probably a result of increasing access to the web, the

department's new online application, and the fact that Carnegie Mellon's program is attractive to Chinese students because there is no application fee.

But in GSIA there are some other interesting factors at play. While the diminished job market is cited first as a cause for the larger application numbers, two other details are worth noting.

The second cause cited by Stewart was the high ranking Carnegie Mellon achieved in business school rankings in publications such as *The Wall Street Journal*, which has boosted the school's stature. Only this past year was the graduate business program rated second in the world by *The Wall Street Journal*, and as a result GSIA has gained some popularity.

Third, the GSIA business degree name

was changed from MSIA (Master of Science, Industrial Administration) to the more coveted MBA. The name change has helped because the MBA is more common than the MSIA, and more potential applicants will search for the MBA online.

"Since MBA is the most widely recognized graduate business degree at the master's level, the change in the name of the degree helps us in a number of ways," said Stewart.

The other gain from the name change was in the implication of the degree itself. Some, according to Stewart, believed that the MSIA degree required a technical or production-related background to pursue it — but this is not the case.

"Since our program is a general management program, the change in the name of the degree has resulted in Carnegie Mellon's MBA program being 'on the radar screen' for a wider population of prospective students."

The administration, however, cannot say which of the factors was most important in the application surge.

"Given our workload right now, we haven't been able to analyze how much impact each of the reasons has made individually, but I am very confident that each of them has contributed to the increase," Stewart said.

CHRISTOPHER CHUNG

Morphing your computer into a home entertainment system

Computers have had a tremendous influence on our lives and now they may influence when and where we are entertained.

And now you can morph your computer into an entertainment system. Using several sophisticated connections you can listen to your favorite radio station, view your favorite talk show or play movies, all while sitting at your desk.

"Computers are so versatile now that you can probably use it for complete entertainment as well as technical support" says Ed McAfoose, computer support manager in the Heinz School. McAfoose says his department is developing a multimedia CD for students that will interface a number of

functions to include accessing school documents, forms, connecting to web site links, spelling/grammar and even a guide to Pittsburgh. This would enable a student for instance to not have to go to the Hub to pick up a form for financial aid.

A standard Internet connection can get you Internet radio, which now has hundreds of stations available. Just as a historical note: WAMO radio station was the first radio station in Pittsburgh to use satellite and Internet technology.

The following components or cards can easily convert your desk-top computer into a very good entertainment system.

High-end video cards give you the speed

and excellent graphics to play games, especially the newer 3-D games. Connect your VCR to a video card and you can play tape and view it on your monitor. A TV/tuner card will allow you to connect to your cable or an antenna to view different television programs from your monitor. For clarity, high-resolution monitors rival any television on the market.

Play MP3 players by connecting your stereo system to your computer's sound card. Sound cards are usually included in most computers you purchase and allow you to receive sound from a variety of areas requiring sound, such as sound effects for video games.

The use of Windows Media Player software can facilitate a good deal of various type media and makes it run smoothly and efficiently. If your computer has a DVD/CD-ROM you can watch your favorite movie from your laptop while sitting under a tree. You can also connect your DVD to other computers in your home or office, allowing computer B to access the movies that are being played on computer A.

Computers have changed the way we communicate, question and respond, and have provided us with new options for entertainment. And the morphing has just begun.

JACQUELINE JENKINS

Don't confuse research with looking things up

After classes ended, I picked up "Master of the Senate," the third volume of Robert Caro's biography of Lyndon B. Johnson.

So what am I doing there on my couch? I think we can all agree that I'm reading a book. If I were thumbing through the book to check references to Estes Kefauver or the Civil Rights Act of 1957, we could also agree that I was "looking things up."

Now imagine a high school or college student on the same couch with the same book. What is happening over there? Go ahead. Ask her, or him. And be prepared to hear a most distressing answer. Namely, "I'm doing research."

This isn't a recent problem. Webster's Seventh New Collegiate Dictionary, published in 1971, lists the first meaning of research as "careful or diligent search." Only in the second meaning does the notion of inquiry arise, "especially investigation or experimentation aimed at the discovery and interpretations of facts, revision of accepted theories and laws in the light of new facts, or practical application of such new or revised theories or laws."

Programs like our own Student Undergraduate Research Grants are working valiantly to preserve the understanding of research as investigative, experimental, interpretative and brave. Meanwhile, the culture is settling for Webster's first definition.

This spells trouble for major research institutions. "What do they do over there at Carnegie Mellon?" a high school teacher might ask. "Oh, they do research," the student might reply, imagining something care-

ful, diligent and abstract.

"Research" is experimental and open-ended; the answers are not implied by the questions. "Looking things up," on the other hand, is an activity that brings into play a different order of material — the rock-solid, unimpeachable, public-domain information that underpins what we say and what we write. When we look up details about the poverty rate in Garfield, we engage in valuable background work, academic work.

But is that research? Hardly. It's looking things up.

The distinction between the two categories — research and looking things up — lies behind the flurry of plagiarism and cheating cases that keep cropping up in universities and publishing houses. Popular historians Stephen Ambrose and Doris Kearns Goodwin are just the latest in a line of writers who, intentionally or not, mistook their notes for their own work while shifting a share of the blame to the hirelings they call researchers.

If experienced hands like Goodwin and Ambrose are too sloppy, too cavalier or too dishonest to respect the difference between original work and plagiarized work, where does that leave raw college students? Reading books and articles, students may turn up a striking new idea or a useful quotation, yet still not understand how to incorporate someone else's work into their own, giving credit where credit is due.

The problem goes back to the popular notion of "research papers," which in most cases is a misnomer. Students at all grade

levels are routinely applauded for doing research that is nothing of the kind, and in the process they lose track of where the books and articles leave off and their own work begins.

The problem has been germinating for a generation or two, but didn't blossom until the Internet turned written information into a cheap commodity, available to anyone who knows how to spell.

When I typed the phrase "my research shows" into Google, I instantly had 1.4 million hits to choose from. And when our students type any old subject into the same search engine, they summon a forest of information. On any straightforward subject, a 6-year-old on Google can generate more information faster than any professional clipping service was able to dig up 20 years ago.

Of course it's never been easier to turn up wrong information. Google wouldn't even let me search expressly for the common "Ghandi" misspelling of the Mahatma's name. I had to go to Nexis to find the 149 misspellings over two years in the database of major metropolitan newspapers, and most of the mistakes appeared to be passing references to Gandhi in either the sports pages or food pages.

So the future looks promising for people like journalists and reference librarians who know how to look things up and how to sift good information from bad. There just isn't a term yet to dignify the profession of "referencer."

And meanwhile, there are signs that re-

search may be staging a comeback.

My Google search turned up several pages maintained by the Great Falls Middle School in Great Falls, MT. "My research shows that my dog likes to play with her ball more than any of her other toys. She played with her ball for five hours all together," one seventh grader wrote in 1997, summarizing conclusions that were unmistakably her own.

Another bold empiricist devised an experiment that showed Energizer batteries lasting longer than the competition, and yet another demonstrated that Peachy Hair shampoo produces a measurably greater volume of lather than White Rain, Suave or Herbal Essence.

The Great Falls seventh graders of 1997 will be entering college this fall. They may graduate from investigating Peachy Hair lather to mapping DNA, dissecting quarks or mixing strange new composites. And who knows? Before long, other seventh graders from Great Falls may join the 499 CMU students who exhibited original research at this year's Meeting of the Minds.

So my immodest proposal is to squelch the indiscriminate use of "research." Assign research papers when research is required. Otherwised, assign term papers or plain old papers when the exercise involves looking things up. And when a teacher or student confuses the two categories, do something drastic. Scream. Jump and down. Throw things. If we make a stir, Webster's may take notice.

JIM DAVIDSON

Is anyone still reading books simply for the fun of it?

Japanimation, Extreme Backyard Wrestling and Oprah's Book Club — are they signs of an inevitable pop-culture apocalypse?

For the sake and sanctity of the human condition we can only hope otherwise and look to shelves in the back of our local franchised book-mart for decent literary material. Assuming it exists, are people at a fine academic institution like Carnegie Mellon reading it? And is the book still a valuable way to entertain and enrich tomorrow's intellectual elite?

The overwhelming attitude toward leisure reading on this campus is somewhat subdued if not negative. Students tend not to read books on the side when they're given so much reading for their class work.

Near the end of the term, Teddy Cleborne, a first-year student in H&SS, said, "I haven't got the time to read. I'm in the middle of three books for two classes."

Most students share that sentiment. When saddled with books and articles that span a multitude of topics, styles and time periods, many just can't be bothered to search out good literature on their own. However, it is not just workload that deters students from reading. Many have simply given up on the quality of writing on the market. Some just said their level of interest in books was low.

Perhaps students just don't have exposure to quality writing. But some say that this isn't the case. The quality of the work isn't the problem.

Justin Wald, a junior in the School of Computer Science, when asked if he would read the top-selling biography "A Beautiful Mind," said, "Why should I bother reading about a weird science guy? We've got enough of them here!"

Though he said this jokingly, it raises the idea of what is interesting to students.

Even old reliable names like Stephen King, whose "Everything's Eventual" recently topped the New York Times hard-cover fiction list for several weeks, were called "old hat" by some students surveyed.

So what are the bright minds reading? The variety will surprise you.

Eric Haas, a graduating senior in the Carnegie Institute of Technology, was knee deep in four books about war, and not all for the same class and not all about the same

Wars. For his Vietnam studies class he was reading "Dispatches" by Michael Herr. For a military history course he was halfway through John Keegan's "The Second World War" and Martin Van Creveld's "Supplying War," an account of the logistics of war. Strangely enough, for pleasure he was reading "The Devil's Horsemen" by James Chambers, about the Mongol invasion of Europe.

It's not all doom and gloom in the hands of the students here, though. Katherine Bouwkamp, a junior student in Professional Writing, was reading about mental dysfunctions in her courses. She was enjoying Oliver Sacks' "The Man Who Mistook His Wife for A Hat." For pleasure she was reading about religion, "Mere Christianity" by C.S. Lewis, though she insists that it's all uplifting stuff.

Bouwkamp also said vehemently that she was just too busy with her work and other school-related activities to take on more substantial pleasure reading. She said that if she had that much free time she'd know that she was forgetting to do something else that she was supposed to be doing.

So, who's reading if the students are too busy? Well, the professors are, and not just as part of rehashing their old dissertations.

Hilary Masters, a professor in the Creative Writing program, tries always to have good recommendations on hand for his students. Most recently he finished reading "The Summons," a new novel by John Grisham. Masters, an accomplished novelist himself, told his classes to pick up the legal thriller because of its intense plot and intriguing style. No word, though, on whether any of his pupils followed his advice.

In the end what does it mean? It would be extremely sad to think that an entire generation of the world's top thinkers and social standard setters has lost the habit of entertainment reading. Maybe they just are taking a break from reading when they can. Time to relax is rare enough.

Brian Catz, a junior in MCS also working on a degree in business, said, "I'm sure when I'm done busting my butt at this place I'll have plenty of time and motivation to read all the great works of our time. But for now I'm just too damned busy."

SEBASTIAN HABR

Poem

The evening star of May

Sometimes
it's a surprise
to see that the sky
is still up there:
over Oakland's
wired buzzing spires,
through the glare
and pollution,
the same night story
is playing out
that first excited the tribe.
Up there,
Venus still loves Diana
and reaches to kiss
her thinnest crescent.
Full in her ripest phase,
radiating light
from a sun
barely over the horizon
in Ohio,
Earth's sister stuns
every onlooker.
Above her,
Jupiter waits
to lord it over all:
after their tryst,
the moon will set
and Venus will wane,
leaving him,
again and forever,
the brightest point
in heaven.

BRIAN CONNELLY

Wisdom of the Woz

Steve Wozniak, the inventor of the personal computer, spoke to a standing room only audience in McConomy Auditorium as guest lecturer for the SCS Distinguished Lecture Series on April 18. Wozniak, a Silicon Valley icon turned philanthropist, lectured on his life-long interest in computer design and development.

The son of a Lockheed engineer, Wozniak grew up in Sunnyvale, CA, in the heart of Silicon Valley. Wozniak said "My father was an engineer and he helped to guide me into science fair projects that were electronics. All of my friends in my neighborhood were interested in electronics as well and we would develop house-to-house intercoms after school. We would go to the Sunnyvale Electronics store and buy the parts and this was our idea of having fun after school."

Wozniak said by the time he had entered the sixth grade he had already developed a working computer and obtained his ham radio license.

In 1971 Wozniak dropped out of U.C. Berkeley (he later finished in 1987) and took a job with Hewlett-Packard as an engineer developing calculators. Wozniak began building a computer at home with parts from the company's stockroom.

He said he never took a course or bought a book on the design or construction of hardware or software systems. He just pieced it together mentally and then developed the components. Sometimes he had to alter or modify other components but he did what was necessary to develop his product.

Wozniak began to develop computer games for companies like Atari in order to earn extra money for parts for his developing computer. He developed the first digital video games, Pong and Breakout. Wozniak used a handful of parts to build a computer that had sound, graphics, a programming language that could play games and could use a home TV as a monitor. Televisions did not have video inputs in the early days and he had to figure out how to convert the television into a video terminal with the use of four small chips, called microprocessors. The larger companies like IBM and Hewlett-Packard sneered at these little products made of microprocessors.

Wozniak spoke of the Homebrew Computer Club he frequented while at Hewlett-Packard to exchange ideas and develop strategies and new design dimensions to the computer world. Wozniak passed out copies of his original design of the computer he was assembling, the Apple I, to his fellow Homebrew members.

No one knew in 1970 there would be a huge market for computers and that they would enter everyone's life so pervasively as they did. Wozniak and a high school friend and fellow Homebrew member Steve Jobs, designed and built the Apple II computer in 1977. When Apple went public,

Wozniak was 30 years old and worth millions. Wozniak said he never really wanted to be a "company" — he just wanted to be a good engineer, write programs and design computers.

Wozniak has played a role in many technology companies, and has been working closely with the Los Gatos School District in California. He has donated state-of-the-art equipment and has also done some teaching.

Wozniak told the audience one of the things he believes is "the time to really make it is when you're just getting started in a career." He said to do it while you're in college and first entering the workforce, rather than just getting by at the same pace as everyone else. By focusing your energies, you'll have "made it" by the time you start acquiring a mortgage and raising a family. That gives you more options later in life to do as you wish.

JACQUELINE JENKINS

Authors recount scandal of 1920s interracial love story

Despite being held April 19, the Friday of Carnival, a talk and book signing by the authors of "Love on Trial: An American Scandal in Black and White" filled each of the 100 seats in Hamburg Hall 100. The authors, Earl Lewis and Heidi Ardizzone, detailed their five years of research and the discoveries they made about the state of race identity in the United States in the early 20th century.

Their nonfiction book tells the story of the romance and marriage of Leonard Rhinelander, a wealthy elite New Yorker, to Alice Jones, a former housekeeper the newspapers called "of mixed race." The two of them met in 1921, after Rhinelander's car broke down outside Jones' house. They fell in love with each other and, after a three-year romance, were married. They had hoped of living quietly with each other, but after a reporter for the New Rochelle Standard Star questioned Rhinelander about his wife's background, the story caused a national scandal.

"This scandal captivated a nation," Ardizzone said. "It made the front page of every newspaper, but had faded from public memory by the end of the 20th century."

After news of the interracial marriage reached the newspapers, Rhinelander's father, along with other New York socialites, pressured Rhinelander to terminate the marriage. Leonard sat alone at his divorce trial, his father too disgraced to show up. Meanwhile, the defense lawyers tried to convince the judge that Jones had fooled Rhinelander by failing to tell him about her black father.

"This marked a transformation of race and race identity in the 20th century," remarked Lewis. Lewis went on to analyze this controversy and illustrate how it affects

today's racial and social climate. "More than anything, 'Love on Trial' is an American love story with a tragic ending due to our country's prejudice in the 1920s."

Lewis is the dean of graduate studies at the University of Michigan and former director of the Center for Afro-American and African Studies there. Ardizzone teaches American Studies at Notre Dame.

JAY NICKELL

Holocaust survivor wonders how it could have happened

On April 9, Eva Weis Schreiber, a Holocaust survivor, told her story to a group of 35 Carnegie Mellon students and staff in Rangos.

She spoke as part of the annual campus commemoration of Yom Hashoah or Holocaust Remembrance Day. Organized by Hillel, the day is marked by a 24-hour reading at the Fence of the names of children murdered in the Holocaust.

Schreiber began with the questions that inevitably come up in all Holocaust discussions: How could it have happened? How could the world stand by when it knew what was happening?

"I have been wondering for 57 years," she said, answering her own question.

She set the scene of what it had been like to be a teenage Hungarian Jew in 1944. Hungary was one of the last places occupied by the Nazis. She spoke about the transition of viewing herself and her community as "good people, law abiding people" to what it felt like to spend two nights and three days inside a cattle car with her family.

The people crowded inside the cars ran out of water. They did not have any place for a bathroom. People died there and their bodies remained among the living. When she was finally freed from the cattle car, she described seeing "a place beyond description." The soldiers separated the young from the old with sticks and there was "mayhem." She was separated from her father.

Once in the camp, young Slovakian and Polish girls greeted her mockingly. "You stupid Hungarians! You had all the time to escape." Even at this point she was still naïve about the situation. "When I saw the smoke from the chimneys," she said, "I thought they were bakeries."

She spoke about being fed only two slices of bread per day, what probably amounted to 300-400 calories. She described her emotional state after she eventually learned the truth about where she was.

"I didn't feel anything. I didn't cry. I didn't smile. I didn't laugh. Nothing," she said, later adding, "I can't explain it. You didn't think. You didn't feel." Her inflection indicated she was still shocked by her reaction.

Schreiber spoke about meeting Josef Mengele, the notorious German doctor who performed atrocious experiments on Jews.

She explained that he was one of the camp Nazis who inspected Jews and decided who was no longer fit for work. As they filed past Mengele, he would point right, indicating life, or left, toward death.

Schreiber said she agonized over the thought of being separated from her mother. Although at the time she did not know what the directions meant, she had decided that if her mother went left that she would follow. "When you're 16, 17, 18, death does not come into play," she said.

Throughout the evening she mixed her story with other people's stories to contextualize the enormity of the Holocaust. Even after the Americans landed in Europe, the Nazis were still able to gather 30,000 Jews in Kiev and take them to the concentration camp of Babi Yar. The Nazis ordered the Jews to dig a ravine, lined them up 50 to 100 at a time, stripped them naked and proceeded to "mow them down with machine guns." She did not spare any gruesome details.

Schreiber emigrated to America shortly after the war ended. She refused her parents' offer to stay at her old home in Hungary. Once in America, she spent her time trying to live a normal, everyday life. She did not hear other people talking about their experiences of the Holocaust, so she was happy not to talk about hers. "I did not have the language," she said, adding, "I was so ashamed of who I was that I thought if I didn't talk, I would be OK."

Not until years later would she be comfortable talking about her experiences. The incident that provoked her to talk, at least to her family, was watching through a glass door one day with her young child as people burned rubbish. "Everything came rushing back to me," she said. "It doesn't go away. It festers."

She has been speaking to groups now for a little under a decade and she said that it doesn't get any easier to retell the story.

"My war still rages within me. Emotionally, they did an awful lot of damage."

When Schreiber finished telling her story, she fielded questions from the audience. She said she does not buy German products or listen to music by German composers. She expressed sympathies for the younger generations of Jews for having been part of the events of Sept. 11 and the current conflict in Israel. "I'm hoping for some sort of peace," she said. She described Israel as "the only way I can make sense of the Holocaust."

Her last word of advice was to "be informed of the situations, be aware of the world around you. Tell your children and grandchildren about [the Holocaust] because people still don't know what happened all these years later."

RUDY ASH

D.C. protests offer alternative to Carnival

On April 20, an estimated 75,000 people converged on downtown Washington, D.C. to demonstrate for a number of different causes. Many Carnegie Mellon students were included in the giant crowd.

The reasons behind each student's decision to miss a day of Carnival to attend the massive demonstration reflect the variety of interests that were present. There were actually three separate demonstrations taking place at the same time. One rally, sponsored by the National Youth and Student Peace Coalition, called for an end to U.S. involvement in any war in the Middle East. Another rally, a little over a block away, sponsored by Act Now to Stop War and End Racism (ANSWER) emphasized solidarity with Palestine and an end to Israeli occupation. A third demonstration took place at the IMF/World Bank meetings. The three separate rallies then joined into one march to the Capitol building.

The majority of the Carnegie Mellon students focused on the World Bank and IMF protest — and so did the police. Following the anti-globalization protests in Seattle two years ago, police enforcement at similar protests has been much greater, and most of the police managing the crowds on April 20 were at the IMF protest.

Some of the Carnegie Mellon students, fearing a possible confrontation or harassment, ended up at the student-sponsored anti-war demonstration. Groups protesting the IMF say that its policies of structural adjustment have done more harm than good to most developing countries. The groups are also calling for a cancellation of Third World debt.

Even though the tone of the march seems to have been dominated by pro-Palestinian supporters, the student marchers tended to focus more on an overall end to fighting in the Middle East.

"I was hoping that the march would be a call to end all wars, including America's 'War on Terrorism' and Israel's war against the Palestinians," said Elina Malkin, a freshman Design major. She did not want to be linked with the more militant Palestinian supporters, some of who were holding signs equating Israeli Prime Minister Ariel Sharon with Adolf Hitler. "The media, and therefore most of the public picked up on the violent voices and ignored the much larger but less aggressive call for peace."

Nearly all of the Carnegie Mellon students who attended the protest believed that the march was a success, in that it demonstrated that a large number of Americans do not support the United States current foreign policy.

"It was an amazing exercise in democracy," said Quentin Steenhuis, a sophomore logic and computation major. "It was inspiring to see so many people." While there was

no formally organized on-campus group heading to Washington for the protest, Steenhuis was one of several Carnegie Mellon students who made the trip through the Thomas Merton Center, a peace and justice organization based in Garfield.

Matt Toups, a Mellon College of Science sophomore, showed similar thoughts on the success of the march. "I feel like this is an aspect of history in the making and it is exciting to be near such an event. While there were the standard problems with disparate agendas and the alphabet soup of organizations trying to work together, I think the message that lots of people out there are willing to march together united against the current administration came through loud and clear."

ROB CULLEN

The carved sun always rises



Despite iffy weather this spring, the sun shone bright every day over the entrance to the Fine Arts Building

Photo: Brian Connelly

Watching home burn on Sept. 11, from far away

After eight months, the World Trade Center towers have stopped appearing on TV every 10 minutes, but the image is still ingrained in the minds and hearts of Americans everywhere. Like everyone else, I remember the first time I learned about the first plane crash.

I had been in Paris for eight days, beginning my semester abroad, when I heard the news. Not fluent in French, my friend and I were speaking English on the street right near the Bastille. An older French gentleman overheard our English sputter and approached us. All he said was, "New York BOOM!" I assumed he was harassing us because we were Americans. He kept repeating himself and then added flailing hand gestures into the conversation.

I started to get worried.

I was alone in a country where obtaining information is not as easy as walking into a store and asking a question. Being unable to communicate with the people made the situation more stressful. I ran to the phone booth and began calling as many numbers in the United States as I could remember. When none of my calls went through, the panic and terror began.

Finally, a woman on the street who spoke English told me as much as she knew about the events that occurred in the States. Basically, all she said was New York, Washington, D.C. and Pittsburgh.

Washington is my home and the place my sister goes to work every day. Pittsburgh is where my friends and especially my boyfriend live. All the stories about Carnegie Mellon's being on the list of the top 10 bomb targets in the United States went racing through my head.

Looking around, I tried to find a face that could identify with my agony. I never felt more American in my whole life than that day on the street in Paris.

Other Carnegie Mellon students and faculty were out of the country on Sept. 11.

Sabine Junginger, a doctoral candidate in the School of Design, was at a design conference in South Africa with CMU faculty and students. Just after she arrived in South Africa, Junginger said, students who had been at a mall watching television screens reported the tragic news to her. "In disbelief we walked over there and stood watching with tears in our eyes."

They were only supposed to be in South Africa for one week. "We didn't know if we could get back," explained Junginger.

Alicia Kozikowski, a senior Art student,

was sitting on a plane at the airport in Ireland when the news arrived. She had spent a week in Ireland, taking a painting class with her mother and 15 other women. After three days of waiting for the airports to open, she finally made it home. "I wanted to cry I was so happy and I wanted to kiss the ground," Kozikowski explained.

Kozikowski had a memorable bonding experience with the other women on the trip, although she did say, "I was so happy that my mother was there."

After returning to the U.S., Kozikowski felt she had missed a lot. "I still had to truly start the getting-back-to-normal phase," she explained. Other people were three days ahead of her in the process. "On the way out, I signed a sympathy book, leaving my mark in Ireland."

I was not in the position to be going home anytime soon. I was left to struggle in a sea of French-speaking French people. After hearing about the events in America, a group of my peers and I went to a café that was airing the BBC. For the first time, I saw the footage of the planes hitting the towers. I was in shock. I thought technology had finally proved itself able to create reality.

However, the more I think about it, I don't think being in the United States would have made the attacks any more true. Would I have believed what I was seeing on television any more, if I had been sitting in Pittsburgh?

My friend seemed to find the words to say what we were all feeling: "This should not be happening. Things should be the other way around. Our parents are supposed to be the ones worried to death about our safety while we are in Europe. We should not be sitting here worried about our parents."

Our solemn faces stared at the television as a group of teenagers sitting in the café laughed at us.

James McClelland, university professor of Psychology, was visiting at the University College, London on Sept. 11, doing research on memory and brain functions. On his way to a meeting he heard about the explosions. "I didn't actually think much of it. I went to my meeting."

His later reaction was much different. "I hadn't really considered it a real terrorist act," he said. "Quite a shock."

At noon, on Friday, Sept. 14, a moment of silence was observed in much of the world. I was sitting on a bus with 60 other students, traveling in the suburbs of Paris. With tears in my eyes, I looked around the bus. I saw

faces from at least 17 countries. The Americans were the only ones with tears in their eyes.

McClelland spent his moment of silence on a train to Oxford. His traveling allowed him a few moments to reflect, "I had a chance to experience my own feelings." Thinking of his daughter in New York, he said, "I was feeling very disconnected from the people who mean something to me."

The feeling of detachment was common among most Americans out of the country at the time. Some people developed the philosophy that they were safer in Europe than in the United States. Others, like me, just wanted to go home.

If someone was going to destroy the United States, I wanted to go down too. There was no comfort in knowing that my life might be spared, while my friends and family were lost.

As the weeks passed and the chaos subsided, I could almost forget about the tragedy. The newspapers continued to show graphic pictures of the remains in New York, but it stopped being a topic of discussion among people. Of course, when people asked where I was from and I said Washington, D.C., I was met with apologies and support.

Junior Levi Sigworth was studying culture and language in Siena, Italy, last semester. He was in the air over Rome when the first plane hit the first tower. His teacher told him about the events. "I believed her, but I didn't believe her," said Sigworth. "It didn't sink in until we saw the pictures on TV."

He received support and apologies from Italians following Sept. 11, but things slowly started to change.

"When we started the war with the Taliban, they made it a point to tell us what they thought. Just because we were Americans they thought we had a direct connection to George Bush," Sigworth said.

McClelland had similar experiences in London. First, the British expressed support and condolences, which were followed by consciousness raising. Conversations turned to questions. "How do we prevent this from happening again? And whether people in America were conscious of their image in the rest of the world." McClelland said.

When my plane landed at Baltimore Washington International Airport at the end of December, I cried. I was excited to be home, but also hit with the shock that things were different. It felt as if Americans and the United States in general had changed and I

was not part of the new nation. American flags were everywhere and a deep sense of patriotism was embedded in the people.

Upon returning to the United States, Sigworth said, "I felt removed. I didn't feel the mass panic."

We both felt a little guilty for not being here to endure the tragedy with our fellow Americans, but that did not stop either one of us from making the most of our European "vacations."

Upon returning to Carnegie Mellon, I was astounded by the impact of Sept. 11. Four months later, I was sitting in classes discussing the what, whys and hows of the events. Once again, I was unable to identify with anyone in the room.

Last fall, another American I knew in Paris completed a series of photographs that make fun of the anthrax situation. She shows a businessman sitting at his desk, covered in white powder. Another photo in the sequence reveals that the white powder is sugar from a French pastry.

While critiquing her work, the French, American and other international students were amused by her poking fun at the stories we had been hearing about anthrax. I realize now, that if those photographs had been shown in the United States, they probably would have been offensive to most people.

Sigworth identified one reason why our feelings were so different from other Americans. He attributes it to the media. "I don't have one specific media view," explained Sigworth. "I could notice a lot of the propaganda," he said upon returning to the United States. Sigworth has become cynical toward the media, questioning what we believe and what we are supposed to believe.

My study-abroad experience was supposed to teach me about French culture, but it gave me an interesting lesson about American culture. I will think in new ways about the American representation in the rest of the world, how we see ourselves compared to how others see us, as well as the impact of the media on our society.

I am not expressing any anti-U.S. sentiments, but I have become more skeptical about the world.

Over spring break, I went to New York. I saw the gaping hole in the skyline. I saw every firehouse adorned with flowers and banners for those that were lost. I saw the rubble at ground zero and I cried.

MELISSA CLARK

Exploring hidden life of campus shade trees

It's a beautiful weekday and students are out on the plush green grass playing ultimate frisbee. Lovers meet for lunch at the garden near Hunt, sitting on the benches beneath the trees. In front of CFA, an impromptu soccer game begins with orange cones marking the goals.

Spring draws out the campus community as people emerge from their offices and dorm rooms to make use of the green space available. Ignorance truly is bliss, for the average person does not truly understand the nuances and nuisances of the landscape. That kind of expertise belongs to the campus architect and university gardeners.

The trees along the Cut may look like any other trees to the average passerby. But they are actually a type of sycamore named the "London plane," known for their ability to withstand air pollution. Their canopy of leaves is also asymmetrical, an important aesthetic factor.

Paul Tellers, the campus architect, explains that the irregular shape is a nice contrast to the rigid structure of the adjacent university buildings.

But while the London planes may be visually pleasing, they are a headache to maintain. Their bark shreds and they drop their leaves in the summer.

"They're messy trees," says Paul Moorey, one of Carnegie Mellon's 10 gardeners.

The oaks near Hunt Library also have hidden problems. Moorey explains that a lack of iron in the soil causes the oak leaves to turn a fluorescent green and fall off. Roy Beebe, another gardener, says there are just too many trees there.

Overcrowding and a general lack of space is a common problem in locations around campus. Beebe explains that trees need adequate space around them to grow. The trees that line the exterior of the University Center, near the swimming pool, are too close to the building, Beebe says. Within 10 years or so, they'll start hitting the buildings.

Beebe explains that the hornbeam trees lining the walkway along Resnik and West Wing are more suitable for placement near a building. They grow straight up as opposed to splayed out.

The trees near Resnik and West Wing Hall have other problems. They are an excellent study in the unpredictability of landscaping. The rows of trees on either side of the walkway were planted at the same time and were intended to be symmetrical.

Today the trees furthest from Resnik and West Wing look like weaklings because the hillside funnels water away from the smaller trees. As a result, the trees closest to Donner Ditch can't keep up with their counterparts.

The lawn in front of CFA has a different set of problems. A long stretch of light green crabgrass invades one end of the lawn. The hidden problem is an underground steam pipe that stops the grass from growing.

Trees that once flourished can fall victim to disease. Last summer, the dread airborne fungus, Dutch elm disease, claimed two elms in front of Margaret Morrison.

"The grounds crew did everything they could but an elm tree has a certain limited life," Tellers says. The trees were dropping branches and were considered unsafe.

So when the weather's beautiful, be grateful that the problems of campus landscaping are not yours. Enjoy the green spaces, even if the trees do drop a leaf or two.

CHRISTINA CHONG



Some trees along Donner ditch are stunted compared to their well-watered cousins by Resnik and West Wing.

Below: Oaks near Hunt Library drop their leaves due to an iron deficiency
Photos: Andrea Georgiana



A talker is a chat system that people use to talk to each other over the Internet. Dating back to the 1980s, they were a predecessor of instant messaging. A talker is a communication system precursor to MMORPGs and other virtual worlds such as Second Life. Talkers are a form of online virtual worlds in which multiple users are connected at the same time to chat in real-time. People log into the talkers remotely (usually via telnet), and have a basic text interface with which to communicate with each