



Carnegie Mellon

- 3 ASK ANDREW
- 4 NEWS BRIEFS
- 7 INTERNATIONAL DISPATCHES
- 8 LECTURE SPOTLIGHT

For Addicts, It's All About the Craving

■ Jonathan Potts

Of all the researchers devoted to studying drug addiction, hardly anyone has ever asked the most important question, says George Loewenstein: Why?

"There is so much research on addiction and drug abuse, and amazingly little of it is focused on the central question of why people take drugs in the first place," said Loewenstein, the Herbert A. Simon Professor of Economics and Psychology and a world-renowned researcher on the psychology of intertemporal choice — or decisions that require trade-offs between costs and benefits at

CONTINUED ON PAGE TWO

Hello Mrs. Huxtable



PHOTO BY KEN ANDREYO

MOST PEOPLE REMEMBER HER AS CLAIR HUXTABLE ON THE TELEVISION SMASH "THE COSBY SHOW," BUT ACTRESS PHYLICIA RASHAD HAD MORE ON HER MIND THAN SITCOMS WHEN SHE SPOKE IN CARNEGIE MELLON'S PHILIP CHOSKY THEATER LAST WEEK. IN "A DIALOGUE WITH PHYLICIA RASHAD," ALUMNUS DAN GREEN (A'94) SPOKE WITH THE TONY AWARD-WINNING ACTRESS ON EVERYTHING FROM HER PROCESS FOR DEVELOPING A CHARACTER TO HER TAKE ON PITTSBURGH, WHICH SHE DEEMED "FASCINATING." AND WHILE THE AUDIENCE TREATED RASHAD TO TWO STANDING OVATIONS, SHE MADE NO SECRET OF JUST HOW MUCH HER TRIP TO CARNEGIE MELLON AND MENTORING SESSIONS WITH SCHOOL OF DRAMA STUDENTS MEANT TO HER. "I MUST SAY THAT BEING HERE TODAY AND BEING ABLE TO INTERACT WITH DEVELOPING ACTORS AT THIS INSTITUTION HAS BEEN THE FULFILLMENT OF A DREAM," SHE SAID. THE DIALOGUE WAS SPONSORED BY THE SCHOOL OF DRAMA, UNIVERSITY ADVANCEMENT AND STUDENT AFFAIRS IN CELEBRATION OF BLACK HISTORY MONTH.

"Seeing Science" Tells Fascinating Story of Historic Tome

■ Cindy Carroll

Last fall, as she perused some of the books in the Posner Collection, Dean of University Libraries Gloriana St. Clair happened across a 16th century edition of the work of Ibn al-Haytham (known in the western world as Alhazen), an 11th century Arabic scientist and mathematician. The book, "Opticae Thesaurus," was a Latin translation of al-Haytham's

theories and discoveries in optics, a science that he pioneered.

St. Clair quickly noted several points of interest about the book. The spine was hand-marked OSF (Ordo Sancti Franciscus), the society of monks that had bound the printed pages in the 1570s. Two previous owners had signed the book: Count Mikolaj Niewiescinski, a collector of science literature in

CONTINUED ON PAGE EIGHT

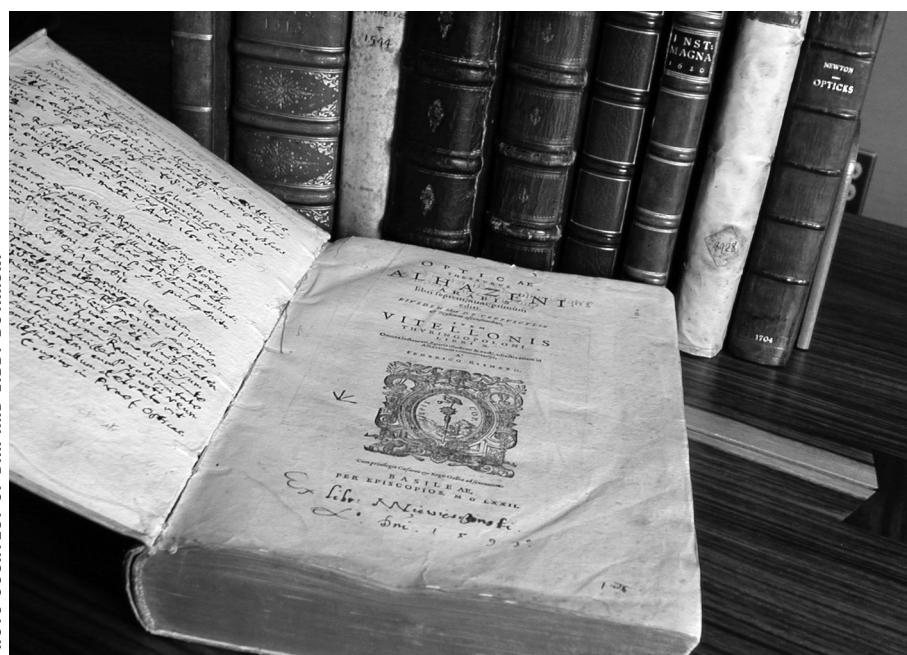


PHOTO COURTESY OF DAN AND LIBBY BOYARSKI

CARNEGIE MELLON'S POSNER COLLECTION HOUSES A 16TH CENTURY EDITION OF THE WORK OF IBN AL-HAYTHAM, AN 11TH CENTURY ARABIC SCIENTIST AND MATHEMATICIAN. THE FULL TEXT IS AVAILABLE ONLINE AT [HTTP://POSNER.LIBRARY.CMU.EDU](http://posner.library.cmu.edu).



the PIPER

2/07 Issue

PUBLISHER
Teresa Thomas

EDITOR
Bruce Gerson

MANAGING EDITOR
Susie Cribbs

WRITERS
Cindy Carroll
Alexa Huth
Jenni King
Jonathan Potts
Byron Spice
Chriss Swaney
Ken Walters
Anne Watzman

DESIGNERS
Communications Design Group

PHOTOGRAPHY
Ken Andreyo
Communications Design Group

To contact The Piper staff, call 412-268-2900 or email cribbs@andrew.cmu.edu.

Carnegie Mellon University does not discriminate and Carnegie Mellon University is required not to discriminate in admission, employment, or administration of its programs or activities on the basis of race, color, national origin, sex or handicap in violation of Title VI of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972 and Section 504 of the Rehabilitation Act of 1973 or other federal, state, or local laws or executive orders.

In addition, Carnegie Mellon University does not discriminate in admission, employment or administration of its programs on the basis of religion, creed, ancestry, belief, age, veteran status, sexual orientation or gender identity. Carnegie Mellon does not discriminate in violation of federal, state, or local laws or executive orders. However, in the judgment of the Carnegie Mellon Human Relations Commission, the Presidential Executive Order directing the Department of Defense to follow a policy of, "Don't ask, don't tell, don't pursue," excludes openly gay, lesbian and bisexual students from receiving ROTC scholarships or serving in the military. Nevertheless, all ROTC classes at Carnegie Mellon University are available to all students.

Inquiries concerning application of these statements should be directed to the Provost, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-6684 or the Vice President for Enrollment, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-2056.

Carnegie Mellon University publishes an annual campus security report describing the university's security, alcohol and drug, and sexual assault policies and containing statistics about the number and type of crimes committed on the campus during the preceding three years. You can obtain a copy by contacting the Carnegie Mellon Police Department at 412-268-2323. The security report is available through the World Wide Web at www.cmu.edu/police/statistics.htm.

Obtain general information about Carnegie Mellon University by calling 412-268-2000.

Produced for Media Relations by the Communications Design Group, February 2007, 07-331.

Student Entrepreneur Sells R&R On a Summer Day

■ Bruce Gerson

With spring right around the corner, the patio furniture sales won't be far behind. But before you decide on that new table, chairs and matching glider, you may want to talk to freshman economics major Josh Kresge, one of the latest student entrepreneurs to enroll at Carnegie Mellon.

You see, Kresge, who's no relation to the Kresge Theater folks, is in the business of backyard rest and relaxation, peace and tranquility on those warm, breezy, blue sky summer days.

So what exactly does Kresge sell? It's a hammock, in more shapes, colors and styles than you can shake a glass of lemonade at.

"It's the perfect gift for someone who has everything," Kresge says.

As a youngster growing up in East Greenville, Pa., about 40 minutes

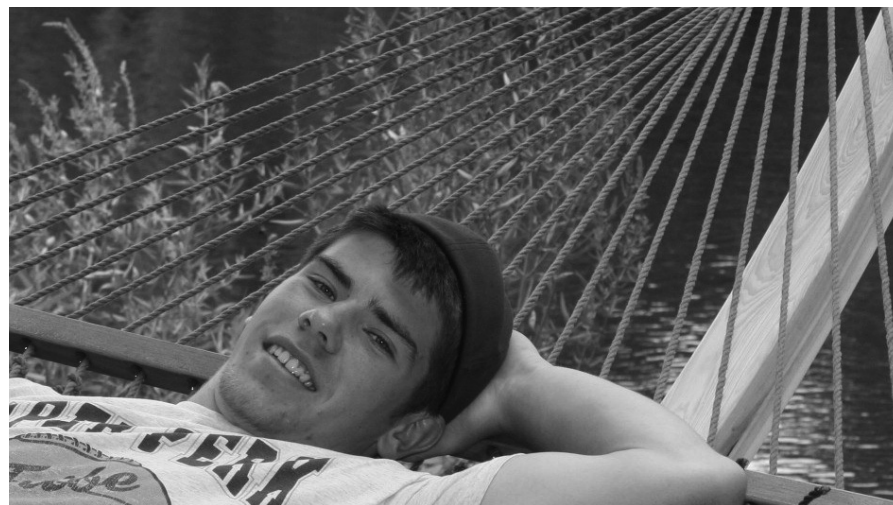


PHOTO COURTESY OF JOSH KRESGE

FRESHMAN ECONOMICS MAJOR JOSH KRESGE SELLS PEACE AND TRANQUILITY AT HAMMOCKHUTCH.COM.

business, but hammocks didn't give you very many options. Some stores, like Lowe's, had them, but there was pretty much one choice."

Using his Web skills, Kresge built

"HAMMOCKHUTCH.COM WAS FOUNDED WITH TWO PRIMARY GOALS IN MIND. ONE WAS TO PROVIDE HAMMOCKS AND ACCESSORIES AT A REASONABLE PRICE. THE OTHER WAS TO HELP OTHERS IN THE PROCESS." - JOSH KRESGE

outside Philadelphia, Kresge took a liking to hammocks while vacationing in Ocean City, Md. Years later, he realized that the easy lifestyle icon could yield a pretty nice profit margin. So he parlayed his interest in business and hammocks into HammockHutch.com, an online hammock warehouse.

"I wanted to do something different," Kresge says. "There was too much competition in the sports merchandise

his own site and launched his company in May 2006. He's had 7,000 hits and has sold about 60 hammocks thus far, but he hopes to increase traffic by working on search engine optimization, so when users search for hammocks, his site comes to the top of the list.

"That's what I'm trying to figure out when I'm not in class," he said.

Kresge's hammocks and accessories, such as stands, cupholders and

pillows, range from about \$40 to \$200. He has distributors in Ecuador, North Carolina and Canada, and is looking to expand into China. He says a distributor in China stocks the "Beach Hammock," which folds like a beach chair and sits low to the sand. It sells for about \$100.

The fledgling entrepreneur says he's made about \$3,000 thus far, but not all of that goes to his college education. Some of the profit goes to his adopted son in Ecuador, 7-year-old Anderson Toscano. Kresge supports Anderson through Children International.

"HammockHutch.com was founded with two primary goals in mind. One was to provide hammocks and accessories at a reasonable price. The other was to help others in the process," Kresge says on his Web site.

If Kresge has his way, Anderson will soon be swinging on a hammock enjoying a little peace and tranquility.

Researcher Says Addicts Can't Predict Intensity of Cravings

CONTINUED FROM PAGE ONE

different points in time.

Researchers have dubbed it the paradox of initial drug use — why a person who understands the risks inherent in drug addiction makes the decision to experiment with drugs anyway. Loewenstein got some insight into the problem while teaching a freshman seminar on drug use and abuse. His students were mystified at the behavior of drug addicts.

"They couldn't imagine that they would behave in that way, like stealing from their parents to feed their addiction," Loewenstein said. "Maybe it's just beyond the ability of an unaddicted brain

longtime drug addicts failed to imagine the intensity of a drug craving when they weren't currently experiencing it.

The study involved 13 heroin addicts being treated with the maintenance drug buprenorphine (BUP). During the eight weeks of the study, participants were repeatedly asked to choose between varying amounts of money or an extra dose of BUP, both when they were craving the drug and when they weren't. The major finding was that addicts valued an extra dose of BUP about twice as much when they were craving it (right before receiving their normal dose of the drug) than when they were currently satiated (min-



PHOTO BY BRUCE GERSON

LOEWENSTEIN AND HIS COLLEAGUES DISCOVERED THAT EVEN LONGTIME DRUG ADDICTS FAILED TO IMAGINE THE INTENSITY OF A DRUG CRAVING WHEN THEY WEREN'T CURRENTLY EXPERIENCING IT. (THE DRUGS PICTURED HERE ARE PRESCRIPTION DRUGS AND THE WHITE POWDER IS SUGAR.)

"IF ADDICTS CAN'T APPRECIATE THE INTENSITY OF A CRAVING WHEN THEY AREN'T CURRENTLY EXPERIENCING IT, ... IT SEEMS UNLIKELY THAT THOSE WHO HAVE NEVER EXPERIENCED A CRAVING COULD PREDICT ITS MOTIVATIONAL FORCE." - GEORGE LOEWENSTEIN

to imagine what it's like to be addicted." Loewenstein thinks he's found an answer to his question. In a study published in the *Journal of Health Economics*, he and his colleagues discovered that even

utes after receiving the BUP) — even when they knew they would not receive the extra dose until five days later.

"If addicts can't appreciate the intensity of a craving when they aren't

currently experiencing it, as these results suggest, it seems unlikely that those who have never experienced a craving could predict its motivational force," Loewenstein said.

Loewenstein's findings reflect a phenomenon known as the hot/cold empathy gap. Scientists have found that when a person is in one state, they are unable to imagine what it's like to be in another. When someone's just eaten

a large meal, for example, they can't imagine what it's like to be hungry.

Loewenstein said his results could call into question most drug-prevention efforts, particularly those aimed at adolescents.

"I'm not sure that describing the horrors of drug addiction is going to have much impact, because it has no basis in reality for them," Loewenstein said.



ASK ANDREW

Dear Andrew,

I've heard quite a bit in the news lately about the great Carnegie Mellon mascot debate. I always thought the Scottie Dog was the mascot, but I guess I was wrong. What other mascots has Carnegie Mellon had? And what's in the running to become the "official" mascot? JK, University Advancement



Dear JK,

Good question. Here's what Jay Marano, licensing coordinator at Carnegie Mellon's Trademark Licensing Office, had to say.

"During the past century several icons — a bagpiper, a highlander/Scotsman in full regalia, and a Scottish terrier — have predominately been used on items such as souvenirs, sporting event tickets, event programs, yearbooks and other publications. To my knowledge none of these were declared 'official.'

"In recent decades, the primary icon we associate with a mascot would be the Scottish terrier. But because we never agreed upon a graphic identity depicting the 'Scotty Dog,' the Scottish terrier is actually an 'unofficial' mascot. The only visual image I allowed on souvenirs was clip-art, though some individual departments created their own depictions of a Scotty Dog for publications. The Scotty Dog costume was created years ago for use at athletic and special events."

As for what's in the running to become the official mascot, that's up to you. The Mascot Identity Task Force is looking for your input and creativity. They've hosted a town meeting and established an email account to get your ideas. So email carnegie-mascot@andrew.cmu.edu with your ideas and questions, and stay tuned for meetings and surveys that will let you have your say.

Have a question for Andrew?

Send it to cribbs@andrew.cmu.edu

New Web Site Debunks Driving Myths

■ Chriss Swaney

If you really want to test fate, hop on a motorcycle at 2 a.m. on Saturday or ease into the family car for a drive between midnight and 4 a.m. It doesn't take a rocket scientist to guess that the midnight to 4 a.m. slot is the most dangerous time to drive or that motorcycles are risky transport.

Travel Safety) for the AAA Foundation for Traffic Safety to improve risk information available to policymakers and the public. The tool provides a different perspective on travel safety.

The study breaks down the stats by age, gender, time of day and geography. Among the study's findings was that 82-year-old female drivers and males

AN ANALYSIS OF TRAFFIC DATA SHOWS THAT MALE DRIVERS ARE 77 PERCENT MORE LIKELY TO DIE IN A TRAFFIC ACCIDENT THAN WOMEN.

But it might come as a surprise that the Pacific region — with its tangled maze of freeways — scores second-lowest in the nation in terms of fatality rates. That's the word from a recent study by Carnegie Mellon engineers who developed an interactive Web site to improve travel risk information.

Carnegie Mellon faculty Paul Fischbeck, David Gerard and Randy Weinberg, consultant Barbara Gengler, and a team of student researchers developed TrafficSTATS (Statistics on

between the ages of 16 and 23 are the groups mostly likely to die on the road. The women die more often because they are so frail, and the young men die because they are risk-takers, inexperienced drivers and less mature, the study says.

The new study also debunks the stereotype of "crazy women drivers." An analysis of traffic data shows that male drivers are actually 77 percent more likely to die in a traffic accident than women, based on miles driven.

"Males don't believe us," said Gerard, study co-author and executive



PHOTO BY BRUCE GERSON

A NEW TRAFFIC STUDY BY CARNEGIE MELLON FACULTY CAME UP WITH SOME SURPRISING RESULTS, INCLUDING THAT TRAFFIC FATALITIES ARE ACTUALLY HIGHER IN THE SUMMER THAN IN THE WINTER.

director of the Center for the Study and Improvement of Regulation (CSIR) in the Engineering and Public Policy Department. "The kicker is that 20,000 men are killed every year behind the wheel compared with 6,700 women."

Carnegie Mellon researchers say men tend to engage in riskier driving behavior, speed more frequently and are more likely to get behind the wheel after drinking.

"They do stupider things," said study co-author Fischbeck, a professor of social and decision sciences and engineering and public policy.

The study also revealed that the safest drivers are between the ages of 40 and 50, and fatality risks are higher in the summer than winter.

The researchers used a national database with more than one million demographic variables to calculate their findings.

Walking to the Arctic Sky

FEBRUARY'S SEVERE WEATHER DIDN'T SPARE ANYONE, INCLUDING THE MEN AND WOMEN "WALKING TO THE SKY" IN JONATHAN BOROFSKY'S (A'64) SCULPTURE. HERE, SNOW-COVERED FIGURES WATCH THEIR ICICLE-ADORNED PEERS MAKE THEIR WAY TO THE FRIGID WINTER SKY ABOVE.



PHOTOS BY BRUCE GERSON AND ERIC SLOSS

Scot on the Street

CARNEGIE MELLON'S HEALTHY CAMPUS 2010 COMMITTEE RECENTLY UNVEILED A PROPOSAL TO MAKE THE CAMPUS TOBACCO-FREE BY, WELL, 2010. WITH ALL THE CONTROVERSY SURROUNDING THE ISSUE, THE PIPER THOUGHT IT WOULD BE A GOOD IDEA TO TAKE TO THE STREETS AND UNCOVER WHAT THE AVERAGE STUDENT, PROFESSOR OR EMPLOYEE THINKS ABOUT THE ISSUE.



Erika Barrington
JUNIOR, HISTORY
DUXBURY, MA

I'm a little hesitant to be totally in support of it because I have friends who smoke and they feel that it imposes the views of other people that no one should be smoking. And they feel that it doesn't really give them license to seek out ways to quit. They basically feel like it's being imposed upon them. And they feel that it really doesn't respect their rights as having the choice to smoke if they want to. People who have been smoking for a long time and have been trying to quit feel like they need that cigarette

and they're wondering how far they will have to go on break to find a place to smoke. They're feeling set apart from everybody, victimized a little bit, ostracized.



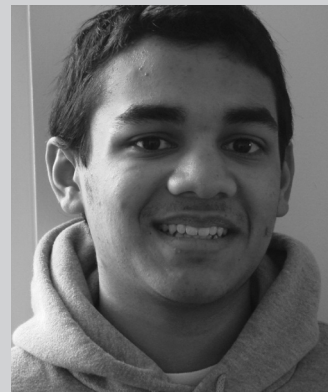
Sholom Cohen
MEMBER OF THE
TECHNICAL STAFF, SEI

One thing I found that is difficult is people smoking right outside a building — three or four people congregating so you can't even walk outside a building without having to go through a wall of smoke. It makes it very uncomfortable for a non-smoker. People should be more considerate. I would be in favor of it (the ban).



Jane Ditmore
SENIOR SALES
ASSOCIATE, ENTROPY

I do not smoke, but I would have no problem with them purchasing the cigarettes because we are very careful as far as carding them to make sure they are of legal age to do that. People should have the right to be able to choose.



Kushal Doshi
FRESHMAN, CHEMICAL
ENGINEERING,
MARLBORO, NJ

I'm an opponent of smoking so I believe this is a great plan that is being proposed. ... It would make the environment healthier for us to breath and walk around without being intoxicated from second-hand smoke.



Maury Burgwin
FACULTY RESEARCHER,
COMPUTER SCIENCE AND
TEPPER SCHOOL OF BUSINESS

It's really very simple. I'm against it. I happen to like to smoke cigars, but that's irrelevant. When I go to a restaurant I actually prefer to go to a non-smoking restaurant. The problem is there's too much government, there's too much imposition in our personal lives. And all I say is, get out!



Krishan Wanchoo
SOPHOMORE, COMPUTER SCIENCE, RIDGEWOOD, NJ

I'm not in favor of smoking so I'm definitely for this proposal. I think it would be great. There are a lot of people who smoke on campus and it gets kind of annoying.

NEWS BRIEFS

Tepper School Creates Richard P. Simmons Distinguished Professorship

The Tepper School of Business has received \$5 million from Richard P. and Virginia M. Simmons to establish the Richard P. Simmons Distinguished Professorship. The first person appointed to the Richard P. Simmons chair is Finn E. Kydland, who received the Nobel Prize in Economic Sciences in 2004. Simmons, retired chairman of Allegheny Technologies Inc., is a devoted philanthropist and distinguished adjunct professor at the Tepper School, where he teaches the popular graduate course "Responsibilities and Perspectives of the CEO." Kydland, who earned his doctor's degree in economics from Carnegie Mellon in 1973, received the Nobel Prize in conjunction with Edward Prescott, who also earned his Ph.D. from Carnegie Mellon (1967).

TK60: Celebrating Takeo Kanade

A symposium celebrating the 60th birthday of world-renowned robotics and computer

vision expert Takeo Kanade will be held March 8–9. The technical symposium will feature top experts in robotics, computer vision and medical and assistive technologies, areas in which Kanade, the U.A. and Helen Whitaker University Professor of Computer Science and Robotics, has made groundbreaking discoveries. Festivities begin at 4 p.m., March 8 in Wean Hall 7500, where Yuichiro Anzai, president of Keio University, will deliver the keynote address. For more on the TK60 schedule and speakers, visit <http://www.ri.cmu.edu/events/tk60/>.

Trotter Reappointed Head of History Department

History Professor Joe Trotter has been appointed to a second five-year term as head of the Department of History. Trotter, the Mellon Professor of History, has been on the university's faculty since 1985, and has been head of the History Department since 2001. During that time, the department housed the internationally renowned journal *Social Science History* and added six full-time faculty members. History faculty published 10 books, edited or co-edited 16 collections and scores of scholarly articles and essays during Trotter's first term.

Chekhov's "The Three Sisters" Slated To Open 2007–08 Drama Season

The School of Drama has announced the stage productions for the 2007–08 drama season, which will address the struggle of individual will within a hostile society. Productions will include Anton Chekhov's "The Three Sisters," directed by Vladimir Mirodan; "Guys and Dolls," created by Jo Swerling, Abe Burrows and Frank Loesser; "Ghosts," written by Henrik Ibsen and translated by Brian Johnston; "The Piano Lesson," written by August Wilson; and "Don Carlos," written by Friedrich Schiller. Performances will take place in the Purnell Center for the Arts' Philip Chosky Theater, Helen Wayne Rauh Studio Theater and John Wells Video Studio, as well as various locations around campus and Pittsburgh.

Carnegie Mellon Software Steers NASA's Mars Rover

Autonomous navigation software developed by researchers at Carnegie Mellon and NASA's Jet Propulsion Laboratory drove the NASA Mars Rover "Opportunity" earlier this month in the software's first live test on the Red Planet. Opportunity, operating near the rim of Victoria Crater, was traversing an area that mission managers had made certain was

without obstacles for this initial test. But they programmed a "virtual keepout zone" for Opportunity to maneuver around, and initial findings suggest the rover veered around this simulated obstacle as anticipated. "Much more work and testing remains to be done, but we are thrilled to see our software operating on Mars and we believe it will ultimately expand the capabilities of this and future planetary rovers," said Tony Stentz, research professor at the Robotics Institute and associate director of the National Robotics Engineering Center.

Trailblazing Historian To Deliver Margaret Morrison Women's History Lecture

Gerda Lerner, a pioneer in the field of women's history and a longtime social activist, will give the inaugural Margaret Morrison Distinguished Lecture in Women's History at 7 p.m., Thursday, March 1 in the Giant Eagle Auditorium. Born in Austria in 1920, Lerner founded the nation's first master's degree program in women's history at Sarah Lawrence College in 1972, and in 1981 established a doctoral program in women's history at the University of Wisconsin—Madison.

The Margaret Morrison Distinguished Lecture in Women's History is sponsored by

Technology Opens New Window Into Civil War History

■ Byron Spice

A bulldozer moving earth for the future School of Computer Science Complex looms in the window of Laura Tomokiyo's office in Newell-Simon Hall. But it doesn't distract her as she works to create a new window for computer users to view Pennsylvania's past.

Using Google Earth as a platform, Tomokiyo and colleagues in the Robotics Institute's Global Connection Project are developing a new way for people to explore the Civil War battlefields, monuments and museums of southcentral Pennsylvania.

This new effort, funded by a \$285,000 state grant, will use some of the same techniques first employed by the Global Connection Project to tie National Geographic photos and articles about people and locales to their respective sites via Google Earth. The National Geographic overlay, now available for Africa and North America, has become a standard feature of the globe-exploring Web site.

The Civil War Trail initiative will encompass information from a wider variety of sources and incorporate a new technology, called Gigapan, which creates "explorable pictures" of historic or scenic sites.

"We are going to change the way people browse for destination experiences," said Illah Nourbakhsh, an associate professor of robotics who is co-director of the Global Connection Project with project scientist Randy Sargent of Carnegie Mellon West. "Gigapan is a brand-new technology

that will open the Civil War trails to electronic exploration, and Pennsylvania will be the first state to capitalize on it."

Gigapan — for "gigapixel panoramas" — is a robotic platform that enables a digital camera to take dozens or hundreds of photos of a scene that can be electronically stitched together to create a panoramic computer image that users can examine in great detail.

A person viewing a Gigapan image of the Gettysburg battlefield, for instance, could zoom in on monuments that would be all but invisible in the larger image. "The battlefield is such an enormous space that even people who have visited it numerous times keep finding new



THE NEW TECHNOLOGY DEVELOPED THROUGH THE CIVIL WAR TRAIL EFFORT WILL ALLOW USERS TO ZOOM IN AND READ THE TEXT ON MONUMENTS LIKE THIS ONE NEAR CEMETERY RIDGE IN GETTYSBURG.

later this spring. At some sites, images will be produced each month, adding the dimension of time to the Gigapan exploration experience.

In the meantime, Tomokiyo, a Language Technologies Institute alumna

"We'd really like Pennsylvanians to have a voice in this," she said. "There are so many people here with special expertise, such as the uniforms, weaponry and even music of the Civil War era. People have just been so forthcoming."

Global Connection, a joint project of Carnegie Mellon, NASA and Google, is working with Ripple Effects Interactive, Public Intelligence, the National Civil War Museum and the Pennsylvania Tourism Office.

Tomokiyo said she hopes the Civil War trail information will be available for use by the end of the year, with Gigapans being added through 2008. But she hopes that won't be the end of the work in Pennsylvania.

"This is a state with a rich history and great scenic beauty, so we have much left to explore," she said.

"THE BATTLEFIELD IS SUCH AN ENORMOUS SPACE THAT EVEN PEOPLE WHO HAVE VISITED IT NUMEROUS TIMES KEEP FINDING NEW THINGS. THE POTENTIAL FOR EXPLORING IT WITH GIGAPAN IS AMAZING."

— LAURA TOMOKIYO

things," Tomokiyo said. "The potential for exploring it with Gigapan is amazing."

Likewise, users could zoom in to read individual headstones in a Gigapan of a historic cemetery.

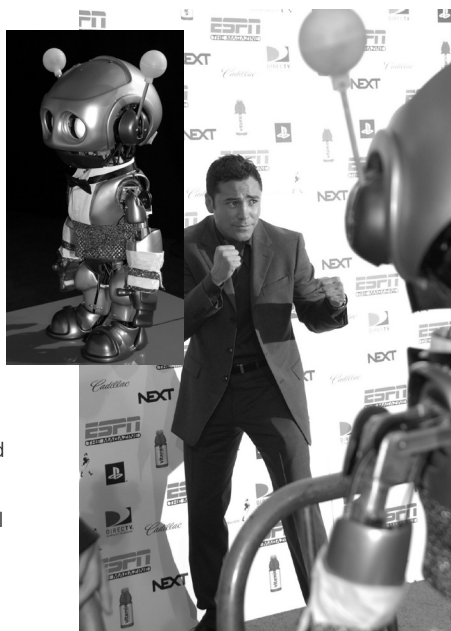
Tomokiyo and other project staff will begin capturing Gigapan images

who joined Global Connection as project scientist in January, is busy identifying which sites merit highlighting and finding sources for the historic, travel and environmental information that will be incorporated into the Google Earth overlay.

the History Department and the College of Humanities and Social Sciences. The lecture will be given annually to mark Women's History Month (March) and highlight the university's strengths in this important discipline.

DNA Gets New Twist

Carnegie Mellon scientists have married bright fluorescent dye molecules with DNA nanostructure templates to make nanosized fluorescent labels that hold considerable promise for studying fundamental chemical and biochemical reactions in single molecules or cells. The work, published online in *The Journal of the American Chemical Society*, improves the sensitivity for fluorescence-based imaging and medical diagnostics. "Our DNA nanotags offer unprecedented densities of fluorescent dyes and, thus, the potential for extremely bright fluorescent labels," said graduate student Andrea Benveniste, who developed the nanotags in the laboratory of Bruce Armitage, associate professor of chemistry in the Mellon College of Science. "We've put it all into a very small package, which will allow us to detect molecules with great sensitivity without interfering with the biological processes we are trying to understand."



Super Quasi

Quasi must still be bursting at the bolts. The cartoonish interactive robot built by grad students in the Entertainment Technology Center (ETC) in 2005 was invited to work the "red carpet" at ESPN's extravagant \$1 million Super Bowl party Feb. 2 in Miami's Design District, where more than 30,000 attended.

Clad in a black and gold tuxedo (see

inset), Quasi rubbed elbows with many entertainment and sports celebrities including NFL Hall of Famer and football analyst Troy Aikman, former NFL star William "The Refrigerator" Perry, boxer Oscar de la Hoya (pictured), actors Christian Slater, Michael Clark Duncan and Allyssa Milano, and ESPN anchor Chris "Boomer" Berman.

Quasi was built by a 10-person interdisciplinary student team called Interbots, which is now the name of an ETC spin-off company in Pittsburgh.

University Receives Record Number of Undergraduate Applications

Carnegie Mellon has received a record number of applications for undergraduate admission for the 2007-08 school year. Numbers released earlier this month by the Office of Undergraduate Admission indicate that 22,052 students have applied for 1,360 available seats — an increase of 3,559 applications (19.2 percent) over last year, which was also a record year for applications. Mike Steidel, director of admission, says the increase is a result of the university's continued recognition as a leader in education and research.

Tuition Increase Approved

Carnegie Mellon's Board of Trustees approved a tiered tuition increase for incoming and current undergraduate students for this coming fall. Tuition for entering undergraduate students will be \$36,950 (an 8.1 percent increase over last year), while current students will see a tuition increase of 4.1 percent. Room and board costs will also increase 4.1 percent to \$5,663 and \$3,997, respectively.

The university uses tuition dollars to support and develop programs that allow it to compete for outstanding students and faculty. Tuition also supports the growth of undergraduate education initiatives and improvements in labs on campus. And since tuition covers only a percentage of these costs, the university engages in energetic fundraising to build its endowment and generate dollars for student programs, facilities and scholarships.

"We aim to offer the best possible learning environment for our students," said Vice President for Enrollment William Elliott. "The student experience here extends beyond the classroom into all aspects of student life. We provide a positive experience for our students and a strong start on their futures."

Co-Ed Rooms, Campus Cars, Bikes Ride Atop Student President's Agenda

■ Bruce Gerson

Student Government President Karl Sjogren (pronounced “sher grin”) is looking to end his one-year term with a rush. With less than three months to go, the senior social and decision sciences major — who’s also a first-year public policy and management grad student at the Heinz School — has a few blockbuster initiatives ready to hit campus. Although he’s busy putting the final touches on his administration’s proposals, the Fremont, Calif., native took a few minutes to chat with The Piper about those proposals, the role of the student body president and some hot topics facing students today.



STUDENT GOVERNMENT PRESIDENT
KARL SJOGREN

What does the student government president actually do?

There are three branches of student government: the Graduate Student Assembly (GSA), the Undergraduate Student Senate and the Student Executive Branch. The latter consists of myself as student body president, Vice President Andrea Hamilton and Vice President of Finance Kirk Higgins. We’re responsible for shaping and spearheading new initiatives that will eventually — knock on wood — become institutionalized. The Executive Branch serves as chief spokesman, investigates and generates ideas, starts new programs and serves as the eyes and ears that connect other students with student government.

In short, we identify how we can make positive change for students that are structurally realistic for both the university side and the student side.

What has your administration accomplished? What are some of your current initiatives?

One of the things we’re working on is setting up a public bike fleet for the campus. These would be ’50s style cruisers painted to look like the Tartan Cookies (with red, white, blue and green pinstripes). So when you saw them, they would scream Carnegie Mellon.

We’re also setting up a similar program with public recreational boxes around campus. We identified 10 sectors on campus that will get these giant Rubbermaid boxes filled with footballs, soccer balls, whiffle balls, plastic baseball bats. They will be painted in the plaid

colors and have “Tartans” written all over it. So if you steal it, everyone will know where you got it.

We’re also setting up a car-sharing program, called Flex-Car, in which cars will be available on campus for rent by the hour for students, faculty and staff. It’s basically having your own personal fleet service on campus.

Will the bikes be for rent?

There will be no fee involved. They would just be placed all around campus. If one’s available you can just grab it. The goal is that they would stay on campus. Only the campus community would want to use them, believe me. These bikes are functional, they’re not very nice. It would all be on the honor system.

But the cars would be rented?

Yes. We’d have three to five vehicles, small hybrids, trucks and vans or something like that. I think the program we’ll wind up going with is called a “placement fee” service. Students, faculty and staff would pay membership fees and then get reduced rates. They would pay about \$5–7 per hour to rent a Toyota Prius. A Toyota Tacoma would be like \$7. We’ll have vans and trucks closer to the beginning and end of the semesters to accommodate students’ needs. And if you’re under 21, you can still rent one.

There are programs like this in Portland, North Carolina, San Francisco, Boston, New York, D.C. It’s a growing movement in metropolitan areas.

You’ve been working on a gender neutral dorm room proposal that may see a decision soon. Why are students interested in co-ed rooms and what’s your take on it?

The proposal calls for making some Oakland apartments co-ed by room, not just by building. Upperclassmen (first-years would be excluded) would select pairing by male, female or no preference. I think it’ll give the students a lot more choice and flexibility within their housing arrangements. Our targets — groups of friends, siblings and GLBT students — are all expected to benefit from this proposal.

Is it difficult to get things done with only one term in office?

It feels like we have attention deficit disorder sometimes because we’re always working on so many things. I’m of the philosophy that if only 10 percent of the ideas will make it, I’d rather be working on 100 ideas rather than five.

What has given you the most satisfaction as president?

Being able to reach out to students, and students knowing they can reach out to me with their ideas, is satisfying. I might not make them happen, but I’ll meet with people and try. If it happens, that’s great, but if it doesn’t at least we tried. I feel

that a lot of administrations in the past didn’t have that reputation.

What are some of the hot topics facing students today?

There’s going to be a lot of focus on the mascot. Deciding what that’s going to be, what it should look like, who’s going to be involved in creating it. When that process becomes more defined, everyone will want to talk about it.

Last year it was public art. It wasn’t that people were objecting to public art. This is an environment that trains you to be a change agent, but when anyone wants to change anything about Carnegie Mellon, we freak out. It’s amazing.

What about the proposed smoking ban?

That’s a mixed bag. You’ll find people vehemently against it and you’ll find people vehemently for it. I think it really comes down to how we engage the people in the middle. I think the vast majority of campus doesn’t have a strong opinion because they don’t smoke.

Has Carnegie Mellon lived up to your expectations?

I love Carnegie Mellon. It’s not perfect, but in terms of the richness of the experience, the richness of the people I’ve been able to meet here, it’s been great. It’s a unique environment. It’s very supportive to the intellectually curious. We’re all very geeky and we thrive on that.

Has Pittsburgh been a surprise to you?

Now that I’m transitioning into the role of a grad student, I realize how much Carnegie Mellon students don’t recognize the strengths of Pittsburgh. Pittsburgh has all the amenities of a large metropolitan East Coast city, but fortunately without the high prices. You can experience a lot — the symphony, fine arts, a ridiculous amount of bars and styles of bars. There’s so much culture that students could spend eight years here and never experience it all. “Yinzers” love Carnegie Mellon students. It’s a very friendly town. It’s a city that’s very much underrated.

Pittsburgh is just like Carnegie Mellon in a way. It’s transitioning into a new role, it’s growing, it’s finding a new purpose. It’s a great time to be here.

Do you have any advice for the next student body president?

Enjoy the power of the role. People want to listen to the student body president. You have one year, so maximize it. Once you’re identified as a student leader, everyone wants to talk to you about initiatives and changes. Use the power to broadcast as many ideas as possible. You’re privy to an incredible amount of ideas. Just use that power and take it all in.

Expert Says No Reason To Panic Over Murder Rate

■ Ken Walters

Despite an uptick in the U.S. murder rate, it’s not clear whether the country is facing a new wave of violent crime. That’s what Carnegie Mellon Professor Alfred Blumstein told attendees of the American Association for the Advancement of Science (AAAS) annual meeting on Feb. 16.

While the murder rate had essentially been flat since 2000, the FBI’s Uniform Crime Report showed a 2.5 percent increase in murders and a 2.9 percent rise in robberies in 2005, which has some people concerned. But Blumstein thinks it could just be a blip.

“The numbers indicate that this increase is not part of a widespread national trend,” said Blumstein, the J. Erik Jonsson University Professor of Urban Systems and Operations Research at the Heinz School. “While some cities are experiencing rising rates, other cities are seeing a downturn in violent crime.”

Blumstein was one of several Carnegie Mellon faculty members to speak at the meeting, considered the largest general science conference in the world, with approximately 10,000 attendees. Other faculty included:

- Cliff Davidson, professor of civil and environmental engineering, discussed Carnegie Mellon’s Center for Sustainable Engineering;
- David Klahr, professor of psychology, and post-doc Junlei Li addressed the need for better operational definitions in educational research, instructional innovation and assessment;
- Baruch Fischhoff, the Howard Heinz University Professor of Humanities and Social Sciences and Engineering and Public Policy, gave a presentation about applying the principles of decision science to climate-change policy;
- Indira Nair, vice provost for education and professor of engineering and public policy, led a symposium titled “Environmental Literacy: Educating for Environmental Well-Being;”
- Jay Apt, executive director of the Electricity Industry Center and professor of engineering and public policy, discussed technologies and policies to control carbon emissions in the U.S. electric sector;
- Sara Kiesler, the Hillman Professor of Computer Science and Human-Computer Interaction, was a participant in the “Cyber-Enabled, Cross-National Social Science Research: Promoting Sustainable Well-Being” symposium.
- Judith Hallinen, director of the Leonard Gelfand Center for Service Learning and Outreach, gave a talk on K-12 outreach.



INTERNATIONAL DISPATCHES

Qatar Announces Spring Faculty, Staff Appointments

Carnegie Mellon University in Qatar announced the addition of several new faculty members for the spring 2007 semester.

- Bill Brown, professor of biological sciences and co-director of the joint M.D./ Ph.D. program between Carnegie Mellon and the University of Pittsburgh, is teaching modern biology and a biological sciences seminar.
- Starling Hunter, formerly a professor at the Sloan School of Management at the Massachusetts Institute of Technology (MIT) and American University of Sharjah, teaches classes in organizational behavior.
- Aziz Lookman, assistant professor of finance in the Tepper School of Business, teaches corporate finance and investment analysis.
- Majd Sakr comes to Qatar from the American University of Science and Technology in Beirut, Lebanon, where he was an assistant professor and acting chairperson of the Computer Science and Computer and Communications Engineering Department. This semester he is teaching computer architecture, computer networking and system-level software development.

Several faculty members who have previously taught courses at Carnegie Mellon Qatar have returned to teach for the spring 2007 term. They are Robotics Systems Scientist Brett Browning; Assistant Professor of Economics Steve Calabrese; Research Scientist in Robotics Bernardine Dias; Business Communications Lecturer Patrick McGinnis; Teaching Professor Mark Stehlik, who doubles as assistant dean for undergraduate education in computer science in Pittsburgh; and Associate Teaching Professor Jacobo Carrasquel, who is the undergraduate advisor for computer science in Qatar.

Also new to campus is Nikki Krysak, reference librarian.

Speaker Series Begins

This semester, students in Qatar enjoyed presentations by Henrietta Fore, U.S. undersecretary of state for management. She talked about her experience managing large organizations and the role of women in management. Fore participated in a Q&A session with students after her Feb. 15 lecture.

Barbara F. Freed, professor of French Studies, was the first speaker for a new distinguished lecture series in Qatar. Gloria Khoury, assistant dean for student affairs in Qatar, said the goal of the lecture series is to bring in futurists and to highlight Carnegie Mellon's interdisciplinary programming. Freed spoke about her book, "Artists and Their Museums on the Riviera," and screened her award-winning documentary, "A Model for Matisse." She also participated in a post-lecture luncheon on second-language study.

Universities Establish Katayanagi Prizes in Computer Science

Carnegie Mellon and Japan's Tokyo University of Technology (TUT) have established the Katayanagi Prizes in Computer Science. Japanese entrepreneur Mr. Koh Katayanagi, a strong advocate of education who founded TUT and several other technical institutions in Japan over the last 60 years, endowed the prizes. The Katayanagi Prize for Research Excellence carries a \$20,000 honorarium and the Katayanagi Emerging Leadership Prize grants an honorarium of \$10,000.

The recipients of the first Katayanagi Prizes are David A. Patterson, the E.H. and M. E. Pardee Chair of Computer Science at the University of California at Berkeley; and Takeo Igarashi, associate professor in the Department of Computer Science, Graduate School of Information Science and Technology at the University of Tokyo. Patterson and Igarashi will deliver the inaugural Katayanagi Prize lectures in ceremonies at TUT on March 12, and at Carnegie Mellon March 20 and 22.

The prizes will be awarded on an annual basis. For more information, see www.cs.cmu.edu/%7Ekatayanagi/.

Robotics Researchers Featured in "Almost Human"

■ Anne Watzman

You've heard the names — Groundhog, Zoe, Sandstorm, Grace. They're just a few of the famous robots created by the students, faculty and staff at Carnegie Mellon's Robotics Institute (RI). But how they were built and what makes them succeed at their tasks is something of a mystery, one that Pittsburgh author Lee Gutkind solves in his new book, "Almost Human, Making Robots Think," a first of its kind, in-depth look at the people and projects in the Robotics Institute, published by WW Norton.

The book focuses on five people — Computer Science Professor Manuela Veloso, Associate Research Professor David Wettergreen, Robotics Professor William "Red" Whittaker, Biological Sciences Professor Alan Waggoner and Nathalie Cabrol, a scientist at NASA's Ames Research Center — plus dozens of other RI faculty, students and staff.

Gutkind spent four years immersed in the institute — in the classrooms and messy labs deep inside Newell Simon Hall — observing its inhabitants, attending their meetings, watching them work and traveling to odd places to view the progress of their research.

What did he discover? That few obstacles are too great for enterprising graduate students to overcome. He also captured the strengths, quirks and idiosyncrasies of the faculty and how they motivate their students to achieve the impossible, whether it's preparing for a race in the desert, a simulation of conditions on Mars or a competition against other robots to see which exhibits the most human-like traits.

Gutkind is a professor of English at the University of Pittsburgh. He has written books about organ transplantation, pediatrics, veterinary medicine, the tragedy of childhood mental illness and even baseball umpires. He held a book signing and presentation for the campus community about "Almost Human" on Feb. 27.

200 Colleges. 10 Weeks. One Goal



Carnegie Mellon is going head-to-head with 200 colleges nationwide in the annual Recyclemania challenge. The competition, designed to educate students about the need for recycling, takes place over a 10-week period and encourages colleges to decrease the amount of waste they generate while increasing the amount they recycle. Campuses across the country compete in different contests to see which institution can collect the largest amount of recyclables per capita, the largest amount of total recyclables, the least amount of trash per capita or have the highest recycling rate. All participating schools are required to report measurements on a weekly basis in pounds and the front-runners are continuously updated on <http://www.recyclemaniacs.org/>.

This is Carnegie Mellon's fourth year participating in the competition, which continues through April 7. During the 2005 competition Carnegie Mellon achieved a recycling rate of more than 15 percent — that's 29 pounds per student. The university wants to improve the amount the campus recycles this year to more than 20 percent. So don't just toss that paper or plastic in the garbage. Recycle it!

For more ways to recycle on campus, see <http://www.cmu.edu/greenpractices>.

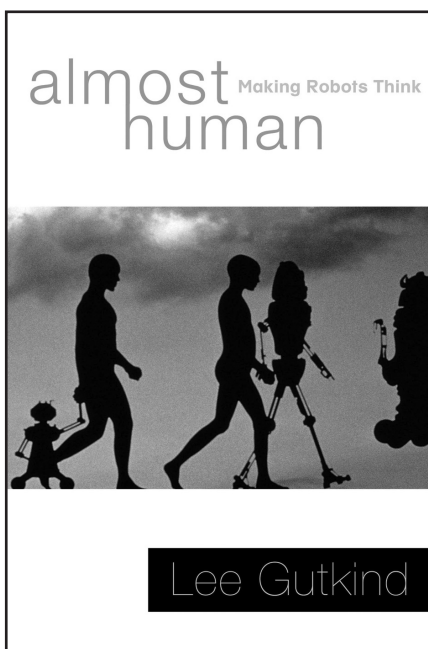


IMAGE COURTESY OF WW NORTON

LECTURE SPOTLIGHT: JARED DIAMOND WINS 2007 DICKSON PRIZE IN SCIENCE

■ Jonathan Potts

The decline and fall of great societies like the Roman Empire have inspired generations of poets, artists and scholars. They seem to provide a metaphor for our own mortality, and their ruins are like a rebuke to our grandest ambitions.

But civilizations collapse for a reason, and there is no life cycle for human societies, says scientist and author Jared Diamond, winner of Carnegie Mellon's 2007 Dickson Prize in Science.

"A common belief is that collapse is inevitable, that it's the fate of all societies. The U.S. has never been close to collapse, although we have been in existence as a political entity for 219 years," Diamond said. "Iceland has been operating for 1,135 years and today it's one of the richest countries in the world."

Diamond will deliver the Dickson Prize lecture, titled "Collapse," at 4:30 p.m., March 26 in McConomy Auditorium. Prior to his lecture, he is tenta-

tively scheduled to sign copies of his latest book, "Collapse: How Societies Choose To Fail or Succeed," at 3:30 p.m. in the University Center's Danforth Lounge.

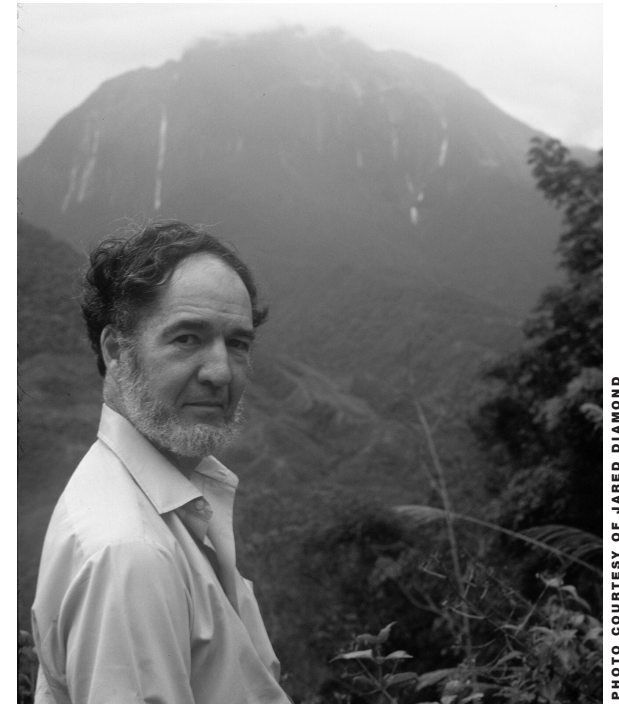
In "Collapse," Diamond probes the decline and fall of once-prosperous civilizations, such as the Maya and the prehistoric Polynesian society of Easter Island. Diamond pinpoints environmental factors common to these catastrophes that provide lessons for today.

"A transparent lesson is to take environmental problems seriously rather than viewing that as a luxury," Diamond said. "There are deeper lessons about the role of leadership in a society, and a society's willingness to change core values."

A physiologist by training, Diamond is a professor of geography at the University of California, Los Angeles. He has also studied ecology and evolutionary biology. His 1997 book "Guns, Germs and Steel: The Fate of Human Societies" — which won the Pulitzer Prize — explores the geographic, environmental and epidemiological factors that enabled some societies to progress rapidly while others remained primitive.

The late Pittsburgh physician Joseph Z. Dickson and his wife, Agnes Fisher Dickson, established the Dickson Prize in Science in 1969. Carnegie Mellon

awards it annually to individuals in the United States who make outstanding contributions to science. The Dickson Prize includes \$50,000 and a medal.



JARED DIAMOND

PHOTO COURTESY OF JARED DIAMOND

WHO: Dickson Prize Winner Jared Diamond
WHEN: 4:30 p.m., March 26
WHERE: McConomy Auditorium, University Center

Read more about what's going on at Carnegie Mellon in the News Briefs on page four.

Upcoming Events

March 1

Margaret Morrison Women's History Month Lecture
 Gerda Lerner, professor emeritus, University of Wisconsin
 7 p.m., McConomy Auditorium, University Center (UC)

March 4

Department of Choral Studies Concert
 3 p.m., Kresge Recital Hall, College of Fine Arts

March 5

"Environmental Challenges to Human Fertility: Three Case Studies"
 Shanna Helen Swan, professor, University of Rochester
 4:30 p.m., Adamson Wing, Baker Hall 136A

March 7

Carnegie Mellon Philharmonic Concert
 8 p.m., Carnegie Music Hall, 4400 Forbes Ave.

March 8-9

"TK60," a symposium in honor of Takeo Kanade's 60th birthday
 Wean Hall 7500 and UC

March 19

Authors' Rights and Wrongs Series
 "Managing Your Rights: Authors and Copyright"
 Julia Blixrud, assistant director for public programs, Scholarly Publishing and Academic Resources Coalition (SPARC)
 4:30 p.m., Posner Center
 (Access the Webcast at <http://www.library.cmu.edu/>)

March 20

"Urban Farming With Youth"
 Patricia Gray, executive director, Food Project of Boston
 5:30 p.m., Rangos 1&2, UC

For a complete list of March events, see the Public Events Calendar at <http://my.cmu.edu/site/events/> and click on "view events" at the bottom of the page.

March 21

Center for the Arts in Society's "Bring Your Own Brain" Series
 Associate Professor of Art Clayton Merrell will present the collaborative work of Carnegie Mellon graduate students and young Mexican artists from Oaxaca
 Noon, College of Fine Arts 310

March 22

"Yoga, Sacred Spaces and the Culture of 'Letting Go'"
 Helen Wang, coordinator, Student Development Office
 4:30 p.m., Adamson Wing, Baker Hall 136A

March 22

Cuarteto Latinoamericano Concert
 7:30 p.m., Alumni Concert Hall, College of Fine Arts

March 26

"Deeper Learning in Leadership"
 Dennis C. Roberts, associate vice president for Student Affairs, Miami University
 7 p.m., McConomy Auditorium, UC

March 29

"The Legacies of Dr. Albert Schweitzer"
 David T. Ives, executive director, Albert Schweitzer Institute, Quinnipiac University
 4:30 p.m., Adamson Wing, Baker Hall 136A

March 30

University Lecture Series' LaPaglia Lecture
 "Nanotechnology, Environmental Ethics and Environmental Justice"
 Ronald Sandler, assistant professor, Northeastern University
 4:30 p.m., Adamson Wing, Baker Hall 136A

March 31

Contemporary Ensemble Concert
 5 p.m., Kresge Recital Hall, College of Fine Arts

April 19-21

Spring Carnival
 Morewood Gardens Parking Lot

Seeing Science

CONTINUED FROM PAGE ONE

the 16th century; and early 19th century mathematician L. C. Bouvier. Between these owners, an unknown scholar penned a Latin annotation inside the front cover, offering references and comparisons to other works.

Clues like these fascinate a book lover because they document the life of the book and its ideas. Twentieth century

TOGETHER, GLORIANA ST. CLAIR, DAN AND LIBBY BOYARSKI, AND DYLAN VITONE CREATED A LARGE-FORMAT PAMPHLET THAT CELEBRATED AL-HAYTHAM'S DISCOVERIES AND HOW "OPTICAE THESAURUS" CAME TO BE PART OF THE POSNER COLLECTION.

collector Henry Posner Sr. acquired the volume in 1967, and Henry Posner Jr. deposited it — along with the rest of the Posner Collection of fine and rare books — at Carnegie Mellon in 1978. Since then, the University Libraries has housed the collection (now in the Posner Center) and digitized it, making nearly all of the Posner Collection available in full-text online, where scholars everywhere can access and study it, page by page if they wish.

At the time that she noticed "Opticae Thesaurus," St. Clair was negotiating a pilot project with the Qatar Foundation to digitize books and manuscripts in the Qatar Heritage Collection. "I wondered," said St. Clair, "how many of al-Haytham's writings were in the Qatar collection." Learning that there were none, she immediately saw Optics and its provenance as an opportunity to demonstrate to the Qatar Foundation

how digitization simultaneously preserves rare books and disseminates ideas.

St. Clair worked with colleagues Erika Linke, Gabrielle Michalek and other scholars to research al-Haytham's scientific contributions and, in particular, to translate and decipher the Latin annotation and other marks of ownership in the Posner copy of "Opticae Thesaurus." She enlisted the creative expertise of Dan Boyarski, head of the School of Design, and his wife, designer Libby Boyarski. Together, they

conceptualized a large-format pamphlet as a vehicle for the text and illustrations, and design's Smillie Lab technician Dylan Vitone printed and bound the final product. Remarkably, within a few weeks the team produced a limited-edition publication that celebrated al-Haytham's discoveries, his place in the history of science and the story of how "Opticae Thesaurus" came to be part of the Posner Collection.

In November, when St. Clair visited Qatar to complete arrangements for the pilot digitization project, she presented copy number one of "Ibn al-Haytham: Seeing Science" to the Qatar Foundation and Her Highness Sheikha Mozah bint Nasser al-Missned. Formally a gift from Henry Posner Jr. and St. Clair on behalf of the University Libraries, "Seeing Science" is a work of art in its own right, of which Dan and Libby Boyarski, the Robert Smillie Digital Imaging Lab and the School of Design can be proud.