

Antarctica

The research team is collecting samples from the McMurdo Dry Valleys. They must make precise descriptions of the location and setting of every sample so that the source can later be analyzed for exposure age and erosion rate.



(Continued from previous page)

strains in mid-September, Mukhopadhyay invited Middleton to join the expedition. "I immediately had to sit down," she says, "because, otherwise, I probably would have fainted." Going to Antarctica has been a lifelong ambition. "I remember being like 6 and telling my grandma, 'I want to go to Antarctica.'"

Although young, Middleton and Pope already have polar experience. Both spent 10 weeks on the northern glaciers with the Juneau Icefield Research Program (JIRP). They received credit for the program through Harvard's Earth and Planetary Science Department. "[JIRP is] definitely what helped me decide that I wanted to go to grad school on this type of thing," says Pope. Pope received the requisite training for this trip through his thesis research; Middleton has been doing an independent study with Mukhopadhyay this past semester. Neither student had much trouble convincing professors and advisers that the once-in-a-lifetime experience would be worth the missed school time.

Ackert, however, claims that it might not be once-in-a-lifetime. "They might get addicted," he jokes. Ackert, too, first visited the ice continent as an undergraduate; from then on, he was hooked. "I'm actually really excited about bringing Jennifer and Al down because, to a certain extent, it is a little bit old hat for me. And I think seeing other people being really excited is contagious. It's fun to be able to share your knowledge and excitement about things and expose them to the same things that I was exposed to and really excited me.... So, I feel like I'm kind of closing the loop after all these years."

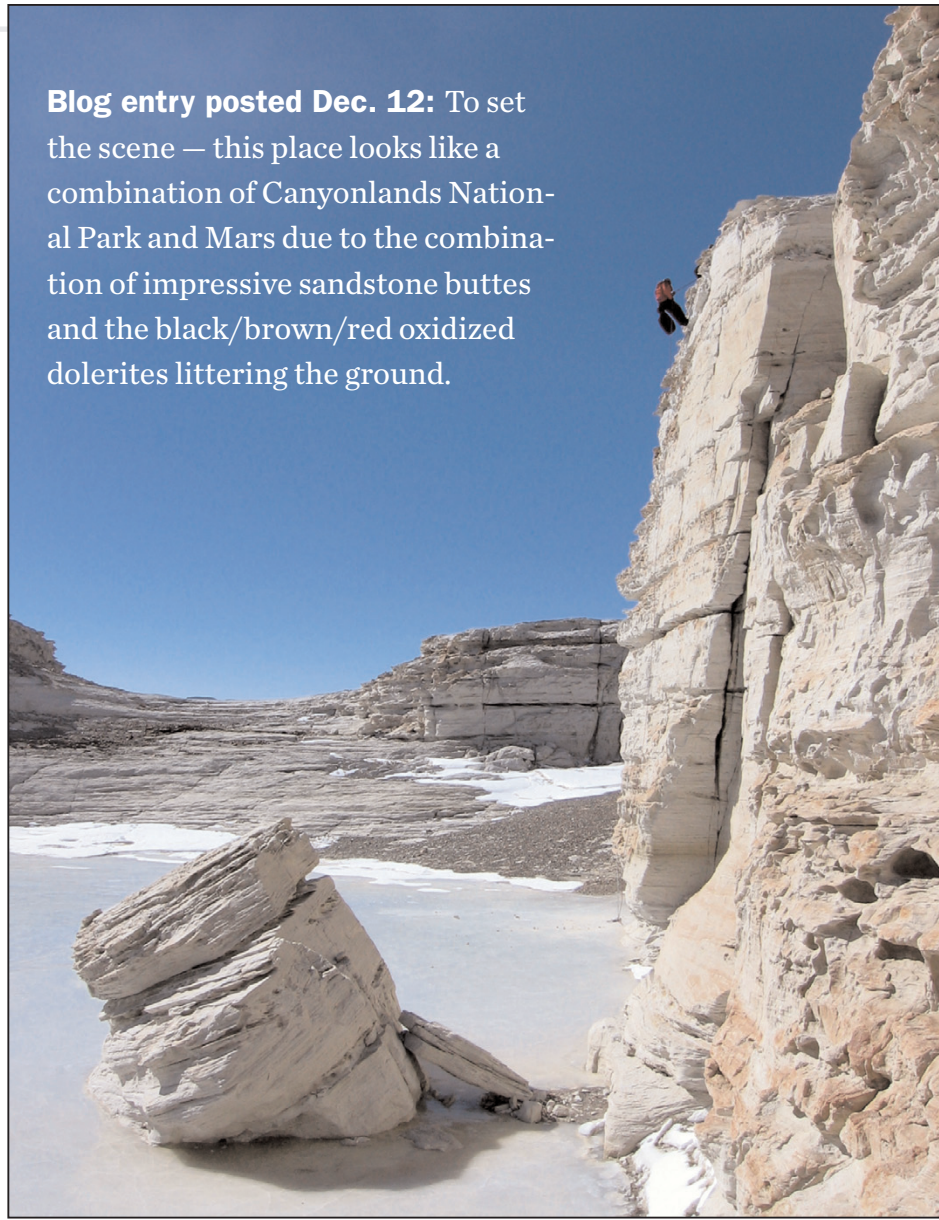
Caitlin Adara Rotman is a member of the Harvard College Class of 2010, concentrating in Earth Science and Media. Her passion is to enliven the earth sciences through a variety of media including photography, documentary, and print.

To share their adventure, Pope and Middleton have been keeping a blog of the expedition. To view photographs and follow their journey, and learn more about the trip, visit www.epsinantarctica.blogspot.com/.

Camp is set up on the barren Ross Ice Shelf during a survival training course before the Mukhopadhyay team can take to the Dry Valleys and get to work.



Blog entry posted Dec. 12: To set the scene — this place looks like a combination of Canyonlands National Park and Mars due to the combination of impressive sandstone buttes and the black/brown/red oxidized dolerites littering the ground.



Photos courtesy of Jennifer Middleton and Allen Pope



On the Nibelungen Valley floor, blown snow highlights cracks caused by freezing and thawing. Freeze-thaw weathering is one form of erosion that the group is considering when trying to unravel the glacial history of the area.

Robert Ackert rappels a cliff in Sessrumnir Valley in order to sample rocks from a variety of elevations. Below him lies a perpetually frozen pond.

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Courtesy of Jennifer Middleton and Allen Pope

In the Nibelungen Valley, the Mukhopadhyay research team is graced with sunny weather as they conduct their research. Instead of precipitation, wind is the real weather hazard, as it tears across the barren desert landscape.

Lawrence Lessig receives two Harvard appointments



Lawrence Lessig — 'one of the most brilliant and important legal scholars of our time' — has joint appointments.

Named HLS professor of law, director of Edmond J. Safra Foundation Center for Ethics

Renowned legal scholar Lawrence Lessig has been appointed to the faculty of Harvard Law School, and as the faculty director of Harvard University's Edmond J. Safra Foundation Center for Ethics.

The announcement was made jointly Dec. 12 by Harvard University Provost Steven E. Hyman and Harvard Law School Dean Elena Kagan.

Lessig — a widely acclaimed expert in

constitutional law, cyberlaw, and intellectual property — comes to Harvard from the faculty of Stanford Law School. Prior to joining the Stanford faculty in 2000, he was on the faculty of the University of Chicago Law School and Harvard Law School.

"Harvard is fortunate to have such an outstanding scholar at the helm of one of its finest organizations," said Hyman of the center appointment. "Lawrence brings with him tremendous vision and administrative experience, which will serve the center well as he continues to build upon its remarkable success."

"Larry Lessig is one of the most brilliant and important legal scholars of our time," Kagan said. "His work has recast the very terms of discussion and debate in multiple areas of law, ranging from intellectual property to constitutional theory. His new focus on questions of governance and corruption will be similarly transformative, and I am thrilled that he is returning to Harvard Law School and assuming the directorship of the center to advance those efforts."

(See *Lessig* page 8)

Researchers study glaciers on Earth's coldest desert

Caitlin Rotman '10 reports on a Harvard research team, including junior Jenny Middleton, that began wending its way to Antarctica in late November and will return toward the middle of January — with information that will help date and describe the evolution of the continent's ancient glaciers.

By Caitlin Rotman
Special to the Harvard News Office

It's December, and undergraduate Jenny Middleton bundles up to face the cold. While all across campus, students, and faculty don their winter gear, Middleton is not preparing for the New England winter; she is preparing for an expedition through the Earth's coldest desert: the McMurdo Dry Valleys in Antarctica.



Stephanie Mitchell/HNO

Middleton

"Occasionally, like when the wind is blowing so hard that you can hear the harmonics of a 50-gallon drum as if it were an empty Coke bottle and you can't see anything due to all the blowing snow, we wonder what we've gotten ourselves into," the Harvard junior jokes in a recent communication from the McMurdo Station, a research center on Antarctica's Ross Island.

Middleton, an Earth and Planetary Science concentrator, has come to McMurdo with two other Harvard researchers from

(See *Antarctica*, page 35)

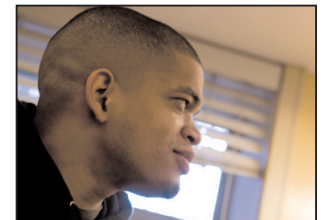
Inside & ONLINE



Green chief
An interview with Heather A. Henriksen, the director of Harvard's new Office for Sustainability.
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Celebrating rights
A semester-long celebration of the 60-year-old Declaration of Human Rights closes with talk and song.
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Gimme shelter
PBHA's entirely student-run homeless shelter gives solace, succor, and counsel to area homeless.
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POLICE REPORTS

Following are some of the incidents reported to the Harvard University Police Department (HUPD) for the week ending Dec. 15. The official log is located at 1033 Massachusetts Ave., sixth floor, and is available online at www.hupd.harvard.edu.

Dec. 11: An officer took a report of two stolen \$25 gift cards at the New Research Building. At Austin Hall, an individual's driver side window was smashed and a Garmin Nuvi GPS navigation device was stolen from the vehicle. Officers were dispatched to Boylston Hall to a report of a suspicious individual hanging around the bathroom. Officers arrived, conducted a field interview, and the individual was checked for warrants with negative results. The individual was placed under arrest and charged with trespassing after the officers found that the individual had a trespass warning for all Harvard University property. At Terry Terrace, officers were dispatched to a report of a threatening e-mail. Officers contacted the individual who sent the e-mail and issued the person a trespass warning for all Harvard University property.

Dec. 12: An officer assisted the Boston Police Department in making an arrest at the François-Xavier Bagnoud building. At the Faculty Club, an officer was dispatched to take a report of a stolen bicycle and cable lock. An Apple laptop was stolen at Gund Hall. At Mather Hall, a red folder containing \$300 in cash was stolen. Officers were dispatched to the Northwest Science Building to take a report of a threat.

Dec. 13: The following unattended and unsecured items were stolen from Hemenway Gymnasium: a Jeanne Lottie pocketbook, Burberry wallet, \$20 in cash, credit cards, ID cards, iPod, and a cell phone.

Dec. 14: At the Eliot House dining hall, an officer was dispatched to a report of a found wallet. The wallet was returned to the owner who stated that \$20 in cash was missing.

Dec. 15: Officers sent an unwanted guest on their way at Holyoke Center. At the Bureau of Study Counsel, an officer was dispatched to take a report from an individual about a smashed glass display case and a broken window shutter.

This month in Harvard history

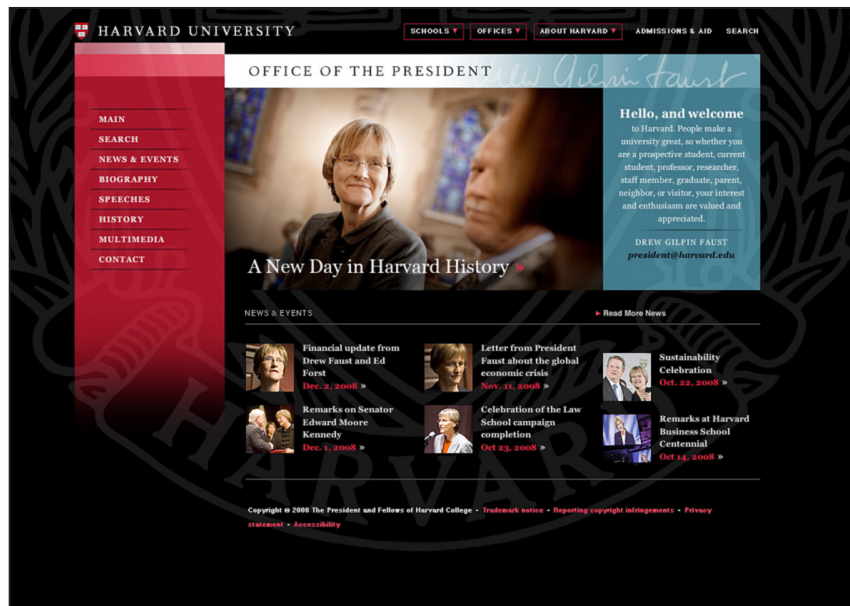
Dec. 8, 1955-Jan. 15, 1956 — In Robinson Hall, the Graduate School of Design mounts an exhibition of works by Joan Miró. The show includes paintings, etchings, lithographs (color and black-and-white), and illustrated books of poetry.

December 1965 — The Nieman Foundation for journalism launches a \$1.2 million campaign to match a recent Ford Foundation grant.

Dec. 1, 1969 — Like thousands around the country, Harvard men learn their fate as the first national military-draft lottery (based on randomly selected birth dates) takes place.

Dec. 12, 1969 — More than 2,200 Harvard and Radcliffe undergraduates begin a 30-hour fast for the December Moratorium against the Vietnam War.

From the Harvard Historical Calendar, a database compiled by Marvin Hightower



President's Web site has new look and feel

The Web site of the Office of the President at Harvard has a whole new look. Fresh and colorful graphics, arresting images, and substantive content are combined with dynamic, easy-to-navigate links — and a design that matches the vibrant new Harvard home page. Features include Drew Faust's speeches, continually updated news stories, and revealing historical timelines linked to lively biographical sketches and images of all of Harvard's presidents. To visit, go to www.president.harvard.edu/.

Harvard Magazine site revamped

The Web site for Harvard Magazine, Harvard's alumni publication, has also been revamped to better reflect its glossy and colorful magazine format. The site now features entire issues online, flashing dynamic graphics, and audio and video clips that enhance articles. Alumni who browse the Web site are greeted with the latest-breaking news at Harvard, including updates on the University's finances.

"Our revamped Web site aims to provide users even more access to breaking news about the University at an especially critical time," said Harvard Magazine Editor John S. Rosenberg. "Along with enhanced online coverage of alumni ... [the Web site] makes it easier to access our complete current contents and online archives."

Other new features include a comments section following articles, where visitors can respond to stories and interact with each other. Alumni can still access familiar functions like submitting Class Notes, classified ads, or change-of-address forms — all easily located under a user-friendly navigation bar.

"We look forward to introducing further improvements in the months ahead," said Rosenberg, who already pinpoints interactive Class Notes as a future target. But for now, he said, "We welcome users' comments and suggestions."

Visit <http://harvardmagazine.com/>.

PRESIDENT'S OFFICE HOURS 2008-09

President Drew Faust will hold office hours for students in her Massachusetts Hall office on the following dates:

Monday, March 16, 2009, 4-5 p.m.

Thursday, April 23, 2009, 4-5 p.m.

Sign-up begins at 2:30 p.m. Individuals are welcome on a first-come, first-served basis. A Harvard student ID is required.

NOTE TO READERS

The Gazette's print schedule will resume on Feb. 5. For the latest news, visit www.harvard.edu.



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Senior Director of Communications: John Longbrake

Director of News and Public Affairs: Joe Wrinn
Associate Director: Rebecca Rollins
Assistant Director for Photography: Justin Ide
Assistant Director for Publications: John Lenger

Managing Editor: Terry L. Murphy
terry_murphy@harvard.edu
Associate Editor: Alec Solomita
alec_solomita@harvard.edu
Calendar Editor: Georgia Bellas
georgia_bellas@harvard.edu
Editorial Assistant: Gervis A. Menzies Jr.
gervis_menzies@harvard.edu
Editorial Assistant: Sarah Sweeney
sarah_sweeney@harvard.edu

Writers:
Corydon Ireland (corydon_ireland@harvard.edu)
Alvin Powell (alvin_powell@harvard.edu)
Colleen Walsh (colleen_walsh@harvard.edu)

Special Areas: B.D. Colen, senior communications officer for University Science (bd_colen@harvard.edu)
Lauren Marshall, public information officer for Community Programs and University Planning (lauren_marshall@harvard.edu)

Chief Photographer: Justin Ide (justin_ide@harvard.edu)
Photographers: Jon Chase (jon_chase@harvard.edu)
Rose Lincoln (rose_lincoln@harvard.edu)
Stephanie Mitchell (stephanie_mitchell@harvard.edu)
Kris Snibbe (kris_snibbe@harvard.edu)
Nick Welles (*intern*)

Imaging Specialist: Gail Oskin
[\(617\) 495-1691](mailto:photo_services@harvard.edu)

Web: <http://www.harvard.edu>
Web Production: Peggy Bustamante, Max Daniels
Contact: webmaster@harvard.edu

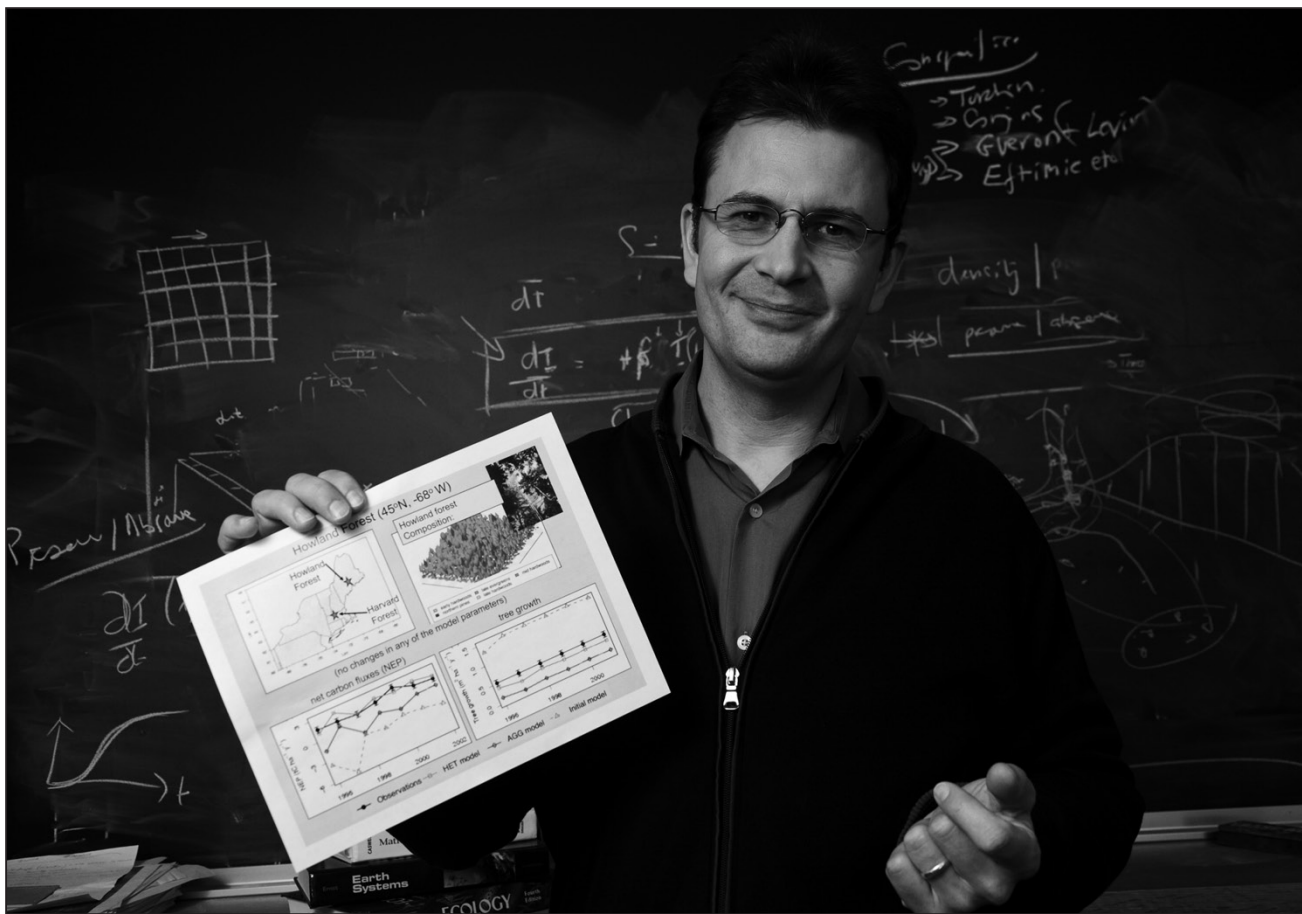
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Moorcroft models provide detailed view of forest responses to climate variation



Jon Chase/Harvard News Office

Professor of Organismic and Evolutionary Biology Paul Moorcroft: 'The big question facing us is how are terrestrial ecosystems responding to climate change and how will these responses feed back onto climate.'

Modeling the forest ... and the trees

By **Alvin Powell**
Harvard News Office

When building computer models of the ecosystems that cover the earth's surface, it is tempting to incorporate sweeping generalizations in your calculations.

The difficulty, of course, is that there is no guarantee that nature generalizes in the same way. All the interactions of individual plants and animals have their own sets of causes and effects.

Accurately capturing the aggregate response of an ecosystem or an animal population that arises from all those causes and effects is critical if computer models are to be effective crystal balls for predicting how ecosystems respond to climate change, or how an animal population will respond to changes in its landscape. Paul Moorcroft, professor of organismic and evolutionary biology, is using tools borrowed from statistical physics to create models that will increase our ability to evaluate different courses of action in environmental management and global warming.

"He had this beautiful insight that we should look at a forest from the level of individual trees," said Steven Wofsy, Abbott Lawrence Rotch Professor of Atmospheric and Environmental Science and collaborator with Moorcroft. "He could look at systems and take apart systems at a level nobody else could."

Moorcroft borrowed concepts that physicists use in modeling fluids and gases, where the properties and behaviors of individual particles are used to predict the dynamics and flow patterns of the fluid or gas. His models treat the individual plants within an ecosystem as a physicist

would "particles," taking into account that those individuals respond to the environmental conditions they experience, interact and affect each other's behavior, and govern the aggregate response of the system.

"The big question facing us is how are terrestrial ecosystems responding to climate change and how will these responses feed back onto climate," Moorcroft said.

Because ecosystems are so large, the standard approach to designing ecosystem computer models has been to aggregate large tracts into a single generalization of their behavior. The scale of a grid cell in a climate computer model is 1 degree latitude by 1 degree longitude or larger, or more than 4,000 square miles.

"It has generally been assumed that the ecosystem within each grid cell will behave like a single giant plant. That's problematic, because we know that ecosystems are much more complex and that the true ensemble of plants is likely to behave quite differently," Moorcroft said.

The problem with this so-called "ecosystem as big leaf" modeling approach is, of course, that 4,000-plus square miles of forest doesn't just hold one kind of plant. Rainforests in particular hold a dazzling array of tree and plant species, each of which will respond differently to changing conditions. Those differences are particularly important when a forest is stressed, Moorcroft said, because it can affect a tree's ability to survive following the change in environmental conditions.

That could mean that, even if all individuals of a particular tree species do in fact die off from hotter days and lower rainfall, other species of tree are likely to survive, or even thrive. When building a

computer model of how global warming might impact the Amazon forest basin, capturing this reality can mean the difference between predicting a changing but persisting forest and one that will die out entirely, to be replaced by grasslands.

"In real ecosystems, there are different types of plants in different places that behave differently. This heterogeneity can be important when an ecosystem is stressed in response to climate change," Moorcroft said. "We have been able to show that capturing this heterogeneity leads to more accurate predictions of the ecosystem's behavior."

Moorcroft remembers always being interested in both biology and mathematics. As an undergraduate at Cambridge University, he studied natural sciences, especially ecology, and math. Moorcroft's interest in predicting how the terrestrial biosphere will respond to climate change grew into his doctoral thesis research at Princeton on predicting how the spatial pattern of animals on landscapes is governed by the movements of individuals.

While he was at school in the 1990s, Moorcroft said there was a movement in ecology to understand how individual dynamics collectively determine the behavior of populations, communities, and ecosystems. Coupled with that was the emphasis at Princeton of employing mathematical models to address ecological questions.

Moorcroft joined field biologists collecting radio tracking data on coyotes in Yellowstone National Park in advance of the wolf reintroduction. He searched the literature to see how the populations had been analyzed in the past and was surprised to see that the work to date was

(See **Moorcroft**, next page)

NEWSMAKERS

Rockefeller Fellows chosen

The Michael C. Rockefeller Memorial Fellowships administrative board has awarded fellowships to six graduating seniors for 2009-10. Rockefeller Fellowships contribute \$18,000 toward a year of purposeful post-graduate immersion in a foreign culture for individuals at critical stages in their development who feel a compelling need for new and broadening experiences.

The six recipients are **Lauren Brants** '09 of Kirkland House, for travel to Mexico; **Wilmarie Cidre** '09 of Kirkland House, for travel to Chile; **Nicholas Rizzo** '09 of Lowell House, for travel to India; **Nora Sluzas** '09 of Eliot House, for travel to China; **Brittan Smith** '09 of Pforzheimer House, for travel to South Africa; and **Cristiana Strava** '09 of Eliot House, for travel to Morocco.

Hedley-Whyte wins AAMI award

John Hedley-Whyte, the David S. Sheridan Professor of Anaesthesia and Respiratory Therapy at Harvard Medical School, has been awarded the Association for the Advancement of Medical Instrumentation (AAMI) Technical Committee Award for his role in the development of American National Standards and the corresponding International Standards in the Application of Risk Management to Medical Devices. These efforts are part of a White House initiative on Medical Device Interoperability.

Goldman invited to speak to Homeland Security Council

Julian M. Goldman, a Harvard Medical School instructor in anesthesia at Massachusetts General Hospital (MGH), has recently given an invited presentation to the White House Homeland Security Council on medical device interoperability requirements and technologies that improve patient treatment and safety. Before coming to MGH, Goldman was the vice president of medical affairs for a medical monitoring company and a chair of the U.S. national standards committee for anesthetic and respiratory equipment.

Steinkeller receives Humboldt Award

Piotr Steinkeller, professor of Assyriology in Harvard's Faculty of Arts and Sciences, has received the Humboldt Research Award from Germany's Alexander von Humboldt Foundation. The award provides funding for internationally renowned scientists and scholars to pursue research in Germany. From May 2009 through January 2010, Steinkeller will research the political and economic organization of Babylonia at the end of the third millennium BCE, at the Ludwig-Maximilians Universität München. He will work in collaboration with Walther Sallaberger, a professor of Assyriology at the university's Institut für Assyriologie und Hethitologie.

Steinkeller, who has taught at Harvard since 1981, has published three books and written more than 100 scholarly articles and book reviews. His work focuses primarily on Mesopotamia, and Steinkeller has led a range of courses on the history of ancient Mesopotamia, Mesopotamian culture and religion, as well as the Sumerian and Akkadian languages.

Counter at Nobel Prize ceremony

S. Allen Counter, director of the Harvard Foundation, attended the 2008 Nobel Prize Ceremony in Stockholm, Sweden, on Dec. 10. Counter was invited to the ceremony by the Nobel Foundation and the Karolinska Nobel Institute, where he received his doctor of medical science degree in 1989. At the event, Counter was able to meet with Luc Montagnier, the winner of the 2008 Nobel Prize in Medicine and Physiology for his discovery of the HIV/AIDS virus.

Compiled by Gervis A. Menzies Jr.

Algebra, topology expert Lurie named professor of mathematics

By Steve Bradt
FAS Communications

Mathematician Jacob Lurie, whose expertise ranges across algebraic geometry, topology, and algebra, has been named professor of mathematics in Harvard University's Faculty of Arts and Sciences, effective July 1, 2009.

appointment Lurie, 31, was previously associate professor of mathematics at the Massachusetts Institute of Technology (MIT), a position he has held since 2007.

"Professor Lurie is a mathematician of impressive breadth and energy," says Jeremy Bloxham, dean of science in FAS. "He is also an enthusiastic and committed teacher of mathematics, known for the clarity of his lectures. Given his dynamism and his broad expertise, I expect that his impact on our undergraduate mathematics concentrators will be substantial."

Although Lurie has published papers on logic, combinatorial game theory, and Lie groups, his most significant work has come in algebraic geometry, topology, algebra, and most recently, representation theory. His recent work has been described by fellow mathematicians as "revolutionary" in its intertwining of these fields, and his notion of topological modular forms has profoundly impacted algebraic topology and homotopy theory.

Lurie's work in homotopy theory has broken new ground with its deep and invigorating connections with algebraic geometry, topological quantum field theory, geometric representation theory, quantum group theory, and higher algebra. His work in this area, regarded by his peers as both fundamental and problem solving in nature, lays a foundation for the "right way" to view certain constructions, opening up new vistas in many of the aforementioned fields.

Lurie is author of the forthcoming book "Higher

Topos Theory" (Princeton University Press, 2009), whose powerful theory presents applications in many areas of mathematics.

Lurie received his A.B. in mathematics from Harvard College in 2000 and his Ph.D. in mathematics from MIT in 2004. He has since been supported by a five-year American Institute of Mathematics fellowship. Prior to joining the MIT faculty in 2007 he had been a visiting professor at both Harvard and MIT.

As a teen, Lurie received a gold medal in the 1994 International Math Olympiad and took first place in the 1996 Westinghouse Science Talent Search. As a Harvard undergraduate, he was the 2000 recipient of the Frank and Brennie Morgan Prize for Outstanding Research in Mathematics, awarded by the American Mathematical Society, Mathematical Association of America, and Society for Industrial and Applied Mathematics.

Marine squad in Iraq wears crimson, thanks to HKS, Coop

By Alvin Powell
Harvard News Office

A contact drawn by a Harvard Kennedy School (HKS) faculty member's research has led to the filling of an unmet need for U.S. Marines in Iraq: Harvard-insignia gear.

Linda Bilmes, an expert on government budgeting and public finance and co-author of the 2008 book "The Trillion Dollar War," was contacted in September by Cpl. Blake Lynch, posted near Ar Ramadi, Iraq. Lynch e-mailed Bilmes, a lecturer in public policy, to ask her about her research into the costs and economic ramifications of the war.

In response, Bilmes asked Lynch about the availability of basic necessities for the troops and what they might need. Lynch responded that, though they have learned to do without — they're faithful to the slogan "Marines do more with less," Lynch told Bilmes — they'd love some Harvard-insignia clothes to augment their government-issued wardrobe.

"During my research on the costs of the Iraq War, I discovered that despite spending \$12 billion every month on contractors and combat, the military does not provide most troops in the field with basic items like soap and toothpaste," Bilmes said. "Many service members rely on their families and friends to send them these items."

Lynch sent Bilmes a short list of 10 items, and



File Dominick Reuter/Harvard News Office

'I applaud the Coop for its donation of clothing to our Marines,' Linda Bilmes said. 'This is a small way we in the Harvard community can show how much we appreciate the sacrifice of our troops stationed in Iraq.'

Bilmes and her assistant, Tammy Sopp, contacted the Harvard Coop, which agreed to donate the hooded sweatshirts, T-shirts, and shorts Lynch requested for himself and members of his squad.

"I applaud the Harvard Coop for its generous donation of clothing to our Marines," Bilmes said. "This is a small way in which we in the Harvard community can show how much we appreciate the sacrifice of our troops stationed in Iraq."

Lynch, reached via e-mail, said the heavier gear is needed this time of year because — despite sear-

ing heat in summer — it can get quite cold in Iraq. When he arrived in Baghdad last January, the city had just received its first snowfall in many years.

Lynch, of Oceanside, Calif., said the squad was excited to receive the gear last month and joked they wouldn't have time to wash it because they were going to wear it to bed, train, and go to work.

"I guess it's true because when we received enemy fire the other night they mustered up just wearing their Harvard gear and weapons, even though that's not the required response," Lynch said.

Other members of the squad include Lance Cpl. Stephen Geib of Climax, Mich., Sgt. Evan Lewis of Sacramento, Calif., and Sgt. Larry Trampel of Virginia.

Bilmes said the experience of Lynch and other soldiers in his squad reflects what she's found more broadly in her research, which has highlighted the often-unseen costs of the war.

"The academic root of this effort is to understand the 'social costs' of the war. These are costs that are borne by the troops and families, but not paid by government," Bilmes said. "For example, the families of veterans who are wounded must often give up their jobs in order to care for a returning loved one. It turns out that personal items are also a social cost: we send young people overseas for 12 months to fight for their country, but they still have to buy their own sheets and towels."

alvin_powell@harvard.edu

Moorcroft

(Continued from previous page)

merely descriptive. In response, he dove into an effort to use mathematical approaches similar to those used in physics to understand how the movement behavior and interactions of the coyotes resulted in their eventual distribution across the landscape.

In building his model, he started with a set of movement rules for an individual coyote. He then compared the spatial distribution of coyotes across the landscape that would result from those rules. The result was a model that was able to predict how the spatial pattern of the coyotes would change in the future.

"We showed that it was possible to translate hypotheses about the movement behavior of animals into a testable prediction," Moorcroft said. "The movements of coyotes are influenced by the availability of food in different habitats, but they are also affected

by avoidance responses that coyotes exhibit when they encounter individuals from different packs. We were able to use observational data to obtain quantitative estimates for these two different forms of movement behaviors, and once we had done so we were able to accurately predict how the spatial pattern of coyotes across the landscape would change in response to the loss of coyote packs."

Moorcroft received his doctorate in ecology and evolutionary biology from Princeton in 1997 and worked as a postdoctoral fellow at the Princeton Environmental Institute until 2001.

It was during that time that Moorcroft began applying similar methods to plants, drawing up equations to explain how the properties and dynamics of individual plants give rise to an ecosystem's dynamics.

"The mathematical approach for scaling from individual plants up to ecosystem dy-

namics is similar to scaling from individual movements up to the spatial distribution of animals on a landscape," Moorcroft said.

Moorcroft came to Harvard in 2001 as an assistant professor. He was named an associate professor in 2005 and professor of organismic and evolutionary biology in 2007.

Today, Moorcroft runs a research group with four postdoctoral fellows, three graduate students, and a research assistant. All but one are working on predicting how ecosystems around the globe will be affected by climate change. Their studies span the world, encompassing tropical forests in the Amazon and Southeast Asia, temperate forests in the eastern United States, the boreal forests of Canada and Alaska, and the Greater Yellowstone ecosystem. The other researcher is working with the U.S. Fish and Wildlife Service to apply Moorcroft's predictive models of animal movement to the conservation and management of animal

populations.

"It's a dynamical model, once you have it you can make predictions about how changes in habitat, management practices, and climate will affect populations," Moorcroft said.

Using data collected by Wofsy at Harvard Forest, Moorcroft has been able to show that the ability to quantitatively link the ecosystem-level responses to the dynamics and properties of individual plants leads to improved regional scale predictions of ecosystem dynamics. They are now engaged in a similar exercise for the forests of the Amazon basin in order to better predict how climate variability and change are going to affect the Amazon forest and the exchanges of carbon, water, and energy between Amazonian ecosystems and the atmosphere.

"That's what other people can't do," Wofsy said. "He can predict very difficult-to-predict systems."

'Bicycle Environments' takes HSPH and GSD students for a ride

By Gervis A. Menzies Jr.
Harvard News Office

At a time when the United States scrambles to resolve the country's obesity epidemic, reduce greenhouse gas emissions and air pollution, and lessen dependency on foreign fossil fuels, this semester the Harvard School of Public Health (HSPH) and the Graduate School of Design (GSD) have launched an interdisciplinary course that tackles all three prob-

lems (and more). Titled "Bicycle Environments in the U.S. and the Netherlands/Denmark: Case Studies in the Promotion of Physical Activity," the class uses case studies to examine how the bicycle communities in the Netherlands and Denmark help individuals stay healthy and reduce greenhouse gas emissions. One clear objective is to find strategic ways to make the United States more bicycle friendly in an attempt to address these central social issues.

The course first got wheels after Anne Lusk, a research fellow at HSPH, armed with

a grant from the National Institutes of Health, spent the past two summers examining the environmental characteristics of 20 U.S. bicycle paths and their destinations. Inspired by her research, Lusk designed — with the help of Walter Willett, the Fredrick John Stare Professor of Epidemiology and Nutrition and chair of the Department of Nutrition at HSPH — a class meant to educate students about the health advantages of flourishing bicycle environments as well as the structural changes necessary to create such environments. The double goal of the

class made a pairing of the HSPH and GSD a natural.

Lusk, who said that the U.S. Department of Transportation should do more to encourage separated bicycle tracks, saw the class as an opportunity to better educate future health experts and future architects about successful ways to increase bicycle riding. "We didn't want it to be a typical class taught by the Federal Highway Administration," said Lusk, "so we proposed it to be 'Bicycle Environments.'"

(See **Bicycle**, next page)

Q&A with Heather Henriksen



Stephanie Mitchell/Harvard News Office

Gazette reporter Corydon Ireland recently had a conversation with Heather A. Henriksen, the director of Harvard's new Office for Sustainability. Some highlights:

What's the mission of the Harvard Office for Sustainability?

Our mission is to lead the Harvard University community in achieving its sustainability goals. We are organized centrally as part of the Office of the President in order to provide (and receive) advice and support across each of the University's Schools and departments. We create forums in order to facilitate the sharing of best practices and new technologies from internal and external sources. We also develop University-wide outreach and education campaigns, as well as programs and incentives for faculty, students, and staff.

Chiefly, we want to work with each of the Schools and departments in order to achieve the goals of reducing this community's environmental impact. We believe that saving energy, water, and other resources is not only smart but is good for the economy, the environment, and is consistent with the Harvard tradition of demonstrating leadership on key societal issues. We will be working closely with the Schools and departments to help them meet their sustainability goals and promote their achievements.

The office is only a few months old. What's your focus right now?

We're focused on establishing the implementation framework for the greenhouse gas reduction commitment announced this summer. This is an opportunity to reduce our energy usage and have our buildings and their inhabitants perform more efficiently.

We have convened six working groups made up of representatives from each of the Schools and key admin-

istrative areas to help us tackle implementation issues. An executive committee made up of several deans, faculty, and senior administrators will be reviewing the recommendations of each working group over the next six months. Our overall goal is that, by the end of this academic year, all Schools and units have a clear understanding of the steps required to plan their energy and greenhouse gas (GHG) reduction strategies. Additionally, we are striving to create a coordinated plan to achieve that goal and develop processes to track and report our progress.

We would like to integrate energy conservation and efficiency into all University operations, and into people's lives. This saves resources and money. Our office will play an advisory role, helping define operational and building guidelines and identifying best practices through the GHG working groups. We will also work to ensure frequent and consistent communication regarding the University's accomplishments in this area and help foster behavior changes that lead to reduced energy consumption and minimized impact on the environment.

The Harvard Green Campus Initiative (HGCI) has been absorbed into the new Office for Sustainability. Does it still exist?

When the Harvard Green Campus Initiative was created eight years ago, it was funded in part by a grant from the President and Provost, and also offered a fee-for-service entrepreneurial model for serving schools at Harvard on a project-by-project basis. Under the guidance of co-chairs Jack Spengler [Akira Yamaguchi Professor of Environmental Health and Habitation at the Harvard School of Public Health] and Thomas

Vautin [Harvard's associate vice president for facilities and environmental services] the HGCI helped Harvard become a living laboratory for sustainability practices and an environmental leader.

Through the efforts of the HGCI and the schools, Harvard has instituted a number of programs and initiatives in partnership with the Schools and units, such as the Resource Efficiency (REP) program, The Faculty of Arts and Sciences' (FAS) student peer-to-peer education program, renewable energy projects, University Operations Services' shuttle bus conversion to biodiesel, the campus-wide green building guidelines, and continued implementation of environmental education programs. The Harvard Greenhouse Gas Task Force recommended changing the HGCI into a more formal Harvard Office for Sustainability to broaden and enhance the University's engagement in sustainable campus operations.

What has changed?

The Office for Sustainability oversees sustainability efforts across the University, including the implementation of the greenhouse gas reduction goals. We'll keep our flexible service-based programs on the fee-for-service front, but the core of what we are doing is to focus on University-wide sustainability efforts. We will accomplish this by promoting Harvard-wide occupant engagement, offering operational recommendations beyond our green building guidelines, facilitating best-practice exchange between the University's Schools and units, and encouraging relevant behavior changes.

(See **Henriksen**, next page)

Henriksen

(Continued from previous page)

Will HGCI programs remain in place?

Our office will continue numerous programs and projects the HGCI has been working on for the past several years. These cover five main areas: green building services; community education and engagement; management of the Harvard Green Loan Fund; development and delivery of trainings; and best practices sharing.

What role will individuals have in your sustainability plans?

We want to take the resources and educational services we have and transfer them to people so they *own* these goals. Each person on campus can be a change agent — and it will take all of us doing our part to reach our goals. Sustainability, especially reducing our energy usage and waste, is something that galvanizes and unifies the Harvard community. We all want to reduce costs and waste. This makes economic sense and shows environmental leadership. Not only can our behavior changes help meet our campus-wide goals, everything we share about reducing energy consumption at Harvard can be used by people to reduce their own energy bills at home.

The HGCI published case studies of Harvard's green buildings — the new and the refurbished. Will your office continue that?

There are four big energy conservation areas — energy supply, building design, building operations, and building occupant practices. There will be case studies on all four areas. Traditionally, we've done case studies on building design and how buildings are efficiently operated. If you can commission an existing building to operate as they were intended to operate, you can have incredible energy efficiency — often up to 15 percent or more. For example the undergraduate Resource Efficiency Program (REP) has achieved a 13.8 percent reduction in electricity use in dorms between 2002 and 2007. Publishing case studies and capturing the lessons learned from projects at Harvard are some of the best ways to make sure we see continuous improvement over time and this will continue to be a focus of our organization.

What about occupant behavior?

We have research on energy consumption at Harvard Houses when they do their Green Cup competitions. We know the energy reductions they are getting and we're working with Harvard University Dining Services, which has a Green Skillet program. We know exactly what their reductions are in energy and natural gas — Leverett House achieved 20.63 percent reduction in electricity and 11.81 percent reduction in gas usage over a three-year baseline. We also know the impact of closing fume hoods in labs through the energy savings of the FAS Shut the Sash program and technology upgrades employed in the School of Public Health's labs. For example, the Shut the Sash program saved the Department of Chemistry and Chemical Biology in FAS \$160,000 and 283 metric tons of carbon dioxide equivalent of emissions over the course of a single year. We know that if everyone plugged everything into a power strip and turned it off every night it would make a huge difference. We can put the lights on sensors, we can put computers on power-saving defaults, and we can default our printers to double-sided copies. So sustainability is also about how people use the buildings they occupy. Case studies can help translate such best practices and their true impact.

Universities are taking a big hit economically, along with the world at large. How will that affect what your office does?

The current economic climate makes energy conservation even more important. Energy reductions will save money. One of our most inspiring messages is that there are things we can do in relatively short order to reduce energy, and that saves money.

Will Harvard's sustainability programs have an impact beyond Cambridge?

Harvard is recognized as a leader in environmental sustainability. The University has worked in partnership with the cities of Boston (as a member of the city's Green Building Task Force) and Cambridge (serving on Cambridge Climate Action Committee) for several years, and continues to do so. The best thing we can do is continue to lead, and demonstrate best practices in reducing energy consumption, water consumption, solid waste, and so on. By motivating behavioral change and honoring our sustainability principles, we can strengthen our role as a living laboratory for sustainability — a place of demonstration, research, and teaching.

Bicycle



Jon Chase/Harvard News Office

Anne Lusk rides along a bike path in Brookline. Lusk is a lecturer at HSPH who teaches a joint HSPH/GSD class. The class uses case studies to examine how the bicycle communities in the Netherlands and Denmark help individuals stay healthy and reduce greenhouse gas emissions.

(Continued from previous page)

The course — containing students from the nutrition and environmental health departments at HSPH, as well as from the GSD — has brought in an array of guest lecturers from different backgrounds. Willett, an avid bicyclist and a member of the Cambridge Bicycle Committee, for instance, is from the Department of Nutrition and has lectured to the class about the importance of bicycle riding and physical activity as a way to prevent obesity and chronic diseases. He has also emphasized the necessity to make the lanes safer for those who are hesitant to ride their bicycles because they feel unsafe riding close to cars. “The perception of safety is a huge factor for whether people are willing to ride a bicycle,” said Willett. “Our surveys showed overwhelmingly that perception of [lack of] safety was the biggest deterrent to people riding bicycles in Cambridge.”

The key, Willett explains, is to connect the lanes so people don't have to deviate from them to reach their destinations. “The facilities have gotten a lot better in the last 50 years in Cambridge. ... But one of the biggest factors now is that they are not connected. There may be a lane in one direction but not in the other. Any route is only as strong as its weakest link. If there's a good route in one direction, but not in the other, people won't ride. We need to get a network that is really connected so most people can get to those places and feel comfortable doing it.”

Jack Spengler, the Akira Yamaguchi Professor of Environmental Health and Human Habitation in the Department of Environmental Health, talked to the class about how an increase in bicycle riding would significantly reduce air pollution and the rate of global warming. He also suggested ways that urban designers can mitigate the effects of these public health hazards.

Despite his hope for more widespread use of bicycles as a mode of transportation, Spengler, too, pointed out that the United States will not see a spike in the number of people on bicycles until riders are protected from aggressive drivers, open doors in bicycle lanes, and parked cars blocking bicycle paths. “Until we make it safe, there's no hope they are going to get me and a lot of other people to do it on a regular basis. There's no hope.”

Despite his frustration with the current state of bicycle-friendly infrastructure, Spengler applauded the course's creation as a first step. “This doesn't often happen on the Harvard campus, particularly at the graduate level, [having] students from multiple departments in multiple Schools taking this [course] around a social issue. ... It's transportation, it's energy, it's green-

house gases, it's physical fitness, it's obesity; all of those are at a confluence when we start talking about how do we promote safe bicycling and expanding the population engaging in [cycling].”

Other invited guest speakers included Jack Dennerlein, associate professor of ergonomics, who spoke about ways that urban design can become more accommodating for bicyclists; Peter Furth from Northeastern University, who lectured on transportation policies; and Mike McBride and John Ciccarella from the Allston Development Group, who came in to give an overview of the bicycle plans for the new Harvard/Allston/Brighton campus.

A particularly well-received guest lecture was given by Hans Voerknecht, international coordinator of the Dutch Bicycle Council, who talked to the class about the bicycle paths and facilities in the Netherlands and the future of bicycling in the Netherlands, and provided recommendations for the United States.

Although bicycle riding in Cambridge is far from perfect, in recent months Harvard has made strides to demonstrate its commitment to creating a more welcoming bicycle environment. University Operations Services, for example, recently erected a covered bike shelter near the Divinity School that will be illuminated by solarpower at night. And as Harvard continues to develop its 50-year master planning framework for the new Allston campus, the plans include both on street and off street bicycle lanes and paths that make key connections and storage facilities that together will promote increased bicycle use and less dependence on the private automobile.

But even as the wheels are in motion for progress, it is clear that more collaboration is key. “One of things that really has to happen is public health people really need to work with design people to make environments that are healthy,” Willett stresses.

“What's very clear as we take on these big health issues like disease or diabetes [is that our] health departments ... can't deal with the whole problem. It has to be a whole societal solution that includes design. That is why we have this class ... bring the Schools together that way.”

The class, Lusk and her colleagues hope, will create a snowball effect. “We are extremely pleased that the Harvard School of Public Health has allowed this [course] to be taught,” said Lusk. “This [class] has greatly expanded the awareness of bicycle facilities and allowed far more collaboration with students, faculty, and departments, the Harvard-Allston design team, and the cities of Cambridge and Boston. We are hopeful that this is a start to much greater things.”

gervis_menzies@harvard.edu



Women's hoops recover on homestand

Crimson records wins over Vermont and Maine as non-conference play draws to an end

By Gervis A. Menzies Jr.
Harvard News Office

After a tough loss to Providence by 12 points and another to Boston University by 19, there was one thing the defending Ivy League co-champion Crimson needed: a home game. Nothing proved that more than the way the 4-4 Harvard

Crimson guard Brogan Berry '12, a three-time Ivy Rookie of the Week selection, squeezes the ball through swatting hands of the Maine defense.

women's basketball team bounced back from consecutive losses with consecutive wins to advance to 6-4. As the Crimson edged the Vermont Catamounts 69-67 and trounced the Maine Black Bears 73-**basketball** 50 — pardon the cliché — the team proved that there's no place like home.

In the Dec. 11 win against Vermont, the Crimson and the Catamounts went down to the wire, with Vermont missing the game winner with just three seconds left on the clock. As both teams battled to pull ahead, the game saw 10 lead changes

throughout the evening.

The Crimson, who led by as many as eight points with less than five minutes to go in the first half, saw their lead evaporate due to lack of rebounding, ugly turnovers, and cold shooting, forcing Harvard into the locker room trailing 34-35.

In the first half, Harvard missed all five shots taken from behind the three-point line. But a flexible Crimson team overcame their outside shooting woes in

(See **Basketball**, next page)

SPORTS WRAP-UP

Men's Basketball (4-4)

L Northeastern 71-76
L at George Washington 63-78
*Does not include results of Dec. 17 game at Rice

Women's Basketball (6-4)

W Vermont 69-67
W Maine 73-50

Women's Hockey (4-5-3; 4-2-2 league)

New Hampshire (postponed)
L at Connecticut 2-3

Men's Squash (5-1; 2-1 league)

W Rochester 5-4

UPCOMING SCHEDULE

The weeks ahead (Home games in bold)

Friday, Dec. 19

W Basketball UC Santa Barbara 7 p.m.
M Swimming Arizona State 5 p.m.

Saturday, Dec. 20

W Basketball USC 2 p.m.

Sunday, Dec. 21

M Basketball Maine 2 p.m.

Saturday, Dec. 27

M Hockey Badger Hockey Showdown 5 p.m.
Lake Superior State

Sunday, Dec. 28

M Basketball **Daniel Webster** 1 p.m.
M Hockey Badger Hockey Showdown 5/8 p.m.
Ala.-Huntsville

Monday, Dec. 29

Wrestling Midland Championships all day

Tuesday, Dec. 30

Wrestling Midland Championships all day

Wednesday, Dec. 31

M Basketball William and Mary noon
W Basketball Northeastern 2 p.m.

Visit www.gocrimson.com for the latest scores and Harvard sports information or call the Crimson Sportsline (617) 496-1383.



Sophomore forward Emma Markley towers over a Maine defender to record one of her 14 rebounds on the afternoon. Markley has scored in double figures in every contest so far this season and has recorded three double-doubles in those 10 games.

Photos: Jon Chase/Harvard News Office

Wrestling's Jantzen to take over the No. 1 spot

There's a new No. 1 for the 141-pound weight class. Previously unranked, Crimson wrestler Corey Jantzen '11 took over the nation's top spot on Dec. 11. Jantzen replaces defending national champion Jeff Jagers from Ohio State, whom he defeated in the quarterfinal round of the Cliff Keen Las Vegas (CKLV) Invitational. In the tournament — his first com-

petitive appearance of the season — Jantzen defeated two ranked opponents (Jagers and No. 4 Chris Drouin of Arizona State), becoming the fourth wrestler in Crimson history to take home a CKLV title.

The last Harvard wrestler to receive a No. 1 ranking was Jantzen's elder brother, Jesse '04, who was a three-time All American and four-time All Ivy selection — and Harvard's first national champion grappler

since John Harkness in 1938.

Corey, a native of Shoreham, N.Y., went 14-8 last season and was named to the All-Ivy second team, despite missing seven weeks of the season due to injury. Jantzen will try to retain his ranking when the Crimson return to action Dec. 29 and Dec. 30 for the Midland Championships in Evanston, IL.

—Gervis A. Menzies Jr.

New ID card distribution through Feb.

Continuing through the early winter of 2009, Harvard is distributing new, high-technology ID cards to the University community. The Harvard ID card is used in more than 400 systems across campus, and the new card will make those systems more secure by segregating key information and encrypting it in card-based technologies that are unique to Harvard.

The new ID card looks virtually identical to the old card, but it contains new technology, including an embedded microchip, an antenna, and a second (thinner) magnetic stripe. All these technologies were selected to enhance the security of the card and its associated information, now and in the future. A University task force of experts in administration, security, and technology studied available ID card technologies and settled on the "HIDiClass" card because it can hold multiple credentials, process more transactions than other card technologies, and — because of encryption — is very difficult to replicate. In fact, the embedded cryptographic chip is unique to the University, adding an additional level of protection against fraudulent copying.

At the distribution points, the ID Card Exchange Team will trade affiliates' old Harvard ID card for a new one in a matter of minutes, with all the personal data activated on the new card.

While ID exchange sites and dates were coordinated to reach the many different areas of campus, any member of the Harvard community can go to any exchange site convenient to them to pick up the new ID.

Re-carding event schedule

Dec. 15-19 (Monday 11 a.m.-6 p.m.; Tuesday-Thursday 8 a.m.-6 p.m.; Friday 8 a.m.-2 p.m.)

Harvard Kennedy School, Radcliffe, athletics, A.R.T., Center for Astrophysics, Central Administration, and retirees at the HKS Taubman Rotunda

Jan. 5-9 (Monday 11 a.m.-8 p.m.; Tuesday-Thursday 8 a.m.-8 p.m.; Friday 8 a.m.-2 p.m.)

Harvard Central Administration, Extension School, retirees, athletics, A.R.T., FAS, GSAS, GSD, GGSE, Radcliffe, and HUL at the Cambridge Queen's Head (Memorial Hall Basement)

Jan. 12-16 (Monday 11 a.m.-6 p.m.; Tuesday-Thursday 8 a.m.-6 p.m.; Friday 8 a.m.-2 p.m.)

Harvard Medical School and Longwood hospitals at the HMS New Research Building

Jan. 20-23 (Tuesday-Thursday 8 a.m.-6 p.m.; Friday 8 a.m.-2 p.m.)

Harvard Business School at the HBS Shad Basketball Court

Jan. 26-30 (Monday 11 a.m.-6 p.m.; Tuesday-Thursday 8 a.m.-6 p.m.; Friday 8 a.m.-2 p.m.)

Harvard Kennedy School and retirees at the HKS Taubman Rotunda

Feb. 2-6

All remaining at the Holyoke Arcade

Feb. 9-11 (Monday-Wednesday 10 a.m.-5:30 p.m.)

Harvard Law School at the HLS Ropes Gray Room

To be determined

Harvard School of Public Health

Basketball

(Continued from previous page)

the second half, playing with fiery aggression around the basket (seeming to draw a foul on every possession). The Crimson — which took 25 free throws in the second half — scored 20 of their 36 second-half points from the line.

Freshman standout Brogan Berry led all scorers with a career-high 18 points and went 12-for-13 from the free-throw line. Katie Rollins '09 was also impressive, adding 17 points and shooting six for seven from the floor.

In the Dec. 14 contest against Maine, Harvard came out firing. After shooting one-for-six from the three-point line against Vermont, the Crimson shot the ball with confidence against Maine, knocking down eight 3-pointers on 47 percent shooting. Harvard also shot 50 percent from the floor in the game.

The first 10 minutes of the game was like a battle of the elements, fire against ice. Maine shot just 26 percent compared with the Crimson's 71 percent.

Falling behind by as much as 18 in the first half, a frustrated Maine team appeared overwhelmed and overmatched by the Crimson. Yet when a 10-2 run by the Bears cut Harvard's lead to 10, the Crimson increased their level of intensity, ending the half with a 41-26 lead.

After halftime the Crimson didn't look back, as they outscored Maine 32-24. Emma Markley '11, who went nine-for-16 from the floor on the afternoon, finished the game with 19 points, 14 rebounds, and three blocks. On Dec. 15, Markley was named Ivy Player of the Week for the second time this season. Also honored by the Ivy League was Berry, who was named Ivy Rookie of the Week for the second consecutive week, and the third time this season.

Senior guard Emily Tay — who in the second half began to score at will — finished the day six-for-nine with 14 points, a sea-



Co-captain Emily Tay '09 became the 13th player in Harvard history to score 1,000 career points.

son-high nine assists, and just one turnover in the game. She also became the 13th Crimson player to score 1,000 career points. Tay is now 13 points away from Beth Wambach '91, who is 12th place on the all-time scoring list.

The Crimson play three more nonconference matchups — against Siena (Dec. 19), Southern California (Dec. 20), and Northeastern (Dec. 31) — before they open up conference play at home on Jan. 10 against Dartmouth.

Lessig

(Continued from page 1)

As faculty director of the center, Lessig will expand on the center's work to encourage teaching and research about ethical issues in public and professional life. He will also launch a major five-year project examining what happens when public institutions depend on money from sources that may be affected by the work of those institutions — for example, medical research programs that receive funding from pharmaceutical companies whose drugs they review, or academics whose policy analyses are underwritten by special interest groups.

"I am very excited to be returning to Harvard to work on a project of enormous importance to our democracy," said Lessig. "The chance to extend the work of the center to focus on the problems of institutional independence is timely and essential. I am eager to work with friends and old colleagues from the Law School and across the University to make this project a success."

A prolific writer, Lessig is the author of five books: "Remix" (2008), "Code v2" (2007), "Free Culture" (2004), "The Future of Ideas" (2001), and "Code, and Other Laws of Cyberspace" (1999). He has published more than 60 scholarly articles in leading law and technology journals. His work also appears regularly in the popular press, and he was a monthly columnist for Wired Magazine.

In addition to his teaching, research, and writing, Lessig has also represented clients

in several high-profile cases involving the Internet. He represented Web site operator Eric Eldred in the groundbreaking case Eldred v. Ashcroft, challenging the 1998 Sonny Bono Copyright Term Extension Act.

In 2006, Lessig was elected as a fellow of the Academy of Arts and Sciences. He is on

For additional information about the Edmond J. Safra Foundation Center,
www.ethics.harvard.edu/

the board of the Creative Commons project, MAPLight, Free Press, Brave New Film Foundation, Change Congress, The American Academy, Berlin, and iCommons.org. He is on the advisory board of the Sunlight Foundation and LiveJournal, and has held board positions at Public Knowledge (Washington, D.C.), Electronic Frontier Foundation (San Francisco), and RedHat Center for the Public Domain.

Lessig was named to the National Law Journal's "100 Most Influential Lawyers" list in 2000 and in 2006. A past fellow of the center himself (1996-97), he has also been a fellow at the Wissenschaftskolleg zu Berlin (1999-2000).

He holds a law degree from Yale Law School, an M.A. in philosophy from Trinity College at Cambridge University, and a B.A. in economics and a B.S. in management from the University of Pennsylvania. He clerked for Judge Richard Posner of the 7th

Circuit Court of Appeals and for Associate Justice Antonin Scalia of the U.S. Supreme Court.

Lessig succeeds Dennis Thompson, the Alfred North Whitehead Professor of Political Philosophy, as director of the center. Thompson founded the center in 1987 and served as director until 2007. Arthur Applebaum, professor of ethics and public policy, has served as acting director since that time. "I would like to extend my heartfelt appreciation to Arthur, under whose leadership the center has flourished this past year," Hyman said. "We are all most grateful for his tremendous stewardship."

"We are deeply proud of the center's achievements, and we are supremely confident of its future success under the direction of Lawrence Lessig," said Lily Safra, chairwoman of the Edmond J. Safra Foundation. "It won't be easy to fill Dennis Thompson's shoes, but we are delighted that someone of Professor Lessig's caliber will be building upon the foundation he laid."

The Edmond J. Safra Foundation is an international leader in the support of medical research and health care, education, religion, humanitarianism, and culture. Edmond J. Safra was a prominent international banker and a dedicated philanthropist who supported countless humanitarian, religious, educational, and cultural causes.

Lessig will join the Law School faculty and take up his duties as director of the center in the summer of 2009.

Idle computing power may ID candidate molecules for efficient solar panels

By Holly Metter
FAS Communications

The world today uses enough power to illuminate 150 billion light bulbs for a year. According to some estimates, by 2050, demand will double, creating irreversible climate change without reductions in humanity's carbon output.

technology Improbably enough, your idle personal computer could play a big part in altering this outcome: Harvard chemist Alán Aspuru-Guzik has received a multiyear renewable grant from IBM to harness the power

of idle desktop computers — a process known as distributed computing — to develop next-generation solar cells that might help satisfy the world's future energy needs.

“The solution to the energy problem requires a combination of many different factors, including increasing the energy efficiency of all activities in our society, dramatically ramping up the use of all renewable energy sources, implementing carbon sequestration schemes in our coal plants, and enacting progressive carbon trading policies,” says Aspuru-Guzik, assistant professor of chemistry and chemical biology in the Faculty of Arts and Sciences, whose re-

search group focuses on the development of novel materials for solar cells as a source of renewable local power generation.

Aspuru-Guzik is among scientists worldwide who are exploring more efficient ways to convert sunlight into electricity — “a process,” he says, “which would likely require less than 1 percent of the planet's surface to meet that need.”

Commercially available solar cells are based on silicon semiconductor technology. But the specialized manufacturing process is expensive, meaning these cells have not

(See *IBM*, next page)

How to get involved

Individuals can download onto their computer a small software program, which, when the computer is not in use, performs complex calculations for a specific World Community Grid project. To contribute to Aspuru-Guzik's project, please visit www.worldcommunitygrid.org to download the distributed computing client, and select the Clean Energy Project.



Kris Snibbe/Harvard News Office

Daniel Schrag, director of the Harvard University Center for the Environment and professor of earth and planetary sciences, said that most optimistic scenarios of climate change have atmospheric carbon dioxide leveling off at around 500 or 550 parts per million — levels roughly double the 280 parts per million that ice cores show existed in preindustrial air.

Climate options must include ‘all of the above’

Problem immense, says Daniel Schrag, and there is much to be done — fast

By Alvin Powell
Harvard News Office

Climate change has so much momentum behind it that “either/or” discussions about options are meaningless because it’ll take all we can do just to arrest carbon dioxide at levels double those in preindustrial times, a top climate scientist said Dec. 11.

environment Daniel Schrag, director of the Harvard University Center for the Environment and professor of earth and planetary sciences, said that most optimistic scenarios of climate change have atmospheric carbon dioxide leveling off at around 500 or 550 parts per million — levels roughly double the 280 parts per million that ice cores show existed in preindustrial air.

More pessimistic “business as usual” scenarios, which factor in continued growth in the developing world, show levels as high as 1,000 parts per million by the turn of the century.

While Schrag said those pessimistic scenarios would almost certainly mean catastrophic change, he cautioned that even the most optimistic scenario represents a considerable increase from today's level of almost 390 parts per million.

“What people don't understand is that we will be at 500 parts per million. The question is:

Will we go to 1,000?” Schrag said. “Double the preindustrial level might be a catastrophe, but it might also be the best we can do.”

The potential changes in store include droughts, floods, stronger storms, and increased extinctions. Schrag also highlighted the danger of sea level rise. The dramatic ice melt in recent summers has already made much of Russia's northern coastline and the Northwest Passage from the Atlantic to the Pacific through Canada ice-free for parts of the year. Though the effects of climate change have proven difficult to predict, Schrag said, it's possible the Arctic Ocean will become ice-free as soon as a decade from now, far faster than recent predictions that it would happen by mid-century.

Melting Arctic ice has ramifications for people living in coastal locations around the world, he said, since it is Arctic ice that helps keep Greenland's immense glaciers cool. Greenland's glaciers contain enough water to raise sea level by 7 meters should they melt or slip into the sea. Schrag said scientists don't know whether that will happen in 1,000 years, 200 years, or even sooner.

Schrag spoke at the Geological Lecture Hall in the third talk in the Harvard Museum of Natural History's Earth Matters lecture series. The event, “Solving the Climate-Energy Chal-

lenge,” featured Schrag and Kelly Gallagher, director of the Energy Technology Innovation Project at the Harvard Kennedy School.

The planetary systems — earth, air, and ocean — that are affected by rising carbon dioxide levels are so complex that scientists still don't know how the Earth will respond. We are, in effect, conducting a planetwide experiment on the Earth, Schrag said, the outcome of which is uncertain.

“What we don't know is very likely going to hurt us,” Schrag said.

Another potential problem is that mountain snowpacks are melting. Mountain snow and glaciers, refreshed each winter during cooler times, have been shrinking, threatening areas that rely on snowmelt-fed rivers, such as large parts of the American West. One projection showed melting beginning weeks, even months, earlier, raising the possibility that snowmelt will dry up by the middle of summer, leaving crops to wither.

“If that water runs out by July, agriculture in California is gone,” Schrag said.

Major rivers of Asia on which millions of people depend, such as the Indus, the Ganges, the Mekong, the Yellow, and the Yangtze, all draw some of their flow from melting mountain ice and snow, raising the specter of water

(See *Climate*, next page)

Robotic radical hysterectomy has advantages

New technologies now allow surgery to be performed with less impact on patient quality of life. As the trend toward minimally invasive surgery grows, robotic-assisted surgery has become an appealing tool for gynecologic oncology surgeons. However, to date, there is little data to confirm the benefits of this technology. New research from Brigham and Women's Hospital (BWH) compares robotic radical hysterectomy (RRH) using the DaVinci robot to classically performed open radical hysterectomies (ORH) in patients with stage I and II cervical cancer. Researchers found that RRH results in lower blood loss and shorter length of stay compared with ORH. The findings are available online and published in the December print issue of *Gynecologic Oncology*.

"Robotic radical hysterectomy is a new and important method for both surgeons and patients as the entire field of surgery trends toward minimally invasive procedures. In our study, we show that this approach can reduce both blood loss and the length of hospital stay for the patient," said Colleen Feltmate, a gynecologic oncology surgeon at BWH and senior author on the study.

Researchers reviewed and compared intraoperative and post-surgical factors for 16 RRHs and 32 ORHs, procedures performed between August 2004 and June 2007. Researchers found that although the surgeries took longer, patients who underwent RRH had less blood loss compared with those who had ORH procedures. Patients who had an RRH also had shorter hospital stays after the surgery compared with patients who had ORH. The complications both during and after surgery for both RRH and ORH were comparable.

"Although the time spent performing the operation in RRH cases was longer, this was reduced over time as surgeons and staff became more familiar with the procedure and the technology," said Feltmate. "This robotic-assisted approach deserves further exploration to evaluate the full potential and application of RRH."

Climate

(Continued from previous page)

shortages for those who rely on these sources.

"This is a really big problem," Schrag said. "Adaptation [to the reduced flows] is important, but it won't be sufficient."

Schrag spent some time going through available energy options, including renewable sources such as wind and solar, nuclear, and coal. He said that carbon sequestration, where the carbon emitted from burning fossil fuels is harvested before reaching the atmosphere and injected underground, will be needed.

Though some are looking for particular technologies to save the day, Schrag said, the global demand for energy is expected to rise rapidly from today's levels as developing nations such as China modernize and industrialize. As standards of living rise and people around the world demand the amenities common in industrialized nations today, energy demand will shoot up.

Governments are unlikely to deny their citizens that energy, Schrag said, particularly since there remain ample coal supplies in the nations most likely to need it. The question, he said, isn't whether China will build coal plants — they're already building them at a rapid rate — it is whether the plants will have clean technology so their

IBM



Stephanie Mitchell/Harvard News Office

Harvard chemist Alán Aspuru-Guzik has received a multiyear renewable grant from IBM to harness the power of idle desktop computers — a process known as distributed computing.

(Continued from previous page)

been widely adopted. Currently, in most scenarios, burning coal is cheaper than using solar power.

Developing affordable solar cells based on organic molecules to harness the abundant power of the sun is the ultimate goal for Aspuru-Guzik and his team, which has partnered with the World Community Grid, a nonprofit initiative funded by IBM.

For many hours a day, the central processing unit of your personal computer sits unused. The goal of the World Community Grid is to utilize the processing power of individual computers during these idle times to find answers to global challenges such as cancer, famine, and human protein structure. Aspuru-Guzik's Clean Energy Project will be one of only six currently

working with the World Community Grid.

Aspuru-Guzik's team is researching organic compounds for use in a new generation of solar cells. Atoms such as carbon, nitrogen, and oxygen molecules are the building blocks for these compounds, but they can be combined in countless ways. The difficulty lies in identifying which compound to use.

"The number of potential molecules that can be used in an organic solar cell is limited only by the imagination of the chemist," Aspuru-Guzik explains.

Tens of thousands of different possible synthetic compounds must be tested. Rather than create them all in a laboratory, Aspuru-Guzik's team is using cutting-edge computer programs to create a virtual laboratory to test and pinpoint the best

candidates for future solar cell research. These massive calculations are greatly accelerated using the power of the World Community Grid.

After computer analysis identifies promising candidate molecules, they will be passed to experimental researchers for testing in real labs. Ultimately, with support from the World Community Grid, scientists hope to create efficient and inexpensive solar cells that will be part of the solution for the world's growing energy needs.

Members of the Aspuru-Guzik research group who are spearheading this distributed computing effort are postdoctoral researcher Roel Sánchez-Carrera and graduate students Roberto Olivares-Amaya and Leslie Vogt.

emissions don't add to the climate change problem.

The good news, Schrag said, is that much of the technology to make energy cleaner already exists — carbon sequestration technology is already in use, albeit for another purpose. The oil industry injects carbon dioxide into wells to push oil out, leaving the gas trapped underground. The difficult part is not the technology itself, it is deploying it on a scale large enough to make a difference.

Another option, Schrag said, is to do a direct intervention in the climate — by releasing sunlight-reflecting aerosols into the atmosphere, for example, to help cool the planet while other fixes are done.

Gallagher's comments focused on the political and policy changes that are needed. Most importantly, she said, it is critical that two nations who have so far been on the sidelines of climate action — the United States and China — get serious about finding solutions and putting them into effect. That is because the two nations account for 46 percent of global carbon dioxide emissions, with China emitting slightly more overall and the United States far more per capita. Without those two countries taking action, she said, it is unlikely that the problem of climate change will be solved.

Gallagher said it is important that the

government set a price for carbon emissions soon. A cap-and-trade system — where businesses pay for tradeable permits to emit a set amount of carbon dioxide — or a flat carbon tax are the two most-often-discussed systems. Gallagher said that once a system sets a carbon price, businesses will begin to figure the cost of carbon emissions into their energy plans, which may make technologies not now considered suddenly financially attractive.

Schrag described himself as both an optimist and a realist on climate change. He recognizes the difficulty of what has to be done to limit the coming changes, but said that a lot of progress has been made just over the past few years. Still, he said, though people are paying attention to climate change, there's a danger that their behavior may not change fast enough to make a difference.

"There's a lot of momentum in the climate system. By the time people become scared enough about climate change to do something, it may be too late," Schrag said.

alvin_powell@harvard.edu

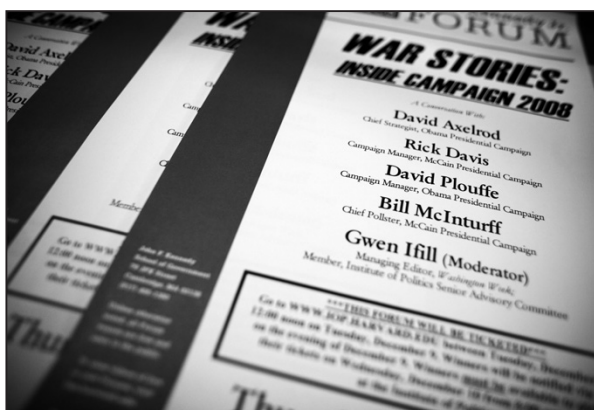


Kris Snibbe/Harvard News Office

The good news, Schrag said, is that much of the technology to make energy cleaner already exists.

Campaign gurus swap strategies, war stories

Obama and McCain's key campaign people talk candidly about Palin, Rev. Wright, more



Photos Justin Ide/Harvard News Office

The revealing, sometimes amusing session was moderated by Gwen Ifill (from left) and featured David Axelrod, David Plouffe, Rick Davis, and Bill McInturff.

By Ruth Walker

Special to the Harvard News Office

No one will ever confuse the John F. Kennedy Jr. Forum at the Harvard Kennedy School with Gillette Stadium. But the forum was host Dec. 11 to two of the undisputed rock stars of American political campaigns: David Axelrod and David Plouffe, chief strategist and manager, respectively, for Barack Obama's successful campaign for the presidency.

They were joined by Sen. John McCain's campaign manager Rick Davis and chief pollster Bill McInturff for a program titled "War Stories: Inside Campaign 2008."

The idea, as moderator Gwen Ifill, managing editor of Washington Week and a member of the senior advisory committee of the Institute of Politics, explained, was to give the two sides an opportunity to engage "in a way that you never saw them engage on Fox News" during the campaign itself.

The two camps showed good sportsmanship in discussing what went right, what went wrong, and what almost went wrong. The Obama team was gracious in victory but not above pointing out the "Faustian bargains" McCain had made to secure the Republican nomination — notably by signing on to the Bush tax cuts. The McCain team, for their part, gave a spirited defense of their man and their campaign.

McInturff, for instance, in response to a pointed question from Ifill about the

brave face he put on polling data in the final days before the campaign, insisted, "I'm very comfortable that we were a heck of a lot closer the week before than two weeks



Ifill (from left), Axelrod, chief strategist for Obama's campaign, and Plouffe, Obama's campaign manager, enjoy trading war stories with their erstwhile competitors.

before." Things were moving in the right direction, he added.

Did that mean that the McCain campaign just ran out of time? Ifill asked.

"No, we lost," was the frank rejoinder. Part of the issue was that the Obama campaign had signed up so many new voters that the pollsters had trouble making predictions. "We had no models for that kind of turnout," McInturff added, noting that all this was to the Obama campaign's "enormous credit."

The Jeremiah Wright episode — when video clips of Obama's controversial pastor at Trinity United Church of Christ burst

into the blogosphere in March — was critical to both campaigns, albeit in different ways. Obama smoothed the waters by giving a well-received speech in Philadelphia

March 18 on race in America.

Plouffe deflected blame for the incident from candidate Obama ("The campaign failed to do its homework") and called it "a moment of great peril."

Axelrod observed that "the one person who wasn't nervous" was Obama — despite the tight timeline for writing and making the speech, which the strategist called "maybe the most important speech of the campaign."

The night before Obama was to give the speech, Axelrod said, there came a point when he realized he (Axelrod) could do

(See *Campaign*, next page)

Pain is more intense when inflicted on purpose

Researchers at Harvard University have discovered that our experience of pain depends in part on whether we think someone caused the pain intentionally. Participants in a study who believed they were getting an electrical shock from another person on purpose, rather than accidentally, rated the shock as more painful than those receiving the same shock thinking it was an accident. Participants seemed to get used to shocks that were delivered unintentionally, but those given on purpose had a fresh sting every time.

The research, published in the current issue of *Psychological Science*, was led by Kurt Gray, a graduate student in psychology, along with Daniel Wegner, professor of psychology.

It has long been known that our own mental states can alter the experience of pain, but these findings suggest that our perceptions of the mental states of others can also influence how we feel pain.

"This study shows that even if two harmful events are physically identical, the one delivered with the intention to hurt actually hurts more," says Gray. "Compare a slap from a friend as she tries to save us from a mosquito versus the same slap from a jilted lover. The first we shrug off instantly, while the second stings our cheek for the rest of the night."

The study's authors suggest that intended and unintended harm cause different amounts of pain because they differ in meaning.

"From decoding language to understanding gestures, the mind distills meaning from our social environment," says Gray. "An intended harm has a very different meaning from an accidental harm."

The study included 48 participants who were paired up with a partner who could administer to them either an audible tone or an electric shock. In the intentional condition, participants received a shock when their partner chose the shock option. In the unintentional condition, participants received a shock when their partner chose the tone option. Thus, in this condition, they only received a shock when their partner did not intend them to receive one. The computer display ensured that participants both knew their partner's choice and that a shock would be coming, to ensure the shock was not more surprising in the unintentional condition.

Despite identical shock voltage between conditions, those in the intentional condition rated the shocks as significantly more painful. Furthermore, those in the unintentional condition habituated to the pain, rating them as decreasingly painful, while those in the intentional condition continued to feel the full sting of pain.

Gray suggests that it may be evolutionarily adaptive for this difference in meaning to be represented as different amounts of pain.

"The more something hurts, the more likely we are to take notice and stop what-

(See *Pain*, next page)

*Findings add to knowledge about obesity
and appetite regulation in the general population*

New obesity-related genes identified

A large international consortium has made significant inroads into uncovering the genetic basis of obesity, adding six new genetic variants to the two already linked to higher body mass index (BMI) in previous studies. Most of the newly discovered genes had never before been suspected of having a role in body weight and, curiously, many of the genes are active in the central nervous system, suggesting they may exert their effects via the brain. The study, from the Genetic Investigation of Anthropometric Traits (GIANT) consortium, appeared online in *Nature Genetics* on Dec. 14.

“One of the major insights to come out of this is a new window into the biology of obesity,” says Joel Hirschhorn of Children’s Hospital Boston and the Broad Institute of Harvard and MIT, who led the study together with researchers from the University of Michigan and research institutes in Oxford and Cambridge, U.K. “One of the interesting things is that the genes near these variants are all active in the central nervous system, suggesting that inherited variation in appetite regulation may have something to do with people’s predisposition to obesity.”

The study used genetic information from more than 32,000 people of European ancestry, drawn from 15 genomewide association studies of BMI involving a total of 76 international research institutes. A large-scale statistical analysis comparing BMI data with about 2.4 million genetic variations, followed by validation of the most promising results in an additional 59,000 individuals, identified six new genetic variants associated

with higher BMI. It also strongly confirmed a role for two genetic variants identified last year “near the FTO and MC4R genes” says Hirschhorn.

The effect of each individual variant was modest, ranging from 0.06 to 0.33 BMI units, and the paper estimates that the 1 percent of people with the most obesity-causing variants will be on average 10 pounds heavier than the 1 percent of people with the fewest variants and 4 pounds heavier than the typical person. Hirschhorn also points out that the GIANT consortium team is likely to have uncovered just a fraction of probably hundreds of genetic regions that each make small contributions to obesity — and that identifying new regions will require both larger studies and additional approaches.

The team also compared their results with those from another large genomewide association study of BMI, led by deCODE Genetics in Iceland. Where comparisons were possible, all of the variants identified by Hirschhorn and colleagues were strongly confirmed by data obtained by the deCODE group. (The deCODE results are described in an accompanying study published in the same issue of *Nature Genetics*.)

According to Elizabeth Speliotes of Massachusetts General Hospital, joint first author on the paper, it can be a major challenge to find genetic associations with strong enough statistical evidence to be certain of their validity. However, she says, “Thanks in part to the large group effort the regions we report are clearly and reproducibly associated with body mass index.”

The GIANT consortium is now performing large-scale studies to identify

more genetic variants contributing to the risk of obesity in both adults and children. “The next round of studies will involve new collaborators and DNA from more than 100,000 people,” says Hirschhorn. “We also hope to do analyses to determine whether genetic variants have the same effects in different ethnic populations, in both genders, and in individuals with extreme obesity compared to overweight or normal-weight individuals.”

Family or twin studies have shown that genetic factors account for 40 to 70 percent of population variation in BMI. But while previous studies have identified “obesity genes” such as the LEP gene, which is mutated in people with leptin deficiency and causes severe obesity, little is known about the genetics underlying more common forms of weight dysregulation.

According to the World Health Organization (WHO), there are more than 1 billion overweight adults worldwide, and at least 300 million of them are obese (as defined by a BMI of 30 or above). But there are still no good treatments, and the need to uncover the biology underlying weight control is becoming increasingly urgent.

“At present, we’ve only identified regions that show natural genetic variations that influence body mass index,” says Speliotes, who is also a fellow at the Broad Institute and an instructor in medicine at Harvard Medical School. “As we learn more about what some of the genes in these regions do, we hope that these discoveries might suggest routes to new therapies for obesity.”

Campaign

(Continued from previous page)

nothing and so he just “went to sleep.” At 2 a.m. he woke up and found the completed speech on his BlackBerry. He read it and responded to his boss, “This is why you should be president.”

For the McCain campaign, the question was whether to make an issue of the Wright controversy, and his aides gave their candidate full credit for doing the right thing for the right reasons: “It was John McCain’s decision,” McInturff said. The pollster also gave Davis credit to standing up, as the campaign wore on, to Republican Party pressure to reverse course and exploit Obama’s connection to the fiery preacher.

To view archive video of the event,

www.hks.harvard.edu/news-events

As McInturff told it, McCain’s decision not to touch the Wright stuff was initially one of instinctively doing the right thing. But as the campaign continued, it was clear that it was the right decision tactically, too. Going after Wright wouldn’t have helped with the groups — young people and Hispanics — who were slipping away from the Republicans. To have pressed ahead and won the White House with 273 Electoral College votes while losing the



Justin Ide/Harvard News Office

Pollster Bill McInturff (from right) regales Rick Davis, David Plouffe, David Axelrod, and Gwen Ifill with tales of the ‘trail.’

popular vote would have “delegitimized the presidency,” McInturff said.

The scandal surrounding Illinois Gov. Rod Blagojevich’s alleged attempt to auction Obama’s Senate seat to the highest bidder came up at a couple of points. Axelrod was asked when he had last spoken with Blagojevich: “Thankfully, a long time ago.”

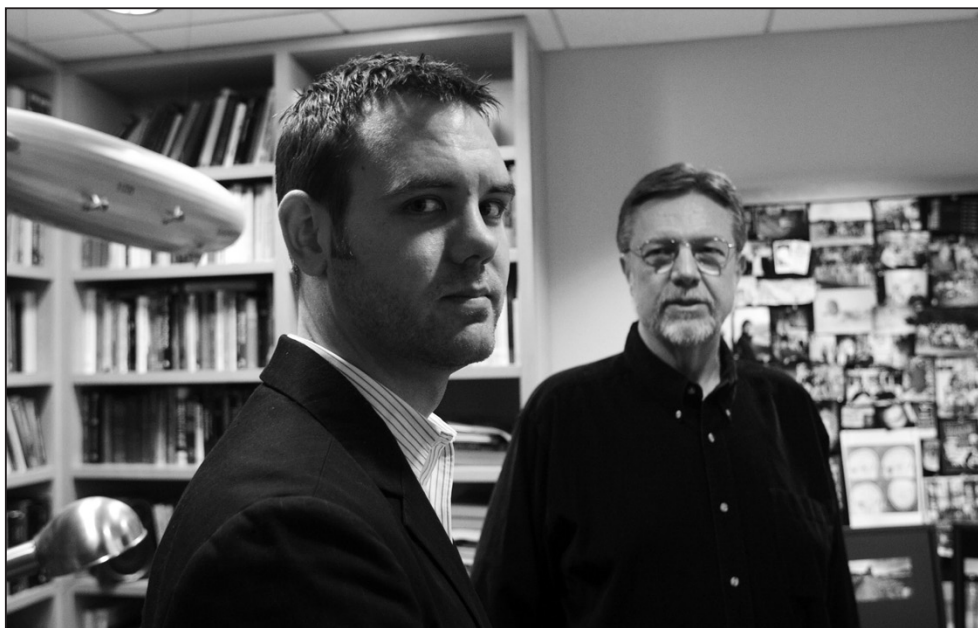
Later a questioner from the floor tried to elicit some information on why longtime Obama adviser Valerie Jarrett, who was at one point seen as a candidate for the Obama senate seat, at another point suddenly wasn’t. Comparing Obama to Nelson Mandela in terms of steadiness and intuitiveness, the questioner asked whether some “intuition” on Obama’s part led him to name Jarrett to a role as a White House adviser instead.

Axelrod’s response was that Jarrett is a longtime friend and adviser. “His preference was always that she serve in the White House.”

Ifill’s question whether Alaska Gov. Sarah Palin helped or hurt the GOP ticket elicited this response from Davis: “To be honest, we were losing. ... You’ve got to win first.” He acknowledged that Palin seemed a riskier pick on Oct. 1 than on Sept. 6, and conceded, “We’ve got to work on our bench.”

McInturff, however, noted that Palin has some of the strongest “very favorable” ratings among Republicans and is likely to be a force within the party over the next four to eight years.

Pain



Kris Snibbe/Harvard News Office

Kurt Gray (left) and Daniel Wegner designed an experiment that shows that people feel more intense pain if they think electrical shocks are inflicted purposely.

(Continued from previous page)

ever is hurting us,” he says. “If it’s an accidental harm, chances are it’s a one-time thing, and there’s no need to do anything about it. If it’s an intentional harm, however, it may be the first of many, so it’s good to take notice and do something about it. It makes sense that our bodies and brains might amplify our experience of pain when we know that the pain could signal threats to our survival.”

These findings speak to how people experience pain and negative life events. If negative events are seen as intended, they may hurt more. This helps to explain why torture is so excruciating — not only are torture techniques themselves exceptionally painful, but it’s the thought that counts — and makes torture hurt more than mere pain.

On the other hand, if negative events are seen as unintended, they may hurt less. This may explain, in part, why peo-

ple in abusive relationships sometimes continue to stay in them. By rationalizing that an abusive partner did not intend harm, some victims may reduce their experience of pain, which could make them less likely to leave the relationship and escape the abuse.

The research was supported by the National Institute of Mental Health, the Canadian Social Sciences and Humanities Research Council, and the Institute for Humane Studies.

Fair shows progress of humanities in digital world

By Corydon Ireland
Harvard News Office

Bill and Carrie meet in a Harvard College library you might know. The walls are reddish stone and in one corner a working fireplace blazes brightly.

They decide to go to another room to see an exhibit of ornate folios from medieval Islamic science.

To get there, Bill and Carrie walk through a wall. Welcome to Second Life, a virtual world accessible through the Internet, and a place where Harvard owns an “island.”

Second Life is peopled with “avatars” — embodied personalities — like Bill and Carrie. “They jump,

they fly, they go through walls,” said science historian, mathematician, and educator Elaheh Kheirandish, a fellow at Harvard’s Center for Middle Eastern Studies. She was curator of the exhibit to which Bill and Carrie paid a virtual visit.

Kheirandish was among more than 100 real live visitors to a Digital Humanities Fair this week (Dec. 16) in the Barker Center’s Thompson Room — a first-ever comprehensive display of Harvard’s digital resources for scholars and students of the humanities.

Those who stopped by included about 60 Harvard faculty members, said fair organizer Alexander F. Parker, director of research computing in the humanities. On hand were experts from 10 Harvard or-

ganizations, ready to demonstrate and discuss their digital projects and services.

“There are a surprising number of resources available” at Harvard in the digital realm, said Parker. “But there are so many, it can be overwhelming.”

He has been working with Harvard Dean of Arts and Humanities Diana Sorensen, sorting out what he called the “landscape” of digital resources in the humanities. It is already clear, said Parker, that “there is a small universe of opportunities.”



Kris Snibbe/Harvard News Office

Dean of FAS Michael D. Smith and teaching fellow Odile Joly look at a display of ‘poetry@harvard.’

(See *Digital*, page 16)



Photos Nick Welles/Harvard News Office

Eastern Michigan University’s Ethan Lowenstein (from left), Robert Selman of HGSE and HMS, and Cambridge Rindge & Latin’s Joshua Landwehr talk about re-introducing the teaching of civics into middle and high school.

HGSE group brings civics back into curriculum

Selman (below left) and Landwehr discuss the kinds of civic and moral questions young people should be asking.

By Colleen Walsh
Harvard News Office

As schools around the country work to meet academic requirements in reading and math set by the No Child Left Behind Act, some educators worry the trend ignores a critical part of a child’s learning: civic and moral education.

What are our responsibilities to our family and friends, our peers, our fellow citizens, our fel-



low human beings across the globe? How do we decide what is just, and what can and should we do when we encounter injustice? How can ordinary people effect change in society via government institutions, the media, community orga-

nizations, new technologies, or collective action? These are the kinds of civic and moral questions that young people should be learning to ask and answer, but that are sadly neglected in many schools today, according to Meira Levinson, assistant professor of education at the Harvard Graduate School of Education (HGSE).

How to shape a curriculum around civic and moral development, how to support students at HGSE interested in these topics, and how to expand the topics’ visibility at HGSE and beyond are some of the questions Levinson and other professors at the HGSE are examining.

The group began last spring, as a handful of academics got together to start assessing the amount and types of courses offered in civic and moral education at HGSE. While they discovered that many professors offer courses that address these topics, and many students — to judge by course enrollments and dissertation topics — are interested, what seemed to be missing was a sense of a wider, common conversation. As a result, the meeting soon blossomed into a wide-ranging initiative.

“When we met, it quickly turned into something bigger. We wanted to create something that allows students to explore these issues more deeply, but also we thought it was really important to help ourselves and our colleagues, both at the Education School and beyond, think about

the goals and importance and place of civic and moral education in the overall educational landscape,” said Levinson.

What developed was the Civic & Moral Education Initiative (CMEI), which with support from HGSE Dean Kathleen McCartney has begun sponsoring a series of seven colloquia exploring the question “How can we effectively educate for civic and moral responsibility in and for the 21st century?” Levinson leads the group along with Robert Selman, Roy Edward Larsen Professor of Education and Human Development and professor of psychology at Harvard Medical School.

The discussions are a good fit for Levinson, whose work examines the civic achievement gap, the disparity in individuals’ civic and political knowledge, skills, attitudes, and behaviors that are tied to race, ethnicity, and class. Levinson argues that the U.S. civic achievement gap is as serious as the one associated with reading and math.

While in the 1960s students received roughly three civics courses by graduation from high school, she offered, today typically only one semester of 12th-grade government is taught.

“In many urban districts there is little better than a 50 percent graduation rate, meaning close to a majority of those students who have dropped out by the 12th grade are getting no civic educa-

(See *Civic*, next page)

Government of India gives \$4.5M to support grad students

Gift honors 75th birthday of economist Amartya Sen

The government of India has given Harvard University \$4.5 million to support fellowships for graduate students from India. The gift recognizes the accomplishments of Harvard Professor of Economics and Philosophy and Thomas W. Lamont University Professor Amartya Sen and his work for social and economic justice across the globe. It also recognizes the work of Harvard's South Asia Initiative toward establishing Harvard as a locus for the study of South Asia.

The gift will establish India Fellowships, which will provide fellowships to highly accomplished and deserving students from India for studies at the Graduate School of Arts and Sciences.

"Harvard is grateful to the government of India for this generous gift to support graduate students and to honor the important work of Professor Amartya Sen," said Harvard University President and Lincoln Professor of History Drew Faust. "We are fortunate to have Professor Sen on our faculty and share India's pride in calling him a member of our community. I can think of no more fitting way to celebrate Professor Sen and to strengthen the important ties between Harvard and India."

"I am glad that Harvard has accepted this gift on the occasion of the 75th birth anniversary of Professor Amartya Sen, who is a great son of India and one of the world's foremost contemporary thinkers," said Ronen Sen, ambassador of India to the United States. "I am confident that these fellowships, by providing new opportunities for gifted students from India to study at Harvard, will further expand the University's impressive scholarship on India, especially its South Asia Initiative."

Sen's work in economics is celebrated for its interdisciplinary nature, with research in diverse areas such as development economics, philosophy, public health, and gender inequality. Although he has spent his entire career in academia, Sen has translated his expertise in economics into practical, on-the-ground approaches to predict and fight famine, as well as ways to measure poverty.



Amartya Sen (from left), President Drew Faust, Ronen Sen, Indian ambassador to the United States, and Sugata Bose gather to mark India's gift to the University — and Amartya Sen's birthday.

Photos: Stephanie Mitchell/Harvard News Office

In 1998, he won the Nobel Prize in economics for his contributions to the field of welfare economics. He has written extensively on economic justice, and his books have been translated into

University broadens engagement with South Asia,

www.news.harvard.edu/gazette/2007/11.01/03-southasia.html

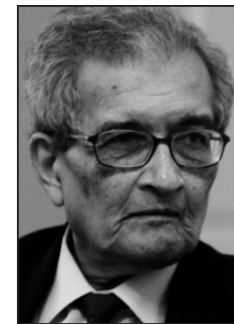
more than 30 languages.

"I am delighted that the gift will help bright Indian students to come to Harvard," said Sen. "The students receiving the India Fellowships will have the opportunity of studying at what is perhaps the best university in the world, and Harvard too will benefit from having wonderful students who could not otherwise afford to come here."

The South Asia Initiative at Harvard University, directed by Gardiner Professor of Oceanic History and Affairs Sugata Bose, is a center for scholarly research and academic inquiry, with a particular focus on modern India, Pakistan, and

Bangladesh. Sen is one of nine senior faculty members who compose the South Asia Initiative Faculty Steering Committee, a cross-disciplinary body that sets the academic agenda for the South Asia Initiative. Since its founding, the initiative has convened renowned South Asia specialists from around the globe, inviting scholars and public leaders to Harvard as visiting academics and lecturers. Supporting international study programs for both American and South Asian students, the initiative is highly regarded as a center of excellence that reflects Harvard's commitment to international studies and expansion. In 2008, the initiative supported 67 students — 35 graduate and 32 undergraduate — with grants to study and conduct research in South Asia.

"Professor Amartya Sen has been an inspiration to generations of scholars and students. I can think of no better way of honoring him on the occasion of his 75th birthday. The South Asia Initiative is immensely grateful to the government and people of India for this farsighted gesture that will enhance the flow of knowledge between Harvard and India," said Bose.



"The students receiving the India Fellowships will have the opportunity of studying at what is perhaps the best university in the world, and Harvard too will benefit from having wonderful students who could not otherwise afford to come here."

Amartya Sen

Civic

(Continued from previous page)

tion. Our lack of attention in general to covering civic and moral education issues certainly contributes to the civic achievement gap, but it is much broader as well. Civic engagement, civic competencies, the skills and values that one needs to be an effective and empowered democratic citizen, really just aren't on the table."

Both organizers cited as a positive step the recent election and influence and symbolism of the campaign of President-elect Barack Obama, whose message, they said, of engagement and inclusion resonated with a wide audience.

"I have to think that at least some people may be more excited and interested because of Obama's candidacy and election," said Levinson. "Both the way his political campaign was run and the message that he has been pretty consistent about sharing have certainly brought civic engagement much more to the fore than has been true in the last ten years."

The group's first discussion was held in October and was led by HGSE visiting professor from the University of Bath Helen Haste, who explored a number of issues related to the field, including how civic and moral education is impacted by the Internet

and the way people use new technologies to build civic communities and communicate their ideas. In November, Levinson, who taught middle school students in Boston and Atlanta before coming to Harvard, offered her perspective on African-American traditions of civic education.

In the most recent talk on Dec. 12, Selman led a panel that questioned whether students could learn about civic engagement by examining historical cases of attempts to destroy it. In evaluating the program Facing History and Ourselves (FHAO), a professional development organization for educators, he told the crowd that he and his colleagues reviewed its case-method approach to learning. The program uses historical epochs and events, like the steps leading up to the Holocaust, as a means of guiding teachers in their conversations with their students about the kinds of messages they receive from society, or the times when people find themselves in "we versus they" situations, and what, if anything, to do about them.

Examining the curriculum and even conducting some of their own interviews with students, said Selman, helped him understand some basic developmental questions.

"We decided to use our research partnership with FHAO as a way to understand

how kids thought about issues like inclusion and exclusion," said Selman, who noted that the research suggested that "by high school, most students can understand that when faced with a we/they situation in school — like ostracism — they can take steps to improve the school climate."

Yet, he also stressed, "it is important for students to be neither too idealistic nor too cynical in the strategies they can imagine choosing. ... Seeing connections and differences to choices made by ordinary people in periods when civil society is threatened is what a program like Facing History can help teachers teach."

Levinson and Selman both note that the definition of civic education involves teaching students to appreciate how historical consciousness, ethical reflection, and civic participation may connect to one another. The basic tenets of participatory democracy, they agreed, are also essential.

Also on the recent panel was HGSE graduate and current history teacher at Cambridge Rindge & Latin School Joshua Landwher, who explained some of the strategies he uses in teaching his students civics lessons from the past. Studying things like the texts from the founding fathers, World War I propaganda, or the Treaty of Versailles, he said, helps his students forge con-

nections between history and civics.

"I have [my class] try to work on formulating a Versailles Treaty ... an end to the war, a just peace or a victors' peace," Landwher said, adding that the students are exposed to the moral and ethical lessons of history in part by putting themselves "back into these places and [moments in time]."

The CMEI colloquia series has been heavily attended by students and faculty from HGSE and other Harvard Schools, as well as by members of universities and organizations in the Greater Boston area. In addition, students at HGSE have begun to organize their own CMEI-affiliated group.

As the series continues next year, organizers hope to invite a representative from the Obama administration to talk about reshaping and reinvigorating civic engagement in a new political landscape. The group also hopes to create a cross-program concentration in civic and moral education at HGSE.

Perhaps the best indication of how important the topic has become arrived at last week's discussion in the form of approximately 20 young students from Landwher's history class. They scattered themselves on the floor to listen to the presentation, choosing to, as their teacher put it, "participate and engage civically."

Scholar asks: 'How can we know the spectator from the dance?'

By Emily T. Simon
FAS Communications

When Yvonne Rainer and her fellow dancers took to the stage in the early 1960s, their performances were like nothing American audiences had ever seen. First, there were no costumes. Performers wore T-shirts, casual pants, and sneakers. In place of elaborate leaps and twirls, the dancers engaged in everyday movements like running, climbing, and even falling. **humanities** And there was little to no emotional drama. The focus was on the body: unadorned, physical, and pure. Rainer — choreographer, dancer, and visionary — had sparked a revolution.

To date, much of the scholarship on Rainer has addressed the ways in which she transformed the performing body and democratized dance. Along with her fellow choreographers at New York's Judson Dance Theatre, she has been celebrated for replacing the body's "star status" with the delights of the quotidian.

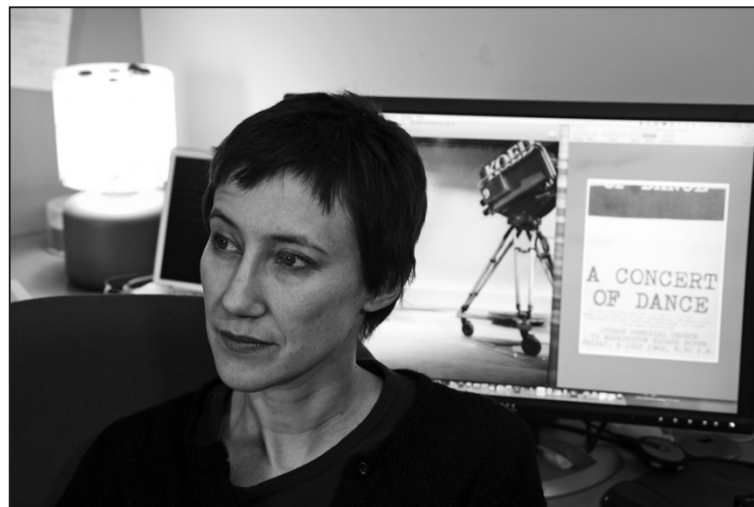
Carrie Lambert-Beatty, assistant professor of

history of art and architecture and of visual and environmental studies, offers a new theory on Rainer's contributions to modern art. Her most dramatic influence, Lambert-Beatty argues, was not in the body of the performer but in the eye of the viewer.

"Rainer worked to alter the relationship between the viewer and the performer," Lambert-Beatty says. "She was a sculptor of spectatorship who grappled with and problematized the notion of the body as a thing to be viewed."

Lambert explores Rainer's work with spectatorship and the perception of dancing bodies in her recent book, titled "Being Watched: Yvonne Rainer and the 1960s" (MIT Press). Central to Lambert-Beatty's argument is the notion of what she calls "seeing difficulties," or the challenges of watching. In dance, the primary challenge is produced by the simple fact of performance's ephemeral nature. Lambert-Beatty borrowed the term from Rainer herself, who famously proclaimed, "Dance is hard to see."

According to Lambert-Beatty, choreographers can play with the "seeing difficulty" to make it ei-



Jon Chase/Harvard News Office

ther harder, or easier, to see the dance. Rainer actively worked through and around the practices of spectatorship, Lambert-Beatty says.

In Rainer's early works, says Lambert-Beatty,

(See *Rainer*, next page)

Carrie Lambert-Beatty is assistant professor of history of art and architecture.

Religion in the vernacular

Nicholas Watson traces the decline of the clergy and the rise of the laity

By Corydon Ireland
Harvard News Office

In 1215, Pope Innocent III convened the Fourth Council of the Lateran, a religious convocation that laid out to hundreds of bishops, abbots, priors, and Christian patriarchs 70 new decrees. One enjoined the clergy to stop frequenting taverns, engaging in trials by combat, hunting, and practicing what might be called noncelibate habits.

But to Harvard English professor Nicholas Watson, this medieval religious council was also the occasion for the church's first debate over teaching theology.

Should the church embrace its longstanding monastic ideal, and keep the learning of theology the province of a few men versed in Latin? Or should it teach every Christian at least a little, and in English or other vernacular tongues?

To Watson, a Radcliffe Fellow this year, the 1215 church council marks the start of a captivating period of English literary history. At the other end of the temporal frame is the English Reformation, which followed a final break with the Roman church.

He sees it as an age in which English emerged as a major language and universities began and flourished, and an age in which vernacular religious texts abounded. Today, he added, those texts are a scholarly key to understanding secularized England.

In a nation where early medieval Christianity was "an elite, small-group religion" with an emphasis on contemplation and theory, said Watson, came the ascendancy of what he called "spiritual mediocrity," where religious instruction took place in the vernacular. In turn, said Watson, "the Christianity of western Europe reinvented itself" into a place where monasticism had been "swept away" in favor of instructing the laity.

Watson's talk was drawn from thoughts on a book he has under way and will continue at Radcliffe, "Balaam's Ass: Vernacular Theology and the Secularization of England, 1050 to 1550."



Rose Lincoln/Harvard News Office

Balaam's ass, he said, is not just a biblical prophet's stubborn talking donkey (though one who can see angels), it is a "figure" for the vernacular. It represents the plain, direct, concrete language of ordinary people, which contains what Watson called "the prophetic resources of the inarticulate."

In the end, the Christian church decided, in effect, to admit a donkey into the stable of its theological horses. What emerged was "vernacular theology," a transformative blend of Christian teachings and the common tongue. Watson revived the phrase (first used in the 16th century) in a landmark 1995 study on cultural change in late-Medieval England.

When combined, the two words "vernacular" and "theology" contain liberating connotations of accessibility, free expression, and even democracy.

But in the 13th century, translating theology into the vernacular presented a pedagogical problem. How do you teach an English-speaking, largely illiterate popu-

For much of the Middle Ages, salvation was presented, says Nicholas Watson, as the sole right of the elite. Vernacular theology tried to 'squeeze through' into paradise those without learning.

lation even the rudiments of Christian teachings, which had been for centuries couched only in Latin?

Well, "rhythmic English semi-prose," for one, which underlay the pedagogical trick of rote learning, said Watson. He read from one example, the "six things" from "The Lay Folks' Catechism," based on a 1281 syllabus. The 12 articles of faith, the Ten Commandments, and other prescriptive lists were all summarized in catchy verse. Priests read the "six things" to their congregations four times a year, an exercise that took 25 minutes. Lay people were also required to memorize them, or be punished for sinning.

"Repetition and counting" were the keys here, said Watson. He read in musical Middle English the section on the Third Commandment, which requires both the "lered and lewed" ("learned and unlearned") to keep the Sabbath.

"Six things" had a theological underpinning too, he said, showing that eternal salvation is based on knowledge and reason, and not behavior.

To gain that "bliss that nevermore ends," said Watson, quoting from "six things" in translation, "knowledge and reason" — qualities lost in the Garden of Eden — could only be regained by study.

For much of the Middle Ages, salvation had been presented in "small-group terms," he said, as the sole right of the educated elite. Vernacular theology was an attempt to "squeeze through" into paradise those without learning.

The concept of purgatory was another way for the unlearned to squeeze into paradise, Watson pointed out later. The ignorant could simply bide time in the afterlife in a sort of waiting room to heaven.

"Six things" was "practical and comprehensive" in 1281, said Watson, but by 1510 was the stuff of parody. That was the year of the anonymously authored "How the Ploughman Learned His Pater Noster," a satire on learning by rote.

Watson told the story of a ploughman (farmer) and a priest. The ploughman knows a lot about practical matters, but cannot recite the Lord's Prayer, and refuses to memorize it. But he agrees to memorize the names

(See *Watson*, next page)

Watson

(Continued from previous page)

of a succession of poor men who visit him for gifts of corn, in return for the priest's promise of a higher price for his grain.

So the first poor man, named "Our," arrives. Then the second, named "Father," and so on, until after one exhausting night the ploughman has memorized what — when strung together — is the Lord's Prayer.

"Six things" and the story of the ploughman are far apart in time and intent, but both illustrate that literacy was a "moral skill before it was a practical skill," said Watson. By the 18th century, he said,

literacy would become what it is today, "a secular, and economic, ideal."

The vernacular theology of Medieval England was a battleground of two broad religious views of salvation. The "perfectionist" view held that only the few, and the intensely educated — like the monks of old — could be saved. The "universalist" view — more tolerant, open, and flexible — held that even "mediocre" (uneducated) Christians could be saved.

Occasionally, expressions of the universalist view seemed not just tolerant, but radically inclusive, said Watson.

To illustrate, he read a passage from

William Langland's visionary narrative poem "Piers Plowman," written around 1380, in which a feminized Christ bade all — Muslims, Jews, and fallen Christians alike — to "souke for sinne salve [remedy] at his breste."

But how revolutionary was medieval vernacular theology — that is, how much did it influence the modern era?

Watson is not prepared to say, but in the end did assert that it was a "potent and under-recognized phenomenon" that deserves more investigation.

corydon_ireland@harvard.edu

Digital

Amir Karger (from left), Therese Celine Condit, and Elaheh Kheirandish participate in the Digital Humanities Fair in the Barker Center's Thompson Room.



Kris Snibbe/Harvard News Office

(Continued from page 13)

Bill and Carrie were part of a display by the Academic Technology Group (ATG) at Harvard, a resource for technology-enhanced teaching and learning tools. Those include virtual worlds and video, along with the clickers, wikis, and discussion boards used in collaborative learning environments.

The ATG, an arm of the Faculty of Arts and Sciences (FAS) Information Technology group, creates course-specific multimedia Web sites, including a recent virtual world of 17th century Harvard for archaeology students.

The Derek Bok Center for Teaching and Learning had a display, pointing to, among other things, its courses and seminars on Web pedagogy.

Visitors took in a lesson on the Harvard University Library's Visual Information Access, with its contributing collections of images on horticulture, Hellenic studies, medicine, business, law, zoology, and more.

The Harvard Division of Continuing Education had a table set up, with experts ready to talk to faculty about the experimental reach of its 120 online courses, and its longtime investment in distance education.

In some cases, digital resources at Harvard have been accelerated or expanded because of an FAS vote in February on open access to scholarly literature. It requires Harvard faculty members to submit an electronic version of scholarly articles to the Provost's office for an online repository, where they will be available free.

In June, Harvard plans to "open the repository to the world," said Amy Brand, program manager in the Harvard University Library's new Office for Scholarly Communication. "The nice thing about a digital

archive, as opposed to a physical archive, is that we can make it visible and accessible to the wider world."

Her office's DASH repository — as in, Digital Access to Scholarship at Harvard — is now only available to members of the Harvard community as a beta test, she said.

But by this summer, DASH will be accessible to anyone worldwide through Google Scholar and other online indexing services.

In May, Harvard Law School (HLS) instituted a parallel open-access requirement for its faculty scholarship.

Harvard University Press (HUP) is also exploring open access, said Daniel Lee, director of digital content development. Early next year it will publish the first online issue of the "Journal of Legal Analysis," a peer-reviewed, open-access journal sponsored by HLS.

At the end of next year, the 2009 journal articles will be published in a print-on-demand volume, said Lee. Bringing digital tools to the humanities, he said, "is about changing modes of access to scholarly research."

Nearby, Ben Lewis, a senior GIS specialist with Harvard's Center for Geographic Analysis, tapped a few computer keys to call up a detailed map of Africa. To the north, it was dotted in red with the locations of 30,000 water wells.

Geographical information systems, or GIS, can provide a robust platform for humanities research, said Lewis. "This exact spot on the Earth," he said, pointing down, is not just a coordinate — but the locus of "all kinds of human things."

For example, his office's AfricaMap project — launched just two weeks ago — can deepen a scholar's understanding of an exact place by layering it with historical, environmental, and economic data, as well as

links to recent research and even rich databases.

The content of AfricaMap is African, but the same layered, rich mapping framework — "geographic switchboards," Lewis called them — "can be applied anywhere in the world."

These kinds of maps, stacked with research and data from many different disciplines, allow researchers to see each other's work, and invite intellectual interplay among fields as diverse as policy, health, the arts, history, and linguistics.

"It's all about layers," said Lewis of GIS tools for the humanities, "and it's all about concurrence in actual space."

The center, he added, plans a one-day training session for Harvard faculty members in March.

Many of the fair's visitors took time to make Bill walk around with the up and down arrow keys on an Apple computer. (Carrie — in reality Caroline M. "Carrie" Kent, head of research services at Widener Library — was moving herself around from a remote location, and busy typing answers to interactive queries.)

The Islamic folios on display numbered only 12, but there is "no limit to the number of pages you can add," typed Carrie, whose redheaded avatar moved around in a stylish black body stocking. It's all about new opportunities for "contextualization," she added. "You could put on display together manuscripts from around the world that you could never, in real life, see together."

Carrie, the avatar, offered one guest a trip to a virtual Harvard College library. It was set whimsically in an open-air portico, where a waiting lounge chair pointed to a nearby faux sea.

"Hold on," said Carrie, "and I will transport you."

Rainer

(Continued from previous page)

she tried to make it "easier" for the spectator to see in a range of ways: for example, by using repetition or a follow-the-leader structure so the viewer had many opportunities to see a particular dance phrase. Later in her career, however, Rainer made it more "difficult" for the audience to see by creating dances with little to no repetition. In "Trio A," one of her most famous works, the dancers do not repeat a single move.

"It's very difficult to get your bearings as you watch this dance," Lambert-Beatty says. "There is just movement after movement. ... You never feel like you've seen it all."

Rainer's efforts to modify the viewing experience reflected contemporary cultural developments, says Lambert-Beatty.

"In the 1960s, artists were reckoning with the transformation that had occurred with the rise of TV," she says. "As media coverage of the Vietnam War intensified, this reckoning got a kind of urgency. I think that consciously or not, artists who worked with displaying a body to a viewer were heavily impacted by the televisual experience of the war."

As an example, Lambert-Beatty cites a strategy that Rainer developed in 1968 called "performance concurrence." Rainer would choreograph multiple dances to take place in different locations at the same time. Performance attendees would receive a map of room locations and a schedule, not unlike a TV guide. Because the dances were concurrent, attendees had to make a conscious decision about what to watch.

"Rainer set up the condition where the viewer would be aware that something is going on that he or she is not actually seeing," says Lambert-Beatty. "This was an artistic 'working through' of life in a media culture."

Rainer also incorporated media culture in a more direct sense. She often projected films during her dances, or had performers imitate positions from photographs or actions from movies.

"Being Watched" traces Rainer's treatment of the spectator from her earliest, minimalist works to the politically charged productions she created in the 1970s. Writing about spectatorship was challenging, Lambert-Beatty acknowledges, but she was able to draw on a rich body of source material to inform her scholarship.

"With dance, the performance itself is gone," she says. "I was considering artwork that by its very nature no longer exists. So, I had to rely on traces like any performance historian."

Lambert-Beatty drew on photographs, performance films, and interviews with individuals who had seen Rainer's works performed live. She was also able to watch reconstructions of certain performances.

The most helpful information, however, came straight from Rainer herself. In 1997, Lambert-Beatty was a fellow at the Whitney Museum of American Art's Independent Study Program in New York. She was interested in performance art of the 1960s, and had plans to write about several artists from that era — including Yvonne Rainer, who teaches regularly at the program. The pair met frequently during Lambert-Beatty's fellowship.

"It was wonderful," says Lambert-Beatty. "I was able to make appointments to sit down with Rainer and discuss her work at length. I came away feeling that there was so much to say."

Those long conversations altered Lambert-Beatty's plans a bit. The other artists would have to wait — Rainer's groundbreaking approach to spectatorship begged its own book. The result? "Being Watched."

esimon@fas.harvard.edu

Rights celebration capped with talk, song, dance

60

Harvard
celebrates
The Universal
Declaration of
**Human
Rights**

This is the last in a series of events and academic innovations in a semester-long Harvard celebration of the 60th anniversary of the Universal Declaration of Human Rights.

Semester's series ends with daylong panels

By **Corydon Ireland**
Harvard News Office

Sixty years ago this month, the United Nations released to a war-shocked world the Universal Declaration of Human Rights (UDHR), a catalog of norms understood to apply to all human beings.

The document's 30 articles seem self-evident today — the right to freedom of speech, belief, and property, for instance. Yet all these years later, experts say, there is still a gap between theory and practice — between the inspiration of landmark words and the way those words are implemented.

It was into that gap that experts stepped in a daylong series of panels last week (Dec. 11) at the Harvard Faculty Club. It was the last event in a semester-long interdisciplinary retrospective on the UDHR at Harvard.

In opening remarks, Wilhelm Krull predicted “an intensive cultural and academic exchange” — and perhaps a recognition that the humanities have a heightened role in the human rights debate. (Krull is secretary-general of the Volkswagen Foundation, a co-sponsoring organization that recently funded two humanities fellowships at Harvard.)

Krull got his wish for a flashbang event, in part because panel participants came from diverse disciplines. The law, medicine, literature, advocacy, education, and public policy are only recently beginning to view human rights implementation cooperatively.

“These debates actually *unite*,” and that’s rare, said organizer Jacqueline Bhabha, director of the Harvard University Committee on Human Rights Studies (an event co-sponsor) and Jeremiah Smith Jr. Lecturer in Law at Harvard Law School.

The humanities and human rights can “dovetail,” said Harvard’s Dean for the Humanities Diana Sorensen, the James F. Rothenberg Professor of Romance Languages and Literatures and professor of comparative literature, employing a carpentry metaphor. “If we put those things together, we’ll fly.”

Anja Mihr said human rights studies recently made a leap from law schools, their traditional nexus, into the social sciences and other disciplines. European universities alone now offer more than 100 master’s degrees with “human rights” in the title, she said, and in the United States Harvard offers

(See *Retrospective*, page 20)



Photos Stephanie Mitchell/Harvard News Office

At the Dec. 10 celebration marking the 60th anniversary of the Universal Declaration of Human Rights, President Drew Faust, Amartya Sen (obscured), and Paul Farmer all spoke.



Accompanying Oumou Sangare, ‘The Songbird of Wassoulou,’ Cheick Oumar Diabete (above) performs on the jembe.



Laurence Tribe (above) takes part in a dramatic reading of the Declaration of Human Rights. Mali’s great diva Oumou Sangare (below) sings.



Theater, music, dance, and ideas mark rights fête

By **Alvin Powell**
Harvard News Office

Harvard marked the 60th anniversary of the Universal Declaration of Human Rights on Dec. 10, highlighting both the document’s power and its unfulfilled promise through theater, song, and ideas.

As images of the declaration’s articles were displayed in light onto University buildings in an outdoor tribute, hundreds gathered inside at the Harvard Kennedy School’s John F. Kennedy Jr. Forum for an event featuring dozens from the Harvard community and beyond, spanning fields from acting to economics, from music to medicine.

“We’re here to celebrate a truly remarkable document ... and all its ramifications and all it means,” said Harvard Kennedy School Dean David T. Ellwood, who introduced the event. “There have been periods of remarkable progress and real setbacks.”

Jacqueline Bhabha, executive director of the University Committee on Human Rights Studies, which sponsored the event, said that it is part of the mission of places like Harvard to inspire students and channel their idealism toward worthy goals, something she hoped Wednesday’s event would help accomplish.

The night opened and closed with the arts. It kicked off with a dramatic reading of the declaration’s 30 articles by 30 different people whose lives have been touched by a particular article’s content. Among them were Bol Riiny, a former Sudanese “Lost Boy”; Svang Tor, a survivor of the Cambodian genocide; and Hassan Bility, a Liberian journalist and former prisoner of conscience. Readers also included several members of the Harvard community, including Loeb University Professor Laurence Tribe, Evron and Jeane Kirkpatrick Professor of International Affairs John Ruggie, and Learned Hand Visiting Professor of Law Richard Goldstone, who was the chief prosecutor of the International Criminal Tribunals for the former Yugoslavia and Rwanda. The evening ended with a performance by Malian singer Oumou Sangare, also known as “the Songbird of Wassoulou.”

In between was a discussion of the current state of human rights by economist Amartya Sen, a Nobel Prize laureate and the Thomas W. Lamont University Professor, and Paul Farmer, the Maude and Lillian Presley Professor of Medical Anthropology and a founder of the nonprofit Partners In Health. The panel event,

(See *Anniversary*, page 20)

Across campus, Harvard community reaches out

Student-run haven gives shelter — and a boost — to homeless

By Amy Lavoie
FAS Communications

The song tells us that there is “no place like home for the holidays,” and soon, many on the Harvard campus will be destined for far-flung places, both dear and familiar. The Harvard Square Homeless Shelter (HSHS) helps those who are not fortunate enough to have a home at all.

HSHS is the only shelter in the country led entirely by college undergraduates; it is a program of the Phillips Brooks House Association, Harvard College’s student-run public service organization.

The shelter, located in the basement of the University Lutheran Church, is open when the streets of Cambridge are coldest: Nov. 15 through April 15, including Thanksgiving, Christmas, and New Year’s Day. It houses 20 beds for men and four beds for women and is full most every night, with requests often outnumbering available beds.

“First and foremost, our mandate from the state is to be an emergency shelter, to get people in from the cold,” says Peter Ganong ’09. “When it’s snowing, raining, or freezing outside, beyond our 24 beds, we put out as many cots as possible.”

Meals are served seven days a week to guests, and are given out at the door for those who don’t have a bed for the evening. Harvard Square eateries such as Au Bon Pain, Oggi, and Darwin’s Ltd. donate food to the shelter. And Harvard University Dining Services donates food from the Adams House dining hall every evening.

Student volunteers come to know guests on a personal level, which is one of the most eye-opening aspects of their experience.

“I think that that word ‘homeless’ can become all-encompassing, defining the essence of who you are,” says Shane Donovan ’09. “You don’t have to spend long here for that stereotype to go away pretty quickly, because when you are eating dinner with somebody in this space, your first thought is not that ‘this person doesn’t have a house,’ you just interact with them as a person.”

Resource advocates at HSHS, who are available nightly, provide assistance with education, employment, legal aid, and housing. For Max Yelbi, 20, a former guest of the shelter, they have had a profound impact. Yelbi was born in the Ivory Coast, grew up in France, and came to America in 2005. Today he is a student at Bunker Hill Community College, and through HSHS, he found the resources to apply to transfer to a four-year college. Shelter volunteers helped Yelbi take the SAT and find an interview suit, but most importantly, he says, the students have always been there for him.

“This has been the most incredible experience that I have had so far in America,” says Yelbi. “These students have done so much for me. I never would have had this opportunity at another shelter.”

Yelbi has just been accepted with a full scholarship to Hamilton College for spring 2009. While elated to know that he has a place at such a prestigious school, he is also waiting to hear from Amherst College, which is his first choice. He hopes to study biology.

“My lifelong goal is helping poor people, especially in West Africa, since it is where I am from,” says Yelbi. “What I really want to do is to use the knowledge that God gave me to serve people.”

While HSHS’s core mission is to serve as an emergency shelter, new programming has focused on helping guests find a permanent home. Resource advocates, who are also Harvard un-



Rose Lincoln/Harvard News Office

Harvard Square Homeless Shelter accepts donations of nonperishable food, clothing, and blankets throughout the year. Contact sdonovan@fas.harvard.edu to make a donation. To volunteer, please contact hshs.volunteer@gmail.com.

Former shelter guest Max Yelbi (left) credits the kindness, the counsel, and the generosity of shelter volunteers with his entering a four-year college next year.



Jon Chase/Harvard News Office

Lucas Toffoli ’09 and Sara Manning ’09 prepare a meal at the Harvard Square Homeless Shelter. In the background is Shane Donovan ’09. Meals are served seven days a week to guests, and are given out at the door for those who don’t have a bed for the evening.

dergraduates, receive training from National Student Partnerships, a national nonprofit organization that connects people in need with the resources necessary to become self-sufficient.

Guests who work a set number of hours per week and meet certain requirements for income are eligible to apply for the Work Contract program. Those accepted can stay at the shelter for up to three months continuously, during which time they can save money toward the deposit on an apartment or house, says Eleanor Wilking ’09, director of the program.

HSHS is the largest program of the Phillips Brooks House Association, with more than 200 volunteers. This number includes 14 directors, who manage every aspect of running the shelter, including food, in-kind donations, administration, and the Work Contract program; and 14 supervisors, who manage overnight shifts. All of the directors and supervisors are Harvard undergraduates. Volunteers, who are mostly Harvard stu-

dents, staff the shelter throughout the evening, from 6:30 p.m. to 8 a.m., in four shifts.

HSHS has earned a reputation as a safe place for those with few options. Compared with other shelters, there is a high volunteer-to-guest ratio, and it is “dry,” meaning guests cannot be under the influence of alcohol or other drugs. It’s referred to as “The Ritz” by guests, according to Mariah Evarts ’09, director of in-kind donations.

Now in its 26th season, the shelter was originally a collaboration between a Harvard Divinity School student and the pastor of the University Lutheran Church. Through the years, HSHS management has transitioned to Harvard undergraduates.

“We’re smack-dab in the middle of campus,” says Donovan, “but I have never felt so outside of Harvard, in a refreshing way, than being here.”

amy.lavoie@harvard.edu



Photos Stephanie Mitchell/Harvard News Office

Under the fierce gaze of a puppet dragon, volunteers at the Phillips Brooks House Association sort through toys donated in the PBHA holiday gift drive.

Toys, clothes, and a visit from Santa

By Colleen Walsh
Harvard News Office

Santa came to Harvard a little early last week (Dec. 13). He sat comfortably in a chair on the second floor of Phillips Brooks House, clad in his familiar bright red outfit with white trim, plus the less familiar, yet practical, Merrell hiking shoes. He was taking a brief break between meeting groups of eager children anxious for an early Christmas present.

The young excited crowd was part of the annual holiday party hosted at the Phillips Brooks House Association (PBHA) that brings participants from their various mentoring programs around Boston and Cambridge to campus for a day of fun, foods, presents, and the chance to meet the jolly man himself (aka Steve Griffin, PBHA vehicles manager).

“It’s really important to have them get these gifts, and make them feel special,” said Valonda Harris ’09, the mentoring program group officer at PBHA who helped organize the event. “The day is really about them; it’s definitely their day.”

All of the gifts for the party as well as the snacks and treats for the day were provided by Harvard University Health Services.

A group of children with their student mentors from Harvard camped on a stairway landing, playing a freshly opened game of Chutes and Ladders. On the first floor, several children gathered around a table, festively decorating holiday cookies, while a collection of new teddy bears, scattered in various chairs, looked on. In a room across the hall from where Saint Nick was handing out personalized presents, 7-year-old Henry Huynh of Dorchester sat beside his mentor, carefully painting a paper snowman a deep shade of brown. He smiled a wide, toothy grin and nodded emphatically when asked if he was having fun, confirming that he was very happy with the cowboy-themed Legos Santa had just brought him.

The event was one of a host of outreach ac-

tivities and programs taking place across campus as the holidays approach. The wide range of initiatives reveals that despite the hard economic climate, or perhaps because of it, the Harvard community is as committed as ever to helping those in need.

PBHA has a long tradition of helping others. Founded in 1900, the student-run organization



Former PBHA President Angelico Razon ’08 (left) and current PBHA President Frances Tompkins ’09 gather gifts from the donation boxes.

is dedicated to social service and social action; each year, close to 2,000 volunteers participate in 79 community programs. In addition, for more than 14 years, PBHA has annually organized a holiday gift drive, collecting toys and other gifts from departments around the University that it distributes to various local organizations.

“I think it’s more important this year when many people in the community are really facing hard times,” said Executive Director Gene Corbin. “It’s amazing what a gift or a small gesture can do to bring encouragement to people. I am proud of the students and staff at Harvard for supporting this mission so strongly.”

(See *Gifts*, page 25)

The following is just a small sample of the many holiday outreach efforts and events taking place around the University.

The Graduate School of Design is collecting donations—including food, clothing, and toys — to benefit Urban Edge, Mass Coalition for the Homeless, and the YWCA of Cambridge. In addition, it is collecting funds for toiletries for the Long Island Homeless Shelter in Boston Harbor.

The dean’s office at Harvard Medical School is holding a nonperishable food drive to benefit the Greater Boston Food Bank. The School’s chapter of the Student National Medical Association hosted a winter clothing drive earlier this month, with donations benefiting the Providence Rescue Mission.

The Radcliffe Institute for Advanced Study is collecting toys and gifts for Casa Myrna Vasquez, a Boston-based shelter.

The Graduate School of Education is holding a raffle to raise funds for Our Place, a local daycare center for homeless children.

The Allston Development Group and Harvard Real Estate Services sponsored a gift drive to benefit the Salvation Army.

Massachusetts Hall has created a gift drive that will benefit several community centers in Harvard’s host communities.

The Athletic Department sponsored a food drive to benefit the Allston-Brighton Food Pantry.

The Harvard Band gave free concerts recently at a number of locations around Boston, including the Boston’s Shriners Hospital for Children.

Harvard University Health Services collected toys and donated food and funds for the Phillips Brooks House Association’s annual Christmas party for children from around Boston and Cambridge.

University Operation Services is collecting gifts for the Toys for Tots program and the Home for Little Wanderers.

The Divinity School collected clothing donations for families connected to the Women’s Lunch Place during its annual “Seasons of Light” service. In addition, Divinity School student Marianne Carroll organized a holiday food drive for St. Paul’s African Methodist Episcopal Church in Central Square.

The Phillips Brooks House Association is running its annual drive, which collects gifts from departments across the University to distribute to the following organizations:

Action for Boston Community Development (ABCD—Greater Boston)
Agenda for Children in Cambridge
Cambridge Community Center
Houston House/Spectrum House (Westborough)
Hyde Park YMCA
Jackson Mann Community Center (Allston)
Mission Hill Task Force
Nathan Hale School (Roxbury)
Sociedad Latina (Mission Hill)
South Boston Action Center
South Boston FANS (Families Advocating Neighborhood Strength)
Thomas Gardner Extended Services School (Allston)
West End House Boys & Girls Club (Allston)
YWCA of Cambridge

Retrospective

(Continued from page 17)

the best example of this new interdisciplinary pathway.

The law has been the traditional “meeting place” in human right studies, agreed Homi Bhabha, director of the Humanities Center at Harvard. Lawyers and humanists alike “live in the realm of language,” he remarked, but literature and the arts have a special role in the “aspirational realm.” Any aspiration, said Bhabha, begins first by humans imagining it.

But human rights instruments like the UDHR have not gone far enough to champion “linguistic rights,” claimed Neville Alexander, a South African advocate for multilingualism. Linguistic rights, he said, are those that guarantee groups within a nation the right to speak and learn and teach in a language other than the dominant tongue.

Alexander, a co-founder of the National Liberation Front in apartheid-era South Africa who was imprisoned with Nelson Mandela, said the hegemony of English threatens to marginalize his nation’s remaining 10 languages — a threat of “linguistic genocide.”

In the same way, French and Portuguese — the language of colonizers elsewhere in Africa — threaten to marginalize indigenous languages.

Krull’s wish for intensity came from more than creative friction between disciplines. By late afternoon, a fundamental paradox in the 1948 document had emerged, and is guaranteed to keep sparks flying both within the academy and in the field.

The UDHR champions individual rights, but within the context of respecting cultural norms. And panelists agreed that sometimes the universal ideal clashes with the local reality.

Take the case of female genital cutting, a practice considered not only ordinary but desirable in some majority-Muslim countries.

The practice is “an unquestionable violation of human rights” as defined in the UDHR and numerous conventions since, said Harvard Medical School assistant professor Nawal Nour, a Sudan-born surgeon and founder and director of the African Women’s Health Center at Brigham and Women’s Hospital.

Yet many Muslim women in Africa, without access to basic health information, believe the practice is both a requirement of faith and a guarantee of marriageability. “In this particular population,” said Nour of her patients, who face reconstructive surgery, “the human rights field has failed.”

In many countries, added Austrian human rights researcher Katrin Kinzelbach, “centuries-old traditions make it difficult to bring human rights to individuals.” Human rights violations forbidden by public law are often executed in the private sphere, she said, “within the shelter of families or clans.”

Old and new cultures also clash over issues not thought of in 1948, said the panelists, including the death penalty, homosexuality, sex outside of marriage, and even in the propriety of allowing head scarves in public schools.

Human rights — broadened by U.N. covenants in 1966 and reaffirmed in 1993 — “are universally accepted,” said Dieter Grimm, a professor of public law in Berlin. “The question is no longer open.”

Human rights covenants are little needed in countries with high legal standards, he said. But in countries without such standards, there’s little way to enforce the will of humanity.

“Here,” said Grimm, “is the dilemma.”



Kris Snibbe/Harvard News Office

Anniversary



Stephanie Mitchell/Harvard News Office

(Continued from page 17)

moderated by Harvard President Drew Faust, highlighted the Universal Declaration’s groundbreaking enumeration of economic and social rights — the right to work, to education, to medical care, and to food, clothing, and housing.

The Universal Declaration of Human Rights was adopted 60 years ago, on Dec. 10, 1948, in the wake of the human rights horrors of World War II and the Holocaust. Its drafting was led by former U.S. first lady Eleanor Roosevelt, who served as a delegate to the United Nations from 1945 to 1952.

Faust introduced the panel, saying that the declaration’s 26th article — on education — is particularly meaningful to her. The article says everyone has a right to free elementary education and that higher education should be accessible to all according to merit, something that Harvard has been working to make happen. Though there has been progress in making the declaration’s rights real to people around the globe, violations are still a regular and unremarkable occurrence, Faust said.

“Every day, every single one of these articles is violated somewhere,” she said.

“They [the articles] ask us to uplift ourselves and keep, as the declaration says, ‘this declaration constantly in mind.’”

Sen provided historical context for the Universal Declaration, saying that its passage provided a hopeful ending to a dark year that had seen the assassination of Mahatma Gandhi and the beginnings of the Cold War with the Berlin airlift. Sen said the declaration made important contributions to the world of ideas by asserting that human rights are fundamental and apply to people around the world independent of laws protecting those rights. This assertion drew ridicule at the time, he said, because some claimed that rights without protecting laws are meaningless. In its incorporation of social and economic rights, the declaration went far beyond earlier pioneering documents such as the American Declaration of Independence, Sen said, but that again made it the target of criticism, this time for being unrealistic.

Groundbreaking as the declaration was, the decades since its passage have seen repeated violations of those rights.

“Its work is not yet done,” Sen said.

In his talk, Farmer highlighted an earlier statement of economic rights, those enumerated by Franklin D. Roosevelt in

his 1944 State of the Union speech. Farmer said an important question today is what is the government’s vision to create jobs to alleviate suffering from the economic downturn. He drew on his experience as a physician through Partners In Health to highlight successes and continued challenges facing the implementation of economic rights.

Children around the world are starving, underscoring a large gap between today’s reality and any declaration of a right to food. Farmers in Haiti and other poor nations are hurt by agricultural trade agreements among wealthy nations that some say are so exclusive they make it difficult for those farmers to feed their families.

Further, he said, we have “failed miserably” at providing the right to a decent home, and, in a world where injuries such as a simple broken leg can be lethal, have a long way to go before medical rights are assured.

Farmer said there is so much work to be done that the popular phrase “Think globally and act locally” doesn’t go far enough.

“We have to be thinking and acting globally and locally at the same time,” Farmer said.

Earlier in December, all 30 articles of the Universal Declaration of Human Rights were projected against buildings in Harvard Yard, at Harvard Law School, and at the Harvard Kennedy School. The light installation — ‘60 years, 30 articles, 1 document’ — featured graffiti-like representations of text from the United Nations declaration.

Harvard’s Committee on Human Rights Studies,

www.humanrights.harvard.edu/

Recent story with related links,

www.news.harvard.edu/gazette/2008/11.13/11-goldstone.html

Following her backup vocalist Dandio Sidibe off the stage is Malian singer and activist Oumou Sangare, ‘The Songbird of Wassoulou.’

College's Phi Beta Kappa chapter welcomes 48 new members

Forty-eight seniors were recently elected to the Harvard College chapter of Phi Beta Kappa (PBK), Alpha Iota of Massachusetts.

The Alpha Iota of Massachusetts chapter of Phi Beta Kappa was first established under a charter in 1779. Shifting from a social and debating club in its early years to an undergraduate honor society in the 19th century, PBK is known as the oldest academic honor society in the country.

Under the national Phi Beta Kappa mission to foster and recognize excellence in the liberal arts and sciences, election to Alpha Iota of Massachusetts signifies that an

undergraduate has demonstrated excellence, reach, originality, and rigor in his or her course of study. The honor society recognizes those whose course work demonstrates not only high achievement, but also breadth of interest, depth of understanding, and intellectual honesty. Twenty-four juniors are elected each spring, 48 seniors each fall, and a further number sufficient to bring the total membership to no more than 10 percent of the graduating class in the final election shortly before Commencement.

Adams House: Charles Gordon Nathanson, math; Charles Harker Rhodes, linguistics; Dana Alexandra Stern, government; David Cherngchui Yang, math/econ-

omics; and Fan Zhang, math/economics.

Cabot House: Alice Nian-en Lee, social studies; and Garrett Gordon Dash Nelson, social studies.

Currier House: Christine Ann Eckhardt, neurobiology; and Won Hee Park, economics.

Dunster House: Brenton Naska Speed, government; Vivek Viswanathan, history; and Wenxin Xu, chemical and physical biology.

Eliot House: Joanna Raine Binney, biology.

Kirkland House: Andrew Ken-Wei Chan, government/

(See **PBK**, next page)



Photos Nick Welles/Harvard News Office

Tavis Smiley, philanthropist, author, and host of the late-night television talk show 'Tavis Smiley' on PBS, holds back tears as he speaks at a ceremony honoring him with the W.E.B. Du Bois medal. The other honorees were Tamara Robinson (seated, from left), Richard L. Plepler, and Ingrid Saunders Jones.

Du Bois Institute awards four with medals of honor

The W.E.B. Du Bois Medal, Harvard's highest honor in African American Studies, was presented on Friday (Dec. 12) to Ingrid Saunders Jones, Richard L. Plepler, Tamara Robinson, and Tavis Smiley, at a ceremony at the Harvard Kennedy School to honor their outstanding "contributions to culture, art, and the life of the mind."

Ingrid Saunders Jones is part of the functional leadership of the Coca-Cola Co., senior vice president of Global Community Connections, chairperson of the Coca-Cola Foundation, and senior vice president of the Coca-Cola Co.

Under her direction, Global Community Connections has had success in the areas of conservation and sanitation, physical fitness and nutrition, recycling, and education around the world. As chairperson of the Coca-Cola Foundation, Jones has contributed more than \$256 million to initiatives including scholarships for high school students and programs that increase the academic achievement and success of students in public and secondary schools.

Richard L. Plepler is co-president of Home Box Office (HBO), where he is responsible for programming and corporate communications. In this position, and formerly as HBO's senior vice president of corporate communications and executive vice president of corporate communications, he has been involved since 1992 in all creative aspects of



Henry Louis Gates Jr., director of the W.E.B. Du Bois Institute, awards Smiley his medal.

the network and has been a driving force behind some of its most innovative programming.

Plepler's community involvement is broad and reflects his interest in the arts, health care, education, and public policy. He sits on the board of directors of the Phoenix House as well as New York Outward Bound, and is on the Advisory Committee of FilmAid International. As a member of the Council on Foreign Relations, Plepler serves on the chairman's Advisory Council, and on the Corporate Advisory Board of the Global Business Coalition on HIV/AIDS. At Harvard, he serves on the National

Advisory Board of the Du Bois Institute and is a member of the Dean's Council of the Harvard Kennedy School.

Tamara Robinson is vice president and director of programming at Thirteen/WNET in New York, where she is responsible for the development and oversight of all national and local programming, including special presentations, mini-series, and ongoing programs such as "Nature," "Great Performances," and "American Masters."

Acknowledged as a leader in public television, Robinson has received numerous awards, including a Primetime Emmy for "Smithsonian World" and several Emmy and Golden Cine Eagle nominations.

Tavis Smiley is host of the late-night television talk show "Tavis Smiley" on PBS and "The Tavis Smiley Show," distributed by Public Radio International (PRI). Outside of his role in the media, Smiley is also an author and a philanthropist.

As a member of the press, his interviews with newsmakers from the fields of politics, entertainment, activism, the arts, and ordinary life have earned him a reputation as a wide-ranging, meticulous, and tough journalist. His advocacy for community investment, financial empowerment, and cultural education have made him a catalyst for cultural change.

Antacid use during pregnancy may increase childhood asthma

Population-based study links maternal prescriptions with child health data

Children of mothers who took acid-suppressive drugs during pregnancy had a 1.5 times higher incidence of asthma when compared with children who were not exposed to the drugs in utero, finds a large population-based study by researchers at Children's Hospital Boston. The findings, accompanied by an editorial, appear online this week in "Early View" in the journal *Clinical & Experimental Allergy*. (They will be formally published online on Jan. 19 and will appear in the journal's February print edition.)

Lead researchers Elizabeth Hait and Edda Fiebiger, and first author Eleonora Dehlink of the Division of Gastroenterology/Nutrition at Children's examined mother-child allergy relationships using national health registers in Sweden, which contain records of all hospitalizations and drug prescriptions. By linking data from the Swedish Medical Birth Register with the Hospital Discharge Register and the Prescribed Drug Register, the team was able to identify mothers who took acid-blocking medicines during pregnancy. "We also used the registries to identify children who were hospitalized for allergic disorders or received a prescription for allergies, and then traced them back

to their mothers," says Hait.

The team analyzed data from more than 585,000 children born between 1995 and 2004. Overall, about 5,600 children (just under 1 percent) had been exposed to acid-suppression therapy during their mother's pregnancy, and more than 29,000 (5 percent) had a discharge diagnosis of allergy or prescriptions for allergy medications by 2006. Maternal use of acid-suppressive medicines was associated with a 43 percent greater likelihood that a child would be hospitalized or receive prescriptions for allergic conditions. Asthma was the most commonly reported condition; maternal use of acid-suppressive medications increased its likelihood by 51 percent.

The team then repeated their analyses to factor in maternal history of allergy, a known strong risk factor for allergy in children. "We found that if a mother is allergic, antacids don't seem to increase the risk of allergies significantly, because the risk of her child having allergies is already very high," says Fiebiger. "But if a mother is non-allergic, it does increase the risk." The increase in childhood allergic disease associated with acid-suppressive drugs was 43 percent when the mother was nonallergic, versus 25 percent for children of allergic mothers (the latter was not statistically different from chance).

Acid-suppressing medication is commonly used for acid reflux, or heartburn. Reflux occurs in up to 85 percent of pregnan-

cies, as high levels of estrogen are thought to weaken the lower esophageal sphincter, allowing stomach acid to splash up.

There have already been studies showing

To access the article online, follow this link and click on 'Early View' under 'Issue Navigation' (appears just before the Table of Contents),

www3.interscience.wiley.com/journal/117999818/home

that acid-suppressing drugs result in allergic sensitization in adults. "One function of stomach acid is to break down food proteins," explains Hait. "If the protein isn't being broken down completely, the immune system can potentially recognize the proteins as allergens." And mouse studies have shown that the offspring of pregnant mice exposed to acid-blocking medications during pregnancy have higher levels of the immune cells that are predominant in allergic conditions.

"Our study is the first to look at mother-child transfer of allergies in humans," says Fiebiger, whose laboratory researches the immune mechanisms of food allergy.

Hait says that there are many nondrug ways a patient can help relieve acid reflux, such as eating smaller meals and avoiding caffeine, spicy foods, and peppermint, which all promote acid reflux.

However, the researchers aren't suggest-

ing that all pregnant women stop taking acid-suppressive medication.

"Some pregnant women have such severe acid reflux they can't eat because they are in so much pain," says Hait. "That is obviously not good for the baby either. So each pregnant woman suffering from acid reflux, with the guidance of her physician, should weigh the potential risks and benefits of taking acid-suppressive medication," says Hait. "If it is deemed necessary, they should certainly proceed with taking the medication, but dietary and lifestyle modifications should be attempted first."

An accompanying editorial, by Andrew S. Kemp of the department of allergy and immunology at the Children's Hospital at Westmead (Sydney, Australia), reviews proposed explanations for a relationship between gastric acid suppression and childhood allergic disease. He concludes that acid suppression isn't ready to be added to the list of potential influences on the development of allergic disease in children. "However," he writes, "it is an issue that requires further research in view of the widespread use in infancy of drugs that suppress gastric acidity and the continuing increase in food allergy in early childhood."

This study was supported by grants from the Children's Hospital Boston Office of Faculty Development, the Gerber Foundation, and the APART Program of the Austrian Academy of Sciences.

PBK

(Continued from previous page)

economics; Hannah Kim Frank, organismic and evolutionary biology; James Eric Goldschmidt, Romance languages and literature/literature; Christopher Bruno Lacaria, history; and Tracy Li, economics.

Leverett House: Kelly Ann Alverson, economics; Charles Chen, math; Patrick Ryan Chesnut, history and literature; Jamie Randall Fuld, economics; Jesse Meeker Kaplan, history of science; and Adam Roth Singerman, special concentrations.

Lowell House: Lin Cong, physics/math; Allen Cheng, chemistry; David Peter Daniels, government; Jean Amanda Junior, sociology; Maxwell Stuart Mishkin, government; Jacob Nathan Sanders, chemistry and physics/math; and Brian Matthew Weller, applied math.

Mather House: Diana Catherine Wise, history and literature.

Pforzheimer House: Connemara Doran, history of science; Kyle Quinby Haddad-Fonda, history/Near Eastern languages and civilizations; Roger Rennan Fu, Earth and planetary science/astronomy; Mitchell C. Hunter, government; Julia Louise Renaud, history and literature; and Xiaodi Wu, biology.

Quincy House: Kathryn Shuyeng Austin, classics/philosophy; Philippa Gibson Eccles, history of art and architecture; Russell Phelps Kelley, molecular and cellular biology; Nadira Lalji, government; John Daniel Lesieutre, math; Eric I-Hwa Lu, anthropology; and Keller Clifton Rinaudo, social studies.

Winthrop House: Thomas Booth Salomon Dolinger, English; Ruwan Gunaratne, chemistry and physics; and Norman Ying Yao, physics/computer science.

CCSR annual report now available

The 2008 annual report of the Corporation Committee on Shareholder Responsibility (CCSR), a subcommittee of the President and Fellows, is now available upon request from the Office for the Committees on shareholder responsibility. To obtain a copy, e-mail Cheryl Thurman at cheryl_thurman@harvard.edu or call the office at (617) 495-0985.

The report provides a detailed description of the CCSR's actions on shareholder proposals, raising issues of social responsibility that came to vote during the 2008 spring proxy voting season (the period between March and June when most publicly traded corporations hold annual meetings). The CCSR receives advice from the Advisory Committee on Shareholder Responsibility (ACSR), a 12-member committee made up of Harvard faculty, students, and alumni.



Jon Chase/Harvard News Office

'What d'ya want?' 'What d'ya got?'

The first Faculty of Arts and Sciences (FAS) Supply Swap on Dec. 17 was, by all reports, a success, with more than five cubic yards of office materials recirculated. FAS and other University entities donated and shopped for supplies, simultaneously promoted sustainability and reducing spending. The biggest success of the day might have been when Frank Farley of the Meissner Lab noticed the FAS Supply Swap sign and dropped in. He walked away with six boxes of supplies to stock his new lab and office space in Bauer Lab. Another swap will be planned in the spring/summer of 2009. Please contact Sarah Gordon at sgordon@fas.harvard.edu to get involved.

Faculty of Arts and Sciences Standing Committees 2008-09

Upon the recommendation of the dean of the Faculty of Arts and Sciences (FAS), Harvard President Drew Faust has approved and announced the following Standing Committees. Standing Committees of the faculty are constituted to perform a continuing function. Each committee has been established by a vote of the faculty, and can be dissolved only by a vote of the faculty or, with the agreement of a particular Committee, by the dean and Faculty Council. The dean recommends the membership of each committee annually.

Curricular Committees — Undergraduate Degree Programs

Chemical and Physical Biology, Degrees in — Erin O'Shea (chair), Howard C. Berg, Michael P. Brenner, Jon Clardy, Melissa Franklin (on leave spring term), Rachelle Gaudet, Stephen C. Harrison, David Jeruzalmi, Daniel Kahne, Nancy E. Kleckner, David R. Liu, Richard M. Losick, Robert Lue, David R. Nelson, Stuart L. Schreiber, Greg Tucci, Suzanne Walker, Christopher T. Walsh, Xiaoliang Sunney Xie, and Xiaowei Zhuang.

Environmental Science and Public Policy, Concentration in — James J. McCarthy (chair), William C. Clark, Richard T.T. Forman, N. Michele Holbrook, Sheila Jasanoff, Jonathan Losos (on leave spring term), Michael B. McElroy, Peter P. Rogers, Daniel P. Schrag, Robert Stavins, Martin L. Weitzman, and Steven C. Wofsy.

Folklore and Mythology, Degrees in — Maria M. Tatar (chair), Lisa T. Brooks, Julie A. Buckler, Deborah Foster, Joseph C. Harris (on leave spring term), Michael Herzfeld, Barbara L. Hillers, Peter B. Machinist (on leave 2008-09), David Gordon Mitten, Gregory Nagy, Kimberley C. Patton, Michael J. Puett (on leave 2008-09), Panagiotis Roilos (on leave 2008-09), John Stauffer, and Jan M. Ziolkowski.

History and Literature, Degrees in — Jill Lepore (chair), David Armitage, Robin Bernstein (on leave 2008-09), Steven Biel, Ann M. Blair, Sugata Bose, Lisa T. Brooks, Janet Browne, Lawrence Buell (on leave 2008-09), Daniel G. Donoghue, James T. Engell, Jeanne Follansbee Quinn, Virginia Greene, Maya Jasanoff, Walter Johnson, James T. Kloppenberg (on leave 2008-09), Barbara K. Lewalski (on leave spring term), Malinda Maynor Lowery (on leave 2008-09), Louis Menand, Leah Price, Doris Sommer, Judith Surkis, Maria M. Tatar, and Joanne van der Woude.

Neurobiology, Degrees in — John E. Dowling (chair) (on leave spring term), Randy Buckner (on leave 2008-09), Florian Engert, Takao Hensch (on leave fall term), Samuel Martin Kunes, Carole Landisman, Jeff Lichtman, Eng Lo, Markus Meister (on leave fall term), Venkatesh N. Murthy (on leave fall term), Bence Olveczky, Naomi E. Pierce, Aravinthan Samuel, Joshua Sanes (on leave fall term), Daniel L. Schacter, Naoshige Uchida, and Yun Zhang.

Study of Religion+ — Diana L. Eck (chair), Ryuichi Abé, Leila Ahmed, M. Shahab Ahmed, Ali S.A. Asani, Francis X. Clooney, Shaye J.D. Cohen (on leave spring term), Francis Fiorenza, Marla Frederick (on leave 2008-09), Luis Manuel Girón-Negrón, Peter J. Gomes, William A. Graham, Janet Gytso, Charles Hallisey, Jeffrey F. Hamburger, Helen Hardacre, Amy Marie Hollywood, Christopher P. Jones, Tamsin Jones, Karen L. King, Smita Lahiri, David Lambert, Jacob Olupona (on leave spring term), Parimal Ganapati Patil (on leave 2008-09), Kimberley C. Patton, Michael J. Puett (on leave 2008-09), and Jonathan Schofer.

Social Studies, Degrees in — Richard Tuck (chair), David Armitage, Eric Beerbohm, Anya Bernstein Bassett, Richard N. Cooper, Kimberly DaCosta, Michael Frazer, Peter Eli Gordon (on leave fall term), Peter A. Hall, Michael Herzfeld, Michael J. Hiscox, Stanley Hoffmann (on leave fall term), Andrew Jewett, James T. Kloppenberg (on leave 2008-09), Michael Kremer, Steven Levitsky, Charles S. Maier, Jens Meierhenrich, Michael Rosen, Nancy L. Rosenblum, Michael J. Sandel, Matthias Schündeln, Tommie Shelby, Ajantha Subramanian (on leave 2008-09), Jocelyn Viterna, Christopher Winship (on leave spring term), and Daniel Foran Zilblatt.

Special Concentrations — Julie A. Buckler (chair), Deborah Foster, Byron Good, Mary-Jo Delvecchio Good, David A. Haig, Jerold S. Kayden, Karel F. Liem, Elizabeth Dyrud Lyman, Stephen A. Marglin, Robb Moss, Sandra Naddaff, Peter P. Rogers, and Richard K. Wolf (on leave fall term).

Studies of Women, Gender, and Sexuality, Degrees in — Bradley S. Epps (chair) (on leave 2008-09), Afsaneh Najmabadi (acting chair), Janet Beizer, Robin Bernstein (on leave 2008-09), Peter J. Burgard, Luis Cárcamo-Huechante, Steven C. Caton,

Nancy Cott (on leave 2008-09), Rachel L. Greenblatt (on leave spring term), Evelyn Hammonds, Helen Hardacre, Alice A. Jardine, Ewa Lajer-Burcharth, Caroline Light, Christie McDonald, Ingrid Monson, Marcyliena Morgan, Katharine Park (on leave fall term), Sindhumathi Revuluri, Amie Siegel, Mary M. Steedly (on leave 2008-09), Susan R. Suleiman, Judith Surkis, Laurel Thatcher Ulrich, and Adelheid Clara Voskuhl (on leave 2008-09).

Curricular Committees — Graduate Degree Programs

American Civilization, Higher Degrees in the History of — John Stauffer (chair), Sven Beckert (on leave 2008-09), Robin Bernstein (on leave 2008-09), Steven Biel, Ann Braude, Lisa T. Brooks, Lawrence Buell (on leave 2008-09), Glenda Carpio, Joyce Elizabeth Chaplin, Lizbeth Cohen, Nancy Cott (on leave 2008-

tor of Philosophy in — Stefan H. Thomke (co-chair), Woodward Yang (co-chair), Carliss Baldwin, Mihir Desai (ex officio), Lee O. Fleming, Michael B. McElroy, Venkatesh Narayanamurti, David C. Parkes (on leave 2008-09), and Vicki Sato.

Chemical Biology, Degree of Doctor of Philosophy in — Jon Clardy (co-chair), David R. Liu (co-chair), Ulrike Eggert, Daniel Kahne, Alan Saghatelian, Gregory L. Verdine, and Suzanne Walker.

Chemical Physics, Degree of Doctor of Philosophy in — Eric J. Heller (chair), Alan Aspuru-Guzik, Adam Cohen, John M. Doyle, Roy G. Gordon (on leave 2008-09), Mikhail Lukin (on leave spring term), Eugene I. Shakhnovich, Xiaoliang Sunney Xie, and Xiaowei Zhuang.

Dental Medicine, Higher Degrees in — Bjorn R. Olsen (chair), John D. Bartlett, Joyce Bischoff, Patricia D'Amore, Floyd Dewhirst,

Daniel Finley, Laurie Glimcher, James Hanken, Peter Hauschka, Martin Hemler, Randall King, Michael Klagsbrun, Beate Lanske, Andrew Lassar, Yefu Li, Yi-Ping Li, Henry Margolis, Bruce Paster, Vicki Rosen, Charles Nicholas Serhan, Philip Stashenko, Kevin Struhl, Martin Taubman, and Malcolm Whitman.

Film and Visual Studies, Higher Degrees in — David Rodowick (chair), Giuliana Bruno, Lucien Castaing-Taylor (on leave spring term), Eileen Cheng-yin Chow, Tom C. Conley, J.D. Connor, Alfred F. Guzzetti, Carrie Lambert-Beatty (on leave spring term), Eric Rentschler, and Justin McCabe Weir (on leave spring term).

Health Policy, Degree of Doctor of Philosophy in — Joseph P. Newhouse (chair), Alyce Adams, John Ayanian, Katherine Baicker, Robert Blendon, David Bloom, Allan M. Brandt, Daniel Carpenter, Amitabh Chandra, Michael Chernew, Nicholas Christakis, Paul D. Cleary, David M. Cutler, Norman Daniels, Amy Edmondson, Arnold Epstein, Majid Ezzati, Erica Field, Richard

G. Frank, G. Scott Gazelle, Susanne Goldie, David Grabowski, James K. Hammit, Robert Huckman, Haiden Huskamp, Ashish Jha, Nancy Kane, Jane Kim, Gary King, Michael Kremer, Bruce Landon, Peter V. Marsden (on leave fall term), Marie McCormick, Thomas McGuire, Barbara McNeil, Michelle Mello, Nolan Miller, Carl N. Morris, Sharon-Lise Normand, Gary Pisano, Lisa Prosser, Meredith Rosenthal, Donald B. Rubin, Joshua Salomon, Stephen Soumerai, David Stevenson, B. Katherine Swartz, Milton Weinstein, Alan Zaslavsky, and Richard Zeckhauser.

History and East Asian Language, Degree of Doctor of Philosophy in — Mark Elliott (chair) (on leave spring term), Peter Bol, Carter J. Eckert (on leave spring term), Andrew D. Gordon, Henrietta Harrison (on leave fall term), William C. Kirby, Shigehisa Kuriyama, Michael J. Puett (on leave 2008-09), and Hue-Tam Ho Tai.

Inner Asian and Altaic Studies — Leonard W.J. van der Kuijp (chair), Mark Elliott (on leave spring term), Janet Gytso, Cemal Kafadar (on leave 2008-09), C.C. Lamberg-Karlovsky, Terry Martin, Michael J. Puett (on leave 2008-09), David J. Roxburgh, John Schoeberlein, Wei-ming Tu (on leave fall term), and Michael Witzel (on leave fall term).

Medical Sciences, Higher Degrees in — (2008-09 membership information is not yet available. The following are the 2007-08 members.) Thomas O. Fox (ex officio), Nancy C. Andrews, Michael C. Carroll, Susan M. Dymecki, Raymond L. Erikson, Dana Gabuzda, Edward E. Harlow, Stephen C. Harrison, Peter Howley, David Knipe, Rosalind Anne Segal, Michael Starnbach, Clifford Tabin, Shannon Turley, David Van Vactor, Christopher T. Walsh, and Gary Yellen.

Middle Eastern Studies — Steven C. Caton (chair), Leila Ahmed, Sugata Bose, Jorge Domínguez, Diana L. Eck, Mark Elliott (on leave spring term), Khaled El-Rouayheb (on leave 2008-09), Marwa Elshakry, Bradley S. Epps (on leave 2008-09), Luis Manuel Girón-Negrón, Mary-Jo Delvecchio Good, Andrew D. Gordon, Michael Herzfeld, Salmaan Keshavjee, Arthur M. Kleinman, Mohsen Mostafavi, Gülrü Necipoglu-Kafadar (on leave 2008-09), Michael J. Puett (on leave 2008-09), Dani Rodrik, Stephen Peter Rosen (on leave 2008-09), Monica Toft, and Richard K. Wolf (on leave fall term).

Political Economy and Government, Higher Degrees in — Torben Iversen (chair) (on leave 2008-09), Kenneth A. Shepsle (acting chair), Christopher Avery, Daniel Carpenter, Suzanne Cooper, Jeffrey Frieden, Edward L. Glaeser, Elhanan Helpman, Michael J. Hiscox, William Hogan, Daniel Hojman, Nolan Miller, Sendhil Mul-



Kris Snibbe/Harvard News Office

Harvard's Lehman Hall inadvertently advertises the bank across the street with a shadow of reversed lettering.

09), Margaret Crawford, Christine Desan, Henry Louis Gates Jr., Claudia D. Goldin, David Hempton, Evelyn Brooks Higginbotham, Morton Jay Horwitz, Andrew Jewett, Walter Johnson, Robin E. Kelsey, Randall Kennedy, Alexander Keyssar, James T. Kloppenberg (on leave 2008-09), Carrie Lambert-Beatty (on leave spring term), Jill Lepore, Malinda Maynor Lowery (on leave 2008-09), Lisa M. McGirr (on leave 2008-09), Louis Menand, Susan O'Donovan, Charles Ogletree, Carol J. Oja (on leave 2008-09), Julie Reuben, Jennifer Roberts, Marc Shell (on leave spring term), Werner Sollors (on leave fall term), Doris Sommer, Rachel St. John, Jason Stevens, Laurel Thatcher Ulrich, and Roberto Mangabiera Unger.

Architecture, Landscape Architecture, and Urban Planning, Degree of Doctor of Philosophy in — K. Michael Hays (co-chair), Antoine Picon (co-chair), Eve Blau, Giuliana Bruno, Lizbeth Cohen, Margaret Crawford, Susan Saltzman Fainstein, Peter L. Galison, Jerold S. Kayden, Michèle Lamont, Neil Levine, Alina A. Payne (on leave 2008-09), A. Hashim Sarkis, and Christine Smith.

Biophysics, Higher Degrees in — James M. Hogle (chair), Howard C. Berg, Stephen Blacklow, George Church, Stephen C. Harrison, David R. Liu, Markus Meister (on leave fall term), Aravinthan Samuel, Eugene I. Shakhnovich, Antoine Van Oijen, Gerhard Wagner, and Xiaowei Zhuang.

Business Studies, Higher Degrees in — Mihir Desai (chair), George P. Baker III, Carliss Baldwin, John Y. Campbell (on leave 2008-09), Amy Edmondson, Lee O. Fleming, Jerry R. Green, J. Richard Hackman, Josh Lerner, Peter V. Marsden (on leave fall term), Michael B. McElroy, Venkatesh Narayanamurti, Ariel Pakes, David C. Parkes (on leave 2008-09), Jeffrey Polzer, Alvin E. Roth, Vicki Sato, David Scharfstein, Toby Stuart, Stefan H. Thomke, Michael Tushman, Luis Viceira, Christopher Winship (on leave spring term), Woodward Yang, and Dennis Yao.

Business Economics, Degree of Doctor of Philosophy in — Jerry R. Green (chair), George P. Baker III, John Y. Campbell (on leave 2008-09), Mihir Desai (ex officio), Josh Lerner, Ariel Pakes, Alvin E. Roth, David Scharfstein, Luis Viceira, and Dennis Yao.

Organizational Behavior, Degree of Doctor of Philosophy in — Peter V. Marsden (chair) (on leave fall term), Mihir Desai (ex officio), Amy Edmondson, J. Richard Hackman, Jeffrey Polzer, Toby Stuart, Michael Tushman, and Christopher Winship (on leave spring term).

Science, Technology, and Management, Degree of Doc-

(See **Committees**, next page)

Committees

(Continued from previous page)

Iainathan, Joseph P. Newhouse, D.H. Perkins, John Ramseyer, Dani Rodrik, Beth Simmons, Robert Stavins, Dennis Thompson, and Richard Zeckhauser.

Public Health Sciences, Higher Degrees in — James Hutchinson Ware (chair), Michael Grusby, David Harrington, Lester Kobzik, Xiao-Li Meng, Carl N. Morris, Bjorn R. Olsen, Frank Sacks, Marianne Wessling-Resnick, and Dyann F. Wirth.

■ Doctor of Philosophy in Biological Sciences in Public Health

Michael Grusby (chair), Lester Kobzik, Bjorn R. Olsen, Frank Sacks, James Hutchinson Ware (*ex officio*), Marianne Wessling-Resnick, and Dyann F. Wirth.

■ Doctor of Philosophy in Biostatistics — Louise Ryan (chair), David Harrington, Xiao-Li Meng, Carl N. Morris, and James Hutchinson Ware (*ex officio*).

Public Policy — Robert Stavins (chair), Alberto Abadie, Arthur Applbaum, Iris Bohnet, George Borjas, William C. Clark, Pepper D. Culpepper, Susan Dynarski, David Ellwood, Jeffrey Frankel, Ricardo Hausmann, Sheila Jasanoff, Christopher Jencks, Asim Ijaz Khwaja, David C. King, David Lazer, Jeffrey Liebman, Erich Muehlegger, Rohini Pande, Robert D. Putnam, Dani Rodrik, Anthony Saich, Monica Toft, Stephen Martin Walt, and Richard Zeckhauser.

Regional Studies — East Asia, A.M. Degree in — David Wang (chair) (on leave spring term), David R. McCann (acting chair), Henrietta Harrison (on leave fall term), Sun Joo Kim, Shigehisa Kuriyama, Yukio Lippit (on leave 2008-09), Roderick MacFarquhar, Karen Thornber, and Xiaofei Tian.

Regional Studies — Russia, Eastern Europe, and Central Asia, A.M. Degree in — Timothy J. Colton (chair), Patricia Rowe Chaput, Grzegorz Ekiert, Alison Frank, George G. Grabowicz, John E. Malmstad, Terry Martin, Kelly O'Neill-Uzgiris, Serhii Plokhii, James R. Russell (on leave spring term), Stephanie Sandler, William Mills Todd III, and Justin McCabe Weir (on leave spring term).

Social Policy, Higher Degrees in — Bruce Western (chair), Kathryn Edin, Jennifer Hochschild (on leave spring term), Christopher Jencks, Jeffrey Liebman, and William J. Wilson.

Systems Biology, Degree of Doctor of Philosophy in — Pamela Silver (chair), Debra Augustine, Michael P. Brenner, Martha Bulyk, Lewis Cantley, George Church, Philippe Cluzel, Adam Cohen, Vladimir Denic, Angela DePace, Catherine Dulac, Walter Fontana, Melissa Franklin (on leave spring term), Jeremy Gunawardena, Marc Kirschner, Roy Kishony, Galit Lahav, Eric Lander, Richard M. Losick, Gavin Macbeath, Lakshminarayanan Mahadevan, Christopher Marx, Sean Megason, Tim Mitchison, Vamsi Mootha, Andrew W. Murray, Radhika Nagpal, Daniel Joseph Needleman, Martin Nowak, Erin O'Shea, Kevin Parker, Johan Paulsson, Sharad Ramanathan, Aviv Regev, Frederick Roth, Pardis Sabeti, Alan Saghatelian, Alexander Schier, Brian Seed, Jagesh Shah, William Shih, Peter Sorger, Jack Szostack, Antoine Van Oijen, Ralph Weissleder, David A. Weitz (on leave 2008-09), Xiaoliang Sunney Xie, and Xiaowei Zhuang.

Instructional Program Committees

Dramatics — Robert Scanlan (chair), Elizabeth Bergmann, Deborah Foster, Marjorie Garber, Jorie Graham (on leave fall term), Biodun Jeyifo, Elizabeth Dyrud Lyman, Christie McDonald, John C. Megan (*ex officio*), Robert Orchard (*ex officio*), Diane Paulus (*ex officio*), Peter Sacks (on leave fall term), Elaine Scarry (on leave fall term), Oliver Simons (on leave spring term), Diana Sorensen (*ex officio*), Marcus Stern (*ex of-*

ficio), Susan R. Suleiman, and Scott Perrin Zigler.

Freshman Seminars — Jay M. Harris (chair), Lawrence Buell (on leave 2008-09), Joyce Elizabeth Chaplin, Peter T. Ellison, Jerry R. Green (on leave fall term), J. Woodland Hastings (on leave fall term), J.W. Hutchinson (on leave fall term), Stephanie Kenen (*ex officio*), Sandra Naddaff (*ex officio*), David Rodowick, and Stephanie Sandler.



A window in the Mallinckrodt Building works as a funhouse mirror for some Ionic columns across the way.

Kris Snibbe/Harvard News Office

General Education — Jay M. Harris (chair), Ali S.A. Asani, Julie A. Buckler, Scott Edwards, Jerry R. Green, Edward J. Hall, Evelyn Brooks Higginbotham, Jennifer Hochschild (on leave spring term), John Huth, Stephanie Kenen (*ex officio*), and Andrew W. Murray.

Life Sciences Education — Erin O'Shea (chair), Mahzarin Banaji, Noël Bisson (*ex officio*), John E. Dowling (on leave spring term), Rachele Gaudet, Ann Georgi (*ex officio*), David A. Haig, Georgene Herschbach (*ex officio*), Daniel Kahne, Stephanie Kenen (*ex officio*), Richard M. Losick, Robert Lue, Lee Ann Michelson (*ex officio*), and Richard W. Wrangham.

Medieval Studies — Jeffrey F. Hamburger (chair), François Bovon, Charles Donahue Jr., Daniel G. Donoghue, John Duffy, Sean Gallagher, Luis Manuel Girón-Negrón, Virginia Greene, Michael Hemment, Baber Johansen, Ioli Kalavrezou, Beverly M. Kienzle, Kevin Madigan, Michael McCormick (on leave 2008-09), Catherine McKenna (on leave spring term), Stephen A. Mitchell (on leave spring term), Katharine Park (on leave fall term), Panagiotis Roilos (on leave 2008-09), William James Simpson, Daniel Lord Smail, Christine Smith, William P. Stoneman, Richard J. Tarrant, Hugo van der Velden, Nicholas Watson (on leave 2008-09), and Jan M. Ziolkowski.

Mind, Brain, and Behavior — John E. Dowling (co-chair) (on leave spring term), Sean Kelly (co-chair), Richard W. Wrangham (co-chair), Richard Born, Randy Buckner (on leave 2008-09), Verne Caviness Jr., Gennaro Chierchia, Peter T. Ellison, Florian Engert, Kurt Fischer, Alice Flaherty, Albert M. Galaburda, Howard Gardner, Peter Godfrey-Smith, Joshua Greene (on leave fall term), Anne Harrington, Marc D. Hauser (on leave fall term), Hopi Hoekstra, Karen Kramer, Edward A. Kravitz, David I. Laibson, Jeff Lichtman, Margaret Livingstone, Richard J. McNally, Jason Mitchell, Bence Olveczky, Avrom J. Pfeffer, Naomi E. Pierce, Steven Pinker, Maria Polinsky (on leave fall term), Stephen Peter Rosen (on leave 2008-09), Aravinthan Samuel, Joshua Sanes (on leave fall term), Susanna Siegel (on leave spring term), Elizabeth Spelke, Robert A. Stickgold, Mark J. Tramo, and Yun Zhang.

Ukrainian Studies — Michael S. Flier (chair), Patricia Rowe Chaput, Timothy J. Colton, Grzegorz Ekiert, George G. Grabowicz, Terry Martin, and Serhii Plokhii.

Writing and Speaking — James T. Engell (chair), Noël Bisson (*ex officio*), Drew Fudenberg, Jay M. Harris, Thomas Jehn (*ex officio*), Courtney Bickel Lamberth (*ex officio*), Jill Lepore, David R. McCann, Sandra Naddaff, Margo I. Seltzer, and James D. Wilkinson (*ex officio*).

Interdisciplinary Coordinating Committees

African Studies — Jacob Olupona (chair) (on leave spring term), Kay K. Shelemay (acting chair), Rawi Abdelal, Leila Ahmed, Emmanuel Akyeampong, Ali S.A. Asani, Robert H. Bates (on leave 2008-09), Suzanne Blier, David Bloom, Rita Breen (executive officer), Felton James Earls III, Caroline M. Elkins, Majid Ezzati, Wafaia Fawzi, Deborah Foster, Duana Fullwiley, Henry

Latin American and Iberian Studies — David Carrasco (chair) (on leave 2008-09), Luis Cárcamo-Huechante, Joaquim-Francisco Coelho, Thomas Cummins, Jorge Domínguez, Bradley S. Epps (on leave 2008-09), Brian D. Farrell, William L. Fash, Luis Fernández-Cifuentes, Jeffrey Frieden, Mary M. Gaylord (on leave spring term), Merilee Grindle (*ex officio*), James Hanken, N. Michele Holbrook, Steven Levitsky, J. Lorand Matory, Doris Sommer, Diana Sorensen, and Gary Urton (on leave spring term).

Oceanography — Eli Tziperman (chair), Peter Huybers, James J. McCarthy, and Daniel P. Schrag.

South Asian Studies — Sugata Bose (chair), Asad Ahmed, Ali S.A. Asani, Homi K. Bhabha (on leave fall term), Diana L. Eck, Smita Lahiri, Sendhil Mullainathan, Parimal Ganapati Patil (on leave 2008-09), Amartya Sen (on leave spring term), Leonard W.J. van der Kuijp, Michael Witzel (on leave fall term), and Richard K. Wolf (on leave fall term).

Undergraduate Committees (noncurricular)

Admissions and Financial Aid in Harvard College — William R. Fitzsimmons (chair), Paul Barreira, Peter J. Burgard, Thomas A. Dingman, Sarah Clark Donahue (*ex officio*), John E. Dowling (on leave spring term), Benedict H. Gross (on leave 2008-09), Guido Guidotti, Evelyn Hammonds, Jay M. Harris, Joseph D. Harris (on leave spring term), J. Woodland Hastings, Harry R. Lewis (on leave fall term), David R. McCann, James J. McCarthy, Marlyn E. McGrath (*ex officio*), Michael D. Mitzenmacher, Venkatesh Narayanamurti, Richard J. O'Connell, Orlando Patterson, John P. Reardon Jr., Monique Rinere, David S. Rosenthal, Robert L. Scalise, Frans A. Spaepen (on leave spring term), John Stauffer, Steven C. Wofsy, and Robert M. Woollacott.

Advising and Counseling — David Harrington (chair), Inge-Lise Ameer (*ex officio*), Paul Barreira, Anya Bernstein Bassett, Steven B. Bloomfield, Ann Marie Calareso, Judith Chapman, Thomas A. Dingman (*ex officio*), Daniel G. Donoghue, Rebekah Lorenz Getman, Michelle Hacker, Jay M. Harris, Robert Jenkins, Laura Johnson (*ex officio*), Mya Mangawang, Lee Ann Michelson, Robin Mount (*ex officio*), Monique Rinere (*ex officio*), Mandana Sassanfar, Stuart M. Shieber, Greg Tucci, and Joost J. Vlassak.

Arts, Council on the — To be announced.

Athletic Sports — Jerry R. Green (chair), Verena Andermatt Conley (on leave fall term), Thomas A. Dingman, William R. Fitzsimmons, Benjamin M. Friedman (on leave fall term), Paul Gompers, William A. Graham, Sean Kelly, Samuel Martin Kunes, James J. McCarthy, Geoffrey M. Peters, John P. Reardon Jr., Monique Rinere, David S. Rosenthal, and Robert L. Scalise (*ex officio*).

Education Abroad — Robert Lue (chair), Sugata Bose, Jorge Domínguez, Grzegorz Ekiert, Luis Fernández-Cifuentes, William E. Granara, Virginia Greene, Jay M. Harris, James J. McCarthy, Ingrid Monson, Donald H. Pfister, and Catherine Hutchison Winnie (*ex officio*).

Public Service — Anya Bernstein Bassett (co-chair), Richard F. Thomas (co-chair), Dorothy Austin, Steven B. Bloomfield, Lisa Boes, Bradley S. Epps (on leave 2008-09), Marshall L. Ganz, Judith H. Kidd, James T. Kloppenberg (on leave 2008-09), Doris Sommer, and Richard Wilson.

Administrative Committees

Benefits — Gary King (chair).

Bowdoin Prizes, Administration of — James D. Wilkinson (chair), Cassandra Extavour, Steven Biel.

Commencement Parts — Richard J. Tarrant (chair), Peter J. Gomes, Jacqueline A. O'Neill, John P. Reardon Jr., Michael Shinagel, and William Mills Todd III.

Continuing Education — Harry R. Lewis

(See **Committees**, next page)

Louis Gates Jr., Evelyn Brooks Higginbotham (*ex officio*), Allan G. Hill, Nahomi Ichino, Francis Abiola Irele, Biodun Jeyifo, Matthew Jukes, Calestous Juma, Michael Kremer, J. Lorand Matory, Jens Meierhenrich, Ingrid Monson, John Murgane, Matthias Schündeln, Lucie E. White, and Richard K. Wolf (on leave fall term).

Archaeology — Gary Urton (chair) (on leave spring term), Ruth Bielfeldt, Suzanne Blier, William L. Fash, Ioli Kalavrezou, C.C. Lamberg-Karlovsky, Peter B. Machinist (on leave 2008-09), Michael McCormick (on leave 2008-09), Richard H. Meadow, Laura Nasrallah, Lawrence E. Stager, and Irene J. Winter.

Asian Studies, Council on — Arthur M. Kleinman (chair), Ryuichi Abé, William P. Alford, Ali S.A. Asani, Theodore C. Bestor, Barry R. Bloom, Peter Bol, Sugata Bose, Mary C. Brinton (on leave 2008-09), James Cheng, Preston Scott Cohen, Diana L. Eck, Carter J. Eckert (on leave spring term), Mark Elliott (on leave spring term), Shenglii Feng, Byron Good, Mary-Jo Delvecchio Good, Andrew D. Gordon, Janet Gytaso, Helen Hardacre, Henrietta Harrison (on leave fall term), Ricardo Hausmann, Michael Herzfeld, William Hsiao, C.T. James Huang, Wilt Lukas Idema, Wesley M. Jacobsen, Alastair Iain Johnston, Tarun Khanna, Sun Joo Kim, William C. Kirby, Shigehisa Kuriyama, Wai-ye Li, Roderick MacFarquhar, David R. McCann, Michael B. McElroy, Anne Monius, Robert Dean Mowry, Stephen Owen, Elizabeth J. Perry, Susan J. Pharr, Michael J. Puett (on leave 2008-09), John Ramseyer, Dani Rodrik, Anthony Saich, Mary M. Steedly (on leave 2008-09), Hue-Tam Ho Tai, Xiaofei Tian, Wei-ming Tu (on leave fall term), Leonard W.J. van der Kuijp, David Wang (on leave spring term), Eugene Yuejin Wang, James L. Watson (on leave fall term), Martin K. Whyte, Michael Witzel (on leave fall term), and Richard K. Wolf (on leave fall term).

European Studies — David G. Blackburn (chair), Peter J. Burgard, Pepper D. Culpepper, Grzegorz Ekiert, Niall Ferguson (on leave fall term), P.L. Higonnet, Stanley Hoffmann (on leave fall term), Maya Jasanoff, Mary D. Lewis, Charles S. Maier, Cindy Skach, Judith Surkis, Daniel Foran Zibblatt.

Global Health — David M. Cutler (co-chair), Paul Farmer (co-chair), David Bloom, Allan M. Brandt, Dan Brock, Colleen M. Cavanaugh, Nicholas Christakis, David A. Edwards, Myron Essee, Susanne Goldie, Byron Good, Mary-Jo Delvecchio Good, David A. Haig, Daniel L. Hartl, Jim Yong Kim, Gary King, Arthur M. Kleinman, Michèle Lamont, Jennifer Leaning, Ingrid Monson, Daniel P. Schrag, Amartya Sen (on leave spring term), Bruce Walker, and Lucie E. White.

Committees

(Continued from previous page)

(chair) (on leave fall term), David Carrasco (on leave 2008-09), Patricia Rowe Chaput, Warren Goldfarb, Robert Lue, Nancy L. Maull, B.C. Mazur, Christie McDonald, Gregory Nagy, and Mark J. Schiefsky.

General Scholarships and the Sheldon Fund

The dean of the Faculty of Arts and Sciences (chair), the deans of the Graduate School of Arts and Sciences and the School of Engineering and Applied Sciences, and the deans of the Faculties of Business Administration, Dental Medicine, Design, Divinity, Education, Government, Law, Medicine, and Public Health.

Information Technology

Howard M. Georgi III (chair), Peter Bol, Nancy Cline, J. Richard Hackman, Georgene Herschbach, Craig P. Hunter, Barry Kane, Thomas F. Kelly (on leave 2008-09), Gary King, H.T. Kung, Henry H. Leitner, Lawrence M. Levine, Harry R. Lewis (on leave fall term), Robert Lue, and Daniel Moriarty.

Library

Robert Darnton (chair), Kathleen M. Coleman (vice chair), M. Shahab Ahmed, Janet Beizer, Joyce Elizabeth Chaplin, Nancy Cline (*ex officio*), James T. Engell, Mary M. Gaylord (on leave spring term), Jennifer Hochschild (on leave spring term), Farish A. Jenkins Jr., Lawrence M. Levine, Ingrid Monson, Stephanie Sandler, Stuart M. Shieber, Xiaofei Tian, and Richard W. Wrangham.

Pedagogical Improvement

Margo I. Seltzer (chair), Noël Bisson (*ex officio*), Allan M. Brandt (*ex officio*), Benjamin M. Friedman (on leave fall term), Virginia Greene, Jay M. Harris (*ex officio*), Eric N. Jacobsen, Henry H. Leitner (*ex officio*), Robert Lue, Logan McCarty (*ex officio*), Xiao-Li Meng, Katie Vale (*ex officio*), James D. Wilkinson (*ex officio*), and Christopher Winship (on leave spring term).

Privacy, Accessibility, and Security of Records

— To be announced.

Professional Conduct

Jeffrey Frieden (chair), Mahzarin Banaji, Peter T. Ellison, Gary J. Feldman (on leave spring term), Philip James Fisher, Richard M. Losick, John H. Shaw, and Gregory L. Verdine.

Science Center, Executive Committee of the

— To be announced.

Women

Elena M. Kramer (co-chair) (on leave fall term), Susan J. Pharr (co-chair), Lizabeth Cohen, Caroline M. Elkins, Rachele Gaudet, Michèle Lamont, Lisa M. McGirr (on leave 2008-09), Katharine Park (on leave fall term), Mylène Priam (on leave 2008-09), Leah Price, Lisa Randall (on leave spring term), Stephanie Sandler, Margo I. Seltzer, Susanna Siegel (on leave spring term), Mary M. Steedly (on leave 2008-09), and Rebecca Wasserman.

Faculty Research Committees

Faculty Research Support

Michael D. Smith (chair *ex officio*), Peter V. Marsden (on leave fall term), Joyce Elizabeth Chaplin, Deena Giacotti, Mark J. Schiefsky, James Sidanius, Steve C. Wofsy, and Xiaowei Zhuang.

Research Policy

Steven C. Wofsy (chair), Roger W. Brockett (on leave spring term), Alfonso Caramazza (*ex officio*), Gary J. Feldman (on leave spring term), Patrick Fitzgerald (*ex officio*), Jeffrey Frieden (*ex officio*), Dean Gallant (*ex officio*), Farish A. Jenkins Jr., Daniel E. Lieberman (*ex officio*), Peter V. Marsden (on leave fall term), Hongkun Park, Mara Prentiss, Alexander Schier, and Brett Sweet (*ex officio*).

Use of Human Subjects in Research

Alfonso Caramazza (chair), Matthew Alper, James C. Beck, Evelyn Bonander (community representative), Earl Bracker, Jane B. Calhoun (research officer), Kenneth L. Carson (research officer), John Ellison, Dean Gallant (*ex officio*), Nancy Katz, Matthew K. Nock (on leave 2008-09), Barbara A. Pan, Diego Pizzagalli, Emiko Saito (research officer), James Sidanius, Joel L. Siner, Mary C. Waters, and Toni Wegner.

* Executive Committee

+ Study of Religion supervises both graduate and undergraduate degree programs, but to avoid double counting, it is listed only under Curricular Committees — Undergraduate Degree Programs.

Gifts



Photos Stephanie Mitchell/Harvard News Office

Former PBHA President Angelico Razon '08 (above) sorts through bags of goodies donated to area children. Razon (below left) and current PBHA President Frances Tompkins '09 look like they'd like to pause and play with some of the toys.

(Continued from page 19)

This year's event collected close to 1,500 gifts — including toys, books, and clothes from 24 different Harvard departments — to distribute to 14 local organizations.

In addition to the PBHA drive, PBHA students staff and run the Harvard Square Homeless Shelter. This year they will continue the holiday tradition of collecting clothing, food and gifts for those in need.

All across the University, departments are organizing their own gift drives and helping local organizations in a variety of other ways.

The President's Office has caught the spirit. Massachusetts Hall has created a gift drive that will benefit several community centers in Harvard's host communities.

At the Harvard Graduate School of

Education (HGSE), the idea is a similar one, but instead of gifts, guests are encouraged to buy \$1 raffle tickets with all the proceeds benefiting Our Place, a local day care center for homeless children. Last year the event raised \$2,500 for the organization.

"Our Place helps provide educational services, day care, and emotional support to families in the grip of homelessness, and this year more than ever, it is imperative that we support their vital mission — one that is in keeping with our values as a School and a community of educators," said Michael Rodman, HGSE director of communications.

Music from the Harvard Band was also part of the holiday festivities. Last weekend the group performed many of the traditional holiday favorites at locations around Boston as well as at Boston's Shriners Hospital for Children.

A former employee's connection to a worthy cause helped establish a tradition of holiday giving at the Radcliffe Institute for Advanced Study. For more than 10 years, employees and fellows at Radcliffe have participated in a holiday gift drive to benefit the women and children of Casa Myrna Vasquez, a Boston-based shelter.

"We get a list of wishes from the children and the parents — things that they would like to have for Christmas. Then we put the list up at Radcliffe, and over a three-week period, people will come by, pick up a tag for a gift, and then bring the gift back," said Mary Provo, Radcliffe's director of human resources.

This year requests included everything from a flashlight to a stroller.

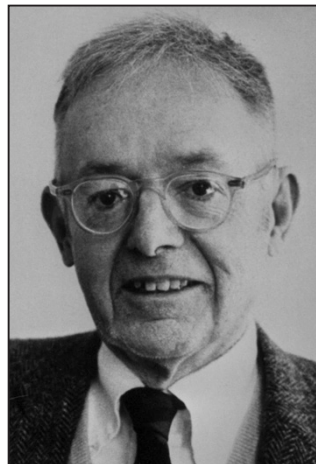
"It is a great program. I think it keeps people mindful of what this time of year is really about."

colleen_walsh@harvard.edu



Faculty of Arts and Sciences — Memorial Minute

‘When I graduated, my mother came to Cambridge and wanted to meet one of my professors. We had lunch with George. After that, she said, “This is what I always thought a Harvard professor would be like, the real thing.”’



George Whitelaw Mackey

At a Meeting of the Faculty of Arts and Sciences November 18, 2008, the following Minute was placed upon the records.

George Whitelaw Mackey was born February 1, 1916, in St. Louis, Missouri. In 1938 he received his bachelor’s degree in mathematics from the Rice Institute (now Rice University). His mathematical talent was recognized nationally when he became one of the top five William Lowell Putnam winners during his senior year at Rice. As a result, he received a full scholarship to Harvard for graduate work.

He earned a master’s degree in mathematics at Harvard in 1939 and a Ph.D. in 1942 under the direction of Marshall Stone. Marshall Stone was, in the 1930s and early 1940s, the leading American figure in the then new field of functional analysis. The Stone-von Neumann theorem (originally conjectured by Hermann Weyl) lies, to this day, as one of the key foundations of the mathematical basis of quantum mechanics. George Mackey’s lifelong research continued the Stone tradition, amplifying and extending it to include and unify seeming disparate mathematical disciplines such as number theory, ergodic theory, group representations, and mathematical physics.

He spent a year in 1941 at the Institute of Advanced Studies before completing his Ph.D. and a year on the faculty of the Illinois Institute of Technology, and then returned to Harvard in 1943 as an instructor in the mathematics department, where he remained until his retirement as Landon T. Clay Professor of Mathematics and Theoretical Science in 1985. For many years, George Mackey served as a tutor in Kirkland House.

The following is an excerpt from the eulogy delivered by Professor David Mumford on the occasion of the memorial service for George:

I met George in the fall of 1954—fifty-three years ago. I was a sophomore at Harvard and was assigned to Kirkland House, known then as a jock house. In this unlikely place, George was a nonresident tutor, and we began to meet weekly for lunch....He showed me what a beautiful world mathematics is. We worked through his lecture notes, and I ate them up. He showed me the internal logic and coherence of mathematics. It was his personal version of the Bourbaki vision, one in which groups played the central role. Topological vector spaces, operator theory, Lie groups, and group representations were the core, but it was also the lucid sequence of definitions and theorems that was so enticing—a yel-

low-brick road to more and more amazing places.

This was my first exposure to what higher mathematics is all about....In those days he led the life of an English don, living in a small apartment with one armchair and a stereo. Here was another side of the life of the intellectual: total devotion to your field, which was something I had never encountered so intensely in anyone in my family circle. When I graduated, my mother came to Cambridge and wanted to meet one of my professors. We had lunch with George. After that, she said, “This is what I always thought a Harvard professor would be like, the real thing.”...

George’s outspokenness and his brutal honesty probably got under everyone’s skin at some point. He never adjusted his message to his listener....

Back in the 1960s, government funding of mathematical research was just starting, so of course everyone was applying. Not George. He rocked the Boston mathematical community—not for the last time—by saying what no one else dared: the government was wasting its money, because all of us would do math all year without the two-ninths raise they were offering. He would not take it. Besides, on a darker note, he predicted all too accurately that when we were bought, the government would try to influence our research.

In the summer of 1955, George Mackey gave a course on group representations at the University of Chicago. The lecture notes for that course spread far and wide and instructed a whole generation of mathematicians. These notes went through several incarnations: Berkeley notes of 1965, Oxford notes of 1966–67 eventually ending up as the book *Unitary Group Representations in Physics, Probability, and Number Theory*, published in 1978. Another book with a profound influence on the next generation of mathematicians and mathematical physicists was his *Mathematical Foundations of Quantum Mechanics*, first published in 1963.

George Mackey married Alice Willard in December 1960 and their daughter Ann was born in February 1963.

George Mackey died on March 15, 2006.

Respectfully submitted,

Andrew Gleason†
Calvin Moore
David Mumford
Clifford Taubes
Shlomo Sternberg, Chair

Calendar

Events for December 18, 2008-February 12, 2009

Inside

Deadlines
Important Calendar
submission
deadlines
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Temperamental
Chekhov's 'The
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The Harvard Film Archive (HFA) presents 'Alexander Mackendrick and the Anarchy of Innocence' Jan. 9-12 and will include Mackendrick's most celebrated film, 'Sweet Smell of Success,' as well as a number of his beloved comedies. See film, page 28.

ABOVE: 'The Man in the White Suit' (UK, 1951) screens Friday, Jan. 9, at 7 p.m., followed by 'The Ladykillers' (UK, 1955).

concerts

Through Tue., Dec. 30—"38th Annual Christmas Revels." (Harvard Box Office) It's "Church meets Tavern" in this celebration with carols, anthems, and rounds, country dances, and more. Inspiration is Thomas Hardy's beloved Wessex and rural England. Sanders Theatre, various times. \$52/\$42/\$25 (partial view) general; \$10 obstructed view; \$42/\$32/\$15 (partial view) children under 12. Harvard Box Office (617) 496-2222, <http://www.revels.org/>. For related UpStairs on the Square pre-show dinner information, visit <http://www.revels.org/calendar/the-christmas-revels-upstairs-on-the-square/>.

Wed., Dec. 24—"Christmas Eve Candlelight Musical Service." (Swedenborg Chapel) Musical prelude of carols and seasonal music for vocal quartet and organ and piano. Featuring Lorna Jan Norris, Emily Romney, and many others. Swedenborg Chapel, 50 Quincy St., 4:45 p.m. Free and open to the public. (617) 864-4552.

Wed., Dec. 31—"New Year's Eve Gala Concert." (Harvard Box Office) A festive celebratory night with Bach, Handel, and Boston Baroque. Conductor Martin Pearlman and orchestra join with singers Kristen Watson and Christina Day Martinson. Sanders Theatre, 8 p.m. Tickets are \$59/\$57/\$44/\$29 general; O&I: 15 percent off, limit two tickets per ID (day of event only). Cost includes a champagne intermission. Harvard Box Office (617) 496-2222.

Thu., Jan. 1—"First Day Concert." (Harvard Box Office) A celebratory afternoon event with Bach, Handel, and Boston Baroque. Conductor Martin Pearlman and orchestra join with singers Kristen Watson and Christina Day Martinson. Sanders Theatre, 3 p.m. Tickets are \$59/\$57/\$44/\$29 general; no discounts. Cost includes a champagne intermission. Harvard Box Office (617) 496-2222.

Wed., Jan. 7-Thu., Jan. 8—"Recital by the Students of Music 93r." (Music)

Chamber music performances by students. Paine Hall, 7 p.m. Free and open to all.

Fri., Jan. 9—"Altan." (Harvard Box Office) Traditional Irish band Altan featuring Mairéad Ní Mhaonaigh, vocals and fiddle; Ciarán Tourish, fiddle; Dáithí Sproule, guitar; Dermot Byrne, accordion; and Ciarán Curran, bouzouki. Sanders Theatre, 8 p.m. Tickets are \$28 and \$22. Harvard Box Office (617) 496-2222.

Fri., Jan. 9-Sat., Jan. 10—"Recital by the Students of 180." (Music) Featuring music of Beethoven, Brahms, Schoenberg, Schubert, and more. Paine Hall, 7 p.m. Free and open to all.

Sat., Jan. 17—"Joyful Noise." (Harvard Box Office) A gospel concert with the Harlem Gospel Choir honoring Rev. Dr. Martin Luther King Jr. Sanders Theatre, 7:30 p.m. Tickets are \$22 general; \$17 Multicultural Arts members (with ID), O&I, and WGBH members; \$12 children 12 and under. Harvard Box Office (617) 496-2222.

Sun., Jan. 18—"Mozart: Le nozze di Figaro." (Harvard Box Office) Music of the Boston Youth Symphony Orchestra, led by Federico Cortese. Sanders Theatre, 3 p.m. Tickets are \$30/\$25 general; students and senior citizens \$5 off. Harvard Box Office (617) 496-2222.

Tue., Feb. 3—"Felix Mendelssohn: A Bicentenary Organ Recital." (Harvard Organ Society, HAM) Ezequiel Menéndez, organist, Cathedral of St. Joseph. Adolphus Busch Hall, 29 Kirkland St., 7:30 p.m. Free admission. (617) 495-9400, www.harvardmuseum.org.

Sat., Feb. 7—"Ladysmith Black Mambazo." (Harvard Box Office) With the power of gospel and the precision of Broadway, Ladysmith Black Mambazo is the undisputed king of *mbube*, South African a cappella singing. Sanders Theatre, 8 p.m. Tickets are \$40/\$32/\$28 general. Harvard Box Office (617) 496-2222.

dance

Fri., Jan. 9-Sat., Jan. 10—"You Can't Stop the Beat." (TAPS, Mainly Jazz Dance Company) An evening of dance performances set to classic and contemporary beats, featuring music from Rihanna, The Weather Girls, Britney Spears, The Matrix, Cirque du Soleil, Hairspray, and many more. Lowell Lecture Hall, 17 Kirkland St., 8 p.m. Tickets are \$10 general; \$5 students/senior citizens. Harvard Box Office (617) 496-2222.

theater

Agassiz Theatre
Thu., Jan. 8-Sun., Jan. 11—"The Laramie Project" is a powerful docudrama centered on the community of Laramie, Wyoming, and their reaction to the murder of Matthew Shepard, the victim of a gay hate crime. Derived from a compilation of interviews conducted by Moises Kaufman and members of the

(Continued on next page)

(Continued from previous page)

Tectonic Theater Project, this play is retrospective and dynamic, heartbreaking and inspiring.

—Performances take place at *Agassiz Theatre, 10 Garden St., Radcliffe Yard, 7:30 p.m., with 2 p.m. matinees Jan. 10 and 11. Tickets are \$10 general; \$7 students. Tickets are available through the Harvard Box Office (617) 496-2222.*

American Repertory Theatre

Through Sat., Jan. 3—**“Aurélia’s Oratorio”** is Victoria Thierée Chaplin’s dazzling display of stage illusion, inspired by the magic of music hall and circus. Starring daughter Aurélia Thierée, granddaughter of Charlie Chaplin. Also featuring Jaime Martinez (through Dec. 28) and Julio Monge (through Jan. 3). An ideal holiday treat suitable for the whole family, children included.

—Performances take place at *Loeb Drama Center Main Stage, 64 Brattle St., various times. Some dates have pre-play discussions and matinees, see*

Guidelines for listing events in Calendar

Events on campus sponsored by the University, its schools, departments, centers, organizations, and its recognized student groups are published every Thursday. Events sponsored by outside groups cannot be included. Admissions charges may apply for some events. Call the event sponsor for details.

To place a listing

Notices should be e-mailed, faxed, or mailed to the Calendar editor. Pertinent information includes: title of event, sponsoring organization, date, time, and location; and, if applicable, name of speaker(s), fee, refreshments, and registration information. A submission form is available at the front desk of the News Office, 1060 Holyoke Center. Promotional photographs with descriptions are welcome.

Addresses

Mail:
Calendar editor
Harvard Gazette
1350 Massachusetts Avenue
Cambridge, MA 02138

Telephone: (617) 496-2651
Fax: (617) 496-9351
E-mail: calendar@harvard.edu

Deadlines

Calendar listings must be received at least one week before their publication date. All entries must be received by 5 p.m. on Thursday. If you are uncertain about a deadline, holiday schedule, or any other information, please call the Calendar editor at (617) 496-2651.

Online

The Calendar is available on the Web at <http://www.news.harvard.edu/gazette>. Click on Calendar.

Available space

Listings for ongoing exhibitions, health and fitness classes, support and social groups, and screenings and studies are provided on a space-available basis. Information not run in a particular issue will be retained for later use.

Screenings/studies and support group listings must be renewed by Jan. 5 or Aug. 30 to continue running for an additional term.

Web site for full schedule. Tickets are \$25-79 general; \$8 students/senior citizens. Tickets are available through the A.R.T. Box Office (617) 547-8300, in person at the Loeb Drama Center Box Office, or www.amrep.org.

Sat., Jan. 10-Sun., Feb. 1—Chekhov’s **“The Seagull”** begins with a family assembling to watch a play. Little can they guess how that performance will change their lives. Directed by János Szász, this tragicomedy of life and art features dreams born and shattered, loves won and lost — a rich and tumultuous portrait of the human heart.

Thu., Jan. 15—**“Under 35 Night.”** Post-show mingling at Sandrine’s Bistro.

Fri., Jan. 23—**“OUT at A.R.T. Night.”** For the GLBT community. Post-show mingling at Sandrine’s Bistro.

—Performances take place at *Loeb Drama Center Main Stage, 64 Brattle St., various times. Some dates have pre-play discussions and matinees, see Web site for full schedule. Tickets are \$25-79 general; \$25 students; \$15 student rush; \$10 off senior citizens. Tickets are available through the A.R.T. Box Office (617) 547-8300, in person at the Loeb Drama Center Box Office, or www.amrep.org.*

New College Theatre

Wed., Jan. 7-Sun., Jan. 11—**“NINE”** introduces Guido Contini, a filmmaker stalled by the spectre of middle age. He embarks on a retrospective journey through his life and the women central to it as he struggles to find the plot for his next movie. Based on the Fellini film “8 1/2” and winner of many awards, including a Tony.
—Performances take place at *New College Theatre, 12 Holyoke St., 8 p.m., with 2 p.m. matinee on Jan. 11. Tickets are \$12 general; \$10 senior citizens; \$8 students. Tickets are available through the Harvard Box Office (617) 496-2222.*

film

Wed., Feb. 4—**“Movie Night at the Schlesinger Library.”** (Radcliffe Institute) Screening of “La corona” (2008) and “Perfect Image?” (1988). A discussion with Helen Elaine Lee, MIT, to follow. Radcliffe College Room, Schlesinger Library, 10 Garden St., Radcliffe Yard, 6 p.m. (617) 495-8647, www.radcliffe.edu.

Harvard Film Archive

All films are screened in the Main Auditorium of the Carpenter Center for the Visual Arts, 24 Quincy St. Video presentations are presented in B-04, a smaller auditorium next to the main auditorium. Programs are subject to change; call for admission charges and details. The Film Archive publishes a schedule of films and events that is available at the Carpenter Center. (617) 495-4700, <http://hcl.harvard.edu/hfa/>.
Thu., Dec. 18—Oshima’s **“Violence at Noon”** at 7 p.m. followed by **“Japanese Summer: Double Suicide”** at 9 p.m.

Fri., Dec. 19—Oshima’s **“In the Realm of the Senses”** at 7 p.m. followed by **“Dear Summer Sister”** at 9:15 p.m.

Sat., Dec. 20—Oshima’s **“Diary of a Shinjuku Thief”** at 7 p.m. followed by **“Death by Hanging”** at 9 p.m.

Sun., Dec. 21—Oshima’s **“Max Mon Amour”** at 3 p.m. followed by **“Empire of Passion”** at 7 p.m. and **“The Man Who Left His Will on Film”** at 9:15 p.m.

Mon., Dec. 22—Oshima’s **“Taboo”** and **“Kyoto: My Mother’s Place”** at 7 p.m.

Tue., Dec. 23-Thu., Jan. 8—No screenings

Fri., Jan. 9—Mackendrick’s **“The Man in the White Suit”** at 7 p.m. followed by **“The Ladykillers”**

Sat., Jan. 10—Mackendrick’s **“Sweet Smell of Success”** at 7 p.m. followed by **“Don’t Make Waves”**

Sun., Jan. 11—Mackendrick’s **“A High Wind to Jamaica”** at 3 p.m. followed by **“Mandy”** at 7 p.m. and **“Sammy Goes South”**

Mon., Jan. 12—Mackendrick’s **“Whisky Galore!”** at 7 p.m. followed by **“The Maggie”**

Real Colegio Complutense

Films are presented at Real Colegio Complutense, 26 Trowbridge St., in Spanish with English subtitles. Free and open to the public. (617) 495-3536, www.realcolegiocomplutense.harvard.edu.

Fri., Jan. 9—Viscarret’s **“Bajo las estrellas”** (2007) at 7:30 p.m.

Fri., Jan. 16—Chávarri’s **“Las bicicletas son para el verano”** (1984) at 7:30 p.m.

Fri., Jan. 23—Cardona’s **“Un novia para Yasmina”** (2008) at 7:30 p.m.

Fri., Jan. 30—Guerín’s **“Innisfree”** (1990) at 7:30 p.m.

Fri., Feb. 6—Fernández’s **“Oscar, una pasión surrealista”** (2008) at 7:30 p.m.

Fri., Feb. 13—Gutiérrez’s **“3 días”** (2008) at 7:30 p.m.

radio

Harvard Radio WHRB (95.3 FM)

WHRB presents the finest in classical, jazz, underground rock, news, and sports programming, and has 24-hour live Internet streaming from its Web site. Program guide subscriptions are free. (617) 495-4818, mail@whrb.org, www.whrb.org.

“Hillbilly at Harvard”—Saturdays, 9 a.m.-1 p.m.

Living on Earth, National Public Radio’s journal of the environment, hosted by Steve Curwood, Department of Earth and Planetary Sciences, and produced in cooperation with Harvard University, is aired on more than 270 NPR stations nationally and on more than 400 outlets internationally. In eastern Massachusetts, the program airs Sunday, 7 a.m., WBUR 90.9 FM. (617) 868-8810, loe@npr.org, www.loe.org.

exhibitions

Arnold Arboretum

“Interpreting an Urban Wild: Illustrations by Anne Parker Schmalz” features illustrated interpretive signs that encourage travelers in Bussey Brook Meadow to look closely at this unique urban wild within the Arnold Arboretum. These precise illustrations, rendered in ink and delicate watercolor pencil, serve equally well as works of art and educational tools. Reception with the artist Sat., Jan. 17, at 1 p.m. (Jan. 17-March 22)
—*Hunnewell Building, 125 Arborway, Jamaica Plain. Hours are Mon.-Fri., 9 a.m.-4 p.m.; Sat., 10 a.m.-4 p.m.; Sun., noon-4 p.m.; closed holidays. (617) 524-1718, www.arboretum.harvard.edu.*

“Science in the Pleasure Ground” provides a captivating retrospective on the oldest arboretum in the nation. The central feature of the exhibit is an 8-foot by 15-foot scale model of the Arboretum that includes historical vignettes and present-day attractions. (Ongoing)
—*Hunnewell Building, 125 Arborway, Jamaica Plain. Hours are Mon.-Fri., 9 a.m.-4 p.m.; Sat., 10 a.m.-4 p.m.; Sun., noon-4 p.m.; closed holidays. (617) 524-1718, www.arboretum.harvard.edu.*

Cabot Science Library

“Birds Do It, Bees Do It, Even Roaming Caribou Do It: Migration in the Animal Kingdom” looks at the migration of mammals, birds, and insects, with an emphasis on how human behavior and activity impacts the movement of animals through the environment. (Through Jan. 22)
—*Cabot Science Library. (617) 496-5534.*

“Rethinking the Darwinian Revolution”

explores the Darwinian revolution and why Darwin still packs such a punch today. Open to the students from Janet Browne’s history of science class. (Jan. 30-May 22)

—*Main floor, Cabot Science Library. (617) 496-5534.*

Carpenter Center

“Three Easy Pieces” is an installation by Paul Chan using animation and video projection to probe historical concepts of utopia as well as to interrogate the psychological ramifications of the so-called war on terror. Chan’s pieces include “Happiness (Finally) After 35,000 Years of Civilization (After Henry Darger and Charles Fourier); “5th Light”; and “Baghdad in No Particular Order.” (Through Jan. 4)
—*Main gallery, Carpenter Center, 24 Quincy St. Hours are Mon.-Sat., 9 a.m.-11 p.m.; Sun., noon-11 p.m. (617) 495-3251, tblanch@fas.harvard.edu, www.ves.fas.harvard.edu.*

Collection of Historical Scientific Instruments

“Time, Life, & Matter: Science in Cambridge” traces the development of scientific activity at Harvard, and explores how science was promoted or affected by religion, politics, philosophy, art, and commerce in the last 400 years. Featured objects include instruments connected to Galileo, Benjamin Franklin, William James, and Charles Lindbergh. (Ongoing)
—*Putnam Gallery, Science Center 136, 1 Oxford St. Free and open to the public. Children must be escorted by an adult. (617) 495-2779.*

Countway Library of Medicine

“Complementary Therapies: Masterworks of Chinese and Botanical Medicine” is held in conjunction with “Grand Delusion?,” bringing to light some of the treasures of the collection and including the first Western texts dealing with Chinese medicine and acupuncture. (Through December 2008)
—*Center for the History of Medicine, Countway Library. (617) 432-6207, jack_eckert@hms.harvard.edu.*

“Grand Delusion? The History of

Homeopathy in Boston” traces the developments of the history of homeopathy in Boston and Massachusetts and the contributions and experiences of its practitioners, in both conflict and concert with their regular medical colleagues. On exhibit are rare books and pamphlets, both supporting and attacking the homeopathic movement; a specimen of documents from an 1871 trial to expel homeopaths from the Massachusetts Medical Society; an early 20th century homeopathic medicine chest; and more. (Through December 2008)
—*Center for the History of Medicine, Countway Library. (617) 432-6207, jack_eckert@hms.harvard.edu.*

“The Warren Anatomical Museum” presents over 13,000 rare and unusual objects, including anatomical and pathological specimens, medical instruments, anatomical models, and medical memorabilia of famous physicians. (Ongoing)
—*Warren Museum Exhibition Gallery, 5th floor, Countway Library. (617) 432-6196.*

Davis Center

“The Arts of Subversion: Nonconformist Art from the Soviet Union” features work from the Norton and Nancy Dodge Collection, the most comprehensive collection of Soviet nonconformist art in the world. The art spans a period of 30 years — from the mid-1950s, soon after Stalin’s death and Khrushchev’s rise to power, through the period of stagnation under Brezhnev in the 1970s, and Gorbachev’s glasnost and perestroika in the 1980s. Work includes photographs, oils, and collages by a diverse range of artists and styles. (Through Jan. 22)
—*Concourse level, CGIS South Building, 1730 Cambridge St.*

Du Bois Institute

“Sketches from the Shore” features new work by Lyle Ashton Harris inspired by his life in Ghana the past few years, as well as other recent works. The

exhibit explores shifting concepts of African modernity and works range from evocative portraits to mixed media pieces comprised of video and collage, utilizing materials such as silver foil, silk organza, and Ghanaian funerary textiles. The show expresses the hybrid rhythms and sublime nuances of daily life. (Through Jan. 15)

—*Neil L. and Angelica Zander Rudenstine Gallery, Du Bois Institute, 104 Mt. Auburn St., 3R. (617) 495-8508, www.dubois.fas.harvard.edu.*

Fine Arts Library

“An Invaluable Partner...: From Fogg Museum Library to Fine Arts Library” presents a visual history of the collection from its beginnings in the 1927 Fogg building, through integration with Widener collections in 1962 and expansion into Werner Otto Hall in 1991. (Through Jan. 15)

—*Fine Arts Library. (617) 496-1502, rsennett@fas.harvard.edu.*

Calendar abbreviations

Where abbreviations appear in Calendar listings, the following list may be used to find the full name of the sponsoring organization.

Belfer Center for Science and International Affairs	BCSIA
Bunting Society of Institute Fellows	BSIF
Center for American Political Studies	CAPS
Center for European Studies	CES
Center for Government and International Studies	CGIS
Center for Jewish Studies	CJS
Center for Middle Eastern Studies	CMES
Center for Population and Development Studies	CPDS
Center for Quality of Care Research and Education	QCARE
Center for the Study of Values in Public Life	CSVPL
Center for the Study of World Religions	CSWR
Committee for the Concerns of Women at Harvard-Radcliffe	CCW
Committee on African Studies	CAS
Committee on Degrees in Women’s Studies	CDWS
Committee on Inner-Asian and Altaic Studies	CIAAS
Committee on Iranian Studies	CIS
David Rockefeller Center for Latin American Studies	DRCLAS
Division of Biological Sciences	DBS
Division of Health Sciences and Technology	DHST
East Asian Legal Studies Program	EALS
Graduate School of Design	GSD
Graduate School of Education	GSE
Harvard AIDS Institute	HAI
Harvard Art Museum	HAM
Harvard Buddhist Studies Forum	HBSF
Harvard College Library	HCL
Harvard Divinity School	HDS
Harvard Education Forum	HEF
Harvard Family Research Project	HFRP
Harvard Film Archive	HFA
Harvard Foundation for Intercultural and Race Relations	HFIRR
Harvard Gay and Lesbian Caucus	HGLC
Harvard Institute for International Development	HIID
Harvard International Office	HIO
Harvard Law School	HLS
Harvard Medical School	HMS
Harvard Museum of Natural History	HMNH
Harvard School of Dental Medicine	HSDM
Harvard School of Public Health	HSPH
Harvard-Smithsonian Center for Astrophysics	CfA
Harvard University Center for the Environment	HUCE
Institute of Politics	IOP
Kennedy School of Government	HKS
Law School Human Rights Program	LSHRP
Law School Program in Jewish Studies	LSPJS
Office for Information Technology	OIT
Office of International Education	OIE
Office of Work and Family Philosophy of Education Research Center	PERC
Program on Information Resources Policy	PIRP
Program on International Conflict Analysis and Resolution	PICAR
Program on Nonviolent Sanctions and Cultural Survival	PNSCS
Program on U.S.-Japan Relations	USJRP
School of Engineering and Applied Sciences	SEAS
Technology & Entrepreneurship Center at Harvard	TECH
Trade Union Program	TUP
Ukrainian Research Institute	URI
United Ministry	UM
Weatherhead Center for International Affairs	WCFA

Important deadline information

The Gazette will not publish between Dec. 18 and Feb. 5. The Dec. 18 Gazette lists events happening through Feb. 12. The Gazette will resume publication Feb. 5; the deadline for that issue will be Thursday, Jan. 29, by 5 p.m. There will be NO exceptions. Please call (617) 496-2651 with any questions.

Graduate School of Design

"Afterlife: Alison and Peter Smithson's Economist Building at Fifty" includes original drawings as well as materials selected by Peter Christensen that range from film to reviews and press clippings, illustrating the structure's significance in the British cultural imagination. (Through Jan. 11, 2009)

—Gund Hall Gallery, GSD, 48 Quincy St. Hours are Mon.-Fri., 9 a.m.-5 p.m.; Sat. 10 a.m.-5 p.m.; and Sun., noon-5 p.m. Free and open to the public.

—Special Collections Department, Frances Loeb Library (lower level), Gund Hall, 48 Quincy St. Hours are Mon.-Fri., 1-4:45 p.m. Free and open to the public. (617) 496-1300.

"GSD '08 Platform: A Year of Research through Studio Work, Theses, Exhibitions, and Conferences at the Harvard University Graduate School of Design"

attempts to formulate prevalent tendencies and coherences among the many that currently operate within GSD, revealing an archaeology of the present state of the School. (Through Jan. 11)

—Gund Hall Gallery, GSD, 48 Quincy St. Hours are Mon.-Fri., 9 a.m.-5 p.m.; Sat. 10 a.m.-5 p.m.; and Sun., noon-5 p.m. Free and open to the public. (617) 495-4784. www.gsd.harvard.edu/events/exhibitions/current.htm.

Graduate School of Education

"Step Into Art" features the paintings and writings of sixth-grade students at the Mother Caroline Academy and Education Center in Dorchester. The works are inspired by portraits from the Harvard Art Museum. (Through Jan. 2)

"Endangered Canyons of Utah" features Harvey Halpern's dramatic photos of canyons and wilderness landscapes in southern Utah. (Jan. 26-Feb. 13)

—Gutman Library, HGSE. www.gse.harvard.edu/library/index.html.

Harvard Art Museum

■ Sackler Museum

"Re-View" presents extensive selections from the Fogg, Busch-Reisinger, and Sackler museums together for the first time. The survey features Western art from antiquity to the turn of the last century, Islamic and Asian art, and European and American art since 1900. (Ongoing)

—The Sackler Museum is located at 485 Broadway. The Harvard Art Museum is open Mon.-Sat., 10 a.m.-5 p.m.; Sun., 1-5 p.m. Admission is \$9; \$7 for senior citizens; \$6 for college students with ID; free to Harvard ID holders, Cambridge Public Library card holders, members, and to people under 18 years old; free to the public on Saturday mornings 10 a.m.-noon and every day after 4:30 p.m. Tours are given Mon.-Fri. at 12:15 and 2 p.m. (617) 495-9400, www.harvardartmuseum.org. **NOTE: The Fogg and Busch-Reisinger closed to the public on June 30 for a renovation project lasting approximately five years. The Sackler will remain open during the renovation.**

Harvard Museum of Natural History

"Arthropods: Creatures that Rule"

brings together unique fossils and preserved specimens, large screen video presentations, striking color photographs and images from scanning electron microscopes, hands-on interactive games, and live creatures. It presents arthropods' long evolutionary history and the incredible variety of their habitats, and showcases a range of arthro-



Photo by K. Mitchell

Jan. 10-Feb. 1

The A.R.T. presents Chekhov's "The Seagull" Saturday, Jan. 10-Sunday, Feb. 1. Directed by János Szász, this tragicomedy of

life and art takes place at the Loeb Drama Center, 64 Brattle St. See theater, page 28, or visit www.amrep.org for details.

ABOVE: Karen MacDonald as the actress Arkadina and Mickey Solis as her son Konstantin

pod adaptations, including the evolution of wings and the remarkable capacity to mimic both their surroundings and other animals. (Ongoing)

"Climate Change: Our Global Experiment" offers a fascinating look at how scientists study climate change and at the evidence of global warming and the impact of human activity. Visitors are encouraged to apply what they've learned via a dynamic computer simulation that allows them to make choices about energy use for the nation and the world and evaluate the consequences. (Ongoing)

"Dodos, Trilobites, & Meteorites: Treasures of Nature and Science at Harvard" features hundreds of speci-

mens documenting two centuries of scientific exploration, including a 42-foot long Kronosaurus skeleton, and the world's largest turtle shell, over 7 feet long and 6 million years old. (Ongoing)

"Language of Color" looks at the vastly different ways and reasons animals display color. This exhibition combines dramatic specimens from across the animal kingdom with computer interactives, hands-on activities, and a stunning display of live dart frogs. Visitors will learn how color and its perception have co-evolved, resulting in a complex and diverse palette used to camouflage, startle predators, mimic other animals, attract a mate, or intimidate a rival. (Through Sept. 6, 2009)

"Looking at Leaves: Photographs by Amanda Means" features dramatic black & white images of single leaves by New York photographer Amanda Means, a monument to the remarkable diversity and beauty of nature's botanical forms. These detailed blow-ups were created by using the leaf itself in the same way as a photographic negative. The immediacy of the process gives the images an eerie intensity and adds to their compelling beauty. (Through Feb. 8, 2009)

"Mineral Gallery." Over 5,000 minerals and gemstones on display including a 1,642 pound amethyst geode from Brazil. Touch meteorites from outer space. (Ongoing)

"Sea Creatures in Glass" features dozens of spectacular glass animals meticulously shaped and wired by artists Leopold and Rudolph Blaschka during the 19th century. Many of these glass marine animals are on display for the first time since Harvard's acquisition of them in 1878. Combined with video, real scientific specimens, a recreation of the Blaschkas' studio, and a rich assortment of memorabilia, these models of marine invertebrates offer intriguing insights into the history, personality, and artistry of the extraordinary men who created them. (Through Jan. 4, 2009)

"The Ware Collection of Glass Models of Plants"

features the world famous "Glass Flowers" created over five decades by glass artists Leopold and Rudolph Blaschka, 3,000 glass models of 847 plant species. (Ongoing)

—The Harvard Museum of Natural History is located at 26 Oxford St. Public entrances to the museum are located between 24 and 26 Oxford St. and at 11 Divinity Ave. Open daily, 9 a.m.-5 p.m.; Closed Jan. 1, Thanksgiving Day, Dec. 24, and Dec. 25. Admission is \$9 for adults; \$7 for senior citizens and students; \$6 for children 3 to 18 years old; free for children under 3 years old. Group rates available with advance reservations; call (617) 495-2341. Free admission (for Massachusetts residents only) on Sun. mornings 9 a.m.-noon, except for groups, and free admission on Wed. afternoons, Sept.-May, 3-5 p.m. Free admission with a Bank of America credit card on the first full weekend of every month. (617) 495-3045, www.hmn.harvard.edu.

Holyoke Center

"The Ninth Annual Group Art Exhibition by Holyoke Center Staff" showcases the talent of Holyoke Center artists Georgia Bellas, George Ducharme, Tom Gattton, Mike Guarino, Maureen Hickey, Laura Kandziolka, Ricardo Maldonado, Michael Sedelmeyer, Alec Solomita, Nela Suka, Michael Van Devere, and Vic Yamboa. (Through Jan. 7)

—Holyoke Center Exhibition Space, Holyoke Center Arcade, 1350 Mass. Ave. Mon.-Fri., 8 a.m.-7:30 p.m.; Sat.-Sun., 9 a.m.-6 p.m. Free and open to the public. (617) 495-5214.

"A Walk in the Park — A Pictorial of Fenway Park" is a collection of photographs of the park as seen through the lens of artist M-C Lamarre. Through intimate views of the park, Lamarre creatively captures its essence in the details. Lamarre imparts a passion for her work that can only come from being a true Red Sox fan. Opening reception is Fri., Jan. 9, 5-7 p.m. (Jan. 9-Feb. 4)

—Holyoke Center Exhibition Space, Holyoke Center Arcade, 1350 Mass. Ave. Mon.-Fri., 8 a.m.-7:30 p.m.; Sat.-Sun., 9 a.m.-6 p.m. Free and open to the public. (617) 495-5214.

Houghton Library

"Harvard's Lincoln" celebrates the Lincoln bicentennial with an exhibition of books, manuscripts, broadsides, prints, ephemera, and artifacts from Harvard's Lincoln collection. Opening reception Thu., Feb. 12, 5:30 p.m. (Jan. 20-April 25)

—Edison and Newman Room, Houghton Library. (617) 496-4027.

"Immersed in a 'Different Atmosphere': Reflections on Yaddo" focuses on the experiences of creative visitors to Yaddo, a writer/artist retreat created in 1900 by Spencer and Katrina Trask of

(Continued on next page)

(Continued from previous page)
Saratoga Springs, New York. Some of the more than 5,000 writers and artists who visited the retreat were Robert Lowell, Elizabeth Bishop, Thomas Wolfe, and James Laughlin. (Through Jan. 28) —*Amy Lowell Room, Houghton Library. (617) 495-2449.*

“**There is grandeur in this view of life: ‘The Origin of Species’ at 150**” examines the publishing history of Darwin’s controversial 1859 treatise, along with some contemporary reactions to his revolutionary theory of natural selection. (Feb. 2-March 28) —*Amy Lowell Room, Houghton Library. (617) 495-2449.*

“**To Promote, To Learn, To Teach, To Please: Scientific Images in Early Modern Books**” illustrates how images in early modern European books of science (1500-1750) were shaped not only by the needs of scientific communication but also by economic, social, and cultural considerations. Representative examples examine physical evidence both in the images themselves and in the books they illustrated. (Through Dec. 20) —*Edison and Newman Room, Houghton Library. (617) 495-2444.*

Lamont Library
“**2007-08 Winners of the Visiting Committee Prize for Undergraduate Book Collecting and The Philip Hofer Prize for Art and Book Collecting**” features samplings of the prize-winning collections, along with personal commentary. (Through May 2009) —*Lamont Library, second and third floors. (617) 495-2455.*

“**Harvard College Annual International Photo Contest**” displays photos taken by Harvard students who have studied, worked, interned, or performed research abroad during the past year. (Jan. 5-June 30) —*Level B and first floor, Lamont Library. (617) 495-2455.*

Landscape Institute
“**Botanical Paintings: New England and Puerto Rico**” features the work of Bici Pettit-Barron. (Through Jan. 15) —*Landscape Institute, 30 Chauncy St. (617) 495-8632, www.landscape.arboretum.harvard.edu.*

Loeb Music Library
“**Nadia Boulanger and Her American Composition Students**” focuses on Nadia Boulanger, one of the foremost composition teachers of the 20th century, especially her American ties and her influence on generations of American composers. www.crosscurrents08-09.org. (Through July 1) —*Richard F. French Gallery, Eda Kuhn Loeb Music Library, Fanny Mason Peabody Music Building. (617) 496-3359.*

Peabody Museum
“**Change and Continuity: Hall of the North American Indian**” explores how native peoples across the continent responded to the arrival of Europeans. (Ongoing)

“**Digging Veritas: The Archaeology and History of the Indian College and Student Life at Colonial Harvard**” showcases finds from Harvard Yard, historical documents, and more from Harvard’s early years. Free and open to the public. (Through Jan. 2010)

“**Encounters with the Americas**” explores native cultures of Mesoamerica before and after Spanish contact. It features original sculpture and plaster casts of Maya monuments as well as contemporary textiles from the Americas. (Ongoing)

“**Fragile Memories: Images of Archaeology and Community at Copan, 1891-1900**” presents the written and visual records of early expeditions to remote areas of Mexico and Central

America, and the results of a two-year project to digitize more than 10,000 nineteenth century glass-plate negatives from those trips. (Through March 2009)

“**Pacific Islands Hall**” features a diverse array of artifacts brought to the museum by Boston’s maritime trade merchants. (Ongoing)

“**Remembering Awatovi: The Story of an Archaeological Expedition in Northern Arizona, 1935-1939**” goes behind the scenes of the last archaeological expedition of its kind at an ancient site sacred to the Hopi people. Part history of archaeology and part social history, the exhibit reveals what the archaeologists found in the village of Awatovi with its beautiful kiva murals and Spanish mission church, and how the archaeologists lived in “New Awatovi,” the camp they built for themselves beside the dig. The written and photographic records of “New Awatovi” add a new dimension to the discoveries of the dig itself. See also Tozzer Library. (Through March 30)

“**Storied Walls: Murals of the Americas**” explores the spectacular wall paintings from the ancestral Hopi village kivas of Awatovi in Arizona; San Bartolo and Bonampak in Guatemala and Mexico respectively; and the Moche huacas of northern Peru. (Through Dec. 31, 2009)

—*The Peabody Museum is located at 11 Divinity Ave. Open daily, 9 a.m.-5 p.m. Admission is \$9 for adults; \$7 for senior citizens and students; \$6 for children 3 to 18 years old; free for children under 3 years old. Free admission (for Massachusetts residents only) on Sun. mornings 9 a.m.-noon, except for groups, and free admission on Wed. afternoons, Sept.-May, 3-5 p.m. The Peabody Museum is closed Jan. 1, Thanksgiving Day, Dec. 24, and Dec. 25. (617) 496-1027, www.peabody.harvard.edu.*

Pusey Library
“**From the Amazon to the Volga: The Cartographic Representation of Rivers**” examines how mapmakers from the 15th century to the early 20th century sought to measure, track, and frame some of the major rivers of the world, including the Tigris and Euphrates, Amazon, Don, Danube, Nile, Congo, Rhine, Volga, and Mississippi. (Through Jan. 30) —*Map Gallery Hall, Pusey Library. (617) 495-2417.*

“**Family Gallery**” features portraits of Theodore Roosevelt’s wives, children, and himself as a father, paterfamilias, and grandfather, while “**Pilgrimage to a Refuge**” displays Roosevelt’s photographs, ocean charts, and his published account of his 1915 trip to the bird refuges at the mouth of the Mississippi. (Jan. 5-June 30) —*Roosevelt Gallery, Pusey Library. (617) 384-7938.*

“**Taking the Measure of Rhode Island: A Cartographical Tour**” examines the cartographical history of the small, enigmatic state. From the Colonial period to the early 20th century, this exhibit features examples of boundary surveys, state maps, nautical charts, town plans, city and state atlases, topographical and geological maps, road guides, and bird’s eye views. (Feb. 11-June 12) —*Map Gallery Hall, Pusey Library. (617) 495-2417.*

“**Through the Camera Lens: Theodore Roosevelt and the Art of Photography**” commemorates the 150th anniversary of Theodore Roosevelt’s birth. (Through May 2009) —*Pusey Library corridor, including the Theodore Roosevelt Gallery. Mon.-Fri., 9 a.m.-4:45 p.m. (617) 384-7938.*

Schlesinger Library
“**From Exclusion to Empowerment: Chinese American Women in New England.**” (Through March 6)

—*Schlesinger Library, Radcliffe Yard, 10 Garden St. (617) 495-8647.*

“**Until That Last Breath! Women with HIV/AIDS.**” (Through Dec. 24) —*Byerly Hall, 8 Garden St., Radcliffe Yard. (617) 495-8212.*

Semitic Museum
“**Ancient Cyprus: The Cesnola Collection at the Semitic Museum**” comprises vessels, figurines, bronzes, and other artifacts dating from 2000 B.C. to 300 A.D. (Ongoing)

“**Ancient Egypt: Magic and the Afterlife**” introduces visitors to the Egyptian view of life after death through coffins, amulets, and funerary inscriptions. (Ongoing)

“**The Houses of Ancient Israel: Domestic, Royal, Divine**” is devoted to everyday life in Iron Age Israel (ca. 1200-600 BCE). Featured in the exhibit is a full-scale replica of a fully furnished, two-story village house. (Ongoing)

“**Nuzi and the Hurrians: Fragments from a Forgotten Past**” features over 100 objects detailing everyday life in Nuzi, which was located in Northeastern Iraq around 1400 B.C. (Ongoing) —*Semitic Museum, 6 Divinity Ave. Open Mon.-Fri., 10 a.m.-4 p.m.; Sun., 1-4 p.m. Closed holiday weekends. Admission is free. (617) 495-4631.*

Three Columns Gallery
“**Advertising My Friends**” features the work of Peter Urban, an established Boston photographer. Based on the premise that even if all advertising may not be art, all art is advertising. The exhibit features portraits of Fay Wray, Carleton Varney, and others. (Through Jan. 5) —*Three Columns Gallery, Mather House, 10 Cowperwaite St. (781) 424-7018, skyphoto@yahoo.com.*

Tozzer Library
“**Remembering Awatovi: The Story of an Archaeological Expedition in Northern Arizona, 1935-1939**” goes behind the scenes of the last archaeological expedition of its kind at an ancient site sacred to the Hopi people. Part history of archaeology and part social history, the exhibit reveals what the archaeologists found in the village of Awatovi with its beautiful kiva murals and Spanish mission church, and how the archaeologists lived in “New Awatovi,” the camp they built for themselves beside the dig. The written and photographic records of “New Awatovi” add a new dimension to the discoveries of the dig itself. See also Peabody Museum. (Through March 30) —*Tozzer Library Gallery, 21 Divinity Ave. (617) 495-2292, http://hcl.harvard.edu/libraries/#tozzer.*

lectures

art/design
Thu., Jan. 15—“**Renaissance Responses to Antiquity: From Titian to Bernini.**” (HAM) Amy Brauer, curator, HAM; Antien Knaap, fellow, HAM. Sackler Museum, 485 Broadway, 3:30 p.m. Free with price of admission. Limited to 30 participants; please arrive early. (617) 495-9400, www.harvardart-museum.org.

Wed., Jan. 21—“**Cities: Their Art and Architecture Series. “Persepolis: Royal City of Ancient Persia.**” (HAM) Susanne Ebbinghaus, curator, HAM. Cost is \$18 general; \$12 members. Sackler Museum, 485 Broadway, 6:30 p.m. Space is limited; registration strongly encouraged. (617) 495-9400, www.harvardartmuseum.org.

Wed., Feb 4—“**The Church of What’s Happening Now: New Art, New Artists.**” (HAM, Humanities Center) Painters Kerry James Marshall and Luc Tuymans in dialogue with Helen Molesworth, curator, HAM. Barker Center, 12 Quincy St., 6

p.m. Free and open to the public. (617) 495-9400, www.fas.harvard.edu/~hum-centr/.

Thu., Feb. 12—“**Bernini’s ‘Modello of Saint Longinus’: The Genesis of a Baroque Colossus.**” (HAM) Frank Fehrenbach, Harvard University, and Tony Sigel, conservator, HAM. Sackler Museum, 485 Broadway, 3:30 p.m. Free with the price of admission. Limited to 30 participants; please arrive early. (617) 495-9400, www.harvardartmuseum.org.

business/law

Fri., Dec. 19—“**Non-Profit Marketing**” (Hauser Center) Craft workshop on non-profit start-ups with Sander Hessler, Office of Career Advancement, HKS. Littauer 230, Gundle Family Room, HKS, 9:30 a.m. Open to all Harvard students and alumni. www.hks.harvard.edu/hauser/learn/seminarslectures/craftworkshops/index.htm.

environmental sciences

Thu., Dec. 18—“**Reinforce Powers of the Environmental Public Administration: The New Spanish Act on Environmental Liability.**” (Real Colegio Complutense) Lecture by Javier García Amez. Conference room, 26 Trowbridge St., 7:30 p.m. Free and open to the public. www.realcolegiocomplutense.harvard.edu.

health sciences

Thu., Dec. 18—“**Components of the Placebo Effect.**” (HMS) Ted J. Kaptchuk, HMS. Room 10, Harvard Faculty Club, 20 Quincy St., 7:45 a.m. Breakfast will be served.

Medical School

Mon., Jan 26—“**Ubiquitin and Cancer.**” (HMS) Symposium with Ray Deshaies, Caltech; Brenda Schulman, St. Jude’s; Mark Rolfe, Millennium Pharmaceuticals; and Tony Hunter, Salk Institute. Joseph Martin Conference Center, HMS, 77 Avenue Louis Pasteur, 1 p.m. sandra_genere@hms.harvard.edu.

Harvard School of Public Health
Tue., Jan. 6—“**Unanswered Questions.**” (Molecular and Integrative Physiological Sciences) John J. Godleski, HSPH, and Mary Williams, Boston University. Room 1302, Building 1, HSPH, 665 Huntington Ave., 9:30 a.m.

Tue., Jan. 13—“**Tuberous Sclerosis and LAM: Pathogenic Mechanisms.**” (Molecular and Integrative Physiological Sciences) Elizabeth Henske, HMS. Room 1302, Building 1, HSPH, 665 Huntington Ave., 9:30 a.m.

humanities

Wed., Jan. 14—“**Theater After Film.**” (Radcliffe Institute) Martin Harries, fellow, Radcliffe Institute. Radcliffe Gymnasium, 10 Garden St., Radcliffe Yard, 3:30 p.m. (617) 495-8212, www.radcliffe.edu.

Wed., Jan. 21—“**Cities: Their Art and Architecture Series. “Persepolis: Royal City of Ancient Persia.**” (HAM) Susanne Ebbinghaus, curator, HAM. Cost is \$18 general; \$12 members. Sackler Museum, 485 Broadway, 6:30 p.m. Space is limited; registration strongly encouraged. (617) 495-9400, www.harvardartmuseum.org.

Wed., Feb. 4—“**Mischievous Lovers, Hidden Moors, and Cross-Dressers: The Meaning of Passing in Colonial Bogotá.**” (Radcliffe Institute) Joanne Rappaport, Radcliffe Institute. Radcliffe Gymnasium, 10 Garden St., Radcliffe Yard, 3:30 p.m. (617) 495-8212, www.radcliffe.edu.

Wed., Feb 4—“**The Church of What’s Happening Now: New Art, New Artists.**” (HAM, Humanities Center) Painters Kerry James Marshall and Luc Tuymans in dialogue with Helen Molesworth, curator, HAM. Barker Center, 12 Quincy St., 6

p.m. Free and open to the public. (617) 495-9400, www.fas.harvard.edu/~hum-centr/.

poetry/prose

Tue., Jan. 20—“**The Carpenter Poets: Reflections on Wood and Trees.**” (Arnold Arboretum) Jamaica Plain poets share original poems with themes based on their trade. Hunnewell Building Lecture Hall, Arnold Arboretum, 125 Arborway, 6:30 p.m. Free; advance registration requested. (617) 384-5251.

science

Thu., Dec. 18—“**Gems of the Winter Sky.**” (CfA) David Aguilar, Harvard University. Phillips Auditorium, CfA, 60 Garden St., 7:30 p.m. Observation through telescopes follows, weather permitting. (617) 495-7461, www.cfa.harvard.edu.

Wed., Jan. 21—“**Unraveling the Dark Side of the Universe.**” (Radcliffe Institute) Priyamvada Natarajan, fellow, Radcliffe Institute. Radcliffe Gymnasium, 10 Garden St., Radcliffe Yard, 3:30 p.m. (617) 495-8212, www.radcliffe.edu.

Wed., Jan. 28—“**The Neurobiology of Social Behavior in Fruit Flies.**” (Radcliffe Institute) Kathleen Siwicki, fellow, Radcliffe Institute. Radcliffe Gymnasium, 10 Garden St., Radcliffe Yard, 3:30 p.m. (617) 495-8212, www.radcliffe.edu.

Wed., Feb. 11—“**The Evolutionary Mechanics of Movement and Communication in the Sea.**” (Radcliffe Institute) Sheila Patek, Radcliffe Institute. Radcliffe Gymnasium, 10 Garden St., Radcliffe Yard, 3:30 p.m. (617) 495-8212, www.radcliffe.edu.

social sciences

Thu., Dec. 18—“**What Makes Vulnerable States Decide For or Against Nuclear Weapons?**” (Belfer Center’s International Security Program) Brown bag seminar with Malfrid Braut-Hegghammer, fellow, ISP/Project on Managing the Atom. Littauer 369, Belfer Center Library, HKS, 12:15 p.m. Coffee and tea provided. http://belfercenter.ksg.harvard.edu/events/3802/.

Wed., Jan. 14—“**Rogue Economics.**” (Cambridge Forum) Loretta Napoleoni, international economics reporter. First Parish, 3 Church St., 7:30 p.m. Free and open to the public.

Thu., Jan. 22—“**The Origins of Global Jihad: Explaining the Arab Mobilization to 1980s Afghanistan.**” (Belfer Center’s International Security Program) Brown bag seminar with Thomas Hegghammer, fellow, ISP/Initiative on Religion in International Affairs. Littauer 369, Belfer Center Library, HKS, 12:15 p.m. Coffee and tea provided. http://belfercenter.ksg.harvard.edu/events/3801/.

Wed., Jan. 28—“**So Damn Much Money.**” (Cambridge Forum) Robert G. Kaiser, veteran Washington Post correspondent. First Parish, 3 Church St., 7:30 p.m. Free and open to the public.

Thu., Jan. 29—“**What Can We Expect from the Obama Administration on Middle East Policy?**” (Belfer Center’s International Security Program) Brown bag seminar with Gregory Aftandilian, former Middle East analyst, U.S. State Department, and former foreign policy adviser, U.S. Congress. Littauer 369, Belfer Center Library, HKS, 12:15 p.m. Coffee and tea provided. http://belfercenter.ksg.harvard.edu/events/3805/.

Wed., Feb. 4—“**Invisible History: Afghanistan’s Untold Story.**” (Cambridge Forum) Paul Fitzgerald and Elizabeth Gould, husband and wife team of journalists. First Parish, 3 Church St., 7:30 p.m. Free and open to the public.

Mon., Feb. 9—“**Conscience of A Liberal.**” (Cambridge Forum) Nobel Prize-winning economist Paul Krugman in conversation with David Gergen, HKS. First Parish, 3 Church St., 7:30 p.m. Free and open to the public.

Wed., Feb. 11—**“The Lonely Americans.”** (Cambridge Forum) Jacqueline Olds and Richard Schwarz, clinical psychologists, HMS. First Parish, 3 Church St., 7:30 p.m. Free and open to the public.

classes etc.

Arnold Arboretum offers a series of classes for the general public. (617) 384-5209, arbweb@arnarb.harvard.edu, www.arboretum.harvard.edu.

■ **Volunteer opportunities:** Share your love of trees and nature — volunteer as a School Program Guide at the Arnold Arboretum. You will be trained to lead science programs in the Arboretum landscape with elementary school groups. (617) 384-5239, www.arboretum.harvard.edu/programs/fieldstudy_guides.html.

■ **T-shirt contest:** The Arnold Arboretum invites artists of all ages to submit their T-shirt designs for Lilac Sunday 2009. Lilac-themed T-shirts have become a tradition on Lilac Sunday, to be held on Sun., May 11, 2009. Deadline is Thu., Jan. 1. For a complete list of guidelines visit www.arboretum.harvard.edu/plants/lilac_tshirt.html

■ **Free walking tours:** Come and explore the collections on a free guided tour led by knowledgeable volunteer docents on select Wednesdays, Saturdays, and Sundays through November. Times vary. All tours begin in front of the Hunnewell Building Visitor Center, 125 Arborway, and last approximately 60-90 minutes. No registration necessary. (617) 524-1718, www.arboretum.harvard.edu/visitors/tours.html.

■ Classes

Tue., Jan. 20—**“The Carpenter Poets: Reflections on Wood and Trees.”** Jamaica Plain poets share original poems with themes based on their trade. Hunnewell Building Lecture Hall, Arnold Arboretum, 6:30 p.m. Free, but advance registration requested. (617) 384-5251.

Thu., Jan. 29—**“The Authentic Garden: Cultivating a Sense of Place.”** Claire Sawyers, horticulturalist, Swarthmore College. Massachusetts Bay Community College, 50 Oakland St., 7 p.m. Cost is \$25 nonmember; \$20 member.

The **Center for Workplace Development** offers a wide variety of professional development courses, career development workshops, consulting services, and computer classes to Harvard employees. State-of-the-art training and conference rooms are available to rent at CWD’s 124 Mt. Auburn St. location as well. Go to <http://harvie.harvard.edu/learning/cwd> to view a complete list of programs and services, or contact CWD at (617) 495-4895 or training@harvard.edu.

Committee on the Concerns of Women at Harvard holds meetings throughout the year. [www.atwork.harvard.edu](http://atwork.harvard.edu), <http://harvie.harvard.edu>. E-mail ccw@harvard.edu for registration and details.

CPR and First Aid Programs. Call (617) 495-1771 to register.

Environmental Health and Safety (Harvard Longwood Campus) safety seminars/orientation for Medical Area lab researchers are offered on the third Thursday of each month, noon-2:30 p.m. Topics include: Laboratory Safety, Bloodborne Pathogens, Hazardous Waste. (617) 432-1720, www.uos.harvard.edu/ehs. Beverages provided.

The Harvard Art Museum presents a series of public seminars and special programs. All programs require a fee and most require advance registration. See each program for details. Discounts are available for Friend members of the Art Museums. For more information, advance registration, or information on

how to become a Friend, call (617) 495-4544. www.harvardartmuseum.org. See also lectures, art/design.

Harvard Ballroom dance classes are offered by the Harvard Ballroom Dance Team throughout the year. Salsa, Swing, Waltz, Tango, Foxtrot, Rumba, and Cha Cha are just some of the dances you can learn. No partner or experience is necessary. For more information, including class descriptions and pricing, visit www.harvardballroom.org.

Harvard Contemporary Gamelan is open to Harvard students, faculty, staff, and other community members. Join us Thursdays for a new music adventure and be part of creating the Music Department’s new orchestra. Lower main floor, Gamelan Music Room, SOCH/Hilles, 7 p.m. To sign up, e-mail diamond2@fas.harvard.edu.

Harvard Course in Reading and Study Strategies offered by the Bureau of Study Counsel. Through readings, films, and classroom exercises, students learn to read more purposefully, selectively, and with greater speed and comprehension. A 14-day course for one hour/day over a period of a few weeks. Cost is \$150. Spring sessions will be held Feb. 9-27, Mon.-Fri., 8 a.m., and Feb. 9-27, Mon.-Fri., 4 p.m. Call (617) 495-2581 or come to the Bureau of Study Counsel, 5 Linden St., to register or for more information. <http://bsc.harvard.edu/>.

Harvard Extension School Career and Academic Resource Center. (617) 495-9413, ouchida@huce.harvard.edu.

Harvard Green Campus Initiative offers classes, lectures, and more. Visit www.greencampus.harvard.edu for details.

Harvard Medical School’s Research Imaging Solutions at Countway. (617) 432-7472, ris@hms.harvard.edu, <http://it.med.harvard.edu/training>.

Harvard Museum of Natural History offers a variety of programs based on the Museum’s diverse exhibits. The entrance for all programs is 26 Oxford St. **Enrollment is limited, and advance registration is required.** Sign up for three or more classes and get an extra 10 percent off. Wheelchair accessible. (617) 495-2341, www.hmn.harvard.edu.

■ Volunteer opportunity

HMNH seeks volunteers who are enthusiastic about natural history and would enjoy sharing that excitement with adults and children. No special qualifications required. Training is provided. Just one morning or afternoon per week or weekend required. More info: volunteers@oeb.harvard.edu.

■ Ongoing programs

Discovery Stations in “Arthropods: Creatures that Rule” let you observe and learn about live animals, artifacts, and specimens, while **Gallery Guides** answer questions and help visitors learn about the natural world. Wednesday afternoons, Saturday, and Sunday. General museum admission.

Nature Storytime features readings of stories and poems for kids ages 6 and under. Saturdays and Sundays, 11 a.m. and 2 p.m.

Harvard Neighbors offers a variety of programs and events for the Harvard community. (617) 495-4313, neighbors@harvard.edu, www.neighbors.harvard.edu.

The Landscape Institute, 30 Chauncy St., 1st floor. (617) 495-8632, landscape@arnarb.harvard.edu, www.landscape.arboretum.harvard.edu.

■ **Spring/Summer 2009 course registration is now open:** Spring courses begin Jan. 26. The spring early registration and spring financial aid application deadline is Jan. 5. Register online at http://arboretum.harvard.edu/landinst/reg_courses.php.

■ **Wed., Feb. 11—“London Burial Ground Parks.”** Liz Goodfellow will dis-

cuss the closing of London’s ancient burial grounds in the mid-nineteenth century, and how many of them were later converted to public gardens. 1 p.m. Open to the public. RSVP to kff245@aol.com.

■ **Thu., Feb. 19—“The Soul of Therapeutic Gardens.”** Robert C. Hoover explores a personal journey of site-specific environmental art, therapeutic gardens, and the soul behind it all. Reception at 6 p.m., lecture at 6:30 p.m. Open to the public. RSVP to landscape@arnarb.harvard.edu by Tue., Feb. 16.

Mather House Chamber Music offers a fun, informal way to play music with other people. Coaching is available for string instruments, woodwinds, piano, harpsichord, Baroque ensembles, and singers. Ensembles are grouped according to the level of participants and availability of instruments. Sessions are scheduled at the mutual convenience of participants and coach. Everybody is invited to play in the concert at Mather, and there are various additional performance opportunities. Three special ensembles are offered: consorts of recorders, flutes, and viola da gamba. Fee: \$100 per semester. (617) 244-4974, lion@fas.harvard.edu, www.people.fas.harvard.edu/~lion/mather.

Office for the Arts offers several extracurricular classes designed to enhance the undergraduate experience. (617) 495-8676, ofa@fas.harvard.edu, www.fas.harvard.edu/ofa.

Office for the Arts, Ceramics Program provides a creative learning environment for a dynamic mix of Harvard students, staff and faculty, professional artists, and the greater Boston and international community. www.fas.harvard.edu/ceramics.

Office of Work/Life Resources. All programs meet noon-1 p.m. unless otherwise noted. Various places. Register for workshops at [http://harvie.harvard.edu/courses/display.do?value\(application_id\)=3](http://harvie.harvard.edu/courses/display.do?value(application_id)=3). Call (617) 495-4100 or e-mail worklife@harvard.edu with questions. See also support/social listings. <http://harvie.harvard.edu/workandlife>.

Office of Work and Family (Longwood Area). All programs meet noon-1:30 p.m. unless otherwise noted. Various places. Feel free to bring a lunch. (617) 432-1615, barbara_wolf@hms.harvard.edu, www.hms.harvard.edu/hr/owf.html.

Records Management Office, part of the Harvard University Archives, offers important workshops to help staff in charge of keeping the University’s files in order. (617) 495-5961, rmo@hulmail.harvard.edu, <http://hul.harvard.edu/rmo>.

computer

The **Center for Workplace Development** offers computer-training classes that are open to the Harvard community and affiliates. Classes range from introductory workshops to all levels of word processing, spreadsheets, databases, desktop publishing, and Web development. To learn more, go to <http://harvie.harvard.edu/learning/cwd> or contact CWD at (617) 495-4895 or training@harvard.edu.

Harvard’s **Computer Product & Repair Center** has walk-in hours Mon., Tue., Thu., and Fri., 9 a.m.-5 p.m.; Wed., 10 a.m.-5 p.m. Closed Sat. and Sun. Science Center B11. (617) 495-5450, www.computers.harvard.edu.

The Harvard College Library offers hands-on instruction in using the HOLLIS Portal Page (the Web gateway to over 1,300 electronic resources), the HOLLIS Catalog (for materials owned by Harvard libraries), and Advanced HOLLIS subject sections each semester. http://hcl.harvard.edu/widener/services/research/hollis_instruction.html.

special events

Fri., Dec. 19—**“6th Annual Holiday Bake Sale.”** (Radcliffe Child Care Center, Holyoke Center) Gourmet quality homemade treats will be packaged for giving, hosting, and celebrating with co-workers or just plan snacking. Come early for whole pies, sweet breads, and specialty desserts. Bring your sweet tooth, and help support the care of infants and preschoolers in the Harvard community. Holyoke Center Arcade, 1350 Massachusetts Ave., 11:30 a.m.-5:30 p.m. (or when the goods run out).

Sat., Jan. 17-Sun., Jan. 18—**“Success Redefined: 10th Anniversary Celebrations of Harvard Alumni Entrepreneurs.”** (Harvard Alumni Entrepreneurs) Join alumni and faculty from across the University for two days of thought-provoking presentations and intimate discussions. Anniversary celebration also includes a faculty brunch on Mon., Jan. 19, and a public party on Thu., Jan. 29, as well as an anthology of alumni essays about success. American Academy of Arts & Sciences, 136 Irving St. Advance registration and payment required at www.harvardalumnientrepreneurs.com/anniversary/register.php. Brunch and party will be held on Harvard campus, specific sites TBA.

fitness

Harvard Wellness Programs

For a recorded listing of programs, (617) 495-1771.

For a registration form, (617) 495-9629, www.huhs.harvard.edu.

Massage Therapy, 1-Hour Appointments

One-hour appointments with Licensed Massage Therapists
Mondays-Fridays, afternoon and evening appointments, limited morning appointments
Saturdays, morning, afternoon, and evening appointments
Sundays, morning and afternoon appointments
75 Mt. Auburn St., HUHS
Call (617) 495-9629 to arrange
Fee is \$60/hr; \$40/hr for HUGHP members

Massage Therapy, 1/2-Hour Appointments

1/2-hour appointments with Licensed Massage Therapists
Wednesdays and Thursdays, 9 a.m.-noon
75 Mt. Auburn St., 2E, HUHS
Call (617) 495-9629 to arrange
Fee is \$37/half-hr; \$25/half-hr for HUGHP members

Lunchtime Massage Therapy Break at HUHS

Ten-minute appointments with Licensed Massage Therapists
Mondays, noon-2 p.m. at the HUHS Pharmacy in Holyoke Center
Wednesdays, 11 a.m.-2 p.m. at CWHC, 2E, HUHS
Thursdays, 5:30-7:30 p.m. at Hemenway Gym
Fridays from 11 a.m.-2 p.m. at the HUHS Pharmacy in Holyoke Center
Call (617) 495-9629 to arrange
Fee is \$10/10 minutes

On-Site Massage Therapy or Shiatsu

10-minute appointments with Licensed Massage Therapists
Call (617) 495-9629 to arrange
Fee is \$10 per person for 10 minutes; minimum of six people

Shiatsu (Acupressure)

One-hour appointments with Karl Berger, OBT, LMT
Mondays, 6, 7, and 8 p.m.
75 Mt. Auburn St., 5th floor, HUHS
Call (617) 495-9629 to arrange
Fee is \$60/hr; \$40/hr for HUGHP members

Reiki

One-hour appointments with Farris Ajalat, Judy Partington, & Lisa Santoro,

LMTs
Tuesdays, Wednesdays, Thursdays, Saturdays
75 Mt. Auburn St., 2E, HUHS
Call (617) 495-9629 to arrange
Fee is \$60/hr; \$40/hr for HUGHP members

Active Release Technique (ART)

One-hour appointments with a Licensed Massage Therapist
Sundays and Mondays, mid-day, afternoon and evening appointments
75 Mt. Auburn St., 2E, HUHS
Call (617) 495-9629 to arrange
Fee is \$60/hr; \$40/hr for HUGHP members

Acupuncture, 1-Hour Appointments

One-hour appointments with Jeffrey Matrician, Lic. Ac.
Tuesdays and Fridays, morning and afternoon appointments
75 Mt. Auburn St., 2E, HUHS
Call (617) 495-9629 to arrange (clinical clearance required)
Fee is \$75/hr; \$40/hr for HUGHP members

Tobacco Cessation Classes are offered weekly at the Dana-Farber Cancer Institute, dates and times may vary. Fee: \$10 per class, and nicotine patches are available at a discounted rate. (617) 632-2099.

Weight Watchers at Work classes are available. (617) 495-9629.

Weight Watchers at Work at HDS

classes are available Fridays, 10-10:45 a.m. in the CSWR conference room, 42 Francis Ave. There will be an information and registration meeting Fri., Sept. 26. (617) 495-4513.

religion

The Memorial Church

Harvard Yard (617) 495-5508
www.memorialchurch.harvard.edu
Handicapped accessible

Sunday Services

During the academic year, Sunday services are broadcast on Harvard’s radio station, WHRB 95.3 FM. For those outside the Cambridge area, WHRB provides live Internet streaming from its Web site at www.whrb.org. Services take place at 11 a.m.

Dec. 21—The Rev. Robert J. Mark, McDonald Fellow, the Memorial Church
Dec. 28—The Rev. Peter J. Gomes, Plummer Professor of Christian Morals and Pusey Minister in the Memorial Church

Jan. 4—The Rev. Peter J. Gomes, Plummer Professor of Christian Morals and Pusey Minister in the Memorial Church

Jan. 11—The Rev. Charles G. Adams, William and Lucille Nickerson Professor of the Practice of Ethics and Ministry, HDS

Jan. 18—The Rev. Charles G. Adams, William and Lucille Nickerson Professor of the Practice of Ethics and Ministry, HDS

Jan. 25—The Rev. Jonathan C. Page, Epps Fellow, the Memorial Church

Morning Prayers

A service of Morning Prayers has been held daily at Harvard since its founding in 1636, and continues to be held in Appleton Chapel from 8:45-9 a.m., Mon.-Sat. A brief address is given by members and friends of the University, with music provided by the Choral Fellows of the Harvard University Choir. On Saturdays, the music is provided by soloists, small ensembles, or instrumentalists. This service, designed to enable students and faculty to attend 9 a.m. classes, is open to all.

Through Thu., Jan. 1—No services
Fri., Jan. 2—Timothy A. Pantoja ’09, HDS

Sat., Jan. 3—The Rev. Dr. Claudia A. Highbaugh, Connecticut College
Mon., Jan. 5—Andrew Amo, HKS
Tue., Jan. 6—Christine E. Whiteside,

(Continued on next page)

(Continued from previous page)

the Memorial Church

Wed., Jan. 7—Charles Jonathan Redlick '09, Harvard College

Thu., Jan. 8—Janetta Cothran Randolph, the Memorial Church

Fri., Jan. 9—Sabrina Annette Zearott '09, Harvard College

Sat., Jan. 10—Andrew C. Forsyth '09, the Memorial Church

Mon., Jan. 12—Jay Derek Musen '10, Harvard College

Tue., Jan. 13—Mary Elizabeth Clack, Widener Library

Wed., Jan. 14—Gene A. Corbin, Phillips Brooks House Association

Thu., Jan. 15—Noel Bisson, Harvard College

Fri., Jan. 16—The Rev. Dr. Robert M. Randolph, MIT

Sat., Jan. 17—Seminarian in the Memorial Church

Mon., Jan. 19—No service

Tue., Jan. 20—Clayton W. Brooks III '10, the Memorial Church

Wed., Jan. 21—Arthur J. Barsky, HMS

Thu., Jan. 22—The Rev. Dr. Dorothy A. Austin, the Memorial Church

Special events

■ Wed., Dec. 24—“**Christmas Eve Service.**” A Festal Eucharist will celebrate the Nativity of Our Lord with music, a blessing of the crèche, and Holy Communion. The Rev. Professor Peter J. Gomes will preach. 11 p.m.

■ Mon., Jan. 19—“**Martin Luther King Day Service.**” Service celebrating the life of Dr. King. 5 p.m.

“Reading Period and Examinations

Meditation.” During reading period and examinations students are invited to use Sanctuary for private prayer and meditation. Appleton Chapel will be open for extended hours on Wednesdays and a booklet of prayers, scripture, and devotions will be provided for private use. Two workshops of guided meditations will be offered. For more information, including dates and times, contact jonathan_page@harvard.edu.

Compline

The ancient service of Compline is held one Thursday a month during term. Based upon the traditional evening liturgy of scripture, music, prayers, and silence, this twenty-minute service is sung in the candlelit space of Appleton Chapel by members of the Harvard University Choir. All are welcome.

Sunday Night Student Service

All undergraduate and graduate students are welcome to attend a worship service every Sunday night at 9 p.m. in Appleton Chapel with the Rev. Jonathan C. Page. The service lasts 45 minutes and includes weekly Eucharist, singing, and student participation. Students are encouraged to come dressed as they are and are invited to remain for food and fellowship. E-mail jonathan_page@harvard.edu for details.

Wednesday Tea

On Wednesdays during Term, Professor Gomes welcomes undergraduates, graduate students, and visiting scholars to afternoon tea from 5-6 p.m. at his residence, Sparks House, 21 Kirkland St., across from Memorial Hall.

Undergraduate Fellowship

An opportunity for students to meet, enjoy food, and discuss faith. Meetings take place Wednesdays at 9:30 p.m. in the Buttrick Room, Memorial Church. E-mail jonathan_page@harvard.edu for details.

Graduate Fellowship

A new fellowship group for graduate students with discussions, food, contemplative worship, and more. Meetings take place Thursdays at 7 p.m. E-mail robfirmpres@gmail.com for details.

Berkland Baptist Church

99 Brattle St., Harvard Sq. (617) 828-2262, dancho@post.harvard.edu

■ Sunday School: Sun., 12:15 p.m.

■ Worship Service: Sun., 1 p.m.

Berkland Baptist Church is a community of faith, primarily comprised of young Asian American students and professionals.

Cambridge Forum

The First Parish in Cambridge, Unitarian Universalist, 3 Church St., (617) 495-2727, www.cambridgeforum.org.

Christian Science Organization meets in the Phillips Brooks House every Tue. at 7 p.m. for religious readings and testimonies. (617) 876-7843.

The Church at the Gate

Sunday services: 4 p.m. www.thechurchatthegate.com The Church at the Gate will see people of all nations transformed by faith in Jesus Christ as we love and serve God and people in the strategic context of the city and the university.

The Church of Jesus Christ of Latter-day Saints

2 Longfellow Park (located at about 100 Brattle St.)

Sunday Worship Services: 9:30 a.m., 11:30 a.m., 2 p.m., 3:50 p.m.

All are welcome. The congregations that meet at these times are composed of young, single students and professionals. For information on family congregation meeting places and times, or for information on other classes and events, e-mail ldsbostoninstitute@yahoo.com.

Congregation Ruach Israel

A Messianic Jewish Synagogue 754 Greendale Ave., Needham, MA Shabbat services, Saturday morning at 10 a.m. Call (781) 449-6264 or visit www.ruachisrael.org for more information. Rides from Harvard Square available upon request.

Divinity School Chapel

45 Francis Ave. (617) 495-5778 Services are held during the fall and spring terms only.

■ HDS Wednesday Noon Service: 12:10 p.m. (617) 384-7571, jvonwald@hds.harvard.edu

■ HDS Thursday Morning Eucharist: 8:30-9 a.m.

Dzogchen Center Cambridge meets every Monday evening at 7:30 p.m. for Tibetan Buddhist Dzogchen practice at Cambridge Friends Meeting House, Longfellow Park, off Brattle St. (718) 665-6325, www.dzogchen.org/cambridge.

Episcopal Divinity School “Introductory Meditation Classes: Finding Peace in a Busy World.”

Introduction to basic Buddhist philosophy and meditation. Each class includes a brief talk, guided meditation, and time for questions. Taught by Gen Kelsang Choma, American Kadampa Buddhist nun, resident teacher of Serlingpa Meditation Center. Burnham Chapel, Episcopal Divinity School, 99 Brattle St., 10:30 a.m.-noon. \$10 suggested donation. epc@serlingpa.org, www.MeditationinBoston.org.

First Baptist Church in Newton

848 Beacon St. Newton Centre, MA 02459 (617) 244-2997 www.fbcnewton.org Sunday worship at 10:30 a.m.; Sunday School at 9:30 a.m. Corner of Beacon and Centre streets, accessible via MBTA's D Line, two blocks from the Newton Centre stop.

First Congregational Church Somerville UCC is a progressive community rich in young adults. Come Sunday mornings at 10 a.m. for creative worship and fellowship, or Wednesdays at 6:15 p.m. for Rest and Bread, a reflective communion and prayer service. www.firstchurch-somerville.org.

First Reformed Presbyterian Church of Cambridge (RPCNA)

53 Antrim St. Cambridge, MA 02139 (617) 864-3185 www.reformedprescambridge.com Sunday worship at 11 a.m. and 6 p.m. Christian counseling available by appointment.

First United Presbyterian Church (PCUSA)

1418 Cambridge St. Inman Square (617) 354-3151 www.cambridgepres.com Sunday Worship at 10 a.m. Weekly small group for young adults; pallikk@fas.harvard.edu.

Fo Guang San 'V International Buddhist Progress Society holds a traditional service every Sunday at 10 a.m. with a free vegetarian lunch. 950 Massachusetts Ave. Open Mon.-Sun., 10 a.m.-6 p.m. for meditation. (617) 547-6670.

Grace Street Church holds a Sunday evening service at 6 p.m. in the ballroom of the Sheraton Commander Hotel, 16 Garden St. All are welcome. (617) 233-9671, www.gracestreet.org.

Harvard Buddhist Community Chaplain Lama Migmar Tseten offers teachings and meditation sessions at the Sakya Institute for Buddhist Studies, 59 Church St., Unit 3, Harvard Square. (617) 256-3904, migtse@earthlink.net, www.sakya.net.

■ Sundays: “In-Depth Teachings on the Four Noble Truths,” 10 a.m.-noon.

■ Tuesdays: Mind training course, “Seven Points of Mind Training,” 6-7 p.m. (practice), 7:30-9 p.m. (class).

■ Fridays: “Uttaratantra,” 6-7 p.m. (practice), 7:30-9 p.m. (class).

Harvard Unitarian Universalist Ministry for Students

Weekly worship: Fridays at 12:15 p.m. Services are held during the fall and spring terms only. The first Friday of the month meet in Emerson Chapel, Divinity Hall. The remaining Fridays meet in Andover Chapel, Andover Hall. All are welcome. http://groups.yahoo.com/group/huums/.

Hope Fellowship Church holds worship service Sundays at 9 a.m. and 11 a.m., 16 Beech St. (617) 868-3261, www.hopefellowshipchurch.org.

Old South Church, United Church of Christ, Congregational

Copley Square, (617) 425-5145, helen@oldsouth.org ■ Sundays: 9 a.m. early service; 11 a.m. sanctuary service with organ and choir ■ Thursdays: Jazz worship service at 6 p.m.

St. Mary Orthodox Church

8 Inman St., Cambridge (617) 547-1234 http://www.stmaryorthodoxchurch.org/ ■ Sunday Orthros: 8:45 a.m. ■ Sunday Divine Liturgy: 10 a.m. ■ Great Vespers: Saturdays at 5 p.m.

St. James Episcopal Church

1991 Massachusetts Ave. (2 blocks beyond Porter Square T station) www.stjames-cambridge.org Sunday services at 8 a.m. (Rite 1) and 10:30 a.m. (Rite 2) A musically vibrant, eucharist-centered, welcoming, and diverse congregation.

Unity Center Cambridge

Sunday services: 11 a.m. (meditation at 10:30 a.m.) Morse School Theater, 40 Granite St., Cambridgeport (accessible by red line, green line and buses), www.unitycambridge.org Unity Center Cambridge is a new spiritual community that emphasizes practical teachings and integrates wisdom across a range of spiritual traditions. All are welcome.

Unity Church of God

6 William St., Somerville, 3 blocks up College Ave. from Davis Sq., (617) 623-1212, www.unitychurchofgod.org

■ Sunday services: 11 a.m.

■ Monday: Prayer group at 7 p.m.

■ Tuesday: Support group at 7 p.m.

■ Alternate Fridays: Movie viewings at 7 p.m.

Vineyard Christian Fellowship of Cambridge

holds service Sundays at 170 Rindge Ave. in North Cambridge, walking distance from Davis and Porter Squares. Service times are 9 a.m. — with corresponding kids church — and 11 a.m. shuttle service currently picks up students at 8:25 a.m. for the 9 a.m. service, and 10:25 a.m. for the 11 a.m. service, at Harvard Square (in front of the Holyoke Center, at 1250 Mass. Ave., next to the cab stand). Senior pastor, Dave Schmelzer. (617) 252-0005, www.cambridgevineyard.org.

WomenChurch, an imaginative community for women, meets the first Thursday of each month (during the fall and spring terms only) at 7 p.m. in Andover Chapel at HDS on Francis Ave. All women are welcome. E-mail mfurness@hds.harvard.edu for information.

United Ministry

The following churches and organizations are affiliated with the United Ministry and offer worship and social services. Call for details.

Anglican/Episcopal Chaplaincy at Harvard

2 Garden St. (617) 495-4340 episcopal_chaplaincy@harvard.edu Eucharist Sundays at 5 p.m. at the Christ Church Chapel (behind the church at Zero Garden St.), followed by fellowship supper at 6 p.m. in the Chaplaincy Common Room. Episcopal Students at Harvard: www.hcs.harvard.edu/~esh/ for an updated list of student activities and events. A ministry of the Episcopal Diocese of Massachusetts and the worldwide Anglican Communion.

Christ the King Presbyterian Church

99 Prospect St. Cambridge, Mass. Sundays: Services in English at 10:30 a.m. and in Brazilian Portuguese at 6 p.m. (617) 354-8341, office@ctkcambridge.org, www.ctkcambridge.org

Harvard Bahá'í Student Association

bahai@hcs.harvard.edu All events are open to the public. Please write to bahai@hcs.harvard.edu for more information, or subscribe to our announcement list at http://lists.hcs.harvard.edu/mailman/listinfo/bahai-list.

Harvard-Epworth United Methodist Church

1555 Massachusetts Ave. Cambridge, Mass. (617) 354-0837 www.harvard-epworth.org ■ Communion service: 9 a.m. ■ Christian education hour for all ages: 10 a.m. ■ Worship service: 11 a.m.

Harvard Hindu Fellowship Meditation Group

is led by Swami Tyagananda, Harvard Hindu chaplain from the Ramakrishna Vedanta Society. Meets Mondays, 7-8 p.m., in the Mather House Tranquility Room. Swami_tyagananda@harvard.edu.

Harvard Islamic Society

Harvard Islamic Society Office. (617) 496-8084 www.digitas.harvard.edu/~his Five daily prayers held in the basement of Canaday E. Friday prayers held in Lowell Lecture Hall at 1:15 p.m.

Harvard Korean Mission meets on Fridays for Bible Study Group at 7 p.m.,

and on Sundays for ecumenical worship at 2 p.m. in the Harvard-Epworth United Methodist Church, 1555 Massachusetts Ave. (617) 441-5211, rkahng@hds.harvard.edu.

H-R Asian Baptist Student Koinonia

Friday Night Bible study: Boylston Hall 105, 7 p.m., every Friday. Join us as we continue our study of the Gospel of Matthew this year. Frosh Mid-Week at Loker 031, 7:30-8:30 p.m., every Wednesday, Freshmen only. iskandar@fas.harvard.edu, www.hcs.harvard.edu/~absk.

H-R Catholic Student Center

Saint Paul Church, 29 Mt. Auburn St. Student Mass: Sun., 5 p.m., Lower Church.

Harvard Hillel

52 Mt. Auburn St. (617) 495-4696 www.hillel.harvard.edu ■ Reform Minyan: Fri., 5:30 p.m. ■ Orthodox Minyan: daily, 7:30 a.m. and 15 minutes before sundown; Sat., 9 a.m. and 1 hour before sundown ■ Conservative Minyan: Mon. and Thu., 8:45 a.m.; Fri., 5:45 p.m.; Sat., 9:30 a.m., 1:45 p.m., and 45 minutes after sundown. ■ Worship and Study Minyan (Conservative): Sat., 9:30 a.m.

H-R Humanist Chaplaincy

A diverse, inclusive, inspiring community of Humanists, atheists, agnostics, and the non-religious at Harvard and beyond. For up-to-the-minute updates, join Chaplain Greg Epstein on Facebook, www.facebook.com. Join us: www.harvardhumanist.org for e-newsletter, event details, and more. Humanist Graduate Student Pub Nights: Queen's Head Pub, Memorial Hall, every other Thursday. “Humanist Small Group” Sunday Brunch: every other Sunday. For Harvard students, faculty, alumni, and staff.

Cambridge Friends Meeting meets for worship Sundays at 10:30 a.m. and 5 p.m., Wednesdays at 8:30 a.m., 5 Longfellow Park, off Brattle St. (617) 876-6883.

Cambridgeport Baptist Church (corner of Magazine St. and Putnam Ave., 10-minute walk from Central Square T stop) Sunday morning worship service at 10 a.m. Home fellowships meet throughout the week. (617) 576-6779, www.cambridgeportbaptist.org.

First Church in Cambridge (United Church of Christ) holds a traditional worship service Sundays at 11 a.m. and an alternative jazz service Sunday afternoons at 5:30 p.m. Located at 11 Garden St. (617) 547-2724.

Lutheran — University Lutheran Church

66 Winthrop St., at the corner of Dunster and Winthrop streets, holds Sunday worship at 10 a.m. through Labor Day weekend and 9 and 11 a.m. Sept. 10-May, with child care provided. UniLu Shelter: (617) 547-2841. Church and Student Center: (617) 876-3256, www.unilu.org.

Old Cambridge Baptist Church, 1151 Mass. Ave. and 400 Harvard St. (behind the Barker Center and the Inn at Harvard), holds Sunday morning worship at 10:30 a.m. Please join this inclusive, progressive congregation in the American Baptist tradition. www.oldcambridgebaptist.org, (617) 864-8068.

Swedenborg Chapel: Church of the New Jerusalem

(617) 864-4552, http://swedenborgchapel.org/ Located at the corner of Quincy St. and Kirkland St. ■ Bible Study, Sundays at 10 a.m. ■ Services, Sundays at 11 a.m. ■ Community Dinner, Thursdays at 6 p.m. ■ Swedenborg Reading Group, Thursdays at 7 p.m.

Cambridgeport Baptist Church, (617) 576-6779
 Christ Church, (617) 876-0200
 Episcopal Chaplaincy, (617) 495-4340
 First Parish in Cambridge, Unitarian Universalist, (617) 495-2727
 Harvard-Epworth United Methodist Church, (617) 354-0837
 Old Cambridge Baptist Church, (617) 864-8068
 St. Paul Church, (617) 491-8400
 Swedenborg Chapel, (617) 864-4552
 The Memorial Church, (617) 495-5508

support/social

Support and Social groups are listed as space permits.

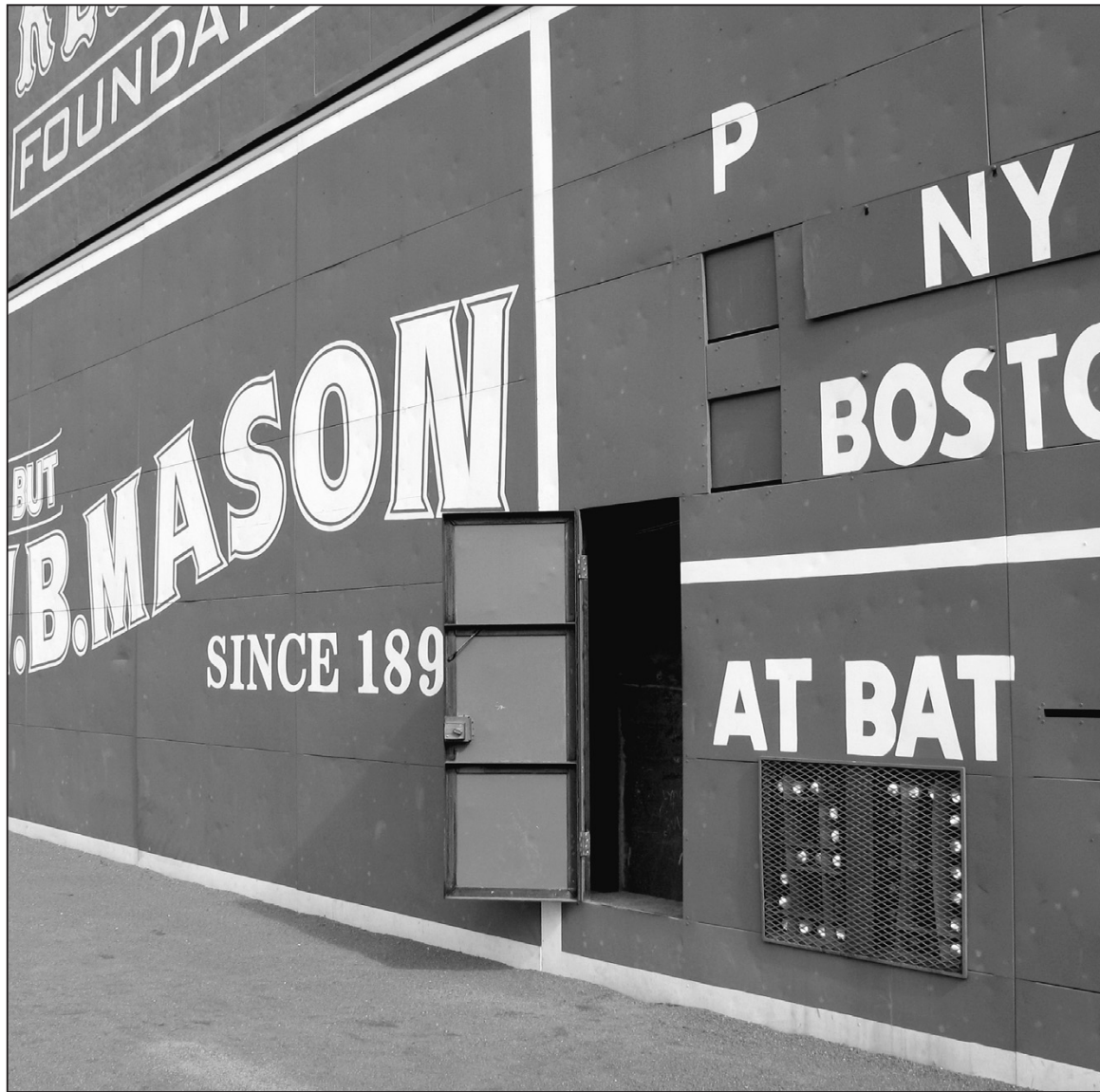
The **Berkman Center for Internet and Society Thursday Meetings @ Berman**, a group of blogging enthusiasts and people interested in Internet technology, meets at the Berkman Center on the second floor of 23 Everett St., Cambridge, on Thursday evenings at 7 p.m. People of all experience levels and those who would like to learn more about weblogs, XML feeds, aggregators, wikis, and related technology and their impact on society are welcome. <http://blogs.law.harvard.edu/thursdaymeetings/>.

The **COACH Program** seeks Harvard college and graduate students to serve as "college coaches" in the Boston Public Schools to assist young people in applying to college and developing plans for after high school. COACH is looking for applicants interested in spending about three hours per week working with high school juniors and seniors in West Roxbury. Interested students should call (917) 257-6876 or e-mail asamuels@law.harvard.edu.

Harvard's EAP (Employee Assistance Program) provides free, confidential assessment and referral services and short-term counseling to help you work through life's challenges. Harvard faculty, staff, retirees, and their household members can access the following services throughout the U.S. and Canada 24 hours a day, 7 days a week: confidential assessment, information, referral; consultation to supervisors around employee well-being, behavior, or performance; individual and group support around a workplace crisis, serious illness, or death; and on-site seminars. In addition, Harvard's EAP can help with workplace conflicts, personal and family relationships, eldercare planning, legal consultations, financial counseling and planning, sexual harassment, workplace and domestic violence, alcohol and drug use, and more. To schedule an appointment near your office or home, call the EAP's toll-free number at **1-EAP-HARV (1-877-327-4278)**. Counselors are available to answer your calls from 8:30 a.m. to 7 p.m. Monday through Thursday, and from 8:30 a.m. to 5 p.m. on Friday; urgent calls will be answered by crisis clinicians round the clock. You may also visit www.wellnessworklife.com for further information and access to other resources available to you as a Harvard employee (there is a one-time confidential registration process; please visit www.harvie.harvard.edu for login instructions).

Harvard Lesbian/Bisexual/Transgender/Queer Women's Lunch is a chance for lesbian/bi/trans/queer women staff and faculty at Harvard to meet informally for lunch and conversation. Meetings take place 12:30-1:30 p.m. in the graduate student lounge on the 2nd floor of Dudley House. You can bring lunch or buy at Dudley House. E-mail jean_gauthier@harvard.edu, dmorley@fas.harvard.edu, or linda_schneider@harvard.edu for more information.

Harvard Lesbian, Gay, Bisexual & Transgender Faculty & Staff Group. (617) 495-8476, ochs@fas.harvard.edu, www.hglc.org/resources/faculty-staff.html.



Harvard Student Resources, a division of Harvard Student Agencies, employs a work force of more than 300 students to provide temporary clerical work, housecleaning, tutoring, research, moving, and other help at reasonable rates. **HSA Cleaners**, the student-run dry cleaning division of Harvard Student Agencies, offers 15 percent off cleaning and alterations for Harvard employees. (617) 495-3033, www.hsa.net.

Harvard Student Spouses and Partners Association (HSSPA) Spouses Support Group is a social group where you can meet other spouses who might help you to get used to your new situation as a spouse or partner at Harvard University. Our support group meets weekly all year long. Please e-mail spousesupport@gmail.com for location and time of meetings and check www.hsspa.harvard.edu for events.

Harvard Toastmasters Club helps you improve your public speaking skills in a relaxed environment. For Harvard students from all Schools and programs. Meetings are Wednesdays, 6:45-7:45 p.m., in room 332, Littauer Building, HKS. jkhartshorne@gmail.com.

The Harvard Trademark Program has redesigned its Web site to better meet the needs of the public and members of the Harvard community who are seeking information about the Harvard Trademark Program's licensing activities and trademark protection efforts as well as information regarding the various policies governing the proper use of Harvard's name and insignias. trademark_program@harvard.edu, www.trademark.harvard.edu.

Harvard Veterans Alumni Organization is open to all members of the Harvard University community who are, or have served, in the U.S. military. Visit www.harvardveterans.org for information and to participate.

LifeRaft is an ongoing drop-in support group where people can talk about their own or others' life-threatening illness, or about their grief and bereavement. Life Raft is open to anyone connected with the Harvard Community: students, facul-

ty, staff, retirees, and families. Life Raft is free and confidential and meets on Wednesdays, noon-2 p.m. in the Board of Ministry Conference Room on the ground floor of the Memorial Church. Come for 10 minutes or 2 hours. (617) 495-2042, bgilmore@uhs.harvard.edu.

Office of Work/Life Resources offers a variety of programs and classes. (617) 495-4100, worklife@harvard.edu, <http://harvie.harvard.edu/workandlife>. See classes for related programs.

■ **Parent-to-Parent Adoption Network at Harvard.** If you would like to volunteer as a resource, or if you would like to speak to an adoptive parent to gather information, call (617) 495-4100. All inquiries are confidential.

On Harvard Time is Harvard's new, weekly 7-minute news show that will cover current news from a Harvard perspective. Online at www.hrvtv.org, 7 p.m. onharvardtime@gmail.com.

Recycling Information Hotline: The Facilities Maintenance Department (FMD) has activated a phone line to provide recycling information to University members. (617) 495-3042.

Smart Recovery is a discussion group for people with problems with addiction. Programs are offered at Mt. Auburn Hospital, Massachusetts General Hospital, McLean Hospital, and other locations. (781) 891-7574.

Tobacco Cessation Classes are offered weekly at the Dana-Farber Cancer Institute, dates and times may vary. Fee: \$10 per class, and nicotine patches are available at a discounted rate. (617) 632-2099.

The University Ombudsman Office is an independent resource for problem resolution. An ombudsman is *confidential, independent, and neutral*. The ombudsman can provide confidential and informal assistance to faculty, fellows, staff, students, and retirees to resolve concerns related to their workplace and learning environments. A visitor can discuss issues and concerns with the ombudsman without commit-

ting to further disclosure or any formal resolution. Typical issues include disrespectful or inappropriate behavior, faculty/student relations, misuse of power or unfair treatment, authorship or credit dispute, sexual harassment or discrimination, stressful work conditions, career advancement, overwork, disability, or illness. The office is located in Holyoke Center, Suite 748. (617) 495-7748, www.universityombudsman.harvard.edu.

Women's Lives Reading Group meets once a month to discuss a novel or a biography. Women in the group use their lives to better understand the women they read about, and use the book's characters to spark discussions about their own lives as women. anne@wjh.harvard.edu.

studies

Studies are listed as space permits.

Acne Study: Researchers seek people 12 years of age and older with facial acne to determine the safety and effectiveness of an investigational drug for acne. The study consists of five visits over 12 weeks and subjects will receive up to \$200 in compensation for time and travel. Study visits are required approximately every two to four weeks. Participants will have to stop all other treatments for acne except emollients approved by the study doctor. (617) 726-5066, harvardskinstudies@partners.org.

Cocaine Usage Study: Researchers seek healthy men ages 21-35 who have used cocaine occasionally for a two-visit research study. Subjects will be administered cocaine and either flutamide or premarin and undergo an MRI and blood sampling. \$425 compensation upon completion. Taxi is provided. (617) 855-2883, (617) 855-3293. Responses are confidential.

Brain Imaging Study: Researchers seek healthy women ages 24-64 who are non-smoking for a three-visit research study. Subjects will undergo MRIs and blood sampling. Up to \$175 compensa-

tion upon completion of the screening visit and study days. (617) 855-3293, (617) 855-2883. Responses are confidential.

Brain Imaging Study: Researchers seek healthy volunteers ages 21-35 for a six-visit study investigating how sedative-type drugs affect the brain. Participants must be willing to have an MRI and make multiple visits. Compensation up to \$625. Round-trip transportation provided. (617) 855-2359.

Brain Imaging Study: Researchers seek healthy men ages 21-50 for a 12-week study that involves taking two FDA-approved antidepressant medications (Celexa and Lexapro), as well as a placebo. Each of the three medications is taken individually for two weeks. There are a total of eight visits during the course of the study, including three MRI brain scans. Compensation up to \$800. All personal information is confidential. Call (617) 789-2404 or e-mail depression@caritaschristi.org and refer to "Celexa and Lexapro study."

Depression Study: Researchers seek women ages 18-55 with depression and insomnia but who are not taking any antidepressant medications. Participation involves taking two FDA-approved medications to treat depression and insomnia. Study procedures include a screening visit, four MRI scans of the brain, and three monitoring visits. Study medication provided free of charge and compensation up to \$600. Call (617) 789-2165 or e-mail depression@caritaschristi.org and refer to "Lunesta study." All inquiries confidential.

Depression Study: Researchers seek individuals ages 18-60 with depression. The study involves an initial diagnostic interview, one blood draw, and a telephone call 8-12 weeks after the study visit. Compensation for completion of the study is \$60. Call (617) 789-2165 or e-mail depression@caritaschristi.org and refer to the "Biomarker Study." All information confidential.

Jan. 9-Feb. 4

'A Walk in the Park — A Pictorial of Fenway Park' is a collection of photographs of the park as seen through the lens of artist M-C Lamarre. The exhibit will be on view in the Holyoke Center Arcade Jan. 9-Feb. 4, with an opening reception on Friday, Jan. 9, 5-7 p.m. See exhibitions, page 29.

Opportunities

Job listings posted as of December 18, 2008

Harvard is not a single place, but a large and varied community. It is comprised of many different schools, departments and offices, each with its own mission, character and environment. Harvard is also an employer of varied locations.

Harvard is strongly committed to its policy of equal opportunity and affirmative action. Employment and advancement are based on merit and ability without regard to race, color, creed, sex, sexual orientation, disability, national origin or status as a disabled or Vietnam-era veteran.

How to Apply:

To apply for an advertised position and/or for more information on these and other listings, please visit our Web site at <http://www.employment.harvard.edu> to upload your resume and cover letter.

Explanation of Job Grades:

Most positions at Harvard are assigned to a job grade (listed below with each posting) based on a number of factors including the position's duties and responsibilities as well as required skills and knowledge.

The salary ranges for each job grade are available at <http://www.employment.harvard.edu>. Target hiring rates will fall within these ranges. These salary ranges are for full-time positions and are adjusted for part-time positions. Services & Trades positions are not assigned grade levels. The relevant union contract determines salary levels for these positions.

Other Opportunities:

All non-faculty job openings currently available at the University are listed on the Web at <http://www.employment.harvard.edu>.

harvard.edu. There are also job postings available for viewing in the Longwood Medical area, 25 Shattuck St., Gordon Hall Building. For more information, please call 432-2035.

This is only a partial listing. For a complete listing of jobs, go to <http://www.employment.harvard.edu>.

In addition, Spherion Services, Inc., provides temporary secretarial and clerical staffing services to the University. If you are interested in temporary work at Harvard (full- or part-time), call Spherion at (617) 495-1500 or (617) 432-6200

(Longwood area).

Additional Career Support:

A Web page on career issues, including links to career assessment, exploration, resources, and job listings, is available for staff at <http://www.harvie.harvard.edu/learning/careerdevelopment/index.shtml>

Job Search Info Sessions:

Harvard University offers a series of information sessions on various job search topics such as interviewing, how to target the right positions, and navigating the Harvard hiring process. All are

welcome to attend. The sessions are typically held on the first Wednesday of each month from 5:30 to 7:00 at the Harvard Events and Information Center in Holyoke Center at 1350 Massachusetts Avenue in Harvard Square. More information is available online at <http://employment.harvard.edu/careers/findingajob/>.

Please Note:

The letters "SIC" at the end of a job listing indicate that there is a strong internal candidate (a current Harvard staff member) in consideration for this position.

Academic

Research Associate/Scientist Req. 35823, Gr. 000
Harvard School of Public Health/CBAR
FT (11/13/2008)

Research Associate/Scientist Req. 35824, Gr. 000
Harvard School of Public Health/CBAR
FT (11/13/2008)

Alumni Affairs and Development

Director of Development, Principal & Major Gifts Req. 35882, Gr. 060

Harvard Medical School/Office of Resource Development
FT (11/20/2008)

Director, Development Req. 35982, Gr. 060
Harvard Business School/External Relations
FT (12/4/2008)

Dining & Hospitality Services

Lead Req. 35922, Gr. 015

Dining Services/Annenberg
Union: HEREIU Local 26, FT (11/27/2008)

General Services Req. 35763, Gr. 010

Dining Services/Annenberg
Union: HEREIU Local 26, PT (11/6/2008)

General Service Req. 35927, Gr. 010

Dining Services/Leverett
Union: HEREIU Local 26, PT (11/27/2008)

Assistant Cook/General Cook Req. 35715, Gr. 016

Dining Services/Lowell/Winthrop
Union: HEREIU Local 26, PT (10/30/2008)

Sales Attendant Req. 35765, Gr. 031

Dining Services/Northwest Cafe
Union: HEREIU Local 26, PT (11/6/2008)

General Service Req. 35923, Gr. 010

Dining Services/Lowell/Winthrop
Union: HEREIU Local 26, PT (11/27/2008)

General Services Req. 36027, Gr. 010

Dining Services/Lowell/Winthrop
Union: HEREIU Local 26, PT (12/18/2008)

General Service Req. 35974, Gr. 010

Dining Services/Eliot/Kirkland
Union: HEREIU Local 26, PT (12/4/2008)

General Services Req. 35986, Gr. 010

Dining Services/Cabot/ Pforzheimer
Union: HEREIU Local 26, PT (12/11/2008)

General Services Req. 35925, Gr. 010

Dining Services/Eliot/Kirkland
Union: HEREIU Local 26, PT (11/27/2008)

General Services Req. 35987, Gr. 010

Dining Services/Adams
Union: HEREIU Local 26, PT (12/11/2008)

Chef/Production Manager Req. 35796, Gr. 056

Dining Services/Dining Services
FT (11/13/2008)

Kitchenperson/Chef's

Helper/Potwasher/Laundryperson Combo Req. 36024,

Gr. 012

Dining Services/Quincy
Union: HEREIU Local 26, FT (12/18/2008)

Second Cook Req. 35758, Gr. 020

Dining Services/Annenberg
Union: HEREIU Local 26, FT (11/6/2008)

Assistant Cook Req. 35924, Gr. 016

Dining Services/Lowell/Winthrop
Union: HEREIU Local 26, FT (11/27/2008)

General Services Req. 35825, Gr. 010

Dining Services/Dunster/Mather
Union: HEREIU Local 26, PT (11/13/2008)

General Service Req. 35826, Gr. 010

Dining Services/Adams
Union: HEREIU Local 26, PT (11/13/2008)

Facilities

Electrician (High Tension Technician) Req. 35899, Gr. 029

University Operations Services/Engineering & Utilities
Union: ATC/IBEW Local 103, FT (11/27/2008)

HVAC Mechanic (Maintenance Operator) Req. 35822,

Gr. 029

University Operations Services/FMO
Union: ATC/IUOE Local 877, FT (11/13/2008)

HVAC Mechanic (Maintenance Operator) Req. 35881,

Gr. 029

University Operations Services/FMO
Union: ATC/IUOE Local 877, FT (11/20/2008)

HVAC Mechanic (Maintenance Operator) Req. 35821,

Gr. 029

University Operations Services/FMO
Union: ATC/IUOE Local 877, FT (11/13/2008)

Faculty & Student Services

Assistant Director Req. 35850, Gr. 058

Harvard Business School/MBA Admissions
FT (11/20/2008)

Assistant Director, Bernard Koteen Office of Public

Interest Advising (OPIA) Req. 35816, Gr. 057
Harvard Law School
FT (11/13/2008)

Assistant Director, Admissions Req. 35851, Gr. 058

Harvard Business School/MBA Admissions
FT (11/20/2008)

Finance

Manager of Accounts Payable, Cash Management, and

Travel and Entertainment Req. 35697, Gr. 058
Harvard School of Public Health/Office of Financial

Services
FT (10/30/2008)

Associate Dean of Finance/Chief Financial Officer Req.

35843, Gr. 062
Harvard Law School
FT (11/20/2008)

Associate Dean of Finance/Chief Financial Officer Req.

35859, Gr. 062

JFK School of Government/Executive Dean's Office
FT (11/20/2008)

Senior Financial Analyst Req. 35769, Gr. 059

Financial Administration/Office of Budgets and Financial
Planning
FT (11/6/2008)

Associate Director, Research Administration and

Financial Operations Req. 36005, Gr. 058
Harvard Business School/Division of Research and Faculty

Development
FT (12/11/2008)

Financial Analyst Req. 35768, Gr. 058

Financial Administration/Office of Budgets and Financial
Planning
FT (11/6/2008)

Senior Financial Associate Req. 35873, Gr. 056

Harvard Medical School/Global Health and Social Medicine
FT (11/20/2008)

Financial Systems Manager Req. 35940, Gr. 057

University Administration/HRES
FT (11/27/2008)

General Administration

Project Manager Req. 36019, Gr. 056

Harvard School of Public Health/SHDH
FT (12/18/2008)

Sosland Director of the Harvard College Writing Program

Req. 35790, Gr. 060
Faculty of Arts and Sciences/Office of Undergraduate
Education

FT (11/13/2008)

Manager of Strategic Communications and Research

Dissemination Req. 35858, Gr. 057
JFK School of Government/Center for International

Development
FT (11/20/2008)

Laboratory Administrator Req. 35751, Gr. 055

Faculty of Arts and Sciences/Chemistry & Chemical Biology
FT (11/6/2008)

Associate Director, C. Roland Christensen Center for

Teaching and Learning Req. 35977, Gr. 059
Harvard Business School/Division of Research and Faculty

Development
FT (12/4/2008)

Associate Dean for Resource Development Req. 35897,

Gr. 062
Harvard School of Public Health/Dean's Office
FT (11/27/2008)

Program Manager MassCONNECT 4KIDS (MC4K) Req.

35941, Gr. 056
Harvard School of Public Health/Division of Public Health

Practice
FT (11/27/2008)

Assistant Director, Surveys & Analysis Req. 35948, Gr.

057
Graduate School of Education/COACHE
FT (11/27/2008)

Data and Reporting Analyst Req. 35988, Gr. 057

University Administration/Institutional Research
FT (12/11/2008)

Executive Assistant Req. 35997, Gr. 054

University Administration/Institutional Research
PT (12/11/2008)

Program Manager/Domain Manager Nonprofit

Organizations in China Req. 35773, Gr. 058
JFK School of Government/Hauser Center
FT (11/6/2008)

Human Resources

Senior Human Resource Consultant Req. 36028, Gr.

058
Harvard College Library/Harvard College Library Human

Resource Services
FT (12/18/2008)

Information Technology

Program Manager, Educational Technology Group Req.

35852, Gr. 0590
FT (10/30/2008)

Statistical Programmer Req. 36018, Gr. 057

Faculty of Arts and Sciences/Institute for Quantitative
Social Science
FT (12/18/2008)

Senior Systems Administrator Req. 35779, Gr. 058

School of Engineering & Applied Sciences/Computing &
Information Technology
FT (11/6/2008)

Software Engineer Req. 35979, Gr. 057

Harvard Medical School/CBMI/Countway
FT (12/4/2008)

Database Applications Developer Req. 35938, Gr. 056

Graduate School of Education/Learning Technology Center
FT (11/27/2008)

CTSC Software Quality Assurance Engineer Req. 35949,

Gr. 057
Harvard Medical School/CBMI/Countway
FT (11/27/2008)

Windows Systems Administrator Req. 35695, Gr. 057

Division of Continuing Education/Distance Education, DCE
FT (10/30/2008)

Scientific Programmer Req. 35807, Gr. 056

Harvard Medical School/CBMI
FT (11/13/2008)

Student Information Systems Support Specialist Req.

35975, Gr. 056
Harvard Divinity School/IT&MS
FT (12/4/2008)

Senior Database Administrator Req. 36016, Gr. 058

Harvard Medical School/Information Technology -

eComputing
FT (12/18/2008)

Business Analyst/Student Information System Specialist

Req. 35961, Gr. 057
Division of Continuing Education/Registrar's Office
FT (12/4/2008)

Manager, Research IT Operations Req. 35784, Gr. 059

Harvard Medical School/Information Technology - Client
Services Group
FT (11/13/2008)

User Experience Designer Req. 35792, Gr. 058

University Information Systems/iCommons
FT (11/13/2008)

Library

Aeon Project Manager Req. 36022, Gr. 058

Harvard College Library/Collection Management
FT, SIC, (12/18/2008)

CTSC Bioinformatics Educator Req. 35803, Gr. 058

Harvard Medical School/Countway Library
FT (11/13/2008)

Project Archivist (Archives for Women in Medicine)

Req. 35801, Gr. 056
Harvard Medical School/Countway
FT (11/13/2008)

Museum

Curatorial Fellow Req. 35832, Gr. 090

University Administration/Arnold Arboretum/Curation
FT (11/20/2008)

Research

Research Associate Req. 36026, Gr. 055

Harvard Business School/Division of Research &
Faculty Development
PT (12/18/2008)

Research Associate Req. 35908, Gr. 056

Harvard Business School/Division of Research &
Faculty Development
PT (11/27/2008)

Researcher Req. 35972, Gr. 056

Harvard Medical School/Genetics
FT (12/4/2008)

Biostatistician I Req. 35990, Gr. 056

Harvard School of Public Health/Biostatistics
PT (12/11/2008)

Research Associate Req. 35910, Gr. 055

Harvard Business School/Division of Research &
Faculty Development
FT (11/27/2008)

Research Associate Req. 35876, Gr. 055

Harvard Business School/Division of Research &
Faculty Development
FT (11/20/2008)

Research Associate Req. 35875, Gr. 055

Harvard Business School/Division of Research &
Faculty Development
FT (11/20/2008)

Administrative Director - Wyss Institute Req. 35766,

Gr. 060
School of Engineering & Applied Sciences/Wyss
Institute
FT (11/6/2008)

Data Analyst Req. 36020, Gr. 056

Harvard School of Public Health/Immunology and
Infectious Diseases
FT (12/18/2008)

Project Director Req. 36021, Gr. 057

Graduate School of Education/GSE Research
FT (12/18/2008)

Research Associate Req. 36041, Gr. 056

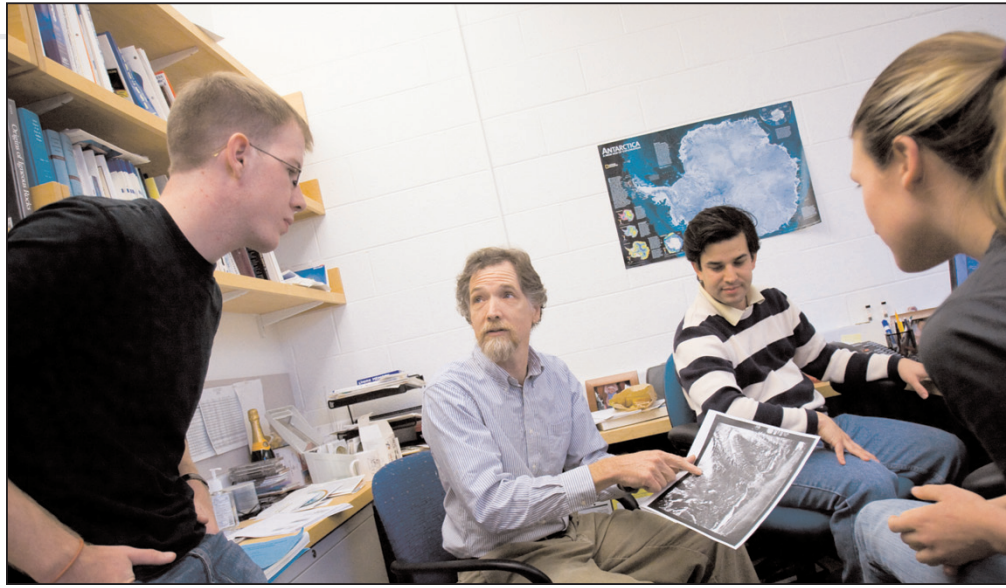
Harvard Business School/Division of Research &
Faculty Development
PT (12/18/2008)

Antarctica

(Continued from page 1)

Sujoy Mukhopadhyay's Noble Gas Laboratory in order to study the history of the East Antarctic Ice Sheet (EAIS) and its correlation to climate change. (Noble gases are odorless, colorless chemical elements with very low reactivity that act as unique geochemical tracers for studying a variety of processes in planetary science.) Allen Pope, a 2008 graduate of Harvard, who studied and wrote his thesis under Mukhopadhyay, an assistant professor in the Department of Earth and Planetary Sciences, is taking a few months from his graduate Polar Research Studies at Cambridge University to join the expedition. Robert Ackert, a glacial geologist and research associate in Mukhopadhyay's lab, will be supervising the field operations.

When it comes to monitoring the health of the Earth vis-à-vis climate change, ice



Stephanie Mitchell/Harvard News Office

On the eve of their departure, Professor Sujoy Mukhopadhyay (second from right) consults with his researchers Allen Pope (left), Robert Ackert, and Jennifer Middleton.

data obtained from samples collected during a previous field expedition, Mukhopadhyay thinks the story might be more complicated. Perhaps glacial floods associated with smaller valley glaciers or even erosion caused by wind and the freezing and thawing of ice formed the potholes. If either — or both — of these scenarios is accurate, it would have drastic implications for climate modeling.

To investigate the potholes and other topographical features, the team will be camping for one to two weeks each at three separate sites, which were chosen to provide the researchers with a variety of landscapes from which to collect samples. Members of the team will have

to scale the massive holes, but the associated risks do not seem to worry them. Ackert jokes, "The most dangerous thing about

Blog entry Dec. 5. Despite the lack of internet in the Dry Valleys, we have devised a rather convoluted method for continuing to post to our blog ... We'll write up a post and take some photos, then we'll put this stuff on a flash drive and give that to the helicopter pilot when he comes out to ferry us around the Dry Valleys and bring our resupplies every few days. The pilot will then fly back to McMurdo and give the memory drive to a USAP staffer at Crary (the McMurdo science lab). The staffer will then e-mail the posts and photos to Sujoy back in Boston, who will upload it all to the blog for everyone to see. So the next time you see an update on our blog (after Robert's), keep in mind all the effort that went in to making it. **Posted by Jennifer Middleton at 8:57 AM**

sheets are like the planet's pulse. But, since glaciers effect both ocean circulation and the amount of radiation reflected from Earth back to space, the glaciers influence — as well as monitor — climate change. The dynamic feedback system is not yet completely understood. "Knowing whether or not the EAIS has been stable or has fluctuated in extent over the past 10 million years is a critical question for climate modeling," Mukhopadhyay explains in his National Science Foundation (NSF) proposal.

So, it is the Antarctic glaciers that bring Middleton, Pope, and Ackert to the bleak 10-million-year-old landscape of the McMurdo Dry Valleys, a journey that took almost two weeks — slowed as it was by the requisite stopovers and inevitable flight delays.

The extent of glaciation in Antarctica during the past 10 million years is still hotly debated. Did a several-kilometer thick sheet of ice completely cover the Transantarctic Mountains 10 to 14 million years ago? How did the Antarctic Ice Sheet behave between 3 and 5 million years ago, when global temperatures and carbon dioxide concentrations were higher than they are today?

It's not the ice itself the research team will be studying, but rather the otherworldly tracks left by now-melted ice-sheets. The intriguing beauty and barren, desolate tranquility of the area have captured and enchanted Robert Ackert for years. It is a topography, he explains, that is "eerily similar" to that of Mars. The mystery of this ancient terrain has drawn Ackert back to the icy continent for his 14th expedition. "It's kind of a detective story," he says, "Why does this landscape look like it does? And what's happened? What's the landscape trying to tell you?"

In trying to uncover the secrets of the Dry Valleys, the research team is examining one of the region's more intriguing landforms: massive "potholes," some more than 10 meters wide and twice as deep. The potholes are believed to have been carved by running water under a giant ice sheet 10 to 14 million years ago, and have been exposed to air since the ice sheet retreated around 10 million years ago. However, based on preliminary



Photos courtesy of Jennifer Middleton and Allen Pope

Massive 'potholes,' on the order of 10 meters wide, are of particular interest to the Mukhopadhyay research team. These geological features are evidence of past erosion.



Allen Pope measures the GPS coordinates of a sample. This sensitive ecosystem is an Antarctica Specially Managed Area, and the researchers will have to report the coordinates of all samples taken.

going to Antarctica is crossing the street in Christchurch [New Zealand] because they drive on the wrong side of the road." Just in case, Mukhopadhyay and Ackert enlisted a Kiwi mountaineer to help the fieldworkers complete their "extreme geology."

It is back in Mukhopadhyay's Noble Gas Laboratory that the mystery of the Antarctic Ice Sheets will be unraveled. In order to determine if these bizarre potholes are formed from ancient (10-million-year-old) subglacial floods or have been constantly eroding through other processes since the last deglaciation of the area, the age and erosion rate of the exposed sandstone must be figured. Mukhopadhyay's laboratory will measure concentrations of cosmogenic nuclides collected on this trip, which correlate to when the sandstone was exposed to air. Published results are expected in 2010 or 2011.

For Middleton, the opportunity to travel to this extreme locale is like a dream come true. She was not originally slated to join the expedition, but as an undergraduate research assistant in the Mukhopadhyay laboratory, word of the upcoming trip entranced her, and she began to wish she'd somehow get a chance to go. "I did spend a lot of time day-dreaming," she says. "What if, at the last minute, they were like, 'You should go to Antarctica!'"

That is, in fact, precisely what transpired. After giving up his spot because of family con-

(See *Antarctica*, next page)