

INSIDE:

Designing war games against terror networks, page 6

Who's who in Loserville USA, page 9

FOCUS

FOCUS — in seven issues a year — is a publication of the faculty and staff of Carnegie Mellon University. Volume 32, No. 6, June 2003

Patriot Act alarms civil libertarians

"My cousin decided to risk his life to read certain books in the USSR," attorney Mary Minow of Librarylaw.com told a room of Pennsylvania librarians, Internet providers and students gathered at the University of Pittsburgh for the Patriot Act Summit 2003.

Minow was certain, she said via teleconference from California, that her cousin's experiences would lead him to deeply oppose the expanded powers of investigation and surveillance granted to agents of the United States government by the anti-terror legislation known as the USA Patriot Act (an acronym for the United and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act).

"Do you think the FBI should be able to get your library records?" she asked.

"Mary," he told her, "if it helps them catch the terrorists, they can have whatever they want."

Minow's cousin is far from alone in his feeling that agents of the American government should do everything they can to stop terrorism, even if that involves crossing a few data privacy borders that were long considered inviolable. He would, however, face some polite disagreement in this room of librarians.

Those who work in libraries need to help people understand why their reading records and Internet logs must remain "sacrosanct," Minow said. "Otherwise, we have the thought police."

Even before President Bush signed the Patriot Act on Oct. 26, 2001, librarians and civil libertarians vocally opposed the act's provisions allowing government agents to access personal information more closely, more easily and more quietly than was possible in the past.

In an Oct. 23, 2001, letter, just days prior to the bill's passage, the American Civil Liberties Union (ACLU) urged Congress to reject the "false dichotomy: that freedom must come at the expense of civil liberties." The ACLU warned that the Patriot Act would be "giving enormous, unwarranted power to the executive branch — which can be used against U.S. citizens — unchecked by meaningful judicial review."

At least seven city councils and municipalities have passed resolutions opposing parts of the legislation, particularly those provisions that allow more windows into citizens' privacy than state or local laws do.

These local governments, like most critics of the legislation, stop short of denouncing the entire act. Even the ACLU says, "It contains provisions that we support." That's because the Patriot Act did not introduce new laws; instead, it amended more than 15 laws already in existence. Most criticism of the act, from the municipal resolutions to Tartan editorials, tends to focus on provisions that overstep long-standing boundaries of personal privacy. These boundaries grew out of public response to McCarthyism, and were further solidified by the Privacy Act of 1974.

continued on page 7



Emeritus History professor Ted Fenton

Photo: Brian Connelly

Seminar about community life combats feelings of "the blahs"

Imagine that you are a fifth-year scholar at Carnegie Mellon. Imagine that as part of your required project, you are designing a class whose purpose is to help engage first-year students in the CMU community. It's already October and the semester course is to be taught starting in January. You haven't found a professor to teach it. You are — no imagination needed — panicking.

This is the position that Lara Panis, a fifth-year scholar with a self-defined major in international relations, found herself in last fall. Panis, whose project had initially focused on using the extracurricular life of first-year students to involve them in the university, decided to switch gears at the beginning of last semester.

"I thought that if there's a way to build through academics, some sort of connection to the community, I want to try it," says Panis.

Though Panis was excited about refocusing her project, it left her little time to get it off the ground. She decided that the best way to combine academics and the issue of community at CMU was to create a course that explored the subject. By October, she had designed a rough course outline. She took it to Indira Nair, professor of Engineering and Public Policy and vice provost of

Education, for help in shopping it around.

"We were looking for master teachers," says Nair. "Someone who could get students excited."

One goal of Panis' project was to combat apathetic attitudes in the student population by engaging first-years in campus life as soon as possible. Panis believes that the earlier students feel a part of the CMU community, the more likely they will be to contribute in positive ways — and to keep contributing during their years here.

"I saw the talent of the freshmen, the great ideas and the energy. I wanted to utilize it, to not let it slip away," says Panis. "I've seen it happen, excited freshman turning into blah sophomores."

With that in mind, Panis and Nair got to work drafting letters to dozens of professors on campus, asking if any of them were interested in teaching the class. Weeks went by and no one had accepted their invitation to teach. Panis and Nair were about to give up hope.

Enter Ted Fenton, emeritus professor of History and part-time Cape Cod resident who happened to check his e-mail one day late last fall, an uncharacteristic thing for him to do during the months he spends each

continued on page 3

Caution paramount in season of SARS

While the new corona virus known as Severe Acute Respiratory Syndrome (SARS) rages in China and elsewhere, its effects are being felt at Carnegie Mellon, where students from Pacific Rim countries are about 80 percent of the large international student body.

Last month in two mass e-mails and two public information sessions in Rangos Hall, the university acknowledged concerns regarding the effect of SARS on commencement travel, summer housing, student visas and other public health concerns. The university has also taken action by appointing Bill Elliott, vice president for enrollment, to lead the university's efforts to develop strategies for addressing SARS-related issues.

In planning for commencement, Carnegie Mellon did not follow the University of Rochester and other schools that advised against inviting guests from areas with SARS outbreaks. Carnegie Mellon, Elliott said prior to the event, "is not going to be any more astringent than what the [Centers for Disease Control] has recommended."

Anyone who exits an affected region is checked for fever before allowed to leave the country, and then may be checked again coming through U.S. customs. Any visitor who had already entered the U.S. was able to attend the commencement, which was simulcast on the web for those who were not able to attend.

continued on page 8

Green team considering roof gardens

Facilities Management Services (FMS) is looking to repair the roofs on top of Hamerschlag and Doherty halls. But instead of rolling in cement trucks and tile, the plan is to rely on garden hoes and green thumbs to add two new green roofs to the campus.

"I thought we really ought to be doing a green roof. This is the perfect place on the whole campus because you can see that the structure underneath is pretty robust and it just has a whole lot of features that made it ideal for a green roof," said Kevin Burke, project manager FMS.

The green roof is an environmentally friendly roofing system that places living gardens on the tops of buildings, creating better insulation, reducing rain runoff and developing urban wildlife habitats.

Barbara Kviz, the co-chair and environmental coordinator for the Green Practices committee on campus, feels that the green roof will aid Carnegie Mellon in its efforts to become a greener campus.

"We want to set an example as an innovative community. So we want to have this

continued on page 4

Brutal imagination at Adamson Awards

Poet Cornelius Eady was the featured speaker May 2 at the Pauline B. Adamson Awards, an annual event to recognize students for achievements in writing. As always, the evening ceremony attracted an overflow crowd to Baker Hall's Adamson Wing.

Eady is the author of seven acclaimed books of poetry. Standing well over 6 feet tall, with red eyeglasses and dreadlocks, Eady appears as approachable as a childhood friend. He speaks with no pretense and even less pomp and circumstance. It's truly surprising and refreshing to share even a moment's conversation with him.

Eady opened his reading with a prose selection and continued with poetry from his large body of work. Beautifully recounting his childhood, his college years and the loss of friends in recent months, Eady was eloquent and emotional in an hour-long presentation that both invited laughter and begged for somber thought.

Between poems, Eady shared his personal wisdom. Perhaps his most important piece of advice was that writing poetry or prose is always a process of blending the truest of emotions and the most abstract of thoughts.

As Eady finished with selections from his new book, "Brutal Imagination," it was clear that this was a man not only taking full enjoyment out of his talent for the art of writing but also pleased to be sharing his experiences with budding authors and poets.

SEBASTIAN HABR

Leibniz's monads v. Newton's physics

After McConomy Auditorium filled to capacity, ticket collectors had to turn away people who wanted to listen to Neal Stephenson give the SCS Distinguished Lecture on May 1.

Stephenson is a science fiction writer whose works include "Snow Crash" and "The Diamond Age." His talk, however, was not about fiction, but about a real conflict occurring some 300 years ago: the rivalry between G.W. Leibniz and Isaac Newton.

Dressed in a dark suit, with his jet-black hair pulled back into a ponytail, Stephenson is a fascinating man to watch. As he delves into the political, theological and scientific melee between the two great thinkers, one catches a glimpse of Stephenson's reckless and roving intellect.

It is fairly well known that both Newton and Leibniz, more or less independently, invented calculus, although Newton ended up getting most of the credit. What is less well known is that both men came up with a theory of physics. In the popular eye, Newton won that rivalry, too; Newtonian physics is still taught in introductory physics courses today.

According to Stephenson, Leibniz found the implications of Newton's physics rather troublesome. If, as Newton claims, God has to intervene to prevent the universe losing energy and degenerating, then God must have been an incompetent creator. To Leibniz, such a notion was at best distasteful, and at worst, heretical.

Instead, Leibniz sought a more aesthetically appealing theory of physics, and developed a metaphysical system called monadology. He believed that all matter is composed of indivisible units, "monads."

These monads are not matter themselves, but they interact to form matter. Every monad can "perceive" the state of every other monad in the universe, and each monad has an internal set of states, and a rule for moving from state to state based on input from the other monads — what, today, we would call a "program."

Stephenson described the similarity of monadology to modern cellular automata theory, a branch of theoretical computer science, making reference to Stephen Wolfram's recent book, "A New Kind of Science." Wolfram, who gave this year's Bruce Nelson

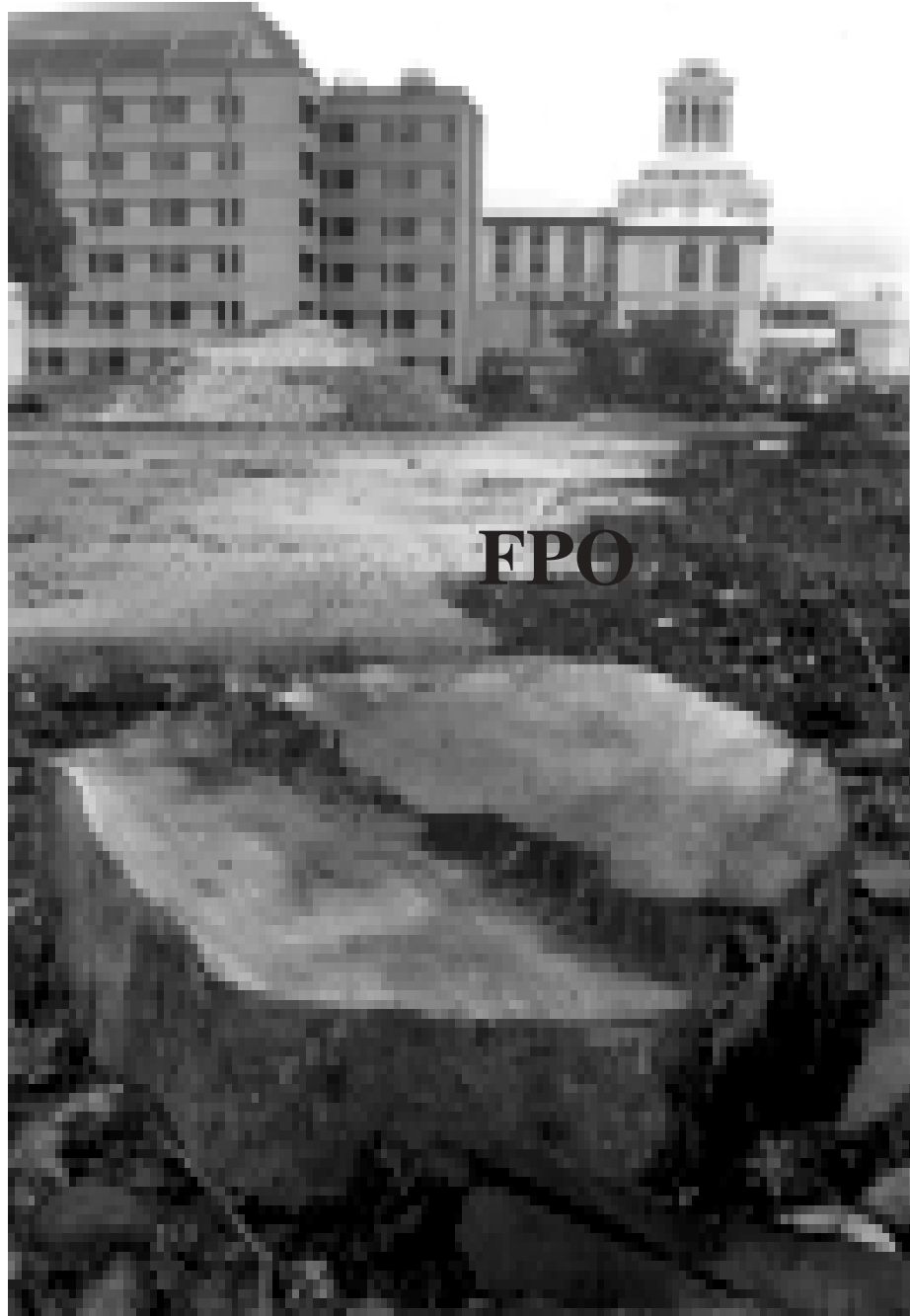


Photo: Brian Connelly

Work began in May on the Collaborative Innovation Center next to Hamburg Hall

Memorial Lecture at CMU, has increased interest in automata by hypothesizing about their applicability to the natural sciences.

"Cellular automata and monads are conceptually analogous," said Stephenson. However, cellular automata can traditionally only perceive the state of a finite number of neighboring automata, and all cellular automata in a system run the same program. Even with these restrictions, systems of cellular automata running very simple programs are capable of exhibiting highly complex behavior. This observation led Wolfram to speculate, rather controversially, that the natural world may be based on similar systems at a micro level.

Because Wolfram's claims are so similar to Leibniz' physics, Stephenson left his audience wondering how the age-old debate between Newton and Leibniz will ultimately be resolved in this "new kind of science."

GREGORY PENNINGTON

Radio's Terry Gross on the art of listening

If you have ever listened to National Public Radio's "Fresh Air," you've heard the voice of Terry Gross interviewing celebrities, artists, politicians and priests, and finding out what makes them tick. "Fresh Air," an hour-long show from WHYY in Philadelphia, has been on the radio in one format or another since 1975.

Currently, the show airs weekdays and usually features two interviews per episode. Gene Simmons of the rock band Kiss, has been on the show, as well as Nancy Reagan, Larry Flynt, and Lou Reed, to name a few.

People listen to Gross's interviews to find out who these famous people really are. What kind of lives do they lead? What do they think about? After 18 years of programs, one might be curious about the identity of Terry Gross herself.

On April 27, Gross stood onstage of the Byham Theater and presented herself, her past failures and successes, and the story of

how she got where she is today.

What was different about this "Afternoon with Terry Gross" rather than any other afternoon is that we could see her. Not often do we get to see the person whose voice we know so well on the radio.

Gross was the first to mention her appearance. She said, "Here I am," and spun around: she was petite with short hair and glasses and dressed in a black suit.

Then, she commenced the show. Like many people, she began her career with a fantastic failure. She went to school to be a teacher and got her first teaching job at 22 years old in Manhattan. She was a bit shy, she said, and didn't quite know how to handle a room of rowdy students. After being fired, she thought "Now what?"

Her roommate knew about an opening on a feminist talk-radio show and Gross decided to go for it. Once hired, she fell in love with radio. She said she loved the way you "turn a knob" and a voice comes on the air.

When a Philadelphia station asked her to host "Fresh Air," she moved to Philadelphia and became the solo interviewer. What made her fail as a teacher, she said — the fact that she was a listener and not a talker — was what made her shine as an interviewer.

It was not an easy road from then on. People have walked off her show: Monica Lewinsky, for example. Other shows have been, well, an experience.

For example, she asked Gene Simmons, of Kiss, if he had a sense of humor about the codpiece he shoves down his pants for each show. Simmons responded with a few lewd comments about women before suggesting Gross would be fun at a party if only she loosened up.

Gross works extremely hard to prepare for two interviews a day. Though she has help — three researchers collect relevant material to prep her before the shows — she often has to turn down phone calls from friends in order to keep working.

"Any of us lucky enough to have work we love are also unlucky enough to have too much of it," she said. This is what she calls

"the modern dilemma."

What Gross wants out of an interview is chance to present a "specimen life" — a portrayal of what it's like to be human. She asks questions in order to make a connection between what the interviewee does and the "sensibility that shaped" what they do.

She said that the interview is a limited form, however. Most people are a mixture of "faulty memory, self-delusion, hyperbole, out-and-out lies and truth."

"And why is this important?" Gross asked herself and the audience. Why is personal narrative a useful thing?

She cited the novelist John Updike when she said that people need to hear personal narrative — they need to hear about other people's lives in order to understand their own. This is why she does what she does. Not only has her career allowed her to understand how celebrities tick, it has shed light on how she, Terry Gross, thinks and feels and lives.

"I interview people to find out what makes me tick," she said.

You can listen to Fresh Air on freshair.npr.org or on WDUQ-FM, 90.5, at 3 and 11 p.m. weekdays.

AMANDA INNIS

Grade inflation by the numbers

In the last lecture of the University Lecture Series of this semester, Valen Johnson, professor of biostatistics at the University of Michigan, presented his statistics based lecture, "College Grades: A Crisis in Undergraduate Education." Developed from his experiments on Duke undergraduates concerning the correlation between faculty course evaluations and the current trends of grade inflation, Johnson presented his lecture to an audience of approximately 65 on April 24 in the Adamson Wing of Baker Hall.

Johnson opened his lecture by welcoming questions and arguments concerning his research. He also noted that audiences peppered with professors frequently consider some of his conclusions about grade inflation to be controversial.

Carnegie Mellon faculty in the audience raised questions concerning the disparity Johnson found between mean grades given by humanities professors versus professors in the natural sciences. That disparity and the tendency for students to evaluate highly the classes in which they expect to get better grades were the main contributors that Johnson cited for recent grade inflation in universities nationwide.

He also touched upon other facts pulled from his study, such as the correlation between good student evaluations and a student's prior interest in the subject of the class; the fallacies of grade attribution theory, in which students believe their grade is related to the quality of instruction and therefore a good grade means a good teacher; and the unsurprising fact that students with access to previous course evaluations will register for teachers who have been evaluated highly in the past. Johnson found weaker links between these factors and the phenomenon of grade inflation.

In closing, Johnson gave the audience his biggest recommendations for curbing grade inflation. He felt communication to be key, especially between different departments and colleges within a university. The goal of this communication would be to create a grading formula to help equalize the previous mean grade disparity.

Lastly, he also voiced his support of weighting grades already on a student's record. This is done by comparing the mean grade of each class to the mean grade of a school and then adjusting the grade received accordingly. This was not favorably received by students at Duke University, since it could just as easily drop a student's GPA as raise it. The students in the Carnegie Mellon audience didn't seem to receive it too favorably either.

ALYSON POPE

First-year seminar takes hard look at campus identity

John Hayes is chuckling. He's just told his students that one of their classmates conducted a survey in which 20 percent of the respondents listed "social life" as their favorite aspect of Carnegie Mellon.

"I hadn't realized that anyone would like CMU because of the social life," he says. "That surprises me."

Laughter spreads around the room. Students nod their heads and mutter "me too."

"Well, why are we surprised by that?" he asks. "Let's talk about it."

Thus begins another class period for the students of 85-117, a course entitled "Assessing CMU Education."

"Assessing CMU Education" is a freshman seminar that Hayes, a professor in the Psychology department, is teaching for the second time. The course, which Hayes designed to involve first-year students in active research, uses the university as a resource for collecting data. Students attempt to answer questions they have about CMU or identify problems they see in the community. They then conduct surveys and gather data to see if their questions have answers.

"I'm interested in issues of educational assessment," says Hayes. "I thought that it would be good for students, to get them thinking about their education."

Consequently, Hayes and the seven students frequently discuss the quality of life

on campus. On this particular day, class discussion touches on everything from the difficulty non-majors have in taking fine arts classes to campus involvement in politics, the meal plan and intramural sports.

"What about clubs on campus?" asks Hayes. He looks at his students, clustered around a conference table on the third floor of Baker Hall. "Are they pretty well known? How hard is it to get involved in them?"

Today, Hayes is trying to get his students to think about possible topics for their final research projects. These projects will allow the students to pursue in depth their interests in specific campus issues.

"I want them to pick issues that they feel passionately about," says Hayes. "Something they can really get their teeth into."

The first time the course was offered, Hayes' students used their final projects to study topics like students' sleep habits, the effectiveness of the freshman English course "Interpretation and Argument" and whether or not CMU undergrads read for pleasure. Hayes remembers one project in particular — a study that examined how students perceive student loans.

"They found that students thought the university was chintzier in this area than it actually is. So, we fed that information back to the administration," says Hayes.

It is not uncommon for Hayes' students to

present their research to university staff. In fact, Hayes believes that this is one of the primary goals of his course.

"I really think it's nice when students find out something surprising, go to the administration with it and then have it validated by them," says Hayes. "I want them to have the sense that they are effective. It's not just a freshman project but something that will be attended to by responsible folks. It gives them a feeling of accomplishment."

But what do the students think? Do they feel as if they are gaining anything from the experience of studying their own campus? First-year student Lillian Bertram says yes.

"I think it gets people engaged more. It gets the seven of us thinking more about the university as a whole."

Bertram's classmate, Ashley Anderson, agrees. "It's allowed me to be autonomous and run my own study and learn more about how the university functions. The work actually makes sense. It's made me more aware of the different things that happen within CMU."

And students aren't the only ones who are learning something from this class. Hayes says the projects and discussions have broadened his perspective of what life is like for undergrads at CMU.

"It's a whole different view of the university that I rarely get to see," says Hayes,

"Last year I learned all about Housing Services and room draw."

Hayes' students are appreciative of his openness to their perspective.

"It's one of those classes that if you don't show up, you're missed," says Bertram. "Everybody talks. He talks. We talk. You get to hear everybody's ideas and comment on them. It's good."

On this day in the classroom Hayes' open relationship with his students is evident. As their discussion of possible research topics for their projects continues, Hayes' students share personal stories with him about problems they've encountered on campus. For example, Bertram expresses frustration that her major, Creative Writing, doesn't have as well established of an identity on campus as other more technically focused degrees.

"Being connected to CMU, people automatically assume that you're a computer genius and a little weird."

Hayes nods. "Perceptions," he says. "Let's talk about that. How cool is it to be a CMU student?"

Hayes leans back in his chair. Students pause, their eyes wide. It's a good bet that one of them has just found a topic for the final project.

GILLIAN BRIGHAM

Course combats feelings of "the blahs"

continued from page one

year building furniture and fishing in South Wellfleet, MA.

"Ted doesn't read e-mail while he's gone," says Nair. "We gave up. And then one day he looked at his e-mail and said 'I'd be delighted to do this.'"

"We weren't expecting him to reply," Panis says. "He sort of fell into our lap. But he was the perfect person."

What inspired Fenton, the author of many books including "Carnegie Mellon: A Centennial History," to take over the reigns of Panis' proposed class?

"I missed teaching very much. Officially, I hadn't taught for 15 years," says Fenton. "The course was a germ of an idea when I signed on. I said sure without really knowing what I was getting into."

What he was getting into was a seminar course in H&SS open to first- and second-year students in any discipline. Dubbed "Carnegie Mellon and the Community," the purpose of the course is to provide students with a historical and social context for their lives at Carnegie Mellon.

"Four years is a long time to be here," says Panis. "And very few students even know the history, the great story behind this place."

"It's not just the little thing you study that matters," says Nair. "It is the whole intellectual environment. The fact that this is a class, there is an implicit message in that about how

important it is to know your community."

Panis envisioned a course that took students out of the classroom each week and introduced them to the city and to the campus via field trips and service projects.

Fenton saw things differently. "We could do a road show, take them out every week and it wouldn't do much good," says Fenton. "Unless they understand the shape that we were in, the shape that we are in now and how we got here, they can't appreciate it."

Fenton points to Pittsburgh's air pollution problems in the mid-20th century as evidence of how far Pittsburgh has come and what students can learn from the history of the city.

"Just look at the terrible mess that Pittsburgh was in after World War II and what it is today and the incredible rebuilding that took place. CMU had a hand in that. The environment is something this university takes very seriously and is making real contributions to."

Learning how to make a contribution to society and deal with real world issues is something that Fenton wants his students to take away from his class.

"They are going out into a world filled with problems," says Fenton. "If they can understand one place and how that place overcame its problems, then they can learn to deal with the problems they face in the rest of the world."

In the end, Fenton and Panis designed the course around a combination of history lessons and field trips, using themes that tie Carnegie Mellon to the Western Pennsylvania region — the environment, technology, ethnicity, education and philanthropy.

They also scheduled occasional guest lecturers like President Jared Cohen and CMU's architectural archivist Martin Aurand, to discuss issues relating to the class themes. In addition, Fenton and Panis took the students out to see how these issues manifest themselves in the community.

One of the outings was a trip to Nine Mile Run, one of the last few surviving streams in Pittsburgh. Located in Squirrel Hill, Nine Mile Run had been used for years as a slag dump for the steel mills. The Studio for Creative Inquiry in CFA has been instrumental in restoring the stream and reducing the pollution. In Fenton's eyes, this is a prime example of the university's commitment to bettering the Pittsburgh area and proof that the campus is not as apathetic as some people accuse it of being.

"Sure, we don't have big football rallies," says Fenton. "But we do have big groups of

people trying to improve the society in which we live. That may not be as visible as a football rally but it is still there and it's certainly not apathy."

While Fenton may not believe that apathy among students is a significant problem, he does agree with Nair that Carnegie Mellon faces a particular challenge in fostering a sense of commonality among all of the students at the university.

Nair says, "In this place where colleges are separated, one of the hardest things to do is build that sense of community across the schools. It's a challenge because our lives are fragmented in so many ways. For CMU students there is always this question — 'What is our identity?'"

That is a question with no easy answer. Still, Fenton, Panis and Nair are hopeful that this course will help students answer that question for themselves.

First-year chemistry major Grisel Perez seems to be well on her way. According to Perez, a New York City native, the course has helped her feel less like an outsider at Carnegie Mellon and in Pittsburgh.

"Taking this class I realized that no matter where I am at, I should always give back to the community. I am now part of this community and there is nothing better than contributing my time and energy to it. Andrew Carnegie was a philanthropist. He gave his wealth to the community and even though I don't have his wealth, through this class I learned that I can be a philanthropist by giving my time."

Though the class seems to be a success, Panis is unsure of whether or not it will continue next year after she's gone.

"I went into this with the hope that it would become a course that was always offered to freshmen. But that might take a year or two," says Panis.

Why? It all goes back to that same question — "Who will teach it?"

Though Fenton says that he's enjoyed the course this semester, he's not sure if he'll sign on next year — his 50th at Carnegie Mellon — to teach it.

"I hope so but I don't know," says Fenton. "Although there's nothing like young people to keep the old people young."

Whether or not Carnegie Mellon and the Community will be offered next year, Panis knows that the issues the course raised for students — *What is our place in this community?* — will remain the same.

"Students," says Panis. "They are all looking for the same thing. They want to feel comfortable here."

GILLIAN BRIGHAM

CMU, Oxford collaborating on global issues

Carnegie Mellon forged a new international connection in March with a program between Carnegie Mellon's School of Architecture and the H. John Heinz III School of Public Policy and Management and the School of Geography at Oxford.

The program, entitled the Carnegie Mellon and Oxford Collaborative Program (COP), will have a research focus on "everything that affects urban environments," said Luis Rico-Gutierrez, special faculty in the School of Architecture. Global issues for urban environments like transportation, public policy and the environment

COP is designed so that a graduate student enrolling in urban design (School of Architecture) or public policy with a focus on urban planning (Heinz School) will be automatically admitted into Oxford's School of Geography and vice-versa. Both CMU programs take a year and a summer to complete, but the schools plan to share summer sessions, so a student could receive a graduate degree from both Oxford and CMU in only two years. Both schools are currently planning to take on an automatic five students a year from the other university.

For CMU, the COP will enable the School of Architecture's Urban Lab to expand its geographical resources. Since the 1960s the Urban Lab has developed site specific designs for neighborhoods in the Pittsburgh region and through this partnership will be able to do the same for regions in Europe.

The research information generated by the COP will also be drawn upon for the Symposia program. This program focuses on one issue per year, such as transportation. A symposium is held to share research and generate ideas and policies related to the focal issue with the end goal of creating a better quality of life. The symposium ideas will in turn be used to put together a "best practices" publication with suggestions for urban communities worldwide.

Overall, Gutierrez hopes the COP will help each school bring a fresh point of view to the other, and he praises international partnerships for their ability to expand a school's knowledge base and add expertise. A program is also being considered between Carnegie Mellon's School of Architecture and Mexico's El Tec (Instituto Tecnológico y de Estudios Superiores de Monterrey, ITESM).

ALYSON POPE

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: Gillian Brigham, Jeannie Choi, Anne Dollard, Sebastian Habr, Whitney Hess, Amanda Innis, Geoffrey Jarrett, Tara Kennon, Elsie Lampl, Andrew McKeon, Batul Merchant, Sylvia Mosser, Vijay Palaparty, Gregory Pennington, Alyson Pope, Erin Reiley, Alicia Sanderman, Elizabeth Weiss
Photography: Brian Connelly, Ken Andreyo
Production: Donna Badger, Sue Layton, Melissa Stoebe
Founding Ed: David Demarest (English)
FOCUS Management Committee: Ed McAfoose (Staff Council); Toby Davis (SDS), chair; Jay Kadane (Statistics); Vic Mizel (Mathematics); Dan Nagin (Heinz School); Teddy Seidenfeld (Philosophy); Susanne Slavick (Art)

Curbs on file sharing speed up the Andrew system

John Lerchey has a busy schedule. As the computer and network security coordinator at Carnegie Mellon, he's responsible for coordinating the security of the approximately 35,000 machines on the campus that Yahoo! Internet Life has named the "most wired" in the nation.

Most of Lerchey's time is spent responding to security problems with personal computers. If an attacker compromises any computer on the Carnegie Mellon network, the machine can be used as a platform to launch disruptive attacks against other computers at Carnegie Mellon or on the Internet.

According to Lerchey, Windows systems account for "by far" the most security problems. He cites two reasons for this: because of the tremendous popularity of Windows, it is the most frequently targeted operating system by attackers. Also, Microsoft prioritizes helpfulness over security. Many of its "user-friendly features," like automatically opening e-mail attachments or installing an unrestricted SMTP mail server by default with IIS, have proved security nightmares.

A related concern on the CMU network is file sharing. Often file sharers use large quantities of the school's network bandwidth, which is very expensive, in a manner that violates federal copyright law. "The Internet can be painfully slow from residence halls," complains sophomore Eric Faden, "because irresponsible people are abusing their connections."

Computing Services monitors bandwidth usage and keeps a "top 50" list of the computers that are generating the most traffic. Some of the computers in the top 50 are valid users who are publishing popular academic resources. However, many are file sharers, and if they are knowingly sharing copyrighted material, they risk having their computing privileges revoked.

Some of those whom Lerchey confronts for file sharing are unaware of the traffic their computers are generating. He has identified several instances in which computers have been compromised by an attacker, who then uses the computer to share files — thus exploiting the speed of CMU's Internet connections.

Since its implementation, the strategy of identifying and enjoining file sharing has caused a 40 percent reduction in average network throughput, resulting in markedly faster Internet access for many users.

The privacy of data transmissions is important to CMU users, who do not want

others reading their mail or passwords, for example. So, the practice of eavesdropping, or "sniffing," on the CMU network creates another potential security problem.

During normal operation, a computer's Ethernet adapter inspects the addresses of all of the data packets that are forwarded to it. The adapter reports only those packets that are addressed to it, and ignores the rest.

However, by setting an Ethernet adapter into "promiscuous mode" a user instructs the adapter to report all the packets it sees. The user can then "sniff," or monitor, other users' traffic.

Many segments of Carnegie Mellon's network rely on switches, which try not to forward packets to computers that they are not addressed to. However, switches are generally designed for efficiency, and not security. By sending out forged Address Report Protocol (ARP) packets, a malicious eavesdropper can confuse even the smartest switches, and intercept other users' traffic.

Sniffing on a wireless network is a little more complex, but is also practical. The wireless network at CMU is designed so that users can roam between different access points while maintaining seamless network connectivity.

The implication of this on the network is that a user's traffic is broadcast across the entire wireless network, and can be observed anywhere on campus. So, wireless connections are especially vulnerable to sniffing.

Most networks, including CMU's, try to insure security, not by preventing sniffing, but by encrypting data. The principal mechanism that CMU uses to do this is Kerberos.

In order to log onto the CMU network, a user must prove knowledge of a password in such a way that someone who may be listening on the network will not be able to gain knowledge of the password. In addition, because there are so many services that might require a password, each service should not have to maintain a database of passwords. Kerberos is designed to satisfy these requirements.

When you check your e-mail with Mulberry, the Kerberos authentication process works roughly as follows. You first contact an authentication server (AS) and announce that you want to talk to the mail server. The AS generates a random password, which is called the "session key." The AS then uses your password (which it already knows) to encrypt the session key so that only you can

Most of John Lerchey's time is spent responding to security problems with personal computers. If an attacker compromises any computer on the Carnegie Mellon network, the machine can be used as a platform to launch disruptive attacks against other computers at Carnegie Mellon or on the Internet.

read it. Similarly, the AS makes a "ticket" by encrypting the session key with a password known only to the mail server. The AS sends both the ticket and the encrypted session key to you.

You decrypt the session key, and use the key to encrypt the current date and time, which is the "authenticator." You send the ticket and authenticator to the mail server, which is able to decrypt the session key from the ticket and then use that to decrypt the authenticator.

A timestamp is put into the authenticator to prevent someone from copying the ticket and using it later to impersonate you. It is the reason why kclient in Windows automatically syncs your computer's time to official Carnegie Mellon time. If the mail server thinks the time printed in the authenticator is reasonably accurate, you will be logged in and allowed to retrieve your mail over a connection that is encrypted by the session key.

This description leaves out significant detail, but illustrates the general principles of Kerberos.

Unfortunately, there are some problems with this solution.

If an adversary pretends to be a user and requests to log in, the authentication server will send him a session key encrypted with the user's password. The adversary can recognize a valid session key from its format, so if he starts guessing passwords he will eventually decrypt the session key, at which point he knows that he has found the user's password.

If an attacker tries to crack the password with brute force by systematically trying every possible password, it will take him a very long time to guess a password that is randomly composed of upper and lower case letters, numbers and punctuation. However, most users do not choose random passwords.

The first time Lerchey ran a security audit in which he tried to guess passwords based on a dictionary of common words and minor variations of those words, he was able to guess 40 percent of Andrew users' passwords. Such a dictionary-based attack is very quick, because the number of common words is far smaller than the number of possible passwords.

Lerchey now runs password audits regularly, advising users whose passwords were cracked that they should switch to something more secure.

"I consider users who reply, 'I like my password. I'm keeping it,' negligently responsible if their account is compromised and used to cause further damage," says Lerchey. His most recent audit cracked only 8 percent of the passwords on Andrew.

Both Kerberos versions 4 and 5 are affected by a problem similar to the one described above. Kerberos 4 allows large-scale attacks of that type to go practically undetected. Kerberos 5 uses pre-authentication to prevent the encrypted session key from being sent to an adversary. However, an adversary can still sniff for such keys, and perform dictionary attacks on them.

Most of the essential services on the CMU campus have been upgraded to Kerberos 5. However, Kerberos 4 authentication servers still exist to support legacy software like Zephyr, and as a result, an attack of the type described above could be mounted against CMU from anywhere on the Internet.

These attacks are relatively difficult to implement, and the value of determining the passwords to a few academic accounts is not great. Lerchey does not know of a single instance in which a user's Andrew account has been compromised through an attack on Kerberos. The system still provides a high level of protection for users who choose their passwords sensibly.

Security engineers are employed because there is no such thing as "perfect security." However, the CMU network is secure for those users who follow computing guidelines and use it responsibly.

GREGORY PENNINGTON

Green team considering plans for two roof gardens

continued from page one

environmental building practice on campus as an example to let other people know about green roofs," said Kviz.

The Green Practices committee was formed in 1998 to create a solid waste reduction and energy conservation program. Since then, the committee has taken a number of steps to make Carnegie Mellon greener — and the city, too.

"Pittsburgh has a combined sewer storm water system — our regular sewer system that takes out waste gets flooded when it rains. Since rain water goes into the same water system, raw sewage pours into the river," said Kviz. "If we can get some of that rain and use it before it gets into the sewer system, that will reduce pollution, which is one benefit of the green roof."

To seek initial funding, Burke at FMS teamed with Martin Altschul, the university engineer for FMS, and a group of five interested students.

The students received a Small Undergraduate Research Grant (SURG) for last summer. The grant, Altschul said, was "focused on mainly what kinds of plants and animal would find a home on such a green roof."

These five belonged to Sustainable Students, an organization dedicated to creating communities that are self-sustained through the efficient use of natural resources.

Anne Wootton, a sophomore environmental studies major who is involved in the project, said Sustainable Students projects are aimed at linking Carnegie Mellon with the community.

"Ideally, the living roof would become like an outdoor classroom and we will try to have as many roofs as possible and make CMU into a sustainable community."

Other students from this organization who are involved in the garden project are Julia Bamford and Diane Loviglio, both sophomore BHA students; Keara Schwartz, a sophomore Design student; and Colin Holloway, a junior History and Social and Decision Sciences major.

The student group was awarded the \$1,000 SURG grant last spring. They also applied for a grant from the Pennsylvania Department of Environmental Protection but were denied the funds. They are now seeking a third grant while they await results from a stress test of the current roof that will show how much additional weight it can support.

The proposed roof is expected to cost \$200,000 to \$250,000.

"There are many different kinds of green roofs," said Altschul. "One that is relatively simple could probably be made for half the amount of money we need. But it just wouldn't be as pleasant a place for people to go out on."

The students hope to create an inviting

outdoor classroom.

"We have been learning as much about gardening as we can because we want this place to be for the students and faculty to learn about gardening and sustainability," said Wootton. She and Holloway have been taking classes on gardening and hope to apply those skills to the building of the roof.

There are many design options available to the creators of this green roof. Some of these options depend upon how much money is available to them. Project manager Kevin Burke said that green practices can generate additional costs that are difficult to reconcile with such a small budget.

"The green roof costs about twice as much as a conventional roof and it just goes up from there. People have created light soil mixtures where it's feasible to put plants on a roof with even up to four to six inches of lightweight soil mixtures," said Burke.

The main concern for this roof, however, is for it to be a facility where faculty and students can learn.

"Without sufficient funding, the roof could just become a green roof without walkways or areas where people can enjoy it. We hope to get enough funding to make it an inviting place for faculty and students," said Burke.

"We want this to be a place for students and faculty to learn more about gardening and sustainable living," said Wootton. She was excited to hear that students could get in-

involved in this project and signed on from the beginning.

Burke feels that the project is a worthy endeavor and hopes to involve students in the process as much as possible.

"What I'm really looking at with this is that the student team be integrated in the design of the roof project," Burke said. "We would have an architect and waterproofing consultant and structural engineer, but we would have the student team act as another consultant."

As the different teams involved in this project wait for the money to come through, Kviz does not seem worried. She said that the university is in full support of this project and believes that CMU is well on its way to becoming a more environmental campus.

"We just recently won a state recycling reward for how much we recycle on campus, we are purchasing natural gas vehicles, and we provide free bus passes for all faculty, staff and students, we don't use pesticides on our campus, and we're doing really well," said Kviz.

"I think we're really making some great efforts compared to other schools and we will continue improving ourselves through innovative projects like this green roof."

JEANNIE CHOI

Wearable computers scale the language barrier

I found myself in a quandary when given a demonstration of LingWear: how do I phrase the question so the device knows exactly what to translate?

LingWear is a wearable tourist information system developed by Carnegie Mellon's Interactive Systems Lab (ISL). The system translates language to help its users communicate when traveling abroad.

If LingWear wasn't here to help, would the person I want to communicate with even be able to understand me, even if I did know the language? If I were traveling abroad and I needed to get a hotel room for the night, or I needed to find a doctor, how would I trust that my language and communication skills were strong enough to get my message across to a hotel clerk or a person on the street?

Many Americans, like me, don't speak German, Japanese or any language other than English well enough to feel at ease communicating abroad. It's not just the language barriers that can feel intimidating; it's the cultural differences in how we communicate and in what we understand that can make communicating seem a challenging and daunting task.

In the beginning of this demonstration, though, my thoughts are elsewhere. I'm in Newell-Simon Hall. I'm behind closed doors in the Language Technologies Institute's ISL department.

Tanja Schultz, a research scientist and speech recognition specialist, is seated beside me. We've just discussed LingWear and its speech recognition and speech translation capabilities that allow it to take my question, in audible or text form, and to output it in German or Japanese so the imaginary hotel clerk and I can begin to communicate.

So, posing my question to LingWear is less threatening than if I were standing in front of a hotel clerk in Heidelberg or Tokyo. In fact, it's even fun.

I'm starting to get hungry so I use LingWear to ask the imaginary German clerk: Do you have room service? LingWear's response: "Nein haben die Zimmer Saunas nicht."

What did it say? I ask Schultz.

She laughs and says, "It understood that you asked a question, but thought you asked if the hotel room had a sauna." She says that my question to LingWear proves an interesting difference between speech recognition and speech translation. "LingWear's speech recognition worked fine, but it didn't translate the meaning of what you said."

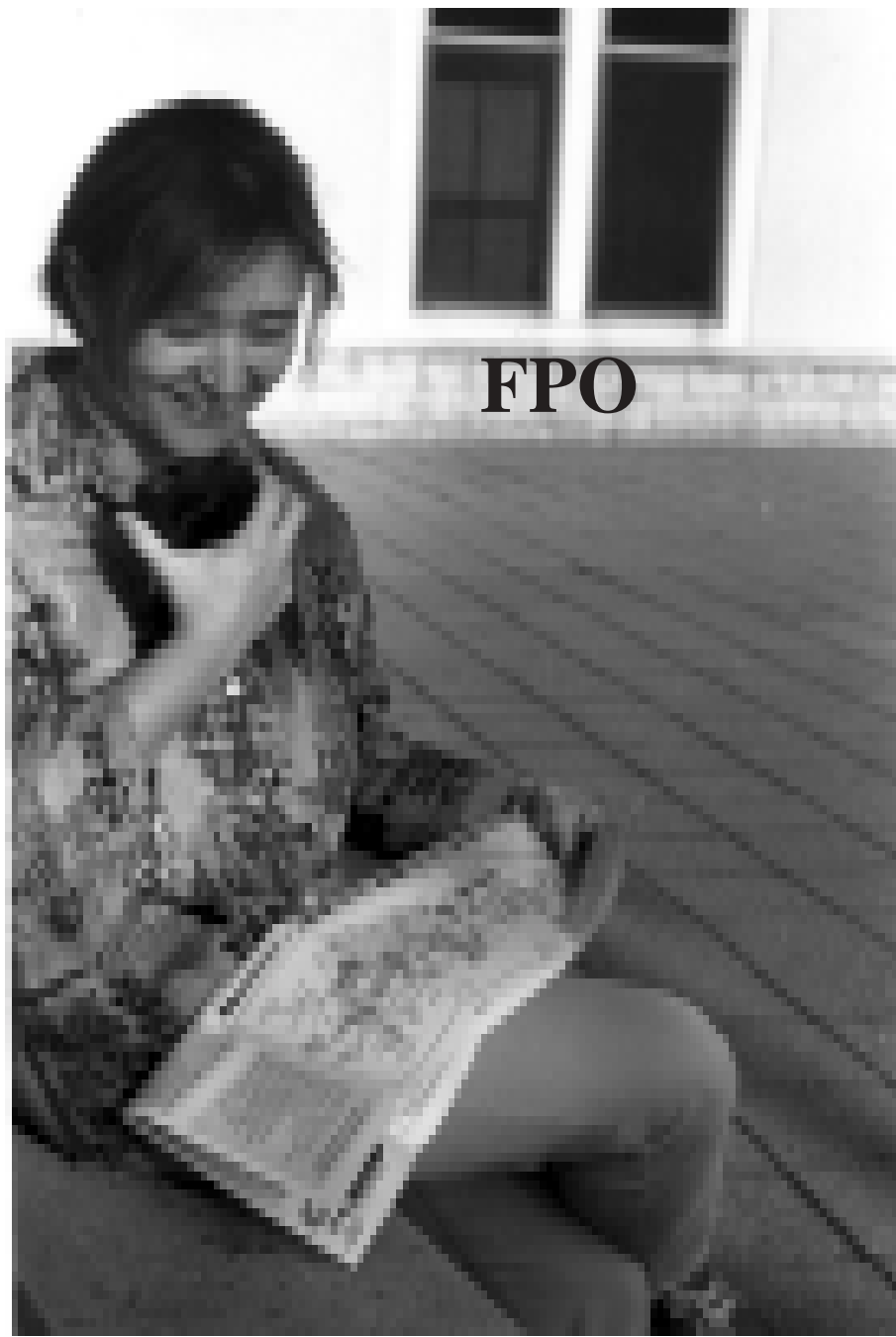
She goes on to explain that Interlingua, the part of LingWear designed to represent meaning from words, did not understand the sequence of my words either because no Interlingua existed or the wrong one was present for the translation. The result was output that did not match what I asked.

Then it hits me: If I can miscommunicate with the premier voice translation system being developed at Carnegie Mellon, I could really mess up if talking to a real person. The Interlingua did not translate the meaning of my words just as an individual from a different background and culture might not. Room service could be an American-born idea, not one that a person in a small hotel in Heidelberg would understand. Even if I had the language skills to ask the clerk about room service myself, he or she might still have misunderstood what I was asking.

Unsuccessful communication goes on every day. I say something to someone and he or she interprets it to mean something other than what I meant.

But do I ever really know that my words have miscommunicated my message? Add cultural differences to the mix, the rhetorical situation gets even more complicated.

There are many departments, offices and individuals on campus that are working to improve communication across cultures. The Language Technology Institute (LTI) is doing research to build bigger language and speech domains, to see if it's possible to create a device with unlimited domain that will cover the endless possibilities of what we can talk about, no matter the language.



Tanja Schultz gets help finding a bus from the Speechalator Photo: Brian Connelly

LingWear is a great example of the research in speech recognition and translation that LTI has so far accomplished. As Schultz says, "It focuses on something valuable that can be used as a language assistant."

Many other efforts, non-technical in nature but with the same underlying theme, are taking place to break down communication barriers on campus.

There is a yearly International Festival hosted by the President's Office, Student Affairs and Student Activities that focuses on world issues and themes in an effort to increase awareness of cultural differences and improve communications between individuals from different cultures. The festi-

vation is the Crossing Cultures Reception hosted in March as a cooperative effort between the Office of the Dean of Student Affairs and International Office of Education. Half says the goal of the reception was to promote cross-cultural interaction through deliberate activities. Activities included a question-and-answer session in which students from diverse domestic and international backgrounds talked about dining customs and holiday traditions in their families and cultures.

The reception offered the mix of American, international, graduate and undergraduate attendees "time to think about the issues affecting them and the barriers that exist,"

I'm starting to get hungry so I use LingWear to ask the imaginary German clerk: Do you have room service? LingWear's response: "Nein haben die Zimmer Saunas nicht." What did it say? I ask Schultz. She laughs and says, "It understood that you asked a question, but thought you asked if the hotel room had a sauna."

val last fall was "A Celebration of Spirituality and World Religions." This coming fall the theme will be "Exploring the World Through Arts and Literature."

The goal of the festival is to break communication barriers and "bridge the gap through a different thematic approach," Emily Half, coordinator of student development in the Office of the Dean of Student Affairs says.

Another initiative to improve communi-

Half says.

Lisa Krieg, director of the office of International Education, says the reception is one of many cross-cultural training initiatives that have been offered through the years. "The reception was a super model for the future, a learning model building on the traditional strengths of student affairs," she says. The energy level was high at the event. People were actively conversing and proving that there are two ways to learn and to

acclimate oneself to another culture, Krieg says.

One is the opportunity to look at other cultures through open dialogue. The other happens in the process: As we talk about our own lives, habits and traditions we gain insight into our own culture. This leads to an understanding of how our own background shapes how we talk with and respond to others.

Communicating across cultures creates challenges at every level, Krieg says. "You have to maintain a level of vigilance and care in every single interaction you have." In addition to the language barriers, there are the other conversational elements to consider – what Krieg calls "surface issues, under the surface issues and body language issues." Great examples of this are casual social communications and the way we interact with new acquaintances in the U.S.

When I arrived at Krieg's office to talk, we shook hands and had a predictable dialogue. "How are you?" she says. "I'm great. It's a beautiful day," I say. Then we quickly discuss the weather and the great view from her office, then begin talking about why we're there in the first place.

This kind of casual first-time interaction came naturally to us. But a visitor or student studying in the U.S. would have to figure this out, just as I, traveling or studying in another country, would learn that what I consider social norms may not apply.

Seldom do I small talk about politics or religion, but in certain cultures this is the tradition. A casual greeting in some cultures includes quickly talking about politics. A big part of learning to communicate successfully across cultures is to learn what's appropriate and what's not. "There are challenges at every level," Krieg says.

These challenges are evident in an academic context as much as in a social context. Krieg explains that students who come to Carnegie Mellon face "having to communicate in many different ways at a sophisticated level both verbally and in writing." It takes time to adjust; for some, more time than others.

We have a diverse campus. Some students have grown up all over the world. Some have never left their home country before attending our university. Because of this, some find adapting to culture in the U.S. an effortless task, while others struggle for a semester or more before they feel comfortable interacting in their new environment.

To prepare students to enter another culture, Eva Mergner, study abroad and exchange advisor, hosts a pre-departure orientation in which she stresses that students should remember they are "taking their own culture with them" when they travel. One goal of the orientation is to discuss with students that they need to be aware of their own beliefs and attitudes before they can openly learn and adapt in a new culture. It's easy to see the differences between cultures on a surface level. "What you don't see are the subtle nuances that really make culture what it is," Mergner says.

It's locating and understanding the nuances in different cultures that makes studying and traveling abroad such a learning experience. It's about far more than language differences; there are styles of interacting, traditions and ways of living that we may not learn until we are immersed in another culture.

If we can discover the differences in something as simple as asking for room service or in stumbling through an awkward conversation about politics with a new acquaintance in Europe, then we're one step closer to learning to break communication barriers.

If I have LingWear on a trip overseas, my experience could go a lot more smoothly. But, if I'm on my own, with no language assistant, I'll now be aware that I've brought my own style and cultural habits of communicating to the situation. This self-awareness will help.

ERIN REILEY

Modeling terror networks for intelligence war games

What makes an organization function well? Kathleen Carley, professor of Computer Science, Technology and Policy at Carnegie Mellon, has created models of organizations ranging from corporations to emergency response teams. She models organizations as networks of relationships to identify critical members of an organization who relay important information to other members. Carley describes these critical members as “nodes” where links from several relationships meet. Organizations function better, she explains, when these nodes are identified and supported.

Several years ago, the Office of Naval Research approached Carley with a question: If you can identify the people that make organizations more functional, can you use that model to make organizations dysfunctional? She thought that she could.

Under the auspices of the Office of Naval Research, Carley is now applying her models to terrorist networks. The models can help U.S. intelligence and law enforcement “war game” against terrorist groups to guide investigations and actively disrupt networks. The goal, Carley says, is to pinpoint what people play critical roles in the network and to target them for observation, wiretaps, disinformation or other action, depending on the goals of the investigation. In the wake of Sept. 11, Carley’s work has taken on a greater urgency.

Rather than looking at terrorist groups like al-Qaida from the perspective of political science, Carley asks questions that an anthropologist might ask about people in the networks: What are their family ties? Have they been in religious study groups together? Who do they know in common? What events have they attended together?

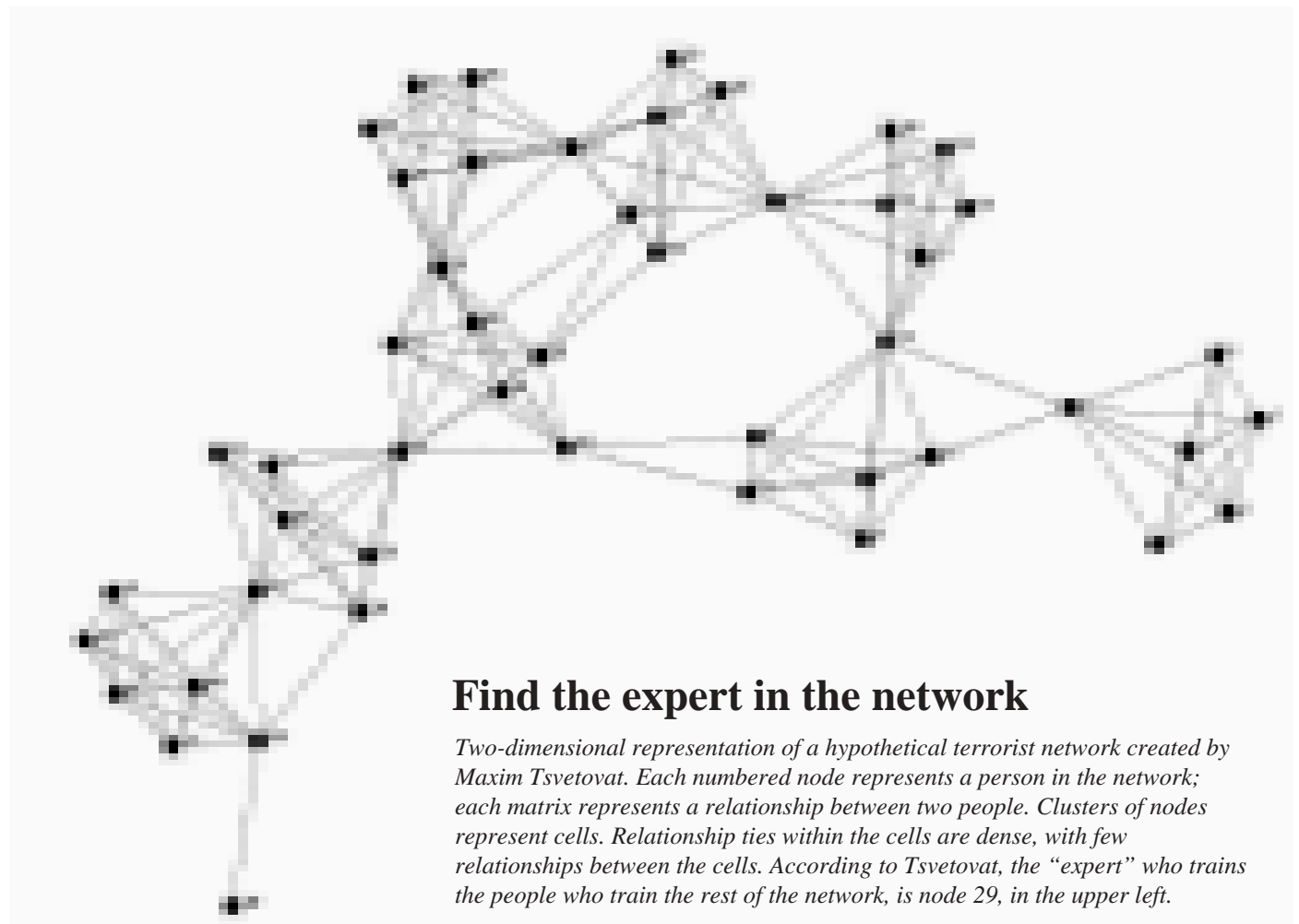
“We look at the connections of people, resources and events,” Carley says. She describes the simulations as semi-hypothetical, based on generally available information like newspapers and some specialized books. She takes data about the relationships within groups such as family ties, education, age, size of religious study groups and size of active cells in order to extrapolate models of networks. For instance, the Sept. 11 hijackers made up a network of 20 men. What might a similar network look like involving 2,000 people? While much of the work is theoretical, Carley also works on ongoing classified cases. Her graduate students do not work on these cases.

Uncertainty is an inescapable element in researching relationships in a network. The amount of information is huge and incomplete. Many errors, Carley says, may be errors intentionally created by the network. In addition, there are vast areas of potential information that intelligence agencies aren’t aware of or don’t share with one another. “There are whole sub-sectors that have never been looked at,” Carley says.

Carley’s role is estimating the effects on a network of an action such as arresting a particular person, given that the information is always incomplete and possibly wrong, maybe slightly wrong, maybe mostly wrong.

Al-Qaida organizer Khalid Sheikh Mohammed, who was arrested in Pakistan in early March, is an example of an emerging “node” in a terrorist network. U.S. intelligence did not consider him to be a major figure in al-Qaida until his name began to surface in interrogations of other al-Qaida operatives in custody. Connecting the relationships, investigators saw that he was a central figure in the financing and logistics, if not the actual planning, of the Sept. 11 attacks. Because senior al-Qaida figures were incommunicado or in hiding after the U.S. invasion of Afghanistan, Sheikh Mohammed’s role became more important in keeping the network intact.

His role as a communicator led to his discovery. The National Security Agency, listening by satellite to what the agency calls “chatter,” identified him in conversations on cell phones and tracked the signals to a house in Rawalpindi, Pakistan. He was arrested by Pakistani police and turned over to U.S. authorities.



Find the expert in the network

Two-dimensional representation of a hypothetical terrorist network created by Maxim Tsvetovat. Each numbered node represents a person in the network; each matrix represents a relationship between two people. Clusters of nodes represent cells. Relationship ties within the cells are dense, with few relationships between the cells. According to Tsvetovat, the “expert” who trains the people who train the rest of the network, is node 29, in the upper left.

Carley also looks at models of recruitment and communications within terrorist organizations. She describes cells in the U.S. and Europe as very sophisticated in using web pages, both to recruit and circulate educational material, but also to send encrypted messages. The web pages go up and down rapidly and are frequently renamed. Many sites do not have links or pointers. Carley’s role is to ask what that volatility may mean, and to consider whether it may be better for law enforcement or intelligence to take out a particular server or to leave it up and see what can be learned.

Command and communication are particularly difficult to model, according to Carley. Is a cell instructed to carry out a particular action at a specific time? Or is a cell told to carry out an action of its own choosing and timing? The two models make for different behavior. Beyond that, one organization may use different models of command in different situations.

Carley describes three escalating approaches to disrupting terrorist networks. The first is information warfare. Real and false information is directed to people in the organization. Carley’s models help identify which people should be fed the information.

The second approach is to disrupt an organization’s resources by slowing down the rate at which money and goods are transferred among the cells. The third approach is to focus on individuals — arresting them, isolating them, cutting off their ability to communicate or killing them.

Carley describes her role as helping law enforcement and intelligence services judge which approach to take. Variables include how confident investigators are of knowing the network and the political legitimacy for an action. “We can’t do all of that yet,” Carley says. But she says it is possible to model the repercussions of different actions, for instance, when it is better to arrest a terrorist cell or to keep observing it.

Carley is currently developing several packages of modeling tools for law enforcement and intelligence agencies. Graduate student Maxim Tsvetovat has co-authored papers with Carley on one of these packages, called NetWatch, a system modeling how networks mend themselves after attacks. The model is used to examine patterns of communications and secrecy within the network.

Tsvetovat’s focus is identifying the experts who train and organize others within the network. The experts, Tsvetovat says, are not necessarily the most visible or connected people. Networks usually recover

very quickly from a disruptions like arrests because the operatives affected are only those who come to light. The unknown part of the network may be much larger. In the al-Qaida model, Tsvetovat says, “Most operatives are expendable. They are crucial to one operation only.”

The NetWatch models were built from newspaper stories about people who were connected in any way with the Sept. 11 attacks. Tsvetovat took that data set and created three-dimensional models of the people in the network as nodes connected along matrices. He color-coded the nodes to distinguish the actual hijackers from the people in the support network. “I measured the numbers of parameters and generated tons and tons of networks that are somewhat similar,” Tsvetovat explains.

The goal of NetWatch is to create the kind of realistic war games for training against terrorist networks that the U.S. military uses, with a Blue Team as the “good guy” and a Red Team as a dynamic “bad guy.”

“Blue team places wiretaps on some member of Red Team,” Tsvetovat explains. “They know Red Team exists, but not everyone who is on it.”

The Blue Team target what Tsvetovat and Carley call “the perceived network,” or the people on Red Team that they know about. If the Blue Team remove one node, Tsvetovat says, they may overestimate the damage done to the network, because they don’t actually know all the resources of the network.

Red Team meanwhile changes tactics and methods of communicating. In planning and carrying out attacks, the Red Team can execute tasks itself, can ask someone else to execute a task, or can seek knowledge and expertise outside the network. Red Team also changes the timing of its actions.

In the al-Qaida model, Tsvetovat explains, there is a clear break between experts and operators: “Operators get minimum training, mainly to work up their courage.” If they are captured, they don’t know very much. “Ninety percent of the people are not considered valuable enough to give enough information to divulge anything valuable,” Tsvetovat says. Operators know the people in their cell well, he says, but not people in the larger network.

Tsvetovat says that the low level connections are important when a “node” is arrested, killed or isolated and the people around them reactivate the ties between individuals in the cells. At some point, he says, one of the low level connections succeeds and a new person emerges as the

gatekeeper. Arresting experts may temporarily demoralize operatives, but Tsvetovat says the network recovers quickly. More important is to disable the gatekeepers.

“The Holy Grail,” Tsvetovat says, “is to take out one person and cause enough infighting for that position that the group falls apart.”

In Tsvetovat’s model, leaders like Osama bin Laden are not as important as they seem in the media. “There’s not really a second in command to bin Laden,” he says. “The lieutenants are regional chiefs. Without bin Laden, al-Qaida would lose some top level organizing, but the regional chiefs could work on their own. This is probably why bin Laden is still walking.”

Tsvetovat readily admits that the simulations only go so far. “This stuff is rather murky in the real world. The idea is to make realistic training simulations to simulate what-ifs: What if you cut someone’s communication, or take them out, or plant information, like that someone in the network has turned.”

What NetWatch can do, Tsvetovat says, is identify people in important roles. “My simulation can be most effective at finding experts early on, before they disseminate information.” The expert, he explains, is deeply embedded in the cell that protects him without access to many members in the network. “If you look at communication patterns,” Tsvetovat says, “the expert is not distinguished from other active members.”

A politically sensitive question in investigating al-Qaida and other militant Islamist groups is the issue of scrutinizing legitimate religious groups and charities. Islamic civil liberties groups like the Council for American Islamic Relations (CAIR), as well as the ACLU, object to actions like the FBI’s widespread interviews of American Muslims and investigations of Islamic charities.

Carley believes that it makes sense to look at the mainstream groups, because militants normally have ties within mainstream groups. Militant groups also have multiple identities: Hamas and Hezbollah, like Sinn Fein and the IRA in Ireland, are at the same time legitimate political parties, charities and support networks for terrorists. Beyond that, many members of mainstream groups consider the militants to be freedom fighters, not terrorists. “Most groups are not known for being radical,” she says. “But you need the contacts within the legitimate groups to find the seeds to increase those who are highly radical.”

BRIAN CONNELLY

At large? Standing? Handbook charts academic titles

Do you know any Regental Professors? Regental is the adjectival form of “regent,” defined both as an acting ruler or a member of a board that governs an institution, namely a university. At the University of Texas the title of Regental Professor is bestowed on faculty Nobel Prize winners.

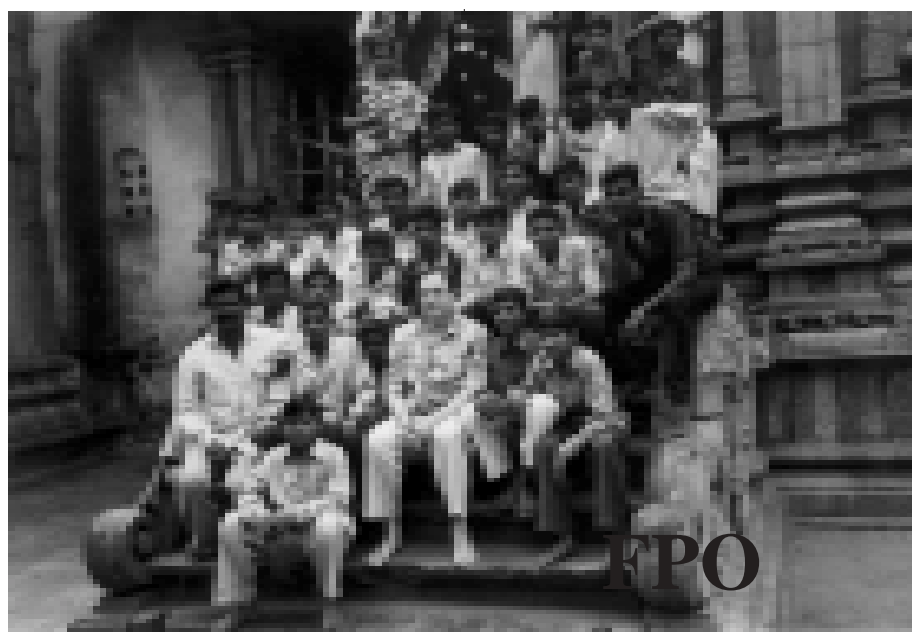
This tidbit is just one of many to be found in Michael Shamos’s “Handbook of Academic Titles,” a 293-page catalog of more than 800 distinct titles found in approximately 300 accredited colleges and universities. Shamos, co-director of Carnegie Mellon’s Institute for eCommerce and director of the Universal Library, compiled the handbook after Carnegie Mellon’s Faculty Affairs Committee (of which he is a member) set out to improve the schema for conferring academic titles.

“When I went to the first meeting on this topic, I realized that no one involved, including me, knew enough about the subject to make a sound recommendation or even evaluate proposals,” Shamos says. “So I decided to write the book. I had been interested in the subject for some time, but never had any reason to write a book about it.” The endeavor took him more than 300 hours in November and December.

“I have quoted liberally from position descriptions in college catalogs, faculty handbooks and web pages,” Shamos writes in the introduction. “Where a position description has been obtained from a specific institution, the name of the institution appears in parentheses in the entry.”

Shamos emphasizes that the titles in his handbook are specifically *academic* titles of higher education faculty and staff, not administrators. He kept the catalog relatively succinct by having one entry for each title, regardless of the ranks and distinctions that may flank it in the real world. “Combining titles with such prefixes as ‘adjunct,’ ‘emeritus,’ ‘visiting,’ etc. would lead to a combinatorial explosion in the size of the glossary,” he explains.

The vast number of academic titles does



Michael Shamos visiting a Hindu temple in Tanjore during a recent visit to India

not, however, mirror the number of job descriptions. Anyone tenacious enough to read the handbook cover to cover would find that different titles can mean the exact same thing. Some titles are so humorous that it is hard to believe people are willing to put them on their business cards.

Take Professor-at-Large for instance, heard in the halls of Brown and Cornell. The “at-large” designation is usually used for magazine or newspaper editors and writers who do not cover a particular beat. “At Brown a Professor-at-Large title is reserved for scholars of exceptional distinction who are invited to teach at Brown as visiting faculty in order to enhance the existing strengths of particular academic programs or meet special needs.”

At Cornell, the title is given to “those individuals who have achieved outstanding international distinction in the humanities, the natural or social sciences, or the learned professions, or have achieved such distinction and have demonstrated broad intellectual interests through their activity in such

fields as public affairs, literature or the creative arts.”

On the opposite end of the spectrum are the Partial Appointments, defined simply by the University of Michigan as “an appointment that is less than 100% effort.”

A Continuous Lecturer is not a lecturer

Among the titles are Jubilee Professor, Distinguished Professor and Lecturer with Potential Security of Employment.

who doesn’t know when to shut up, it is Purdue’s version of a Continuing Lecturer, a non-tenured lecturer employed on an ongoing basis. Standing Faculty members are not those who avoid sitting behind a desk; it is the University of Pennsylvania’s term for all current tenured and non-tenured faculty. A Jubilee Professor need not be particularly joyful; it is an honorific title employed pri-

marily at the University of Illinois, similar to Distinguished Professor.

Titles of distinction run the gamut because each institution has its own idea of what distinguished means and how it should be branded. There are Alumni Distinguished Professors, Board of Trustees Distinguished Professors, Collegiate Fellows, Distinguished Adjunct Professors, Distinguished Librarians, Distinguished Presidential Professors, Distinguished Researchers, Distinguished Service Research Professors and Distinguished University Scholars. Then there are Founders Professors, Overseers Professors, Special Faculty, Emeritus Faculty, Bicentennial Preceptors, Curators Professors and the simple prefix Honorific.

Shamos himself is a Distinguished Career Professor — a title unique to Carnegie Mellon — in the Language Technologies Institute. In his own handbook his title is described as “a non-tenured Special Faculty position conferred on those who have made notable advances in their field of research and have otherwise had careers of exceptional note.”

The endurance that it must have required to compile this handbook surely warrants that one.

“For particularly silly terminology,” Shamos says, “see Permanent Appointment, Research Lecturer, Definite Tenure, Indefinite Tenure, Lecturer with Potential Security of Employment, Other Faculty.”

“There is much to be amused about concerning faculty titles because, in words attributed to Henry Kissinger, ‘There is so little at stake.’ My intent in writing the book was quite serious, but that doesn’t prevent me from laughing at the pomposity.”

It is fitting then that Shamos gives thanks to Professor Quincy Adams Wagstaff of Huxley College for “imbuing [him] with the appropriate perspective on academic titles.” (If you are not familiar with Professor Wagstaff, be sure to rent the 1932 Marx Brothers film “Horse Feathers.”)

WHITNEY HESS

Patriot Act alarms civil liberties groups, librarians

continued from page one

One controversial provision makes it much easier for agents to secretly access an individual’s personal records from third parties such as libraries, hospitals, Internet service providers and universities. Another provision allows judges to issue general search warrants that may be served nationwide instead of specific search warrants that can be served only within a certain jurisdiction.

A law that previously limited the government’s phone-tracing powers has now been revised by the Patriot Act to not only make it possible for government agents to trace incoming and outgoing calls on nearly any phone that could be used by a “suspect,” but to track every website visited on a computer that could be used by a suspect, and to do so without first establishing probable cause.

The provision that has prompted concern among librarians — and events such as the Patriot Act Summit in March — is one that allows federal agents to gain access to reading records and personal information from public libraries, bookstores and Internet service providers. Under the revised law, librarians will often have no choice but to comply when police or FBI agents ask them to divulge information about patrons. Agents may request personal data (such as an address or phone number) for a certain patron, or may request broader amounts of information, such as a list of all patrons who have checked out a certain book, or all individuals who used a library computer to surf the Internet on a certain day. In any of these cases, librarians may not tell patrons that their personal data has been disclosed to federal agents. It is this veil of secrecy that most alarms many involved in library law and civil liberties. Because these informa-

tion seizures are conducted in secret, people whose privacy has been compromised are usually not aware of what has happened and therefore cannot take legal action.

When *Newsday* surveyed 1,000 librarians last year, 85 said that police or FBI agents had requested information about their patrons.

At Carnegie Mellon, Associate University Librarian Erika Linke said, “In brief, we have not received any warrant or subpoena

Under the revised law, librarians will often have no choice but to comply when police or FBI agents ask them to divulge information about patrons.

to turn over information.” She explained that University Library policy in such a case would be to contact campus security and the university counsel; a library task force is in the process of drafting a document that will outline specific procedures for responding to agents who may show up at the library with warrants or subpoenas.

Minow recommended that all libraries draft such a document and train all employees, including students, in how to respond appropriately to such situations. Agents need librarians to find and turn over the information they request, so librarians are faced with the task of sharing the data they are legally required to divulge without compromising patron privacy by turning over more than they need to.

“The Patriot Act is dangerous,” said Kevin Mitnick, a former computer hacker who now works in the field of information security, when he spoke in the sold-out Rangos ballroom on March 18. “I think the American government is exploiting the tragedy of 9/11. Americans are willing to give up civil liberties in return for security — and it concerns me greatly.”

While some worry with Mitnick and Minow that the Patriot Act will allow for the creation of a powerful and oppressive “thought police,” others are worried that it will create more of a ditz and disorganized thought deputy.

“Instead of Big Brother,” writes Philip Harper for *MSN Money.com*, “Americans find their privacy threatened by Bumbling Uncle. Actually, it’s not just one uncle, but many; there seem to be almost as many information-gathering efforts as there are agencies and sub-agencies in the executive branch of government. What unites these fragmented efforts is the generally low level of protection afforded to the information that’s collected.”

The Privacy Act of 1974 explicitly requires such decentralization of information. One apparent goal of the legislation was to prevent the creation of one all-encompassing and controlling organizational database. Some in the post-Patriot Act world argue that it is this lack of organization — not a lack of information — that impedes anti-terrorism investigations.

“Too much information, it turns out, is sometimes not much better than too little,” reporters Michael Duffy and Nancy Gibbs write for *CNN.com*. They add that the FBI has consistently gathered sufficient information to prevent terrorism but has not analyzed or assembled it effectively enough, in part because of its traditional culture of

valuing action-based field agents more than reflection-based analysts.

Gibbs and Duffy quote a former Justice department official as saying that “for years, the analysts were not the heroes of this agency. Nobody wanted to be one. Nobody wanted to listen to them.”

Rebecca Serey, director of Pittsburgh’s *eiNetwork*, an organization that provides Internet service and computer expertise for Southwestern Pennsylvania libraries, explains that interpreting the encrypted data from libraries and universities may pose a greater challenge for federal agents than they anticipate.

“From a tech perspective, the Patriot Act is very interesting, because it is often not easy to get that data in any kind of meaningful way,” she said.

Among those most actively involved in exploring the social, legal and historical implications of the act are individuals who believe it is a culturally situated phenomenon that will eventually exhaust the patience of the American public.

“Pendulums swing on issues like this,” said Carrie Gardner, moderator of the Patriot Act Summit 2003. Citizens demanded government restraint and privacy guarantees in reaction to McCarthyism, she explained, and now accept the Patriot Act in response to the terror attacks of Sept. 11.

Emily Stewart, a Carnegie Mellon student who has studied and written about the Patriot Act extensively this semester, said that public opinion about the act is bound to change as time goes on. She said that many people are not paying attention to it right now, but that “When the war ends and the adrenaline goes down, people are going to take interest more in what the act actually says.”

TARA KENNON

Homeless, temporarily, at Forbes and Morewood

"The reason I couldn't enjoy my first days here was that I didn't have my own place to call home," says a graduate student who arrived at Carnegie Mellon from India last August, just days before classes started. She stayed temporarily with friends of friends of her father while attending her first graduate classes, arranging immigration documents and — perhaps most urgently — looking for an apartment of her own.

"It was so very stressful," remembers the woman, who asked that her name be withheld. "I wasn't comfortable in their environment. Their eating habits were different. I wanted to tell them 'Hey guys, I am so damn hungry!' But because I didn't know them, I was so conscious of how I should ask for food or how I should tell them I needed to sleep. That was the point when I started to lose my strength."

She struggled to keep up with her courses while continuing to search for apartments. "I thought, 'Oh goodness, once I move in, I'll deal with stuff. I just have to move, sleep, unpack. Then I'll really deal with everything else,'" she says.

The stress of temporary homelessness continued to build until one night at 2 a.m. she awoke in a panic and became violently ill. "I couldn't sleep because I was like 'I don't have a house,'" she says. "I cannot even describe the feeling."

"Home is a place that brings you into the deepest part of yourself," explains psychologist Jeff Beyer of Counseling and Psychological Services. "Home is a place where your psychological senses can relax — where you can let your guard down." He explains that being without a place to call home, even for a few days or weeks, can be profoundly stressful. "The whole event affects people more than they realize," he says.

This silent epidemic of temporary homelessness leaves a strong mark on the university community during times of transition, such as the beginning and end of the academic year. It's a significant but often overlooked trauma that has become an accepted — and, some would argue, unavoidable — part of life at a high-pressure university where commitments and obligations

change by the semester. Students and faculty who are focused on academic life can find that they lack the time, energy and finances to make ideal living arrangements.

Though undeniably less traumatic than the long-term homelessness that millions of Americans struggle with every day, temporary homelessness can trigger shadow-versions of the same anxieties caused by long-term homelessness. Whether a person has lived for years on the streets or has just crashed temporarily on a classmate's sofa, he or she can recall feelings of isolation, fear, hunger, confusion, embarrassment and a deep sense of exhaustion that comes from never having a space to truly rest.

"It's that sense of alienation that can be so stressful," Beyer says, "if we think of alienation as the opposite of at-home-ness."

International students — especially graduate students, who do not have the option of long-term dormitory housing — suffer disproportionately from the strain of temporary homelessness; but significant numbers of undergrads and American students, faculty and staff also struggle with it during particular academic transition times such as fall and spring.

They may have trouble finding or affording a place to stay for that extra month they'll be in Pittsburgh before leaving for the summer; they may find their dream rental but need another place for a few weeks; they may sign a lease with roommates who back out of the agreement; they may leave town for the summer before finding a place for the fall; or they may simply clash with roommates or partners. In cases of emergency, they may decide to spend a week or two on a friend's couch rather than remain in their own home with someone who is unsafe or emotionally abusive.

The negative effects of temporary homelessness, Beyer explains, are amplified by the fact that it tends to afflict people during times "when they'd otherwise be recharging," such as summer or winter break.

"CMU students can't afford to be giving away any recharging time," he says. Beyer compares a summertime experience of temporary homelessness to "traveling abroad in

a country where you don't speak the language, sightseeing every day — when you really need to be sleeping by the beach. It's a funny kind of stress. No matter how much fun you're having, it's exhausting."

Often, he says, the real effect of temporary homelessness — and its accompanying lack of meaningful rest — may not appear until after the experience has ended and the next semester has begun. Starting out without sufficiently recharged energy reserves can lead to delayed psychological and emotional struggles that individuals may not realize are linked to temporary homelessness.

"You can bet it's more stressful than you thought," Beyer says, "and more stressful than you experience at the moment."

Community housing coordinator Norma Shaw works with students who are looking for a place to live in the communities surrounding Carnegie Mellon. In addition to lists of available housing, the Housing Services office provides small but meaningful conveniences, such as a phone to use for calling utility companies. The idea is to combat the sense of alienation that can cause such constant worry for those experiencing temporary homelessness.

"I try for them not to feel homeless," Shaw says. "They're scared. They don't realize that they're homeless, but they are, and I do what I can to make them understand things will work out. I deal with homeless people. That's my job."

Shaw says that with the exception of a few tenants who "think they can get a bedsheet as a toga and get out there and go berserk," most housing problems arise from property owners or managers trying to take advantage of tenants, sometimes creating situations that could leave them desperate for a temporary place to stay.

She works with students who have trouble finding a place to live, often counseling them in how to dress appropriately and communicate with realtors and property owners. Some students, she says, were turned away from apartments until they traded their "mohawks and cutoffs" for interview suits, "just like they would wear for any other business meeting." Shaw said the students

actually met, unrecognized, with the same realtors who had rejected them when they had spoken and dressed less professionally. After using this new attitude to find a new apartment, "they all came in here cartwheeling — they were so excited."

Effective communication skills are key, Beyer says, in making the experience of staying in someone else's home as easy as possible. "It's such an important thing to communicate, to go out of your way to be clear of what's expected," he says. "Kind of go overboard on checking in just to be on the safe side." He also recommends that both those who are temporarily homeless and those who are sharing their home "go overboard on being good to yourself," by making time for personal activities such as going for a walk or reading a novel. The physical and emotional trauma can be reduced, he says, by eating properly and being sure to get more sleep than usual.

He points out that not all effects of temporary homelessness are negative. Temporarily sharing a living space can bring about new levels of intimacy, he says, and can lead to personal growth as well. Asking for and accepting this sort of help can be difficult, he says, but doing so, "because it is difficult, can point you in the direction of your own personal growth. It presents an opportunity to get to know yourself in a new way and grow psychologically."

Remembering her experiences last year, the graduate student says that she learned profound lessons from being temporarily homeless. "I realized I'd been very pampered at home," she says. "Now I am pretty much confident on my own." When she recovered from her illness, she was finally able to move into her own apartment.

"The first thing I did was, I went to my bed and just lied there and cried until I was tired of my tears. I thought, 'I am finally here. It is finally over. From now on, things will be OK. I know this is my own small place here — I can sleep here and I don't have to ask for bedsheets and pillows.' It was so embarrassing to ask for these small things. It is so very different now. It is an amazing feeling."

TARA KENNON

Course demonstration explores nature of language

On March 18 in a hidden Doherty basement room, about 50 students listened intently to people speaking Cantonese, Mandarin, Yoruba, Argentine Spanish, German and Polish — six languages they didn't know from Urdu.

Their challenge was to decipher what they were hearing, based on what they had already learned about phonetics (sounds of a language), morphology (word structure of a language) and syntax (sentence structure of a language).

The Nature of Language (80-180) has been taught for the past three years by Carol Tenny, an adjunct professor in the Philosophy department. She started out teaching from a textbook, but adopted a hands-on approach as she came to understand that students learned better through application. Her teaching assistant, Keith Douglas, said that they "try to be as interactive as possible

and this is the most extreme sort."

The seven different foreign language speakers — two spoke German — were dispersed around the large room in corners and down the sides. Each of the seven was surrounded by an assigned group of students who asked questions and hurriedly scribbled answers on their handouts.

One requirement for the exercise was that the students had no prior experience in the language of the group they were in. The whole point was not to understand what the speaker was saying, but to decipher how the language worked as a system.

Tenny advised her students, "Try to arrange yourselves so that Argentine Spanish and Yoruba don't get mixed together."

Some of the speakers were Carnegie Mellon international students and faculty, while others were from outside the university. Tenny warned faculty members to keep

their expertise to themselves, so as not to give the students any hints. But they could repeat the sounds as much as the students needed because "You don't have to do it perfectly — you're not phoneticians."

The students used the phonetic alphabet to write down the sounds they heard, often asking their speakers to repeat a sound or a word that they missed. The students had a worksheet with English phrases and sentences. The speakers would speak the phrases and sentences in their language and the students had to figure out how the language worked by drawing connections.

The Argentine Spanish speaker, Professor Pascual Masullo from University of Pittsburgh, made sure the students knew that he was speaking Argentine Spanish, not European Spanish.

One student in the German group asked the speaker, "Can you say the black fish

cooks the black fish?" Later the student asked, "Would it be normal if someone came up to you and asked"

Tenny heard the student's questions and shouted encouraging words, letting him know he was on to something and that others should follow. The students were trying to figure out what was causing changes in the language, knowing that different languages have different syntax and morphology.

The man hits the woman, but what about the fish hits the woman?

Inquiring minds were figuring out the nature of language in a setting where six languages were being spoken at once and students were speaking nonsense about abusive fish in an interactive learning experience that everyone seemed to enjoy.

SYLVIA MOSSER

Caution paramount in the season of SARS outbreaks

continued from page one

Elliott expected upwards of 300 visitors from the Pacific Rim in attendance. To help allay the fears of anyone in attendance there was a SARS information desk in Kirr Commons and an aid station available in the University Center.

"You will see, in fact, masks," said Elliott, making a prediction that did not come to pass. Carnegie Mellon neither promoted nor discouraged the use of surgical masks, but announced beforehand that if members of the audience saw someone showing the symptoms of SARS, like a harsh dry cough, they could report it to the school police force. That person would have been offered an examination at Health Services, whose director Anita Barkin was co-moderator of

the information sessions.

The issues raised by commencement mostly affected graduating seniors, but problems with summer housing are a concern for nearly all international students. "Many students are just not comfortable returning home right now and are waiting until June or July to see what happens," said junior Tommy Poon, a Hong Kong native who is remaining in Pittsburgh.

The university has no figures regarding students who are applying for summer housing rather than returning home to an affected area, but Elliott said volume of housing requests received by Conference Planning. Barkin said, "I know of a few requests, and they have all been accommodated."

Elliott cautioned that anyone in the pri-

vate sector, such as landlords or hotel managers, is allowed to deny housing based on the fear that an applicant may have SARS, even if that fear is unfounded.

The harder questions may lie in the future as university policy on SARS takes shape. "There are many things that relate to next fall that we quite frankly don't have answers to," said Elliott.

Those questions are of concern to incoming freshmen, new graduate students and students returning from summer at home in the Pacific Rim. The school has no control over U.S. immigration, and if a student is denied entrance to the country because of concern that he or she has been exposed to SARS, the school will be unable to do anything about it. This fact has been a disap-

pointment for concerned parents who are worried about bringing their children home without a guarantee they will be allowed to return. It also applies for any Carnegie Mellon staff member who decides to travel to an affected area, which the school currently discourages.

For now, all CMU can do is take actions to minimize risk on campus. This will be Elliott's focus as he assumes the new duties.

Come fall, he and Barkin plan to participate in all orientations of new international students. Campus police and EMS are receiving SARS-specific training, and Student Health Services is following all provisions set forth by the CDC.

ALYSON POPE

Loserville USA and the American cultural identity

"The world does not need another book," said Scott Sandage, associate professor of history. "It doesn't need my book. It doesn't need most of the books of my colleagues. Probably, it doesn't need all of the books published by all the university presses in the last 10 years."

So, why has Sandage written "Forgotten Men: Failure in American Culture" (Harvard University Press, 2004)?

Sitting in a Baker Hall office adorned with icons running the gamut of American history, Sandage coolly explained that his soon-to-be-published efforts are an exploration of personal interests. His thoughts on the academy's fixation with the doctrine of "publish or perish" and his eclectic office decor suggest that he is concerned not with the scholarly short term, but the bigger picture of our cultural history.

Having received numerous accolades for his publications and post-graduate research, Sandage has become known for his work with the Smithsonian Institution, the National Archives and the Abraham Lincoln Institute, just to name a few. But, it is obvious that such public recognition pales in comparison to the satisfaction he receives from teaching the "Development of American Culture," and "Roots of Rock n' Roll" courses here at Carnegie Mellon. "It gives me a chance to put my own specialization back into the larger context of American history," Sandage said.

Sandage's primary interests lie in 19th-century American history and the social forces that have shaped American popular culture. "Forgotten Men: Failure in American Culture" deals with the expanding definition of failure from solely economic terms to a cultural identity and how this has inculturated skewed perceptions of success versus failure.

"There are many books about success and there are very few books about failure," he said. Sandage explained the challenges of finding historical evidence such as letters and diaries documenting everyday, ordinary Americans' failure. He also noted the pitfalls of books venerating famous people like Albert Einstein and Thomas Edison for their triumph over early failures and resulting ascent up the cultural ladder. "That narrative of failure on the road to success is part of why people worry so much about failure," Sandage said.

In expounding upon his book's concepts, like the relationship between ideals of individualism and the label of failure, Sandage enlightened me about the recordkeeping practices in 19th-century American society. He recounted the degree to which insurance companies, bankruptcy courts and charities created permanent records that began to trail the American citizen like an unwanted appendage.

"It's like in third grade when they divide you up into reading groups and there are the smart kids, the middle kids and the dumb kids and they call them blue birds, red birds and yellow birds," he said. "Everybody knows that once you get tracked, it can be very difficult to get out of that category."

This permanent label, he went on to explain, perpetuated a virtual glass ceiling as such records of failure became self-fulfilling prophecies for many people.

Sandage cited the example of a CNN story he saw about a child who was tortured and eventually killed by his stepfather. When the report was over, he said, the newsroom anchor muttered under his breath, "loser," as a contemptuous insult toward the killer of a child.

"What criminal behavior has to do with winning and losing, I don't know," Sandage said. "But it tells you why people are so sensitive when they get called a loser." He went on to describe the mixed messages concerning the acceptability of failure that are projected onto America's youth. "When you associate 'being a loser' with everything from being bad at sports in gym class to being a vicious murderer, it's very difficult to feel that losing is OK."

When asked about the greatest challenges he faced in writing the book, Sandage re-



Scott Sandage with a photograph of Henry David Thoreau

Photo: Brian Connelly

Sandage explained how this fixation on failure, or the avoidance thereof, has crucial implications considering how, in America, the language of success is quite similar to the language of freedom. "So, if success and freedom are equated, then what does that mean about failure, that it's some sort of diminution of freedom?"

plied that it was, without a doubt, the research on history's unheralded losers. He spoke of the difficulties in scouring archival libraries for records of failure, saying, "There is no category for failure or loser."

First he looked at thousands of charity letters that destitute Americans wrote to famous millionaires in the 1800s. Wary of taking these self-descriptions of failure at face value, he gathered the specific names from such letters and used them to guide his digging into census records, financial records, insurance accounts, etc. "Apparently, Bill Gates gets a lot of letters like this even today," Sandage said.

In the competitive academic environment at Carnegie Mellon, he said the stigma of "loser" is a major motivational force.

Acknowledging Carnegie Mellon students' lofty aspirations, Sandage said, "Carnegie Mellon is a school where the student body probably thinks about success and failure more intensely than the students at other universities." He explained how this

fixation on failure, or the avoidance thereof, has crucial implications considering how, in America, the language of success is quite similar to the language of freedom.

"So, if success and freedom are equated, then what does that mean about failure, that it's some sort of diminution of freedom?"

A major theme in Sandage's book, the notion of freedom resonates with both his professional and personal life.

In 1999, Sandage published an article entitled, "Why one gay professor would leave Pennsylvania," in the Pittsburgh Post-Gazette in response to the state legislation that exempted state institutions from offering domestic partner benefits to their employees.

In the article, he revealed the terms of his employment and articulated that people have the right to define their families however they want, regardless of lifestyle and sexual orientation. Asked about the personal import of the article, Sandage responded, "Just as I didn't want to write abstractly about failure, when I found this was an issue, I felt that the more specifically someone could explain the consequences, the better." Sandage said that, in the time following the article's publication, he received an influx of letters, some decrying his position as an openly gay professor and condemning his personal life. The worst one, a page-long letter wishing him "good riddance" in a carefully crafted calligraphy of hatred, is posted on his office door. "I put it up on the theory that the best way to fight ignorance is to expose it to the light," he said.

This letter, Sandage said, is not reflective of Pittsburgh's cultural and moral values, which, while somewhat antiquated, valorize simple pleasures over big city brouhaha. Having lived in New York City, Sandage would rather live on a farm than be just another city dweller. He said that this burgh is all the city he needs.

"I don't wear a beret and smoke clove cigarettes, so the fact that Pittsburgh is not Greenwich Village has never really bothered me," he said. A native of Iowa, Sandage espoused a belief in simple pleasures and affirmed the stereotypes of Midwesterners as being modest, good-natured people, saying, "People from the Midwest are nice. They can also be narrow-minded, but the most provincial people I've met in my life grew up in New York City and think that the world ends at the Hudson River."

With an air of comic resignation, Sandage commented on the recent remarks about homosexuality by Sen. Rick Santorum. "Well, I think that what Santorum said is stupid and that we spend far too much time

paying attention to stupid things," he said. Conversely, it's hard to not pay attention to the astute observations Sandage makes about rock 'n' roll, the subject of one of the most popular courses offered in H&SS.

Asked about the current state of music, Sandage said facetiously, "There's this new guy called Bob Dylan that I like a lot." Behind Sandage, an ironic picture of the fabricated pop poster girl, Avril Lavigne, stared right at me as he explained how rock 'n' roll developed outside the law. "I think rock 'n' roll is one of the best things there is about America because it represents everything that we want to be about: not discriminating on people based on what they look like or who they are."

Not as American vanilla as apple pie, but definitely just as American as good old rock 'n' roll, Sandage is a devout believer in pop culture. "Look around my office. I love American culture. It's what I've devoted my life to," he said. He then began to point out the markers of his devotion strewn about the office walls, saying, "Peabody and his boy Sherman, Abraham Lincoln, Harpo Marx, Thoreau, Walt Whitman, mechanical toys, the phonograph."

Avowing that "Forgotten Men: Failure in American Culture" is not a self-help book geared toward those with aspirations of upward mobility, Sandage said, "I hope the book will give people perspective on the strangeness of some American definitions of failure." Sandage's planned sabbatical for the fall semester will have him already hard at work on his next book, "Half-Breed Creek: A Tall Tale of Race in America." Spotting the ambiguities of mixed-race identity presented by self-definition and family folklore, the book will specifically focus on the Indian reservation system that separated purebred Native Americans from those with mixed heritage. "I want to look at what aspects of culture allowed Americans to continue to believe in the myth of race," said Sandage.

Though Sandage may say his book about failure is non-essential in the greater historical scheme of things, such an exploration of America's constructed definitions of failure will be a welcome wind of change in our academic climate so obsessed with success. The scholarly phobia of failure has become a heavy burden for many college students, but understanding this fixation as a historical construction offers some consolation. As Sandage said, "Two hundred years ago, there weren't any GPAs."

ANDREW MCKEON

The women who untangle 7,000 lines at 412-268-2000

The number is 412-268-2000 and it serves as the gateway to Carnegie Mellon. But who answers this phone? Is it one phone or many phones? Who are the people at the other end of the line and where are they? Such an important part of the university is a mystery to many.

Behind the walls on the first floor of Cyert Hall, near the computer cluster, the lines of this telephone number run into a quiet office. The telephone number is that of the Carnegie Mellon operators and they are part of Telecom, the department that handles all the telecommunications needs of the campus community. Whether you have a problem with your telephone or you need a new phone to be installed in your office, Telecom is the department to call.

Each day 6,000 to 8,000 calls travel through the line. People from abroad, people next door — everyone calls them. “You have to like people or it just doesn’t work,” says Marcia Mahaffey Bryant, the lead information services help desk coordinator. “It’s a large department and we try to do the best we can say,” adds Lois Broddus, information service operator.



Marcia Mahaffey Bryant and Audrey Patrick

Photo: Brian Connelly

Among the thousands of calls, there are many that are memorable — some quite funny and others more serious. On one occasion, a staff person’s house caught on fire and the operators tried many different num-

bers before they were successfully able to reach the person. “It’s what makes my job more important because I like to help people,” says Broddus, describing what happened.

They have talked to callers who ask for Frank or Bill — not realizing that there are many Franks and Bills, but also assuming that the operators know the entire campus community on a first-name basis. The operators even received a call from a woman who was angry with her husband and gave an earful to the operators, who listened because “It’s part of our job.”

All the calls that come into the office are handled properly and appropriately. Most of the operators who work for Telecom came to the university with prior customer service experience. “Sometimes people even call back to thank us for helping them,” says Mahaffey Bryant.

From 8 a.m. to 5:30 p.m., two operators are on duty at all times. They sit in front of an advanced data and information service monitor to access the needed information. Telecom has long moved from what many know as a switchboard. Carnegie Mellon has more than 7,000 lines and phone numbers. It’s a vast system to manage and navigate through.

VIJAY PALAPARTY

When a voice in the story matches the life in the work

When writers document their own lives or the lives of other people, there are plenty of issues to contend with. How will they depict someone who will eventually read the book they are writing? How does the difficulty of remembering the past factor in? What form will the work take?

In a Center for Arts and Society lecture on March 19 entitled, *Writing a Life and Shaping a Story*, director Judith Modell introduced Lisa Miles and Jane Bernstein.

Bernstein, associate professor in the Creative Writing program, is the author of a novel, *Departures*, and two book-length memoirs, *Loving Rachel* and *Bereft*.

Miles is a violinist based in Pittsburgh who composes music in collaboration with theater, film and movement artists. Although she is primarily a musician, she has published prose and poetry in *Unsilenced: The Spirit of Women* and the autobiography, *This Fantastic Struggle: The Life and Art of Esther Phillips*.

A slim, tall woman with dark, unruly, curly hair, Miles looked both creative and professional in an ankle-length black tank dress and long earrings. She is undeniably a fast-talker with a vibrant personality.

The lecture, held in a hard-to-find room on the third floor of the College of Fine Arts, was attended by a handful of people, which made for an informal setting. The lecture was an investigation of the intersection of the writers’ mutual interests as well as some of issues unique to their work.

Miles’ biography of Esther Phillips, a Modern Independent painter who lived in Pittsburgh briefly during the 1930s, was a 10-year side project. The book includes reprints of Phillips’ paintings and letters in their authentic scrawl. Miles saw Phillips’ painting displayed at Pittsburgh’s Carson Street Gallery in the early ’90s. Because of Miles’ past experience as a mental health counselor and a violinist working among artists, she was intrigued by Phillips and her obsession with painting.

Born in Russia, Phillips came to Pittsburgh at age 2 and left in 1936 for Greenwich Village, New York. She was “no different from any other creative artist we mainly know in that she starved and had plenty of stress because she was far too under-employed for most of her life,” said Miles.

Although Phillips was institutionalized for six years, she continued to paint prolifically during that time, and eventually recovered. Despite all the work she produced, she never made a name for herself.

“Early on, I was hooked and the research became an investigation. It became something more personal and parallel to my own life than I thought it was going to be. I ended up writing a book that’s far more than a biography of a woman artist, but it’s a cul-

tural essay on the struggle that all creative artists face in trying to make a living,” she said. “When you write on memoir or life history, there’s that awkward responsibility of what your voice should be in the story.”

To begin what she calls her “investigative obsession,” Miles spoke to aging artists and bohemians who were contemporaries of Phillips. Her investigation took off when she found out that the institution where Phillips stayed in Wingdale, NY, was about to be converted into a women’s state correctional facility. With the help of a volunteer lawyer for the arts, Miles arranged to have Phillips’ records sent to her.

She was even allowed to visit the institution and go to the actual spots where Phillips went. “I felt truly like a detective,” she said.

Like Bernstein’s original concept for *Bereft*, Miles’ work began to change into a form where biography and essay intersect. She enjoyed the stylistic choices that opened up as a result.

“You can be true to the facts, but you can look at what’s presented to you — those garbled pages all over the floor — and see about creatively weaving it together.”

Miles spoke about how the Center for Arts and Society’s goals are consistent with the themes in Miles’ biography of Phillips. She said the center is committed to bringing inquiry to the public domain, investigating and upholding the role of artists in society, and examining political and economic fallout on the creative artist in any era.

In her book, she also examines the relationship between mental illness and struggling artists through Phillips, who was a hypochondriac. “Why is it that artists and other people on the fringe have to display such mad coping mechanisms to stay afloat?”

Bernstein in her talk exuded a calm confidence. Dressed in a classy outfit of a red V-neck sweater and black pants, she used her hands extensively in sharing her experiences as a memoirist.

She began her career as a fiction writer. Her work was not overtly autobiographical although her first novel, *Departures*, explored concepts related to her experiences, like real and imagined loss, desertion and death. Since then she’s written a number of essays, creative non-fiction and the two memoirs, *Loving Rachel* and *Bereft*, which she discussed in the lecture.

“I think still I have the soul and sensibility of a fiction writer; even in conversation I think I tend to use scenes as a way of explaining things. That is, you can see what happens, and therefore, maybe you will understand it afterwards,” she said.

In 1983 when her second daughter Rachel was born with various disabilities, Bernstein became preoccupied with related themes. Her agent was interested in a subplot about domestic struggles in the novel she was

writing at the time and asked Bernstein if she’d consider writing the story as an autobiography.

Bernstein’s first reaction was, “No, I can’t do that. I don’t know how to do that.”

“It was like I had the piece of my brain in which I would imagine something and then I had what I think of as the non-fiction part of my brain, which was basically very dry, non-narrative, kind of academic writing — nothing to do with this other piece. So I rejected this notion,” she said.

Also, she said that in the ’80s, the genre of memoir didn’t exist, let alone know the popularity that it does today.

Through *Rachel*, however, Bernstein developed an interest in issues surrounding blind babies, such as delays in attachment and motor development. The interest inspired her to begin a written work, without confining herself to a genre. She agreed to “just write [it] as a novel, and worry about the truth some other time.” Indeed, after she completed the memoir, entitled *Loving Rachel*, she had her former husband, physicians and others fact-check it.

“I had to get free of this notion that to recall and to remember and to create from life was something that I couldn’t do with the same kind of style and interesting language and imagination that I could a non-fiction work,” she said.

Part of the struggle was what she refers to as “the odd and somewhat awkward life of a memoirist” that involves exposing your life to the public.

Before Bernstein went to Arizona in 1989, she knew very little about the murder of her sister, Laura, on September 20, 1966. She only knew that the murderer was a 17-year old male Laura didn’t know, who eventually confessed to the crime. Bernstein didn’t even know if he was still in jail or not.

She was surprised to find that because of the Freedom of Information Act, there was a huge amount of archival information available in Arizona. In addition, many people remembered the case very well and were eager to talk about it, even though it had occurred 23 years earlier.

“The murder in 1966 was before this tremendous wave of violence in the country, and so it was shocking, and also she was from somewhere else, she was white, she was a young woman and all those things make a big public story,” she said.

She said that for two weeks, the size of the headlines were the equivalent of when JFK was assassinated.

In the process of researching her sister’s case, Bernstein found that the murderer was eligible for parole and that she would be summoned to his first commutation hearing in 1990. After that, she returned to Arizona several times to continue her research.

Despite her initial tendency toward fic-

tion and her determination not to be in the story, she realized that “the facts of the case were very interesting, and there did not seem to be a justification for fictionalizing this,” she said.

But she was still looking for the dramatic arc in the story. “Life is sort of this messy pot of events and, even if you’re true to the facts, still there’s an arrangement of the facts in order to make the story compelling.”

Once she understood that it was her responsibility to tell the story of her sister’s murder, she was able to overcome the discomfort of writing memoir. After keeping herself out of the story for so long, she eventually wanted the reader to experience what she went through in the process of remembering her sister; she wanted to structure the book so the reader would see something of her life both before and after she acknowledged her sister’s murder.

As a result, her personal issues could have a greater meaning for any reader who deals with or is interested in “the repercussions of unacknowledged grief.”

“The reader is a stranger, even if the reader turns out to be someone you know and there is a kind of seduction in writing a great story,” Bernstein said. The seduction comes from bringing people to life.

“If you hit the reader too soon with generics, or what I think of as church words — those heavy words of emotion and sorrow — it’s too much. It’s really like a stranger on a park bench telling you a sad tale, and you can’t take it in because there’s no context and there’s no dramatization,” she said.

Another difficulty of being a memoirist is in the exposure of personal details and depictions of people that the writer knows well. Bernstein said that as long as you don’t use art to wound people, you shouldn’t limit yourself by worrying about what people will say. But ultimately, it depends on the situation.

“There are some cases,” she says, “where somebody whose life has been so impacted by someone else’s toxic or aberrant behavior that I feel [those details are] the right of the memoirist to expose.” But she also believes there are cases where people deserve their privacy. While doing research in Arizona, she was still quite distanced emotionally from her sister’s story. Although she did not experience a neat catharsis in completing the work, she said that “writing and revising brings a lot of clarity.”

Bernstein is close to finishing a novel that is still untitled. It’s about a family practitioner in northern New Jersey who is overly concerned with caring for people but, paradoxically, has trouble with intimacy.

In the fall semester she will teach creative writing to master’s students at Bar-Ilan University in Tel Aviv, Israel.

ALICIA SANDERMAN

Carnegie Mellon loses battle of campus bandstands

The advent of spring is celebrated worldwide with spectacular parties ringing in primavera with welcoming, flower-filled hands and sleeveless arms giving the sweet air a warm embrace. This year's springtime festivities at Carnegie Mellon and Pitt proved that it is not the weather, but the outdoor soundtrack, that can make or break such seasonal celebration.

At Carnegie Mellon's Spring Carnival, the funnel cakes were as sweet as ever and Swank's Fun Slide exceeded my expectations, but the musical element was stifled by poor planning and the threat of rain.

Pitt's annual springtime festival, Bigelow Bash, came a week before Carnival under far worse weather conditions, yet still managed to serve up loads of food, fun and music. The headlining act, Queens of the Stone Age (QOTSA), braved the elements to deliver a rocking show in the best possible springtime venue, the great outdoors. Organized by the Pitt Program Council, the Bigelow Bash on April 5 took place on a barricaded block of Bigelow Boulevard on the Pitt campus. Even under perilous gray skies with the constant menace of precipitation looming above, the festival and its live acts persevered.

Having risen from relative obscurity to become mainstream misfits in the last few years, Queens of the Stone Age make music best described as an untamed exploration of rock's subconscious. Yet, it has become quite commonplace among the critical cognoscenti to slap the band with the ready-made label of "stoner rock" on account of the Queens' unabashed drug use and enigmatic image.

Much to the chagrin of such pundits, QOTSA's latest album, "Songs for the Deaf," is connecting with more than just the title's implied demographic, as the record's substantial radio airplay has won the band much better than their usual buzz.

The four members' band experience is a combination of punk rock debauchery (the Dwarves), metallic psychedelia (Kyuss), and driving, raunchy rock (Fu Manchu). Like the Fantastic Four coming together to defeat a menacing foe, the band converged upon a restless college crowd to forge a unique, engaging sound that dumbfounded fans and silenced skeptics.

"Songs for the Deaf" is rife with cryptic choruses, undulating rhythms and inimitable song texturing that in concert can be both bewildering and hypnotic. Demonstrating their abilities for sonic abstraction, singer/guitarist Josh Homme and guitarist Troy Van Leeuwen unleashed extended guitar solos and improvised breakdowns that left me with eyes wide and mouth agape. But, these axeslingers showed they haven't disavowed their roots, and still exhibited a penchant for the raw riff rock from which their unique sound was born.

As the winds picked up and the gloomy cumulous clouds moved across the sky, the Queens rocked on. Bassist Nick Oliveri noted the dire conditions and implored the crowd, "Don't catch a cold for Queens of the Stone Age." The band masterfully bled one song into the next, leading listeners astray for a jaunt into another jam, then returning to the original tune with a crafty exactitude. While the shirtless Oliveri showed his punk rock stock with energetic outbursts and drummer Brant Bjork banged away to keep warm, the other desert deviants showed a certain degree of rock 'n' roll reserve. Josh Homme sang his lines with an air of nonchalance in sharp contrast to the spasmodic rock star moves of today's indie rock front men. But, for all his stellar singing, Homme between songs was mumbling an incoherent mess of intoxication and pantomimed lunacy.

The Queens rolled through their recent singles, "No One Knows," and "Go with the Flow" and played most of the new album as well as selections from the older "Rated R."

Mark Lanegan, former Screaming Trees vocalist and frequent Queens collaborator, took the stage for a couple of songs, standing rigid and reticent for some moments



The Giants' playful putzing around and tongue-in-cheek delivery were well received by the faithful who responded to the band's indulgent little game of sing-along ping pong with the audience. They Might Be Giants lived out the rock star dreams of all dorks in attendance. It really is hard to dislike the band of amiable extroverts. But I did.

before emitting his throaty, gravelly vocal styling in perfect harmony with the dual guitars' melodious reverb.

The ambiance became a touch apocalyptic as the chorus, "Close your eyes and see the sky is falling" resonated beneath a gathering head of clouds that proved ever more foreboding to the unwitting heads in the crowd. This might have prompted some to say "The end is near," and in fact it was. Chants for an encore were rewarded with a few jams, including "Ode to Clarissa," a B-side from "Rated R." The song's chorus, "I'm the one your mamma told you 'bout," perfectly summed up the band's appeal.

The musical acts showcased at CMU's Carnival the following weekend were a far cry from the demented misanthropy of QOTSA. Two well-known headlining acts were slated to perform outdoors on the Cut: They Might Be Giants (TMBG), cultish idols praised for uplifting dork-rock anthems, and Jurassic 5 (J5), a hip-hop group with old-school appeal and socially conscious zeal. Drizzling weather dampened the Carnival's opening on Friday, April 11, leaving campus's freshly sodden grass moist like a sponge. The skies later cleared and things were looking up as They Might Be Giants' scheduled show time of 7 p.m. approached.

Upon moseying on down to the Midway that afternoon, I was shocked to find only a handful of people paying heed to the student acts on the second stage. Biding my time in the haunted amusement park, I heard a faint trace of underground hip-hop coming from, of course, the Underground.

Sponsored by the school's Black Graduate Student Association, what was dubbed simply "The Show" featured a handful of hip-hop acts in the Underground's casual cafeteria environment. After a long delay, a jovial emcee/comedian taunted a listless crowd, his self-importance emblazoned across the back of his shirt in an airbrushed graffiti spelling of his moniker, "That Cat." Obviously uninterested in the feline banter, some enterprising emcees sprouted an impromptu rhyme circle until student act Unknown Prose took the stage and the growing crowd's attention.

Anchored by student Justin "Bud" Bishop, the charismatic duo (see "Hip-hop CD, p. 12) spat pinpoint punctual rhymes and exhibited an incredible presence of mind, as

well as stage. Shortly thereafter, I left for the TMBG show, only to be greeted by an empty outdoor stage with no signs of a primavera performance. I had only to follow my ears, and the makeshift signs, to the scheduled outdoor show's new indoor venue, Wiegand Gymnasium. The poor carnies operating the Midway rides must have shed tears of jealousy upon seeing the mammoth lines for the TMBG show that now spilled out of the University Center.

After a long wait, the TMBG tandem of John Linell and John Flansburgh appeared on the makeshift corner stage with their band of musicians all named Dan. They opened with the mid '90s mainstream mainstay, "Istanbul (not Constantinople)" to get the hordes of bespectacled heads bobbing and the college hippies hopping. The audience looked a bit like a computer science cult, a gathering of introverts who, finding safety in numbers, let loose their pent-up arrhythmia. Judging from coordination alone, it must have been the first time many of the students in attendance had ever set foot in the gym. Moving and shaking, the crowd was evidence of the band's potential to inspire collective cult action with tunes like "Birdhouse in Your Soul" and "Doctor Worm."

I ducked out of the way of a caravan of small children with their parents riding caboose and dodged the crazies clad in plushy animal costumes. The most compelling spectacle in such a circus of the absurd was not the spotlighted band, but the clownish fans.

As for the band, though, this was their third trip to Carnegie Mellon, averaging about one every five years now, in their 20-plus years of playing together. TMBG's trademark brand of campy, eclectic joke rock with a conscience has earned them the opportunity to coast on reputation alone and embark on other ventures, like children's albums. Their latest album, "No!" is just that, a collection of bizarre children's songs and nursery rhyme rock that is sure to fill out many a 30-something super-fan's TMBG collection. Yet, in spite of their recent appeals to the Nickelodeon demographic, the band managed to belt out a drinking song Friday night, reaffirming their adult orientation and placating those Carnival goers with illusions of intoxication.

The Giants' playful putzing around and tongue-in-cheek delivery were well received

by the faithful who responded to the band's indulgent little game of sing-along ping pong with the audience. They Might Be Giants lived out the rock star dreams of all dorks in attendance. It really is hard to dislike the band of amiable extroverts. But I did.

The gym's atrocious acoustics limited any chance of a good performance. Sounds bounced every which way off the walls and ceiling, making it hard to hear Flansburgh bemoaning the venue's horrible sound surrounds. Amid the cacophony, the two Johns sang in high-pitched nasal tones about the burden of everything banal while sounding quite helplessly anal.

The gym may have been a perfect sanctuary for TMBG's reverent tribe of sheltered oddballs, but it definitely didn't fit the bill for the following day's lively hip-hop performance.

Saturday's Carnival events played out under much more favorable skies than the previous day. The sun was out in full force and so were the coeds, littering campus like ants on a forgotten Popsicle stick. The main attraction was Jurassic 5, a crew of four able emcees and one superhero deejay.

But my high hopes for an outdoor extravaganza were soon dashed when I waltzed over to campus and spotted lines of people encircling the University Center. It was the same old tune; what could have been an outstanding alfresco performance was now confined to the musically unfit Wiegand Gymnasium. The change of venue was reportedly made because of the risk presented by possible heavy winds to the deejay's turntable precision. Of course, the show was delayed and, to top it all off, throngs of hip-hop heads and die-hards were turned away for lack of a CMU ID, leaving ample room for students—fans or not—to stand around indoors. Not only was it sacrilege to house the free outdoor show inside a gymnasium, but the CMU-only policy smacked of unfeeling exclusivity and elitism.

As if the preceding night's show hadn't been testament enough to the gym's unsuitable acoustics, Saturday's Jurassic 5 concert definitely was. Ill-equipped student sound technicians without an ear for hip-hop tried fiddling with knobs and buttons to improve the sound, but it was to no avail as the bass-heavy beats muffled the deejay's scratching and the emcees' rhymes. If I hadn't seen them all standing together onstage, I would have thought the members of J5 were performing in opposite corners of the gym as the lyrics and beats pinballed off every angle of the inferior interior.

The group, however, maintained their composure. Blazing through songs both old and new, and even buzzing a tune on some kazoos, J5 played to the restless crowd like experienced snake charmers. The deejay, Cut Chemist, dazzled onlookers as he scratched out a solo on a mobile turntable strapped to his shoulders like a guitar.

The emcees did their part, too, preaching messages of hip-hop hope with rhyme and reason that inspired audience interaction, and voicing a stridently anti-war message that had the house bumping with abandon.

Still, the group couldn't transcend the horrible venue and some weary fans began to trickle out into the open air. Growing stir crazy and anxious to exit, I followed and took a seat outside near the gym's side door. In the path of a cool breeze and still able to hear the music with a window view of the stage, I had, no doubt, the best seat in the house.

By the time Spring Carnival rolled around, it seemed that Queens of the Stone Age had delivered the death knell for the winter of our discontent with blazing guitars and a disturbing demeanor. As for Carnegie Mellon students, it wasn't the winter that persisted, akin to Punxsutawney Phil's prophecy, but the discontent, thanks to planning follies and lackluster live performances that tarnished the very primavera spirit of this year's Carnival.

ANDREW MCKEON

Saturday CPR classes cover the latest in techniques

Most people are familiar with the basics of cardiopulmonary resuscitation or CPR. We all know the drill—check for breathing, check for pulse, start the cycle of two breaths and 15 compressions.

If your American Heart Association CPR certification is up to date, however, you would know that the standard “check pulse” step has changed. Everything you need to know you have the most up-to-date information was covered in the Saturday CPR classes offered this spring by Carnegie Mellon EMS.

Checking for a pulse is tricky. Many times, according to the AHA, laypeople performing CPR have found a pulse when in fact the victim had no pulse. Equally as bad are the numerous times rescuers could not find a pulse and began chest compressions when the victim’s heart was still beating.

Because of these complications, the AHA changed its guidelines from checking for a pulse to looking for signs of circulation. Some of these indications are movement and healthy skin color.

Time is critical when dealing with a person whose heart has stopped. Risk of brain damage occurs in minutes. Irreversible brain damage occurs at about four minutes. A person will experience brain death after about six minutes without oxygen. Ambulance response time typically averages about six minutes.

CPR is a simple yet vital procedure for a person in cardiac arrest. Breathing air into the victim’s lungs provides the blood with

oxygen. Compressing the chest pumps the heart to circulate the blood through the body, providing the brain and other vital organs with necessary oxygen. CPR is not designed to restart the heart – it just keeps the brain alive until more advanced medical support can arrive. Generally, an electric shock from an automated external defibrillator (AED) is required to restart the heart, and in a sense, bring the person back to life.

Many people at Carnegie Mellon realize the importance of CPR training, however, it is a hassle to enroll and attend a class to get certification for a skill that everyone hopes will never be used.

To meet the need, CMU EMS provides a quick and convenient solution.

In a recent series called “Saturday Morning CPR,” CMU EMS offered all faculty, staff and students the opportunity to learn and become certified in CPR. The classes were conveniently located on campus in the Old Student Center and they take less than three hours.

CMU EMS offers a variety of classes to all members of the campus community including American Heart Association CPR and AED, and American Health and Safety Institute first aid. For two weekends in the spring, CMU EMS skipped the Saturday CPR classes in order to provide all-day training for new members. Even with the intensive training schedule, CMU EMS later offered Saturday CPR classes, starting with “Heartsaver CPR for Family and Friends” and ending with “Heartsaver CPR for Adults

and Children.” At the end of the AHA Heartsaver CPR courses, participants who successfully complete both a written and a practical exam receive a certification card.

Despite the cost of only \$10 to \$15, enrollment in the courses has been disappointing. Five people must sign up for a scheduled class to run.

Carl Peterson, former executive director of the program, explains that because two instructors are needed, it is not efficient to run the class for fewer than five students. CMU EMS does not make any money from the classes, which are offered as a service to the campus community. That said, there were exactly five participants enrolled in one CPR class and the second class also had enough people for the class to run.

Peterson is not discouraged by the low turnout. In the fall semester, the Saturday morning CPR classes were really a pilot program that flowed over into the spring. More of an effort will be made to publicize the classes in the future.

CMU EMS offers other services to the campus community in addition to certification classes. The Chemistry department sent 30 people to a CPR session earlier this year. On the horizon is a possible collaboration with Student Life to add CPR and basic first aid to the schedule in the Resident Assistant training week.

Christine Blankertz, the community advisor of Boss and McGill Houses, attended the Heartsaver CPR class in early February. She hopes to organize a training session

covering basic first aid, CPR and dealing with intoxication for her resident assistants. Steve Marshall, training director of CMU EMS, is more than willing to accommodate. “We can tailor the program to the information you want,” he told Blankertz.

Blankertz believes it is important for CAs and RAs to know what to do just in case a problem arises. “I would take all the EMS classes if I had time,” Blankertz said.

Levi Broderick, another participant in the class, has personal reasons for learning CPR. “My mom’s friend died of a heart attack in an airport a few years ago,” he said. He too wants to be ready if a problem presents itself.

And emergencies do occur at Carnegie Mellon. Rescue breathing is administered several times a year on campus, according to Peterson. Typical problems leading to the need for rescue breathing are illnesses such as asthma, seizures, allergic reactions and excessive consumption of alcohol. CPR has been performed on campus as well. In the three times since 1998 that CPR was needed, two victims were over the age of 50. The third case was a traumatic car crash.

CMU EMS plays an important role in the response to emergency situations on campus. If you want to get involved, take a class or just find some additional information about CMU EMS you can visit them at www.cmuems.org.

ANNE DOLLARD

Turrell draws a crowd—twice

James Turrell, an acclaimed American artist best known for his explorations with light, came to Carnegie Mellon on March 12 to speak about his site-specific works in conjunction with his exhibition “Into the Light,” then appearing at the Mattress Factory. The lecture had been promoted as free and open to the public and thus drew an enormous crowd.

Mass chaos ensued at the lecture after a fire alarm went off in McConomy at 7 p.m. Everyone in the jam-packed auditorium, as well as the 200 or so people still waiting in line, had to file out of the University Center. After 20 minutes or so, police and staff were faced with the question of who had been inside before the alarm, and who hadn’t.

As people streamed back into the auditorium through doors on the west side of the building, a Mattress Factory staffer tried to hold back the crowd. “We are relying on your honesty and good citizenship to tell us if you have already been inside.” A simulcast of the lecture was set up in the Connan Room. Still, people had to be turned away.

In introducing Turrell, the Mattress Factory’s Barbara Luderowski, artistic director, and Michael Olijnyk, curator of exhibitions, told of first meeting him in 1982 in a cab in New York City. “Now that you’ve had a show at the Whitney,” Luderowski teased, “you should have a show at the Mattress Factory.” Thus began a long relationship with the museum and the artist.

Turrell’s latest exhibition at the Mattress Factory included eight installations representing the widest variety of his work ever shown in one place. An outdoor installation called “Skyspace” altered and heightened the viewer’s visual perception of light by forcing viewers to fixate on a 10-square-foot portion of the sky.

In his lecture entitled “Plato’s Cave and the Light Within,” Turrell discussed the importance of art in today’s climate. “No nations seem to be behaving right now,” he said. “It’s a good time for art.” He also explained his extremely ambitious and career-long project titled “Roden Crater” in which he is transforming a natural cinder volcano in the Arizona desert into a naked-eye observatory.

WHITNEY HESS

Hip-hop CD emerges from collaboration

In an unprecedented partnership between the School of Music and the Graduate School of Industrial Administration, hip-hop artists Justin Bishop and Jason Bowen were given a jump-start launch into the world of music business.

Their hip-hop group, Unknown Prose, is the first musical group to reap the benefits of the Arts Greenhouse, a self-sustaining, collaborative effort aimed at launching Carnegie Mellon- and Pittsburgh-based artists into the music business. Part of the project’s community-oriented emphasis also includes an outreach effort to the Hill District.

In true CMU style, the project began with an e-mail Bishop sent to Riccardo Schulz, a recording technology professor in the School of Music, asking to use the new studio to record his hip-hop.

After auditioning on the spot for Schulz, Bishop was encouraged to bring in his partner Jason Bowen, a theater major at Skidmore College. Bishop, a double major in political science and psychology at Carnegie Mellon, goes by Bud, a nickname that has stuck since pre-school; Bowen goes by J-Sizz. Together they call themselves Unknown Prose. The two went to high school in Boston, where they had their own radio show.

Schulz took the initiative to inquire into GSIA to see if the school would be interested in working on a joint project. “They’re supposed to be number three in the world. Let’s see what they can do,” he said.

How’d it go? “They hit the ground running with this one,” he said.

Ajay Kalra, associate professor in GSIA, took the responsibility of leading a class of eight students this semester in developing a marketing strategy for Unknown Prose. Because they were starting with an “empty slate,” Arshad Chowdry, one of the GSIA students in the class, said that the first six weeks were difficult because no one was sure of their roles. Nonetheless, they were confident they could market the arts.

Although the class was academically oriented, Chowdry noticed how their work “really quickly turns into real life.” They held weekly class meetings that Bishop often attended, and which he described as energetic. They were often taped by 21 Productions, and snippets of video ended up in the trailer.

The GSIA students held focus groups

with college-age hip-hop aficionados and brought their findings to Bishop to help him and Bowen design an image for Unknown Prose. Chowdry said the CD covers combines professionalism, integrity and movement. GSIA found that the focus groups—a subset of college-age, hip-hop aficionados who appreciate lyrics and go to concerts—didn’t like some of Unknown Prose’s background beats, so they let the artists know.

Knowing that pop artists make the majority of their money from touring, not CD sales, GSIA designed its marketing strategy accordingly. The students also decided to use the Internet as a tool rather than an obstacle; several of Unknown Prose’s songs are available to be downloaded from KaZaA, one of the post-Napster music sites. Unknown Prose has done three concerts so far, two at the Morewood Underground, and one at Foundry Ale Works in the Strip District. (see article, page 11)

The students also discovered that there are no established criteria to select which artists will be successful. For future artists who look to the Arts Greenhouse for support, there will be an audition process “almost like ‘American Idol,’” said Chowdry.

Chowdry said he wished more people were working on the project; they could have used 20 undergraduates to help out with the field research.

He thought that publicity of this project will also assist CMU’s positioning by demonstrating students’ opportunity to do interdisciplinary work. Unknown Prose had access to first-class recording facilities and professional promotion without having to go outside the university or spend a cent.

Although the GSIA students are all graduating, it is likely that other business students will be working on both Unknown Prose and the Arts Greenhouse next year. This year, the students donated their time, but an application for funding for next year is pending. Veenu Taneja, another GSIA student who worked on the project, said that there have been informal commitments from all the parties involved.

The recording course only includes a few music majors, but most read music and have a musical background. “They know enough about music to make musical decisions,” Schulz said.

So who gets the last word? “The engineer

is to serve the artist,” said Schultz. Generally, Unknown Prose enjoys the suggestions from the recording studio, although Bishop said they tend to fight a lot about reverb.

Alex Geis also met Schulz at the right time. Geis is a junior mechanical engineering major and the president of 21 Productions, a multimedia organization, which began his sophomore year in high school.

The project developed out of an interest in software and video. “Originally it was more of a hobby,” said Geis. His other friends have continued to spread 21 Productions around the country, as they branched out and attended various universities.

At CMU this year, 21 Productions has recorded and released DVDs of Lunar Gala, Greek Sing, Scotch ‘n’ Soda’s “Hair” and Dancers’ Symposium, just to name a few. QiJun Leo, a junior mechanical engineering and public policy double major, is in charge of the organization’s PR. “A lot of people are going around saying, ‘Hey, have you heard of 21 Productions?’” he said.

The group does web support, video documentation (paired with Schulz’s music) and design for Unknown Prose. All the work it does is *pro bono*, with the understanding that if the hip-hop duo finds success, 21 Productions will reap some of the benefits.

The project is also based in the Center for Arts and Society, led by director Judith Modell. It involves searching 12 schools in the Hill District, a low income area, for potential young adult artists to benefit from the greenhouse.

In conjunction with a grant received by Natalie Ozeas, associate professor of music education and associate head of the School of Music, Bishop worked with a general music class at Reizenstein Middle School in East Liberty.

Bishop worked with the teacher to develop a program that taught the middle school students a history of rap styles. The students also had the opportunity to write their own lyrics and use software to generate their own beats. Three of the students in the class who demonstrated talent will record at CMU and also perform at their school. He also did a workshop with teachers at Frick Middle School to inform them about current popular trends in the music young adults listen to.

ALICIA SANDERMAN

COMMENTARY PAGES

Gatekeeping inconsistent at university gyms

Last summer and again in the fall, Ryan Harris and Charles Martin, both Carnegie Mellon students and Tartan football players, were asked to leave the University Center Gym. To facilitate their weight training, they then walked across campus to use Skibo Gym — and soon thereafter were asked to leave that building as well.

The problem was they had been out of school for a year and were not “current students,” a status that could affect others during the summer months.

“I thought we were still able to use the facilities, given the fact that we were both in some way still affiliated with the school,” Harris said. Martin agreed.

Martin worked last fall as a volunteer announcer and commentator for the broadcasts of CMU Tartan football games on WRCT. He was not enrolled for classes because he was not sure whether he was staying or leaving to study at another school. Harris, a former football player for the Tartans, was waiting for word about financial aid and was hoping to attend classes in the fall. Both Martin and Harris were devoted to weight training and had gone to the UC gym almost every day prior to this incident.

Why were the two barred from using the gym? What is at stake here is the policy involved and how it is enforced.

The following is what is posted on the Athletics department website:

“Carnegie Mellon staff members are welcome to use the indoor athletic and recreation facilities in the Skibo Gymnasium and the University Center, as well as the outdoor tennis courts and all-weather running track. They can also use the swimming pool, racquetball and squash courts, weight and aerobic equipment. The Skibo Gymnasium has a free-weight room and body shop with a full circuit of universal weight and aerobic equipment, as well as a gymnasium for basketball, volleyball and badminton. The Athletic department offers a full schedule of aerobic classes and physical education activities for faculty and staff as well as students. *A Carnegie Mellon ID card is required for admittance to the facilities.*”

Harris and Martin had been working out at the UC for most of the summer, and were looking forward to continuing their work-

outs last fall. Three weeks before they were barred, a facilities manager at the University Center had approached Harris and asked to see his ID. Harris did not have it. The manager gave him a warning and proceeded to tell him that he needed to be signed in as a guest. Harris left.

This did not deter Harris or Martin. They decided to carry out their training at Skibo instead. “I made sure I had my ID next time,” Harris said. They went to the gym the next day. In the next three weeks, the two men were able to work out at the UC and Skibo almost every day with no problems.

Then, as Harris was walking down the Skibo corridor, he bumped into the facilities manager who had warned him before. Martin had already entered Skibo a few minutes prior to Harris, and was walking down the stairs to the weight room when he heard an argument break out.

The facilities manager was not happy. As Harris tells the story, the manager had checked Harris’ student account and the HUB had told the manager to ask Harris to call them regarding a financial situation. Harris was unhappy because the manager had taken his ID from the UC equipment desk to check his status while he was working out.

The argument ended abruptly when the manager called campus security. “I couldn’t believe he would assume that I am a thief and a liar. I didn’t even have an outstanding balance. The HUB just needed to find me to see if I needed financial aid for next semester,” Harris said.

The policy states that if you don’t have a Carnegie Mellon ID, then you cannot gain access to the facilities. It doesn’t specifically say, however, that you have to be a “current student.” A “current student” is a student who has paid his or her tuition and has enrolled for classes.

If you have a CMU ID, what distinguishes a “current student” from everybody else is the Port Authority Transit sticker on the front of the ID. The sticker is distributed by the HUB to every student currently enrolled. A person without one can’t use the athletic facilities. Before PAT stickers, the only way to check a student’s status was to access his or her account.

Because Harris didn’t have a PAT sticker on his ID, the facilities manager decided to check whether he was current or not. In doing so, the manager learned that the HUB needed to speak with Harris. As a result of the dispute, Martin was suspended from his position as a commentator at football games, and was also barred from entering the two facilities.

“We were there to get our hour of training in,” Harris said. “We were able to use our IDs, get wristbands and use the gym for about three months before we were asked to leave. I don’t know why we were singled out.”

Whatever the reason, the incident raises an important policy issue. If a student has to be a “current student” then why isn’t it clearly stated on the policy, that you have to be “current” as well as have a valid CMU ID? Furthermore, why doesn’t the Athletic department implement the policy consistently by checking every student’s status? Does this also mean that alumni, including May graduates, can’t use the facilities because they are not “current”?

To see if the policy is consistently enforced, I decided to conduct an experiment by walking into the UC and Skibo gyms without checking myself in. Almost every day for two weeks in late April and early May, I put on my workout attire and walked into the UC and Skibo gyms at various times of day.

Every time but one, no one asked me to show my ID or to leave it at the desk. I was able to use the equipment for as long as I needed, without anybody asking me to validate myself. Of the 10 times I entered the UC, only once did a security guard ask me to get a wristband.

When I did leave my ID at the desk, I was not sure whether it was checked to see if I was “current.” I also did not see a computer at the desk that could have been used to check my status. Most of the time students are working the desk and students, because of confidentiality laws, don’t have the authority to look up another student’s account.

The University Center Gym is a lot easier to access than Skibo because the desk is located on the ground floor and the workout room is upstairs, allowing anybody to by-

pass the desk without ever having to sign in. The UC system seems to work on the honor system with help from an occasional security guard who decides whether to enforce the policy or not.

Skibo Gym has a slightly different setup. Inside the front door you should see a student at a desk to your left, checking IDs as people enter. There is no way you can access the gym without passing the desk.

However, it is a lot easier than I thought to get into Skibo without a CMU ID. Only three days out of 10 was there a student at the desk. And on those three days, I’m not even sure whether the students were working there or just sitting at the desk. They never asked to see my ID as I walked through the door, giving me complete access to the weight room, locker rooms and basketball courts.

As a “current student” I was quite shocked to see the careless management of the UC and Skibo gyms that are supposed to be accessible *only* to faculty and “current students.” If the policy was enforced more strictly with each student cross-checked with their accounts, then there would have been no incident. The ID check would be regarded as protocol. The fact that Harris and Martin were given irregular treatment, and I was able to just walk in without any problem, proves that there is an inconsistency of enforcement with respect to policy.

The policy needs to state clearly that students who are not registered for that particular semester cannot use the facilities during that time, and are subject to removal if they are checked. The policy should also state, given the incident with Martin and Harris, that the people who work the sign-in desks will not check student accounts on an arbitrary or discretionary basis.

More important, this policy must be strictly enforced, with someone regularly checking IDs or wristbands at both facilities. Just checking IDs can avoid incidents like this, as every “current student” has the appropriate registration sticker clearly visible on his or her ID. Finally, there needs to be someone checking IDs at Skibo Gym, because anybody can just walk in and out without proper identification.

GEOFFREY JARRETT

Dolly, age 6, dies; survived by ethical, practical debates

Fifty years have passed since the discovery of DNA, the genetic material responsible for the propagation of life. Its anniversary brings to mind several scientific breakthroughs, notably that of the cloning of Dolly, an ordinary Scottish sheep catapulted to fame through genetic engineering.

Cloning is essentially the reconstruction of an embryo by the transfer of a nucleus containing all the genetic information required to create an organism from a donor cell to an enucleated egg (an egg lacking the nucleus). This leads to the production of genetically identical offspring or clones.

Dolly was cloned using a mammary gland cell from a six-year old sheep. What made this technique remarkable was that Dolly was cloned from something other than an oocyte (egg cell), which had never been done before.

Before the cloning of Dolly, scientists believed that different cells in the body had fixed roles; that is, a stomach cell could only yield a stomach cell and nothing else. The birth of Dolly dramatically changed the way scientists and the rest of the world looked at cloning. To some it was the onset of a genetic revolution that would unlock the mystery surrounding disease genes and help “fix” them. To others it was the appropriation of life, somewhat akin to playing God.

Dolly became the darling of the media. Recently she had to be put down after being diagnosed with progressive lung disease. She was 6 years old.

Her death only fueled a bitter debate on the ethics regarding cloning as rumors cir-

culated of how cloning had sped her to an early demise.

The scientists at the Roslin Institute, Edinburgh, who cloned Dolly were quick to say that lung disease was an ailment common to older sheep, especially those housed indoors like Dolly.

As the dispute continues, bioethicists and scientists are presenting valid arguments supporting their respective views for and against cloning.

Scientists believe that cloning is advantageous because they are able to modify genetically the DNA in clones to create transgenic animals, producing therapeutic human proteins such as human factor IX used for the treatment of hemophilia. Also facilitated are nutraceuticals — modified animal products for dietary improvement or the removal of allergenic substances from milk. Altering the genes in these clones also helps to test for ways to avoid rejection of transplanted tissues or organs resulting from xenotransplantation (the use of animal tissues for transplantation to humans).

Genetic modifications also allow for a greater understanding of the mechanisms of cell signaling in different cell types. This can potentially provide new routes to cell-based therapies for a range of human disorders, such as neurological damage, viral diseases, immune disorders etc. Cloned sheep or rodents may also be used as models for studying disease progression.

As utopian as cloning may seem from the previous sentences, it is important to recognize its limitations.

Plans to clone extinct species have attracted a lot of publicity. One Australian project aims to resurrect the “Tasmanian tiger” by cloning it from a specimen that had been preserved in a bottle of alcohol for 153 years. Another research group announced plans to clone a mammoth from 20,000-year-old tissue found in the Siberian permafrost. The DNA in such samples, however, is hopelessly fragmented and there is no chance of reconstructing a complete genome. In any case, cloning requires an intact nucleus, with live and functioning chromosomes. DNA on its own is not enough.

Other obvious requirements for cloning are an appropriate supply of oocytes and surrogate mothers to carry the cloned embryos to term. Cloning of endangered breeds may be possible by using eggs and surrogates from more common breeds of the same species. It may be possible to clone by using a closely related species, but the chance of successfully carrying a pregnancy to term would be increasingly unlikely if eggs and surrogate mothers are from more distantly related species. Proposals to “save” the panda by cloning, for example, would seem to have little or no chance of success because it has no close relatives to supply eggs or carry the cloned embryos.

Another major disadvantage of cloning is its low success rate. Less than 1 percent of cloned embryos survive. Some clones that do survive have other abnormalities, which basically result in their early death.

Lastly, cloning is a very expensive technique. A cloned cow costs \$40,000. Given

its low success rate of the process, this is an inefficient and costly technique to produce cells or whole organisms.

Many ethical and moral concerns have arisen over the potential applications of cloning technology. The technology is still in its infancy and, in the meantime, society as a whole has time to contemplate which uses of the technology may be acceptable and which are not. It is also impossible to predict all potential applications of a new technology. Most will be beneficial but all technology can be misused in one way or another. The solution is not to regulate the technology itself but how it is applied.

Those concerned that scientists were “playing at God” seemed to ignore how much humankind has altered the cards that we were originally dealt. Animals were first domesticated about 5,000 years ago and selective breeding has since produced modern strains of livestock, plants and pets that are very different from their original progenitors. In medicine, our current life expectancy of well over 70 years is a result of direct intervention in nature, from improved prenatal care, vaccination and use of antibiotics.

The human condition is still far from perfect and there is no particular reason now to call a general halt to what most people view as progress.

In the end, it’s all about giving cloning a chance to improve life as we know it.

BATUL MERCHANT

More Talkers

Stopping endocrine disrupting chemicals

On April 21, zoologist, scientist and activist Theo Colborn spoke to a crowd of about 150 people in McConomy Auditorium. Colborn, in her position as a World Wildlife Fund scientist, helped to pioneer research into the effects of endocrine disruption, which she discusses in her book "Our Stolen Future."

According to the European Union, an endocrine disruptor is a "substance or mixture that alters functions of the endocrine system and consequently causes adverse health effects in an intact organism, or its progeny, or populations."

The endocrine system controls reproduction, immunity, metabolism, behavior and various functions.

Colborn has also worked on H.R. 852, the Environmental Health Research Bill. The pending legislation would authorize the development of a research program to study endocrine and hormone disruption.

Colborn said she would like to see all chemicals tested as thoroughly as the FDA tests new drugs before they are marketed.

Some of the offending chemicals Colborn is crusading against are polychlorinated biphenyls (PCBs), polybrominated diphenyl ethers (PBDEs), phthalates, bisphenol A (BPA) and ichlorodiphenyl trichloroethane (DDT). Although the production of some of these chemicals is already prohibited, she wants to force all of them out of use.

These chemicals are found in virtually everything, Colborn said. In a frenzied tone, she listed some of the many places the toxic chemicals may be found, including food, paper, perfume, shampoos, cleaning compounds, schools, cafeterias, federal and state forests, cellular telephones, gas, electric lines and compact discs. The EPA has found residual deposits of Dursban, a toxic chemical, in every living cell it has tested, with the highest levels found in children.

The biggest threat these chemicals pose lies in how they work. The timing of the exposure and not just the dosage determines whether or not the developing child will be affected later in life.

An increase in hypospadias cases among children is one example of a problem Colborn believes is associated with the prevalence of endocrine-disrupting chemicals found in the environment and in living cells.

Hypospadias is a particularly painful deformation of the penis caused by the urethra and the penis not growing at the same rate. As a result, an opening does not form at the tip. Only many surgeries over time can repair this condition.

Colborn left the audience with her impassioned assertion that "We need a world where children are born healthy. We must understand that cleaning out the womb is a matter of national defense. Our leaders must understand that peace begins in the womb."

ANNE DOLLARD

Japan wired for cell phone multimedia

Minoru Etoh, CEO of DoCoMo Communications Labs USA Inc., gave an hour-long lecture, "Recent Trends in Mobile Multimedia in Japan" on May 8 in Scaife Hall to about 120 people.

Over the last year and a half, cell phones have revolutionized phone usage in Japan. About 80 percent of Japanese cell phones are now equipped for data communications, including e-mail, Internet and now cameras, whereas those uses have just begun to take off in the U.S.

In Japan, technology trends are a key component to Japanese consumers. DoCoMo's focus has been on developing ways to further cell phone technology via the Japanese market.

Currently in the United States, 3G is the technology that newer phones are shipped with. The technology supports Internet browsing capabilities at a certain speed. The speed varies depending on coverage, but it is not faster than wired connections.

Etoh explained that the key to successfully integrating data usage in cell phones is to create a technology that enhances speed, so consumers can load web pages, e-mail and send pictures as fast as they would through a DSL modem.

"Our goal is to follow what successfully happened to the legacy of the Internet, without sacrificing the meaning of mobility," said Etoh.

He went on to forecast that cell phones in the future would enable consumers to make payments from a bank account with just the touch of a button, or to access a computer from the palms of their hands.

Moving a piece of data faster requires a more complicated system. DoCoMo is trying to implement aspects of how the Internet works to wireless networks. On the Internet, information is sliced up into data packets so they can move faster.

DoCoMo wants to implement this kind of architecture to cell phones so that the whole network will move faster as a growing number of people use it. He expects the technology to allow users to send not only large chunks of data (such as a movie), but also small chunks of data (such as e-mail) at a faster rate.

It requires a lot of research and develop-

ment to make the technology faster and more efficient, but once that goal is reached, the next generation of cell phones will have greater functionality and will transmit data much faster.

GEOFFREY JARRETT

Traditional African healers treat AIDS

Imagine the prospect of a more effective, collaborative effort to fight AIDS in Africa. Then consider the possibility that the groups involved would be delegitimized by working together. Doesn't seem likely? Think again.

Robert Thornton, a professor of social anthropology at Witwatersrand University in South Africa, shared the findings of his research in a lecture entitled "Traditional Healers, Biomedical Practices, and Sexuality Prospects and Barrier to Co-operation" on April 22 in Baker Hall. The Engineering and Public Policy department sponsored the talk, and about 10 people attended.

Thornton spent 25 years in South Africa and has the accent to prove it. From April to August of last year, he returned to Mpumalanga, Gauteng and Kwa Zulu-Natal, eastern parts of the country, to conduct research on medical doctors and traditional healers. He worked with Edward Green of Harvard University and was supported by the Margaret Sanger Institute in Boston. He concluded that although patients often see both kinds of specialists, each are respected in their own right, for different reasons. Encouraging them to work together would discredit both healers and physicians.

There are three types of traditional healers: "sangomas," herbalists and faith healers. The "sangomas" work through the intercession of ancestral and other spirits. "Sangomas" are part of a "pande," the group of people who are trained by a senior expert. The herbalist, on the other hand, learns his vocation through his family. Herbalists don't diagnose patients, but prescribe herbs that they have often traveled far and wide to obtain. They tend to prescribe emotional or sexual remedies. Finally, the faith healers diagnose and pray for their patients.

Neither racial boundaries nor prices separate the three types of traditional healers and medical doctors. Patients have no qualms about going to another type of professional if they are not satisfied with one of them. In fact, because Africans believe that taking medicine is killing something in one's body, they will often see a traditional healer to be cleansed of the "toxin."

Thornton said that the traditional healers don't converse with medical doctors. "Sangomas" use "biomedical metaphors" to describe what they believe are equivalent procedures. For example, they believe "throwing the bones" is comparable to an X-ray, just as examining the Spirit substitutes for a blood test. Thornton said traditional healers feel, "We can see through people because we can feel their pain."

He found that a distinction must be made between "cure" and "treatment." Whereas medical doctors say they can't even effectively "treat" AIDS, traditional healers think they can "cure" patients. This belief is probably due to the spontaneous remissions that a patient may experience. However, some methods and herbs are effective in treating symptoms; they can improve appetite and control diarrhea, esophageal thrush (a fungal infection in the mouth and/or throat) and depression.

Thornton found several obstacles to cooperation. There is no formal system of registering healers. In fact, he said that there is a tendency for "sangomas" to be deliberately secretive, although they will talk with their "pande."

Traditional healer organizations are anarchical. Religion is also an impediment to cooperation as nurses tend to be born-again Christians who are especially hostile to doctors. "People see these as separate powers," said Thornton.

There is no national health care system; hospitals are rare and overcrowded. Thornton said that governmental intervention is probably unlikely and unadvisable anyway.

"What we don't see is a real awareness of African beliefs in sexuality," said Thornton, referring to plans for intervention. He said the government is often inconsistent or in denial that AIDS is such an epidemic.

"[Doctors] seem to have more confidence in their patients than traditional healers." Unfortunately, because of spiritual beliefs about the exchange of fluids in sex, he said, many South Africans are unlikely to wear condoms or be faithful to a single person. They see the spirit concept as more concrete than transcendental. Traditional healers are more pragmatic and acknowledge this.

Thornton said, "Any sexual exchange involves some gift-giving."

Sex is seen as an act where both vaginal secretions and semen are equal and transmitted to the other partner. The fluids are conceptualized as blood. "The body dies but the blood endures," he said. This is why there is such an emphasis on unprotected sex and monogamous relationships are rare.

ALICIA SANDERMAN

Focus
welcomes
questions,
comments,
complaints
and fulsome
praise.
Write bc1z
@andrew

Taking a risk at Leadership House

Last March when it came time to decide where I wanted to live during my senior year at Carnegie Mellon, I was torn between staying in off-campus housing or moving in to a special interest house on campus with seven other girls.

The decision was difficult to make. I could not figure out if I cared more about maintaining my own space with my roommate and best friend, or about living in a house full of girls where there would always be someone around to keep me company.

Another dilemma was that my roommate left the decision up to me, claiming that she did not care either way, although she would be the only girl in the house who did not belong to Delta Gamma sorority. The two of us had gone through informal recruitment the spring of our sophomore year and I had been offered a bid while she had not, so the whole sorority issue had become an area of unspoken tension between us — even though the tension may have been a product of my guilt over joining without her.

So we decided to take a risk and agreed to

move into the newly named Women's Leadership House. It was close to our classes and the on-campus food vendors, which was important to my roommate and I because we suffered, and still suffer, from bad cases of laziness. We also thought that it would be a good change for us to live with a lot of people because it would bring more excitement into our lives.

We moved in August, finding our room to be very small compared to our off-campus apartment from the year before. The house was kind of dark because the back of it sat at the bottom of a small hill covered in trees. Our new roommates seemed much more enthusiastic about moving in than we did, and we were worried. The lack of light and size depressed us and made us regret our irreversible decision. We made plans to move out of the house and into anywhere else — plans that were unrealistic and would have been detrimental to the other girls in the house. Despite all of our talk we knew we were stuck.

As the months passed, however, the house

became our home, our small room became cozy and the other girls became our friends.

Looking back on all of the late night procrastination snacks and laughs I have had this year with these girls, and what true and lasting friendships I have made, I now look at the decision to move in to the house as one of the best of my life. Living here has made my senior year so much more fun and rewarding than it ever could have been without this house full of girls.

Although my roommate has remained more distant from the group than the rest of us, she has made new friends and experienced the changes that can happen in one school year just by taking a risk.

Making the decision to move in to a new place with new people — and going from regretful to grateful — has taught me how wonderful change can be, and how the fear of taking a risk can turn into joy. My sadness about having to say goodbye to my home full of friends is much stronger than the fear I felt about moving into a house full of girls.

SYLVIA MOSSER

Diversity, according to three faculty members

This year in a speech on Martin Luther King Day, President Jared Cohon addressed the question of minority presence in the university, saying, "We've made good progress in student recruitment, admissions and retention, some progress with regard to women in the technical areas, both faculty and students, and in some leadership positions. I think our biggest weakness is in the minorities in management and leadership positions, and faculty."

With this in mind, Focus posed several questions to faculty members Andres Cardenes, Omer Akin and Milton Cofield.

What do faculty members think of Carnegie Mellon's faculty and administration community?

Andres Cardenes, professor of Music, feels that CMU is doing a good job at promoting diversity in the faculty and community though wishes for more diversity. "Being Cuban-American, I personally feel extremely welcome and supported by the school and university as well. I wish we had more African-American applicants in violin studies but for many socio-economic and cultural reasons, we probably won't see much improvement in this area. Even I as a student rarely had contact with African-American classical musicians, and even less so as a professional."

Omer Akin, professor of Architecture, says, "Thanks to Jerry Cohon's leadership we have been inspired and motivated to make diversity an important agenda item. However, we have a long way to go. Some impediments (like climate, pipeline pro-

grams, recruitment and nurturing) can be immediately addressed, while other issues (like culture and increased numbers of diverse individuals) are much harder to attain."

Milton Cofield, senior lecturer in business management in GSIA, has had only positive experiences at CMU. "My personal experiences at CMU have been nothing but good. My perception of this issue with regards to the breath of the question you ask is that CMU has so much diversity in cultures that it must be welcoming to cultures. Largely in the university community, of all the universities that I have been affiliated with, people are "welcomed" on the basis of what they can contribute. Welcoming cultures depend both upon the individual and the institution as a result. Consequently, it is hard to generalize on this issue and what is easier to assess is whether a particular situation feels unwelcoming, rather than welcoming. Clearly CMU is not an unwelcoming university in my experience."

Should Carnegie Mellon enforce affirmative action for faculty?

Akin says, "CMU would benefit from a diverse faculty simply because it would make us better. We would, as an institution, become better, because our institutional values and judgment will be informed by sensibilities that are inclusive rather than exclusive. Also, I most certainly believe in a type of affirmative action that improves our diversity without sacrificing quality — which I consider absolutely feasible."

Because of his personal struggles,

Cardenes believes that while diversity would be helpful for faculty, affirmative action is not necessarily the right action. "I feel that there are still some socio-economic biases in the world that do not allow all peoples equal opportunity in all areas of education. Should those people have jobs based on their ill fortune? I felt the sting of prejudice and lack of support. I still made it, however, through great resolve, aspiration to be the best, no matter what, and through great faith and humility. CMU would benefit from being more diverse, but not at the expense of hiring less than qualified faculty or accepting marginal students. Obstacles in life are yardsticks of resolve and dedication; reward those that overcome them."

Cofield doesn't have a definite opinion on the matter, "The issue of affirmative actions is whether or not people are excluded or whether or not the negative perceptions of which I spoke earlier are so limiting as to prevent people from having opportunities. We know that in some cases it is. So in order to "address" this we need to think consciously about how and when it is being used arbitrarily to deny opportunity. This type of action is needed."

How is Carnegie Mellon compared to other universities?

Akin says, "I have taught at Virginia Polytechnic Institute and State University, Istanbul Technical University and Yunnan Polytechnical University. CMU is an academically intense institution. Like most leading higher learning institutions, it has been focused on excellence in research and teach-

ing, sometimes to the exclusion of other things that make life wholesome. This includes the appreciation of the diverse points of view about learning, teaching, collaborating, researching, nurturing, disseminating and playing, which only happens in a diverse environment. All of these are essential for a healthy academic environment and we at CMU have been poorer than many institutions with which I have been in contact over the past 30 years."

Cardenes says, "I have worked at other universities such as Indiana University, University of Utah, University of Michigan. Indiana and Michigan are larger music schools, therefore [with] more people to hire in a more diversified way. CMU School of Music is quite good, I believe. We have many nationalities represented, as well as several different racial groups including, Hispanics, African-Americans, Asian-Americans. For a relatively small school, I think we are doing an excellent job."

Cofield says, "I have taught at two other universities. One was a public university and the other a private technical university. The faculty of CMU is the most culturally diverse faculty of the three universities. Within these departments and colleges that I was affiliated with in these universities, the public university had more racial diversity (but only slightly so) and the private technological university had about the same amount of racial diversity."

ELSIE LAMPL

Dancer's Symposium: 100 dancers kick up a storm

There are things in life that you leave behind and never expect to return to. For some, it's a person or a place. For me, it was dancing.

Growing up, being a dancer was always the thing that I felt best described me.

Gillian, is she the one with the brown hair?

No. She's the one who dances.

So, when my mom got sick and I had to quit ballet after eight years of training, I felt as if I had lost my identity. I was 13.

After that, I learned to love other things. Books, above all else, I loved and used to patch the cracks that no longer being able to dance had left in my sense of individuality. I read. And read. Books became my new nametag.

Gillian is the one who reads.

This got me into to college. At 17 I left my hometown in North Carolina to major in English at Carnegie Mellon. By that time, dancing was the old, beloved coat tucked into my attic of memory. Imagine, then, my surprise when the first letter I received from my mother at college said this: *I think that you're going to get the chance to dance again.* I didn't believe her. But college has a way of helping people find themselves, or, as in my case, helping them retrieve parts of their lives that had been lost. My mother's words had been prophetic. And it didn't take long for the wish in them to come true.

This story, however, isn't about me. I'm in it, sure, but it's really about second chances. And first chances, for people who never knew they had them. It's about what can happen when people from every corner of life at Carnegie Mellon get together for

one purpose — to dance.

It's 8 p.m. on Saturday, May 3. I'm standing in one place I'd never thought I'd be — backstage at the Philip Chosky Theatre. I'm in the wings with dozens of other people, all of whom are students, all of whom are anxious to dance. It's the final performance of Dancer's Symposium's Spring 2003 show and there is an enormous sense of expectation in the air.

We're five minutes to curtain. The house is packed. Tomorrow is the day before finals and we're all exhausted but that is the furthest thing from our minds. We're running on caffeine and adrenaline. And no one is complaining. We all want to be here. Why? What is worth sacrificing sleep, studying and our occasional sanity for? A little thing called Dancer's Symposium.

Dancer's Symposium (or DS to students) is an organization on campus for undergrads who want to dance and who need a venue in which to do so. At the end of every semester DS puts on a show for the campus community. More than 100 students perform in this show, which usually consists of 25 or so student-choreographed pieces, and which takes an entire semester to prepare for.

I remember the first time I auditioned to be in a DS show. I'd seen a poster on campus advertising auditions and something in me clicked. It was the first time that I'd been presented with an opportunity to dance since I'd given it up long ago. So, early one Sunday morning I dragged my friends out of bed and we all trooped to the UC to try out.

DS auditions are open to the entire campus — to people with and without dance experience — so there was a big turnout.

Every type of person showed up from ballerinas in leg warmers and leotards to guys in gym shorts and sneakers.

We all took numbers, learned a few counts of a dance and performed it for the student choreographers. A few days later I got an e-mail saying I was in. The beauty of it is that almost everybody is accepted. In a DS show, there's room for everyone.

And room for every type of dance, too. In a typical DS performance, there's hip-hop, ballet, Indian dancing, traditional hula, break dancing, tap dancing, jazz and modern. I've been in pieces ranging in style from Fosse to Latin to pure pop. Each time I've learned something new about dance and about why I love it.

On this particular night, at this particular show, however, I have a special investment in the piece that I'm performing in. It's mine. This semester, my last at CMU, I decided to try my hand at choreographing. It has been one of my most rewarding college experiences. And one of my most challenging. Faced with the task of creating a performance-worthy piece in a few months, my co-choreographer Kelly McLaughlin and I spent four hours of every Sunday this semester in Skibo gym's Fencing Room (yes, an actual fencing room, and one of the only spaces on campus conducive to dancing) with our boom box and notepads, trying to pluck creative choreography from the dusty corners of our minds.

Then there is the matter of teaching it. When we auditioned girls for our piece, we chose dancers with a wide range of ability, from girls who'd never had formal training to ones who had apprenticed with the Ameri-

can Ballet Theatre. For me, part of the attraction in DS is that it unites people who never thought they'd dance with people who were hungry for their next opportunity to perform. Along with this brand of unity, however, comes a great disparity in skill and experience.

But Kelly and I were never ones to back away from a challenge. In order to equalize the differences in experience level, we taught a formal dance class before each practice, enabling everyone to begin rehearsal having learned at least a minimal amount of technique. We still had people interrupting practice to ask, "Which way is stage left again?" and "How do you do a pirouette without getting dizzy?" but miraculously, at the end of three months, all 12 of our dancers had managed to blend.

And now, we're all backstage, grinning like idiots through the thick layers of our stage makeup. The house is quiet. We are all holding hands, holding our breaths and waiting.

For some, it's their inaugural dance, the first time they've performed onstage, the first chapter of their life's new, unfolding storyline. For others, it's a swan song, their last dance before graduation, the end of a certain era in their lives. But for all of us it's a culmination of hard work and dreams — ones we knew we had and, for me, ones that I'd thought were forfeit.

But that's enough of that. The lights have dimmed and the stage is waiting. It's finally time for me, for all of us, to dance.

GILLIAN BRIGHAM

Farewell to Focus editor Jim Davidson after nine years at the helm

This is the last issue of Focus for our editor Jim Davidson. Jim is moving on to pursue ordination as a Presbyterian minister after graduating last year from the Pittsburgh Theological Seminary.

Lynn Berard, head of the Science Libraries, has been picked by the Focus steering committee to take over the newspaper. Current managing editor Brian Connelly will still be working on the paper in the fall.

Jim began editing Focus in 1994. Focus has a dual identity: it is the Carnegie Mellon

faculty and staff newspaper and also the advanced Journalism Workshop offered by the English Department. Jim has taught the Focus workshop every semester since September 1994. He also taught an additional journalism course every year, either Newswriting or Contemporary Journalism.

A generation of students has passed through Focus. Jim certainly considers the students his finest accomplishment at Carnegie Mellon. He has spent uncounted hours listening to students: their writing

problems, their family problems, lame excuses, their funny and not-so-funny stories. He has also spent uncounted hours writing letters of recommendation for students for jobs and graduate school.

At a university that has no formal journalism program, the Focus workshop has built an impressive roster of students who work in journalism-related fields. This newspaper was the proving ground for most of them, and Jim was the first editor who listened to their concerns, nudged them along

and sharpened their ideas and their expression. Students who had written pretty good term papers got their first opportunity to be edited professionally.

Jim will be sorely missed, and not just in this office. He put out the best-edited little newspaper in Pittsburgh, one of very few independent university publications in the country. Much more than that, he helped his students, and his managing editor, to figure out what they were doing with their lives.

BRIAN CONNELLY

Outreach brings kids to campus, campus to kids

They don't sit still. They don't listen. They don't share. They can kick. They can scream. They can cry.

They are kids and they scare you.

The mischief that children are capable of has long been the fear of many adults and college educators alike. But there are several Carnegie Mellon organizations focused on reaching out to youth in the community, in the belief that although kids can kick and scream, they can also learn, dream and accomplish.

Since the disbanding of the Center for University Outreach last summer, outreach organizations such as C-MITES, the CMU Science Van, East End Tutoring and Role Models have all been left to maintain their programs on their own. The organizations have long histories and have continued to show passion for their causes, demonstrating their dedication to reaching out to youth who are willing to learn.

Some of the organizations have competitive admissions policies that require prospective students to apply, while other programs have open enrollment for any young person who wants to participate. No matter the premise, each organization draws young people from all over the Pittsburgh community to help them learn more about the world around them.

East End Tutoring

Hannah Yi, a first-year at CMU, is a little frustrated. Rayna (last name not provided), her eighth-grade tutee, does not understand the worksheet and does not seem to care. They sit together in a classroom at Sterrett Middle School in Point Breeze, where Hannah comes every week to spend some time with Rayna in hopes of helping her with school work and, more important, with life.

"It's very difficult at times because they don't seem to want to be there," said Yi. "But there are some moments when they are engaged and are learning and that's the payoff."

Many other East End tutors understand where Yi is coming from. They serve as tutors to students from Colfax and Liberty elementary schools, and from Reizenstein and Sterrett middle schools.

April Stewart, a junior mechanical engineering major and president of East End Tutoring, says that working through the frustration is worth it. "I do this because it's gratifying to see a student finally understand something. It's like a burden is lifted and there is hope."

This hope inspires more than 60 Carnegie Mellon tutors to continue working with individual students from these four schools.

The after-school tutoring program requires CMU students to tutor once a week for two hours. The students are bused from the campus to the elementary or middle school.

A new music tutoring program was established last semester by Annie Savarese, a Bachelor of Humanities and Arts major working with a SURG grant. The program was selected as one of the best projects in the arts and humanities at this year's Meeting of the Minds.

In the pen pals program, CMU undergraduates send letters to kids who sign up.

"Teachers have told us that there were some students who would have had nothing to look forward to if they didn't have these tutors or these pen pals," Stewart said.

Stewart believes that the same goes for many of the tutors themselves. As a tutor, she saw the difference when her young pupil made a plan for his future.

"He asked me, wouldn't it be great if he could come to a school like CMU? That ambition in him was nice to see."

Instilling and fostering ambition in children is the unifying focus of each of the outreach programs. By daring children to dream and training them to accomplish those dreams, each of these programs is expanding the horizons of the students. Each of these organizations is dedicated to molding a small part of the future, and in so doing, to changing a small part of the world.



C-MITES students Mackenzie Freudenreich and Jaelyn Placha make a bottle-and-straw barometer

Photo: Brian Connelly

C-MITES

When Anne Shopwick first came to CMU, she was sharing a small office with a secretary and working with a small grant given to her to run a program for gifted students. What was a small grant in 1992 has now become the Carnegie Mellon Institute for Talented Elementary Students (C-MITES).

This program provides academic classes for students in kindergarten through seventh grade throughout Pennsylvania. C-MITES began with a class of 20 students meeting every weekend at Carnegie Mellon and has spread to the entire state. The first year they tested 145 students and this year they tested 2,500.

"I wanted to start something that would be challenging for students. I knew that there were a lot of opportunities for kids in seventh grade and older, but not for kids younger than that.

"I wanted to offer something challenging that would be accessible to students in the state," said Shopwick.

With this vision in mind, Shopwick proceeded to work with local school districts to identify the exceptionally gifted by relying on state test scores.

Shopwick explained the selection process. "First we ask the schools to select students who have already scored in the top 5 percent on other state-issued exams in their age group."

Those students then take an exam called EXPLORE, which is specifically designed for eighth graders.

"Instead of writing a new test, we decided that the best way to identify gifted children was by giving them a test designed for older kids," said Shopwick.

Those who pass the exam are accepted into the two-week summer program. For the C-MITES weekend programs, however, no test is required. Students sign up on a first-come, first-served basis.

"We started offering weekend workshops in 1995 and now we are bringing over 3,000 students on campus every year. It's a pretty big program," said Shopwick. "We have a few [former] students who are teaching assistants in the program who have taught for us." The biggest testament to the effectiveness of this program is the presence of current Carnegie Mellon undergraduates who were students in the C-MITES program.

"Seeing students here who were once C-MITES is really nice because it shows that we've made a difference in their lives somehow," said Shopwick. "It's good to know that we've gotten them on the right track to getting a good education."

CMU Science Van

"When I was a student myself, I was convinced that there were two kinds of teachers, ones who stood and talked and others who entertained you as they taught. I got convinced at an early age that there was no comparison between the two. One made you sleep and the other made you learn."

With this in mind, chemistry professor Gary Warnock decided to begin the CMU science van — a program designed to teach middle school students all the wonders of science that can fit into a medium-sized van.

Along with retired high school science teachers Hugh Carr and John Ziegler, Warnock takes the van to various classrooms, teacher's workshops and museums to conduct demonstrations that excite and educate the students that they meet.

"The reaction we get from students and teachers is always very good," said Ziegler, who taught science and math at Riverview High School for 35 years. "Because these programs are very hands-on, students get to experience science rather than read about it or hear someone talk about it."

Warnock feels that teaching middle school teachers how to conduct the experiments is as important as the presentations themselves. He has begun conducting teacher workshops as well as doing presentations.

"Not many science teachers at the middle school level are trained in the sciences. So it's difficult for them to grasp the concepts enough to be able to conduct experiments with the kids," said Warnock.

"We have wonderful accolades from teachers who have attended the workshops. We give them equipment and show them how to use it."

Ziegler explained that the workshops follow the content of the demonstrations "The teachers need to know how to do these experiments themselves if they want to be able to do them with the kids also. So everything stays very hands-on, even during the training seminars."

The science van program appears to have a bright future. The support from Carnegie Mellon and various school districts has produced a happy group of "van guys," as they are called for short.

"When I first arrived, this program was supported strongly by Susan Henry," Warnock said, referring to the former dean of the Mellon College of Science. "The funding for the van and payment for the retired teachers has all been taken care of by grants."

He added, "Many people were very supportive and if you have that kind of support it really helps to get a program like this launched and continued."

Role Models

At 3:30 p.m., a group of mentors sit outside of Margaret Morrison Hall awaiting the arrival of their students. Slowly, the yellow school bus pulls up. Young children from third to fifth grade climb out. Each child shakes hands with Noa Zilbering, the assistant to the director of Role Models. They lock eyes as they say hello to one another.

"The first thing kids learn when they come to the program is how to give a strong handshake and make eye contact. When they get on the bus and come to the classroom and I see them, we shake each other's hands and then make eye contact, in order to teach them the importance of body language," said Zilbering.

This is one of the life lessons that Role Models aims to convey to kids from five Hill District elementary schools who are bused from school to be tutored and mentored by a group of students, faculty and community members. Elaine Atkinson, the head of the program, began Role Models in 1991.

"Basically we are an after school program, but we do more than help with academics. There is a mentoring part of the program that is more complex than helping the students with their homework," said Zilbering. "The tutors are involved in a training session that takes about a week where they learn our mission and the value of bringing their own life experience to the tutoring sessions."

Takaaki Agawa, a first-year economics major, was looking for a tutoring job. "I was interviewed and that developed into a full-on discussion about how I was going to make a mark on society and the world, and I became very interested in this program," said Agawa.

Agawa said that coming from a prestigious suburban private school made him want to interact with different people. "I'd always made it a goal in life to truly become down to earth and understand what reality is and this just seemed like the best hands-on experience I could get."

Zilbering believes that the diversity among the tutors and the students offers both parties an opportunity to experience a world outside their own. "We provide exposure for a lot of the children and tutors. They are most comfortable when they stay in their own neighborhood and this kind of comfort becomes somewhat limiting," said Zilbering.

"Just by being involved in the Role Models program, they are able to speak with people outside of their neighborhood and see things that are different than the things they see on a daily basis. This gives them a better sense of their world."

JEANNIE CHOI