Evolution explored from all angles

Class of '58 members bring exhibit to life; faculty fieldwork fulfills museum’s mission

By Alvin Powell

Harvard News Office

From humanity’s close relationship to chimpanzees to the missing link between land and sea creatures, the Harvard Museum of Natural History (HMNH) has capped off a year celebrating Darwin and “On the Origin of Species” with a new exhibit that puts evolution front and center.

Called simply, “Evolution,” the exhibit, which opened in April, looks at evolution from a variety of angles, from tree-of-life relationships between creatures, to convergence that causes distantly related species to develop similar traits, to anatomical, fossil, and genetic evidence that evolution underlies life around us.

As it does so, the exhibit takes pains to highlight the role of Harvard faculty in important discoveries in the field, fulfilling the museum’s mission to be the public face of the collections and research that goes on beyond its galleries. Among the faculty whose work is mentioned in the exhibit is Agassiz Professor of Zoology Farish Jenkins’ discovery of the missing link between fishes and terrestrial vertebrates. Called Tiktaalik roseae, the fossil was discovered in 2004 by Jenkins and colleagues from the University of Chicago and the Academy of Natural Sciences in Philadelphia, filling a blank in the fossil record. A model of Tiktaalik, gleaming as if still wet and peering out of a shallow, prehistoric stream or pond, is the first thing visitors see when they enter. Also mentioned is the evolution of anoles lizards on Caribbean islands, research conducted by Lehner Professor.

(See Evolution, page 28)

To give just a hint of the profusion of species, the exhibit includes a Beetle Trophic Pyramid (detail above) in which every specimen represents approximately 1,000 species.

Mendillo: Guiding Harvard’s endowment

Call it fate. Just as the world’s financial markets started tumbling, a woman with unique understanding of the Harvard endowment took over the helm of the Harvard Management Company (HMC). Jane Mendillo came to the endowment from Wellesley College, where she restructured the school’s portfolio to strengthen investment results over the long term. Before that, she spent 15 years at HMC, handling everything from domestic equities to alternative assets and developing an appreciation for the team at HMC, which she says provides “important insight and flexibility” to the management of Harvard’s assets.

Mendillo spoke with the Gazette about guiding the University’s portfolio through challenging economic times.
**Special notice regarding Commencement Exercises**

**Morning Exercises**

To accommodate the increasing number of those wishing to attend Harvard’s Commencement Exercises, the following guidelines are proposed to facilitate admission into Tercentenary Theatre on Commencement Morning (June 4):

- Degree candidates will receive a limited number of tickets to Commencement. Parents and guests of degree candidates must have tickets, which they will be required to show at the gates in order to enter Tercentenary Theatre. Seating capacity is limited, however there is standing room on the Widener steps and at the rear and sides of the theater for viewing the exercises.

**Note:** A ticket allows admission into Tercentenary Theatre, but does not guarantee a seat. The sale of Commencement tickets is prohibited.

- Alumni/ae attending their major reunions (25th, 35th, 50th) will receive tickets at their reunions. Alumni/ae in classes beyond the 50th may obtain tickets from the Classes and Reunions Office, 124 Mt. Auburn St., sixth floor, Cambridge, MA 02138.

For alumni/ae from nonmajor reunion years and their spouses, there is televised viewing of the Morning Exercises in the Science Center, and at designated locations in most of the undergraduate Houses and graduate and professional Schools. These locations provide ample seating, and tickets are not required.

- A very limited supply of tickets will be made available to all other alumni/ae on a first-come, first-served basis through the Harvard Alumni Association, 124 Mt. Auburn St., sixth floor, Cambridge, MA 02138.

**Afternoon Exercises**

The Annual Business Meeting of the Harvard Alumni Association convenes in Tercentenary Theatre on Commencement afternoon. All alumni and alumnae, faculty, students, parents, and guests are invited to attend and hear Harvard’s president and the Commencement speaker deliver their addresses. Tickets for the afternoon ceremony will be available through the Harvard Alumni Association, 124 Mt. Auburn St., sixth floor, Cambridge, MA 02138.

— Jacqueline A. O’Neill
University Marshal

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**This month in Harvard history**

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June 19, 1725 — The Harvard Corporation elects Benjamin Wadsorth, Class of 1690, as Harvard’s eighth President.

June 11, 1776 — The Provincial Congress grants the College permission to reoccupy its buildings, and Harvard prepares to return from Concord, where it has operated since October 1775.

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

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**H1N1 influenza advice for Commencement week visitors**

While at Harvard, should you experience any symptoms consistent with H1N1 flu, you should contact Harvard University Health Services.

These symptoms include fever (greater than 100 degrees F or 37.8 degrees C) and any of the following: sore throat, cough, stuffy nose, chills, headache and body aches, or fatigue. Some have also reported diarrhea and vomiting associated with H1N1 flu.

HUHS is available 24 hours a day and is located at 75 Mt. Auburn St. The HUHS day-shift telephone numbers are (617) 495-2001 and (617) 495-8414. For evenings, nights, and weekends, the number is (617) 495-5711.

If you have symptoms of H1N1 flu, it is important that you see a doctor to determine if you need medication and to determine whether you should isolate yourself to avoid infecting others. If you are diagnosed with H1N1 flu, you should avoid close contact with others. Increased fluids, rest, and Tylenol are usually suggested. Some antiviral medications may be prescribed.

If you are ill and unexpectedly feeling worse (such as having trouble breathing, having chest pain, feeling faint, or dehydrated), call 911 or contact HUHS immediately.

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**POLICE REPORTS**

**Moving on up**

Moving trucks, including the fanciful, futuristic one above, are proliferating around the Yard these days.

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Leadership Initiative Fellow Bolden nominated to head NASA

By Alvin Powell
Harvard News Office

Retired Marine Maj. Gen. and former astronaut Charles Bolden was nominated to be the head of NASA Saturday (May 23), interrupting his stay at Harvard as an Advanced Leadership Fellow.

Bolden was halfway through the calen-
dar-year fellowship with the Harvard Ad-
vanced Leadership Initiative, a new inter-
faculty program. The fellowships are aimed at experienced leaders with 20- to 25-year track records of accomplishment who are interested in devoting future efforts to signif-
ificant public service or international prob-
lems.

While at Harvard, the fellows audit class-
es, mentor students, attend a weekly seminar and intensive workshops with experts, and travel to Brazil and Louisiana before under-
taking independent research. Bolden, who arrived in January, is interested in research on using education to help disadvantaged children and on improving the lives of those stricken with sickle cell anemia.

Advanced Leadership Initiative Chair and Director Rosabeth Moss Kanter, the Ar-
buckle Professor of Business Administra-
tion, said initiative faculty and fellows are proud that Bolden was selected to continue his already considerable service to his coun-
try. Kanter, who has spent time with Bolden during his fellowship, described him as “thoughtful, warm, and strong.”

“He’s clearly very accomplished, but also humble,” Kanter said. “He’s motivated to help people who are disadvantaged.”

Bolden, who retired from the U.S. Marine Corps as a major general in 2004, was born in 1946. He graduated from the U.S. Naval Academy in 1968 and flew combat mis-
sions in Vietnam, Laos, and Cambodia in 1972 and 1973. He became a test pilot in 1979 and has logged more than 6,000 hours of flying time.

Bolden became an astronaut in 1981. He flew the space shuttle four times, including the 1990 mission that launched the Hubble space telescope and the 1994 mission that was the first U.S./Russian joint shuttle mis-
sion, which had a cosmonaut as a member of the crew. Bolden commanded that mis-
sion as well as his last, also in 1994.

President Barack Obama announced his inten-
tion to nominate Bolden as NASA admin-
istrator and Lori Garver, president of Cap-
ital Space LLC and former NASA official, as NASA deputy administrator on May 23.

“These talented individuals will help put NASA on course to boldly push the bound-
aries of science, aeronautics, and explo-
ration in the 21st century and ensure the long-term vibrancy of America’s space pro-
gram” Obama said in a statement.

NASA is dealing with several challenges as Bolden takes the reins. The agency faces questions about the future of the Interna-
tional Space Station and is in the midst of a transition from the space shuttle to the Orion program, which aims to replace the shuttle as the major vehicle to take astro-
nauts into space.

Scholar makes robots that detect land mines

By Corydon Ireland
Harvard News Office

On Oct. 10, 2005 — he remembers the date exactly — Thrishantha Nanayakkara was driving down a country road, headed for a science workshop at Jaffna Central College, a high school in the far north of Sri Lanka. The event was designed to distract potential child soldiers from the allure of war.

His cell phone rang. It was a government official, with a tip-off. “Turn back,” the caller said, in so many words, “or you will be killed.”

Nanayakkara, an artificial intelli-
gence expert, said the phone call saved his life. Later that day, the school principal at Jaffna was shot to death.

The call was also the last straw for Thrish (as he likes to be called) — the last of many threats from Tamil rebels. Within days, his wife and two children hiding, and furtive living as Thrish scrambled for a job.

In 2007, after a semester at the University of Texas, San Antonio, Thrish and his family slipped back into Sri Lanka for visas. He resigned his post as commissioner of the Sri Lanka Inventors Commission, took a sabbatical from teaching at the University of Moratuwa, and by July 1 — gratefully — was a visiting scholar at Harvard’s School of Engineering and Applied Sciences.

Just four years earlier, lured by the hope of perma-
nent peace, Thrish had moved back to Sri Lanka after earning a doctoral degree in Japan and doing postdoc-
toral work in the United States. In 2003, Sri Lanka was enjoying a cease-fire in the two-decade war between the Tamil Tigers and government forces.

In December 2004, drama visited the Indian Ocean nation in a killer wave: the tsunami that killed 225,000 people in 11 countries, including tens of thousands in Sri Lanka. For days, hundreds of other schol-
ars volunteered for relief work, bagging bodies, distrib-
uting food, and absorbing a nation’s collective shock.

In 2005, another killer wave: renewed fighting by Tamil rebels. They targeted scientists and politicians who addressed “burning problems,” said Thrish.

“Whenever someone proposes a concrete solution, they kill them.”

The fateful cell phone call came, in part, because Thrish was confronting one of those burning problems.

Yes and a team of researchers were at work on an an-
imal-robot team for hunting land mines. Sri Lanka is one of 50 countries affected worldwide by a legacy of an-
tipersonnel mines. As many as 3 million lie buried in the island’s rich farmland or in forests nearby.

Thrish had already correctly mapped a test mine field outside a Sri Lankan army base, using a ro-
botic device loosely strapped to a mungoose. In the space of one morning, the little mammal — light, agile, and equipped with an acute sense of smell — had sniffed out every buried mine.

But the Tamil guerrillas were targeting ideas as well as ideas, said Thrish. Among those they killed was a Sri Lankan legal scholar and a foreign min-
ister, he said. “Their ideals were different. That was their only criminal act.”

In the fall of 2007, three months after arriving at Har-
vard, Thrish became one of the scientists and writers supported by the Scholars at Risk program, adminis-
tered by Harvard University Committee on Human Rights Studies.

A gifted researcher, he continued work on land-
mine-hunting robots by starting work with experts at

The Scholars at Risk pro-
gram at Harvard started in 2002, when it spon-
sored an Ethiopian geog-
raper imprisoned for his work. (He showed that a certain famine had politi-
cal, not natural, causes.) Since then, the program has found temporary aca-
demic sanctuary for 26 scholars who face harass-
ment, imprisonment — or worse — in their native countries. Many choose to remain anonymous. In 2009-10 the program will host four scholars — from Eritrea, Iran, Iraq, and Pakistan. The 2008-09 class, including Thrishan-
tha Nanayakkara, num-
bered six — from Iran, Iraq, Sri Lanka, Syria, and Uzbekistan. Organizers have awarded Harvard fel-
lows to novelists, an-
thropologists, composers, physicists, historians, human rights advocates, and scholars of law, gov-
ernment, and literature.

The Harvard program is af-
filiated with the Scholars at Risk Network, an inter-
national consortium host-
ed by New York University. For more information, visit http://scholarsatrisk.nyu.
edu.
Biology department evolves at FAS

FAS creates a new dedicated Department of Human Evolutionary Biology

By Steve Bradt
FAS Communications

Earlier this month, the Faculty of Arts and Sciences (FAS) made official what scientists worldwide have known for years: Harvard is a hotbed of research and teaching in the field of human evolutionary biology — the study of why we’re the way we are.

At MIT, Thrish worked with Russ Tedrake’s Robot Locomotion Group to study the walking patterns and to understand what causes uncertainty in leg locomotion, and how animals cope with it.

At Harvard, Thrish worked with molecular biologist Naoshige Uchida on rodent olfaction. “Most robots,” said Thrish, “get stuck on fences and light enough to not set off a land mine. The mines can be dug up without removing springlike joints, and low clearance (6 inches). It’s small enough to squeeze under barbed-wire fences and light enough to not set off a land mine.

Thrish’s working model — a robot the size of a serving platter — has eight legs, one motor, springlike joints, and low clearance (6 inches).”

The mongoose is light too — less than 10 pounds. It’s a slender, intelligent mammal with the best developed sense of smell in nature, after the elephant and the pig. A third of its brain function is given over to processing odor signals.

Knowing more about these fundamental mammalian processes, said Thrish, will usher in a new generation of robots — self-learning, nimble, and equipped with sensitive (though artificial) noses.

In looking for land mines, such robots even in their present form reduce risk to humans and protect the environment. Once precisely located, the mines can be dug up without removing layers of fertile topsoil or virgin trees.

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The mongoose also has excellent locomotive skills in a forest environment, and can be trained to detect buried explosives quickly, said Thrish. “100 percent detection takes just three weeks.”

At Harvard, Thrish worked with molecular biologist Naoshige Uchida on rodent olfaction. He also worked with Robert Howe, Harvard’s Gordon McKay Professor of Engineering, and assistant professor of computer science Radhika Nagpal. They supervised Matthew Valente ’09, who used Thrish’s improved understanding of legged locomotion in rough terrain to build a field model robot that was tested in mud, brush, and sand.

At MIT, Thrish worked with Russ Tedrake’s Robot Locomotion Group to study the walking patterns and to understand what causes uncertainty in leg locomotion, and how animals cope with it.

A major barrier in robot research is this uncertainty. “Most robots,” said Thrish, “get stuck or fall down in uncertain environments.” With a laugh, he called this emerging field of machine motion “careful walking.”

Thrish no longer works on robots coupled with rodents, but he still studies odor-guided behavior and legged robot locomotion.

But the mongoose and its ilk will have a continuing role, said Thrish. They “teach” self-learning robots how to move through cluttered terrain, and continue to provide scientists with models for man-made odor sensors.

In April, Thrish helped organize a two-day conference on humanistic de-mining — the first ever at Harvard and MIT. It included experts in artificial noses, as well as in field robotics, odor-guided behavior, seismic sensing, and humanitarian action.

In June, Thrish and his family will depart for a new life in the United Kingdom, where, at King’s College London, he’ll continue research on legged locomotion for robots, deformable robotic bodies, and primate bipedal locomotion.

At Harvard, Thrish burrowed into his science, but he also broadened his perspective on the land mine detection problem, connecting up with experts in political science, philan-thropy, humanitarian aid, and other humanist disciplines.

“The engineering we do,” he said, “cannot be disassociated from the humanities, from the environment, or from politics.”

“This is clear, Lieberman adds, that a holistic view — such as that embraced by his colleagues — is key to addressing problems of this complexity. And, he says, with its insights into what makes us human, evolutionary biology can help address the underlying causes of major global problems, rather than just the symptoms.

“How humans came to populate the globe left an imprint on our genomes collectively, says Maryellen Bavolo, professor of human evolutionary biology. “The big questions that still remain are first, which genes have been molded by natural selection to make us different from our common ancestor with chimpanzees, and second, which genes have been selected for, more recently, in human evolution that are adaptations to new, diverse environments that humans have colonized.”

The field of human evolutionary biology is itself evolving fast, adds Richard Wrangham, Ruth Moore Professor of Biological Anthropology, with advances in genetics, genomics, and neuroscience playing a particularly important role.

“The great thing about this area is that we can pull together advances from many different disciplines,” Wrangham says, “offering an integrated view of the effects of biological and cultural influences.”

Small by Harvard standards in terms of faculty, the Department of Human Evolutionary Biology is large by the standards of its field, which still counts but a few full-fledged academic departments. The Max Planck Institute in Leipzig, Germany, is an international leader in human evolutionary biology; on this side of the Atlantic, similar departments exist at Duke University and in Stony Brook University’s medical school.

Students have responded favorably to Harvard’s offerings in the area. The undergraduate concentration in human evolutionary biology, launched in 2006, is already home to some 150 concentrators — among the largest cohorts in the College.

“Human evolutionary biology attracts students from a wide range of interests, from philosophy to pre-meds — anyone wanting to understand where we came from, what we are, and where we are going,” Wrangham says.

The new Department of Human Evolutionary Biology evolved from the biological anthropology wing of the Department of Anthropology, one of three distinct divisions in existence since 1972.

“Anthropology at Harvard has a long and distinguished history, but the intellectual paradigms of the field have undergone rapid change in the past generation,” says Ted bestor, professor of anthropolo-gy and chair of the Department of An-thropology, adding that modern human evolutionary biology differs tremendously from physical anthropology as practiced even 15 or 20 years ago.

The new Department of Human Evo-lutionary Biology and the archaeologists and social anthropologists in the Depart-ment of Anthropology will continue to share — and collaborate on — their common interests in understanding human beings across cultures, across historical and prehistorical time, and across the much greater spans of evolutionary de-velopment.

The new department, Lieberman says, is Harvard’s affirmation of evolutionary approaches to the question: “Why are we the way we are?”

“Evolution matters profoundly,” he says. “We need to understand our origins before we can possibly hope to address these urgent problems facing humanity.”

By Steve Bradt
Four faculty join FAS’s teaching elite

Named Harvard College Professors in five-year appointment

Four professors in the Faculty of Arts and Sciences have been named Harvard College Professors in recognition of their contributions to undergraduate teaching, advising, and mentoring.

The new Harvard College Professors are Ann Blair, Henry Charles Lea Professor of History; Janet Browne, Aramont Professor of the History of Science; Christopher Stubbs, professor of physics and astronomy; and Richard Thomas, professor of Greek and Latin.

The Harvard College Professorships were established in 1997, supported by a gift from John and Frances Loeb. The five-year appointments provide support for professional development, either in the form of research funding or summer salary. There are a total of 24 Harvard College Professorships.

The new class of Harvard College Professors shares their classroom philosophies, their views on balancing teaching and research, and their reaction to their new recognition as extraordinary educators.

— Amy Lavio, Steve Bratt, and Emily T. Simon
FAS Communications

Ann Blair

Ann Blair receives the honor of being named Harvard College Professor as she celebrates 25 years since she was a student at the College.

“I am a big fan of Harvard undergraduates! I was one myself — this year is my 25th reunion,” says Blair. “The students today seem more amazingly diverse and involved in more different activities than they were 25 years ago, so they’re even more interesting to get to know.”

Blair teaches courses on early modern European history, intellectual history, and the history of the book.

“As a historian with a focus on cultural and intellectual history I emphasize reading texts in historical context,” says Blair. “In most of my courses I ask students to focus on primary sources and to attend to the different mental categories and historical circumstances from which past thinkers approached the questions they thought were important. Sometimes those questions are still with us today. Studying the assumptions taken for granted in the past can help us be aware of how our own historical context shapes our thinking.”

Blair says that the collaborative nature of teaching at Harvard is particularly rewarding.

“I’m surrounded by wonderful colleagues and staff who can help with advice and extra support as needed,” says Blair. “When I work with a team of teaching fellows, I find we all learn from each other about the material and the best ways to teach it.”

She explains that she loves teaching, and especially teaching at Harvard.

“I feel it’s a great privilege to be here,” says Blair.

Janet Browne

“It is fantastic to work in such a lively and open atmosphere,” says Janet Browne, who joined the Harvard faculty in 2006.

Browne teaches courses on the history of evolutionary biology, Darwinism, and natural history. Her courses include undergraduate and graduate seminars, as well as classes in the Core Curriculum and the Program in General Education.

“I am thrilled to receive this honor,” says Browne. “I would like to thank all the wonderful people in the History of Science department, the Collection of Historic Scientific Instruments, the Gen Ed program, the Bok Center, and the Science Center Life Sciences lab and Cabot Library especially, who have been so supportive and inventive in making ideas happen.”

Christopher Stubbs

Physics department chairman Christopher Stubbs was “astonished” when he opened the letter informing him of his selection as a Harvard College Professor, and “deeply honored” by the recognition.

“I strive to make the research frontier in science accessible to undergraduate students, and incorporate those topics into the classroom at every opportunity,” Stubbs says.

“My field of research is cosmology, the study of the ingredients and interactions in the universe, and we’re living through a golden age of discovery. Bringing the excitement of science as an ongoing process into the classroom is one of my main goals.”

Since coming to Harvard in 2003, Stubbs has taught freshman seminars, courses in the introductory physics sequence, tutorials for astronomy concentrators, and several graduate-level classes. He had already been planning to develop several new courses — including a new General Education class — and says his Harvard College Professorship will allow him to devote time over the summer to these efforts.

“I thoroughly enjoy the freshman seminar where we discuss the fact that 95 percent of the universe is made of stuff that doesn’t appear in the periodic table,” he says. “It’s a delight to introduce our first-year students, especially those who don’t intend to pursue a science degree, to the frontier of ignorance in modern cosmology.”

Teaching and research complement and reinforce each other in his life at Harvard, says Stubbs, whose research group is a community of scholars that includes undergraduates, staff, graduate students, and postdoctoral scientists.

This summer, his team will welcome three new undergraduates as partners in the challenges of building apparatus, making measurements, and analyzing results.

“I think that much of the important learning at Harvard happens outside the lecture halls, especially in the sciences,” Stubbs says.

Richard Thomas

As professor of Greek and Latin in the Classics Department, Richard Thomas delves into the ancient world to illuminate the work of literary greats such as Horace and Virgil. But his investigations frequently make connections to the present — for example, the music of Bob Dylan.

“Dylan’s recent lyrics allude to classical texts, especially the poetry of Ovid,” says Thomas. “I have found it fascinating to explore that relationship, and to see Dylan engaging many of the same very human issues confronted by the great poets of Greece and Rome.”

His excitement about the classics and his ability to make the subject matter relevant and contemporary are hallmarks of Thomas’ courses.

“It is a delight year after year to introduce new students to the poets who have inspired two millennia of readers, and who remain as fresh and vital as they have ever been, a delight also to get new insights from the questions new generations of students bring to these texts,” Thomas says.

Thomas teaches a variety of offerings, including a General Education course on the poetry of Virgil, his reception, undergraduate courses in Latin literature, a graduate course on Latin prose composition, and a course on Dylan and his lyrics. Thomas currently serves as director of graduate studies for the department. Next year he will switch to director of undergraduate studies.

“It is a great honor to receive this award,” he says. “I have been fortunate to have spent all but three of my 32 teaching years at Harvard. These students and the libraries are what appealed to me from the moment I arrived, and it’s easy to forget just what a privilege Harvard faculty enjoy in this community of teaching and learning, particularly in such challenging times as these.”
Pneumonia risk increases when patients given medication for heartburn

By Bonnie Prescott
Beth Israel Deaconess Medical Center

Ever since a class of drugs called proton pump inhibitors was introduced to the market in the late 1980s, the use of these acid-suppressive medications for heartburn, acid reflux, and other gastrointestinal symptoms has grown tremendously. The widespread use has medical extended to the inpatient hospital setting, where patients are often routinely given the medications as a way to prevent the development of stress ulcers.

But a large study led by investigators at Beth Israel Deaconess Medical Center (BIDMC) finds that this routine practice may actually be harmful to patients. In their research, published in the May 27 issue of the Journal of the American Medical Association (JAMA), the researchers found that acid-suppressive medications were associated with a 30 percent increased risk of developing hospital-acquired pneumonia.

The practice of administering acid-suppressive medications to hospitalized patients originated in intensive care units (ICU), where a combination of stressful conditions and intubation (insertion of a tube into the airway to help a patient breathe) leaves individuals at higher risk of developing stress ulcers. In an attempt to thwart this development, many hospitals began routinely prescribing acid-suppressive agents to all patients in the ICU. And, over time, the practice was also extended to general medical patients, explains Herzig. Today, an estimated 40 percent to 70 percent of hospitalized patients receive some form of acid-suppressive medication, either proton pump inhibitor drugs or medication known as histamine2 receptor antagonists.

“These popular medications are, by and large, considered safe,” explains the study’s lead author, Shoshana Herzig of BIDMC’s Division of General Medicine and Primary Care. “But, in fact, they may be creating an environment that predisposes patients to developing hospital-acquired pneumonia.”

The researchers examined the records of all patients over age 18 admitted to BIDMC and hospitalized for three days or more between January 2004 and December 2007, a total of 63,878 hospital admissions. Using hospital pharmacy records, they determined whether the patients were prescribed an acid-suppressing medication during their stay. Their analysis concluded that acid-suppressive medication was ordered in 32,922 admissions, or 52 percent. (Of the patients who received acid-suppressive medication, 83 percent — 27,236 patients — received proton pump inhibitor drugs, while 23 percent — 7,548 patients — received histamine 2 receptor antagonists, with some exposed to both.) The majority of these medications were ordered within 48 hours of admission.

Using a traditional statistical approach known as multivariable modeling, together with a newer statistical approach using propensity scores, they found that hospital-acquired pneumonia occurred in 2,219 admissions. After further analysis and adjustment for other potential factors that could influence outcomes, the investigators determined that the patients who received the medications had a 30 percent greater risk of developing pneumonia than other patients.

“By reducing acid in the stomach, the medications may be creating a distinct bacterial colonization in the gastrointestinal and respiratory tracts, predisposing patients to develop pneumonia,” explains Herzig. Furthermore, she adds, by reducing the acidity of the stomach contents (as occurs with the use of these medications) a patient’s stimulus to cough may also be reduced, posing another risk factor for pneumonia.
Deep in Civil War Mississippi, where manicured plantations gave way to wild swampland and thick pine forests, a young white man named Newton Knight led a ragtag band of guerilla fighters against the Confederate Army. His story is one of personal bravery and unwillingness to adhere to the secessionist movement that all but surrounded him. It also tells of inter racial alliances and the complexity of politics during the Civil War, when allegiances were not quite as simple as “Northern” or “Southern.”

Knight’s rebellion is the focus of “The State of Jones,” a forthcoming book by John Stauffer, chair of the Program in the History of the American Civilization and professor of English and of African and African American studies, and Sally Jenkins, journalist and columnist at the Washington Post. The book’s title refers to Jones County, the area of Mississippi where Knight lived and fought. Jones was the poorest county in the state and a surprising bastion of Unionism.

Knight began rounding up like-minded deserters and black allies and trained them to fight and survive on the forbidding terrain. In 1863, following the Battle of Vicksburg, the men pledged allegiance to the United States and launched a campaign of guerilla warfare against Confederate troops.

“The company consisted of about 70 men, and they received from [Gen. William Tecumseh] Sherman,” Stauffer said. “The Confederates kept trying to snuff them out with cavalry, but Newt and his men knew how to fight in the swamps.”

By the end of the war, numerous Unionist guerilla companies controlled the Piney Woods, the bottom quarter of the state. The strength of Unionism in Southern Mississippi was “terrifying” to the Confederate leadership, Stauffer said.

“Mississippi was the marrow of the Confederacy, the second state to secede, and home to some of the wealthiest and most powerful men in America,” said Stauffer. “The Confederate high command was frightened and outraged by the amount of Unionism that emerged there.”

Even more alarming for Confederates, Stauffer said, was the idea of whites and blacks rebelling in league.

“This truly was their worst nightmare,” he said.

The end of the Civil War brought little comfort for Knight and his men, according to Stauffer.

“The Confederates surrendered but they did not lay down their arms,” Stauffer said. “Instead, they continued shooting blacks, Unionists, and Republicans, and started a reign of terror throughout the South.”

Reconstructing Reconstruction, Knight befriended and worked with Republican Gov. Adelbert Ames and led a company of black militiamen.

“They were essentially living under siege, fighting off the former Confederate soldiers, who continued to kill Republicans at will,” said Stauffer. “The continuation of violence highlights the extent to which the South won the war, not only ideologically but militarily,” Stauffer argued.

“The long, scholarly legacy of romanticizing the South has overshadowed these stories of Southern Unionism,” Stauffer said. “The desire for reunion between Northerners and Southerners required the war to be whitewashed. During Reconstruction, the last phase of the war from Knight’s perspective, white Southerners won a war of attrition, preserving the old order of black unfreedom — despite constitutional amendments that guaranteed equality under the law for all persons.”

Official records, such as Confederate reports, proved helpful for Stauffer and Jenkins as they researched the history of Jones County.

“We only have one letter by Newt … so we had to rely extensively on official documents along with ‘parallel narratives’ from people whose experiences resembled those of Newton, such as ex-slaves and other Republicans in the South,” Stauffer said.

Stauffer and Jenkins traveled to homes in Mississippi to meet and conduct interviews with descendants of the Knight family.

“The State of Jones” is published by Doubleday Press. It will be available in June.

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**Face transplant recipient shares gratitude, hopes for his future**

By Alvin Powell

Harvard News Office

James Maki, a 59-year-old who became the nation’s second face transplant recipient in April to repair injuries from a horrific subway accident, left Brigham and Women’s Hospital May 21, thankful for what he called a “new chance to build my life.”

**medicine**

Maki, whose April 9 surgery at the Harvard-affiliated hospital received wide news coverage, appeared in public for the first time May 21 at a Brigham news conference. With him was Susan Whitman-Helfgot, the wife of donor Joseph Helfgot, who died at age 60 during heart transplant surgery.

Maki expressed his gratitude to the Helfgot family and the doctors at the Brigham and said he hopes his story highlights the importance of organ donation. Maki, whose place of residence was kept confidential, asked for privacy as he continues his rehabilitation and takes steps to rebuild his face.

“They did not know me. Clearly it was a deeply held belief in helping others that led them to their decision,” Maki said of the Helfgots. “I will be forever grateful.”

Maki, a Vietnam veteran who moved to Amherst, Mass., from Seattle when he was in high school, was injured in 2005 during an accident at the Juggles stop on Boston’s subway Orange Line. Maki fell onto the tracks and came in contact with the electrified third rail. The contact burned away much of the middle of Maki’s face, including his upper lip, a patch of skin near his eyes, and the tip of his nose.

Reconstructive surgery after the accident left Maki able to survive, but with a hole in his face where his nose used to be and difficulty speaking and eating.

His partial face transplant gave him a new nose, hard palate, upper lip, nasal structure, facial skin and the muscles and nerves that move the skin and give it sensation.

He received the transplant during a marathon 17-hour procedure that involved 35 doctors, anesthesiologists, nurses, and other clinical personnel working in two operating rooms to harvest the tissue and transplant it. Maki said the transplant was pain free and the first thing he thought when he looked at his new face was that his new nose looks like his old one.

Whitman-Helfgot also spoke, describing her husband as someone who grew up in poverty but sought out an education, earning a doctorate. He became a father and worked in Hollywood as a marketing adviser on such films as “Iron Man,” “X-Men,” and “Spider-Man.” She declined to share details of the family’s discussions as they weighed whether to permit the transplant, but urged everyone in the room to sign up to become organ donors, saying her husband’s heart transplant failed because he had to wait too long for a donor heart.

Seeing Maki and with some of the sting out of losing her husband, she called Maki’s transformation “a miracle and a blessing.”

(See Transplant, next page)
The Nieman Foundation for Journalism at Harvard has selected 24 journalists from the United States and abroad to join the 72nd class of Nieman Fellows. The group includes print and multimedia reporters and editors; radio and television journalists; photographers; book authors; a filmmaker; and a columnist.

Established in 1938, the Nieman Foundation is the oldest midcareer fellowship program for journalists in the world. Working journalists of accomplishment and promise are selected to come to Harvard University for a year of study, seminars, and special events. More than 1,300 journalists from 89 countries have received Nieman Fellowships.

The U.S. Nieman Fellows in the Class of 2010 and their areas of interest:

- Mary Jane Driscoll, a reporter, WBUR in Boston, will study health care spending and the politics of trying to curb health care costs.
- Maki Halim, a freelance journalist based in San Francisco, will study how criminal organizations create cultures of fear and fuel corruption, with a special focus on Mexico and Africa.
- Janet Heard (South Africa), executive editor, Weekend Argus, will study post-liberation politics, leadership, and the media.
- Jana Juginovic (Canada), medical reporter, The Washington Post, will study solutions to collective action problems and explore how minorities in interracial societies influence education, politics, and the criminal justice system.
- Alejandra Matus (Chile), freelance journalist, Punto de Encuentro magazine, and The Miami Herald, will study political science and technology to understand the impact social inequality and the concentration of economic power have on democracy, as well as the possibilities and limitations of new media technologies.
- James Reynolds (United Kingdom), China correspondent, BBC News, plans to investigate the question “Does violence work?”
- Madhu Chandra (India), a freelance writer from Chandigarh, will study the impact of new media on journalism as well as the influence of globalization on political processes in Latin America.
- Beth Macy, families beat reporter, The Roanoke (Va.) Times, will study the impact of the aging baby boomer population as well as financial, social, and political solutions to the long-term care crisis.
- Liz Mineo, reporter, The MetroWest Daily News in Framingham, Mass., will study the social, economic, political, and legal implications of the presence of Latin American immigrants to the United States, with a special focus on Brazilian immigrants. Mineo is the Donald W. Reynolds Nieman Fellow in Global Journalism.
- Lisa Mullins, anchor senior producer, Morning Edition, will study how the media are affecting policy and politics.
- Monica Campbell, a freelance writer from Canada, will study journalism, memory, and everyday life.
- Helen Branswell, a medical writer from Toronto, will study the health care costs.
- Alex Gersh (Canada), editor, Maclean’s, will study international organizations create cultures of fear and fuel corruption, with a special focus on Mexico and Africa.
- Carol Vazquez (Chile), freelance journalist, Al Día, will study the political and artistic grapple with the political and artistic.
- Jana Juginovic (Canada), medical reporter, The Washington Post, will study solutions to collective action problems and explore how minorities in interracial societies influence education, politics, and the criminal justice system.

Nieman Fellows in Global Health Reporting and their areas of interest:

- Hellen Bramwell (Canada), medical reporter, The Canadian Press, plans to study disease eradication efforts and the demands they place on developing countries.
- Hopewell Rugoho-Chin’ono (Zimbabwe), documentary film director/news producer, Television International, Zimbabwe, will examine the impact of poor health on Africa’s prosperity. Rugoho-Chin’ono was born in 1975 in one of Zimbabwe’s worse poverty and mental illness. Rugoho-Chin’ono is the Robert Waldo Ruhi Nieman Fellow.

International Nieman Fellows and their areas of interest:

- Audra Ang (China), correspondent, The Associated Press, will study how new media such as Twitter and blogs are shaping activism and nationalism in China. Ang is the Atsuko Chiba Nieman Fellow. Her fellowship honors the memory of Atsuko Chiba, a 1968 Nieman Fellow.
- Maria Balinskis (United Kingdom), editor, World Current Affairs Radio, BBC, will explore how the future of open source is changing the way the Internet is changing society. She will also study contemporary affairs with a particular emphasis on the media and how the media are affecting policy and politics.
- Balinskis is the Ruth Cowan Nash Nieman Fellow.
- Ibrahim Barazq (Palestinian Territories), correspondent, The Associated Press, will study history and political science and technology to better understand how leaders in Israel, the United States, and Palestine make decisions.
- Israel Bingham Jr. Nieman Fellow.
- Janet Heald (South Africa), executive editor, Weekend Argus, will study post-liberation politics, leadership, and the media.
- Jana Juginovic (Canada), director, news and programming, CTV News Channel, and executive producer, CTV News at 6, will study the impact of 24-hour news on public policy. Juginovic is the Martin Wise Goodman Nieman Fellow.
- Jano Gorjao Henriques (Portugal), deputy editor, Público, will study the ways in which minorities in interracial societies influence intellectual circles and leading institutions, including the media. Henriques’ fellowship is supported by the Luso-American Foundation and the Calouste Gulbenkian Foundation.
- Jana Juginovic (Canada), director, news and programming, CTV News Channel, and executive producer, CTV News at 6, will study the impact of 24-hour news on public policy. Juginovic is the Martin Wise Goodman Nieman Fellow.
- Gary Knight (United Kingdom), photographer and editor, VII Photo Agency and Dispatches Quarterly, will examine the interconnectivity of some of the broad issues facing mankind, including the economy, the environment, foreign policy, human rights, and primary health care. He also plans to research business studies pertaining to the man and the relationships of business to society and history. He is the Carroll Binder Nieman Fellow.
- Alejandra Matus (Chile), freelance journalist, Punto de Encuentro magazine, and The Miami Herald, will study political science and technology to understand the impact social inequality and the concentration of economic power have on democracy, as well as the possibilities and limitations of new media technologies.
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Hospice care underused by many terminally ill patients, HMS study finds

By David Cameron
Harvard Medical School Communications

A new study led by researchers at Harvard Medical School (HMS) found that only about half the patients diagnosed with metastatic lung cancer discuss hospice care with their physician within four to seven months of their diagnosis.

“Many terminally ill patients who might benefit from hospice aren’t discussing it with their physicians and may not be aware of the services hospice could offer,” says Haiden Huskamp, lead author of the study and HMS associate professor of health care policy. Findings were published in the May 25 Archives of Internal Medicine.

Hospice, a well-established approach to palliative care, has enabled countless people worldwide to die with dignity. Through focusing on the patient rather than the disease, hospice ensures that individuals spend the last weeks of their lives in an environment where caregivers minimize their pain, maximize their comfort, and provide bereavement services for loved ones and family members.

Through the Cancer Care Outcomes Research and Surveillance Consortium, the researchers surveyed 1,517 patients diagnosed with metastatic lung cancer. For reasons not clear, blacks and Hispanics were less likely to discuss hospice than whites and Asians. Forty-nine percent of blacks and 43 percent of Hispanics discussed hospice with their doctors, whereas the percentages were 53 and 57, respectively. Married people were also less likely than unmarried people to have this discussion (51 percent compared with 57 percent, respectively).

In general, the longer patients expected to live after their diagnosis, the less likely they were to have explored hospice care with their doctors. However, the researchers also found that patients tended to overestimate how long they had to live. For example, about 30 percent of the patients thought that they would live up to two years. In reality, though, only about 6 percent of patients with metastatic lung cancer will survive that long.

What’s more, patients who preferred care that eased their pain and suffering at the end of life over care that extended life (roughly 50 percent of patients) were no more likely to have discussed hospice than patients who had the opposite preference.

“These conversations can be difficult for everyone involved — patients, families, and physicians,” says Huskamp. “We suspect that the process of considering prognosis and end-of-life care options in advance is essential to make sure that patients receive care that reflects their wishes.”

Patients with advanced cancer understandably hope that cancer treatments can extend their lives,” notes John Ayanian, senior author on the study and HMS professor of medicine and health care policy. “When these treatments are no longer working, their doctors have an important role to play in offering them hospice care that will ease their symptoms as they approach the end of life.”

This study was funded by the National Cancer Institute.

In 1999, Alessandra Sanguinetti began photographing two young cousins growing up in Buenos Aires. During her fellowship year, Sanguinetti will continue the project. The images include ‘Time Flies,’ 2005 (right), and ‘Untitled,’ 2004 (below).

Peabody awards photography fellowship

The Peabody Museum of Archaeology and Ethnology has recently announced Alessandra Sanguinetti as the recipient of the 2009 Robert Gardner Fellowship in Photography. Sanguinetti, an award-winning photographer who divides her time between the United States and Argentina, will be working on a project titled “The Life That Came,” inspired by an earlier project, “The Adventures of Guille and Belinda and the Enigmatic Meaning of Their Dreams.”

In 1999, she began photographing two young cousins as they grew up in the remote farmlands outside Buenos Aires. She cultivated a close relationship with the girls over a five-year period, capturing their dreams and desires as their childhood ended and they became young adults. Sanguinetti writes, “The Pampas is a mythical space imagined, but a more complex social one as well.” During her fellowship year, Sanguinetti will focus both on the two girls’ individuality and on the wider social networks and context in which they live.

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The Radcliffe Institute for Advanced Study at Harvard University has announced the women and men invited in 2009-10 as Radcliffe Fellows in 2009-10. These creative artists, humanists, scientists, and social scientists were chosen for their superior scholarship, research, or artistic talent, and the potential of their projects to yield long-term impact. While at Radcliffe, they will work both within and across disciplines, collaborating with one another and with members of the global humanities, sciences, and social sciences community.

The fellows include an astronomer searching for Earthlike planets in Centaurus, a constellation neighboring Earth’s own solar system, and the principal investigator on multiple projects, including the Lick Planet Search program, the Cerro Tololo Inter-American Observatory, and the Parkinson’s, and mad cow and who recently won the prestigious Otto Warburg Medal; celebri- cating music and Latin jazz; Pulitzer Prize-win- ning journalist Tony Horwitz, who is also the au- thor of several books about travel; and defense lawyer Hausan Ibrahim, a winner of many precedent-setting cases before Islamic Sharia courts who was honored with the 2005 Sakharov Prize for Freedom of Thought. The 2010-11 fellowship applications for creat- ives arts fellows are now due Oct. 1; applications for natural scien- tists and mathematicians are due Nov. 15. Ma- terials sent by mail should be postmarked by these deadlines.

Applicants are evaluated at two levels of review. In the first level, two leaders in each ap- plication are read and a decision is made whether to invite the applicant for an interview. The top applicants are then submitted to a fel- lowship committee, which selects the fellow- ship class.

The Radcliffe Institute for Advanced Study at Harvard University is a scholarly communi- ty where individuals pursue advanced work ac- ross disciplines. Within this environment, scholars, and artists. Within this environment, they work on creative projects that have the potential for long-term impact. While at Radcliffe, they will work both within and across disciplines, collaborating with one another and with members of the global humanities, sciences, and social sciences community.

Creative arts fellows
Among the creative arts fellows are Alison Knowles, a visual artist and founding member of Fluxus — an international avant-garde move- ment with a history of challenging different media and disciplines, emphasizing frequently neglected elements as a basis for the creation of new works. Knowles is also known for her 1967 Guggenheim fellowship; “The Big Book” (1967), a book of printed faces, which toured in Europe; and “Bohnen Sequences” (Bean Sequences), a series of plays exploring the re- lationship between the size of different hard surfaces, which won her a 1982 Kari Szcza- k Prize for Works of Radio Art. Her unique in- stallations, performances, prints, publications, and sound works have been exhibited with many other awards. Knowles’ Radcliffe project is titled “Fluxus Around the Clock.”

Leonard Retel Helmrich is a film director at- tractions for the formation and evolution of structures in various parts of mathematics, how they relate to “exact” ones, and the im- plications of this relationship for number the- ory and other areas.

Science fellows
The humanities fellows include art histori- ans Claire Margaret Roberts, the senior cura- tor of the collection at the National Gallery of Art in Washington, D.C., and a fellow at the Australian National University. Among Roberts’ numerous honors is a grant from the Smithsonmian Institution and the Aus- tralia-China Council, as well as multiple art-re- lated Australian government appointments. Flu- ent in English, Chinese, and Malay, she has edited or co-edited several books and catalogs and curated many major exhibitions related to Asian visual culture. Roberts’ book “Going Green” (2006), a joint project of the Powerhouse Muse- um and the National Museum of China, Beijing. At Radcliffe, Roberts will study the histo- ry of the public talk on the formation and evolution of Islamic Sharia courts who was honored with the 2005 Sakharov Prize for Freedom of Thought. The 2010-11 fellowship applications for creat- ives arts fellows are now due Oct. 1; applications for natural scien- tists and mathematicians are due Nov. 15. Ma- terials sent by mail should be postmarked by these deadlines.

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The Radcliffe Institute for Advanced Study at Harvard University is a scholarly communi- ty where individuals pursue advanced work across a wide range of academic disciplines, methods, and the creative arts. With its broad purpose, the institute sustains a con- tinuing commitment to the study of women, gender, and society.

Radcliffe Institute Fellows and their projects
Joanna Alzenberg,* Susan S. and Kenneth L. Wallach Professor of Applied Sciences, will be this year’s professor at Radcliffe and the Bunting Fellow, Harvard University, natural sciences and mathematics, “Connecting Engineering, Physics, Chemistry, and Biology in the 21st Century”
Seema Alavi, William Bentinck-Smith Fellow, Jamia Millia Islamia (India), “Middle Class” — a culmination of her nine-year Kennedy School, who will form an economics clu- sear talk on the formation and evolution of Islamic Sharia courts who was honored with the 2005 Sakharov Prize for Freedom of Thought. The 2010-11 fellowship applications for creat- ives arts fellows are now due Oct. 1; applications for natural scien- tists and mathematicians are due Nov. 15. Ma- terials sent by mail should be postmarked by these deadlines.

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The Radcliffe Institute celebrates the accomplishments and commitment of distinguished alumnae with the 2009 Alumnae Awards.

The Radcliffe Institute for Advanced Study at Harvard University has announced the 2009 Radcliffe Alumnae Award winners, who will be honored at the Radcliffe Awards Symposium on June 5 from 10:30 a.m. to noon at the American Repertory Theater’s Loeb Drama Center. The event will also feature a panel discussion by alumnae award winners, titled “Seeking Harmony in a Tumultuous World: How Does an Individual Make a Difference?”

The award winners are distinguished alumnae who have extended the boundaries of knowledge in a wide range of fields and helped ensure the presence of women at the forefront of academia and the scientific community. The event will also feature a panel discussion by alumnae award winners, titled “Seeking Harmony in a Tumultuous World: How Does an Individual Make a Difference?”

Alumnae Award winners:

- **Sarah P. Chayes**, attorney, author, and journalist, has been a contributing editor to the magazine “The New Yorker” since 1993.
- **Amy Sillman**, artist, has been awarded the 2009 Alumnae Recognition Award.
- **Claire Margaret Roberts**, poet, has been named an Elizabeth Cary Agassiz Scholar.
- **Rachel Ollivier**, professor of physics at Harvard University, has been awarded the 2009 Radcliffe Fellowship Award.

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Tradition rings out

On Commencement Day, bells will peal in chimes of celebration

A peal of bells will ring throughout Cambridge next week, on June 4. For the 21st consecutive year a number of neighboring churches and institutions will ring their bells in celebration of the city of Cambridge and of Harvard’s 358th Commencement Exercises.

In a bow to earlier history when bells of varying tones summoned people from sleep to prayer, to work, or to study, this joyful noise will begin at 11:30 a.m., just after the sheriff of Middlesex County declares the Commencement Exercises adjourned. The bells will ring for approximately 15 minutes.

The bell in the Memorial Church tower, for years the only bell to acknowledge the festival rites of Commencement Day, will be joined by the pealing of a set of new bells replacing the 17-bell Russian zvon of Lowell House that was returned in 2008 to the Danilov Monastery near Moscow, the bell of the Harvard Business School, the Harvard Divinity School bell in Andover Hall, the historic “Harvard Chime” of Christ Church Cambridge, and the bells of the Church of the New Jerusalem, First Church Congregational, First Parish Unitarian Universalist, St. Paul Roman Catholic Church, St. Peter’s Roman Catholic Church, University Lutheran Church, Holy Trinity Armenian Apostolic Church, First Baptist Church, and St. Anthony’s Church.

Other churches or institutions interested in participating in this happy tintinnabulation are invited and encouraged to do so.

— Cynthia Rossano

Tips to help you enjoy Commencement, come rain or shine

Visitor tips and services

The following services will be in effect at the University on Commencement Day, June 4.

Restrooms

Restrooms for the general public are located in Weld, Thayer, and Sever halls. These restrooms are wheelchair accessible.

First aid stations

First aid stations will be situated in the following locations: Weld Hall (room 11); Thayer Hall (room 106); and Sever Hall (room 112).

Water stations

Clearly marked water stations will be located along the perimeter of Tercentenary Theatre. The stations will be located on the Widener Library steps, at Weld Hall (north porch and northeast entrance), Thayer Hall (south steps), Sever Hall (main entrance), and at the College Pump (near Hollis Hall).

Large-screen viewing

Large-screen televised viewing of the Morning Exercises will be available for ticketed guests at the Science Center, the undergraduate Houses, and most of the graduate and professional Schools.

Televised viewing

Morning Exercises and the afternoon Annual Meeting of the Harvard Alumni Association will be televised live for guests who are unable to attend. The broadcast times are 9 to 11:30 a.m. and 1:45 to 4:30 p.m. These events will be aired on Comcast Cable (Channel 283 in Cambridge/Greater Boston area and Channel 12 in Boston/Brookline).

Webcast viewing

A live Webcast of the day’s events can be viewed at the following Harvard sites: www commencemontoflice harvard edu, www commencement harvard edu, or www uis harvard edu.

Video services

Broadcast-quality, multiple-camera DVD and VHS recordings of Commencement Morning Exercises and the afternoon Annual Meeting of the Harvard Alumni Association held in Tercentenary Theatre will be available. Class Day exercises (held the afternoon of June 4) will also be available. Recordings of the morning and afternoon Commencement Day activities will include commentary during the processions. Single-camera recordings are made of the diploma ceremonies at all of the Houses and some of the graduate/professional Schools.

To purchase videos, or for more information, contact Commencement Video at (617) 884-6000; for audio only, call the Media Production Center at (617) 495-9440.

Parking

Parking at the University during Commencement Week is extremely limited. Please view updated information regarding Commencement parking at www uos harvard edu/transpor tation/parking/ special event_parking.shtml#comweekpark.

In case of rain

The Morning Exercises will be held rain or shine in Tercentenary Theatre.

The Alumni Procession begins promptly at 8:30 a.m.

Commencement schedule

On Commencement morning the Harvard gates will open at 6:45 a.m. Parents and guests of degree candidates who have tickets to attend the Morning Exercises should plan their arrival accordingly. All guests will be required to show their tickets at the gates in order to enter Tercentenary Theatre. All guests should be seated by 8:30 a.m. for the start of the academic procession, which begins at 8:50 a.m.

8 a.m. Senior Chapel in the Memorial Church begins.

8:05 a.m. Formation of advanced-degree candidates in the Sever Quadrangle.

8:15 a.m. Senior Chapel ends. Formation of seniors in the Old Yard.

8:30 a.m. Alumni Procession begins.

8:35 a.m. Procession of advanced-degree candidates begins.

8:50 a.m. Academic Procession begins. President’s Division begins processing through the open ranks of seniors. All alumni have ended their procession and have taken their seats in the theater.

9:25 a.m. President’s Division ends its procession into the theater.

9:45 a.m. Commencement ceremony begins.

11:30 a.m. Commencement ceremony ends.

Noon Luncheons and diploma-awarding ceremonies at the undergraduate Houses, and graduate and professional Schools.

1:30 p.m. Formation of the Alumni Procession in the Old Yard.

1:45 p.m. Alumni Procession begins.

2:30 p.m. The annual meeting of the Harvard Alumni Association in Tercentenary Theatre begins.

4:15 p.m. The annual meeting of the Harvard Alumni Association ends.
Talking terror

Harvard researchers probe the roots of ‘crimes against humanity’

This is one in an occasional series of articles examining the international work of Harvard faculty and researchers. It is part of a multimedia project available on the Harvard World Media Web site.

By Alvin Powell
Harvard News Office

The two men sit close, knees almost touching, in a mud-walled hut in the Congolese village of Katokota.

The thick grass roof mutes the sound of the falling rain in the room’s dim interior. Surrounded by dark earthen walls and lit only by the cloudy day’s gray window light, the scene has an intimate feel.

As if afraid to break the spell, the two men talk in low voices — low voices for serious subjects.

One man, an interviewer, asks about the other’s children, about his native tongue. He starts with easy questions before getting to the heart of the issue: horrific violence visited on women in this eastern region of the Democratic Republic of the Congo (DRC). The United Nations estimates that 200,000 women were raped here over the past 12 years, 18,000 during 2008’s first nine months alone. The rapes have been so widespread and brutal that U.N. officials have described them as the worst in the world and tantamount to crimes against humanity.

The interviewers are Congolese social workers collaborating with the Harvard Humanitarian Initiative (HHI) through a partnership with a local nonprofit, the Centre d’Assistance Médico-Psychosociale (CAMPS). Together, the two organizations are seeking to understand the violence against women that hangs like a toxic cloud over a huge swath of this enormous country in Africa’s midsection.

The region, rich in mineral wealth and tragedy, has been the stage for one of the new century’s most awful displays of humankind’s capacity for inhumanity. Using rape as a weapon of war, dozens of armies and rebel and militia groups regularly engage in violent assaults and sexual slavery that touch women of all ages. Often combined with mutilation and murder of family members, these atrocities leave the women not only physically injured, but emotionally bereft, sometimes pregnant or HIV-infected, and, in the region’s still-traditional societies, outcast.

The DRC has long been a place of turmoil. Rebels backed by Rwanda and Uganda attacked the government in two separate wars that began in 1996 and 1998. The first toppled dictator Mobutu Sese Seko and resulted in the nation, then called Zaire, being renamed the Democratic Republic of the Congo. Mobutu’s successor, Laurent Kabila, was assassinated in office in 2001. The latter clash, which involved eight nations and came to be known as “Africa’s World War,” resulted in 5.4 million deaths, largely from starvation and disease.

A 2002 peace treaty ended the conflict, but the resulting government remains too weak to project power into the DRC’s eastern border region. Into the vacuum have stepped more than 20 armed groups struggling for power and control of the region’s minerals: tantalum, tin, copper, and diamonds.

The plight of the eastern DRC’s women is no secret. It has been the subject of front-page newspaper stories, it has become a major focus of a hospital in the Congolese city of Bukavu, and it has prompted an outpouring of condemnation from around the world.

But to solve a problem one must first understand it. And to understand the problem of rape in the DRC, one must understand not just the suffering women but also the men fighting the endless wars.

That truth occurred two years ago to Jocelyn Kelly, a Harvard School of Public Health (HSPH) graduate and research coordinator for HHI, an interfaculty program that applies the expertise of Harvard’s various Schools to the world of disaster relief. Though it’s easier to simply condemn the men responsible and turn one’s attention to the women — whose needs are almost beyond imagination — it is not enough, Kelly realized. The men, brutalized themselves, living in the forest, and often starving, are at the root of the problem and so hold the key.

“By demonizing them, you make them incomprehensible,” Kelly said. “Instead of saying these men are demons and how can they do these terrible things, we say, these are men, and why are they doing things that should never happen?”

That belief is what brought Kelly and a small contingent from HHI and CAMPS to the village of Katokota, just a short distance from the Rwandan border in the eastern DRC. The visit, which occurred in February 2009, drew dozens of soldiers from the Mai-Mai militia to Katokota to be interviewed. The Mai-Mai-Shikito is one of roughly 13 homegrown Mai-Mai groups, originally formed to fend off attacks on their homes by other soldiers but which have themselves been implicated in horrific sexual assaults.

The day was a strange, silent one in Katokota. Almost two dozen soldiers sat on long benches under billowing tarps that kept the rain off, talk-
From the South Bronx to Harvard University

A glimpse into the future

By Gervis A. Menzies Jr.

Harvard News Office

now in his fifth year of hosting the school, Bloomfield reminds his current and former freshmen advisors as well as Harvard staff and faculty from around campus to talk with the visitors about that “Harvard experience.” The information, encouragement, and even inspiration the speakers provide makes this visit much more than a simple tour.

“What you see [the KIPP students] you get some sense of how full of life, appreciation, and curiosity they are,” says Bloomfield. “KIPP has this really great formula in reaching students and their parents and so they’re worth every bit of investment that an institution like ours can make — not on behalf of the Harvard brand necessarily, but on behalf of education.”

The wide eyes, cheek-to-cheek grins, and thoughtful questions from the KIPP students spoke not only of their appreciation for the trip, but also of how special they are.

While only about a quarter of high school graduates in the South Bronx plan to go to college, almost 90 percent of the kids who start fifth grade in KIPP in fifth grade have gone on to higher education. And of those who do go to college, nearly three-fourths of the students graduate.

Davina Wu, a music teacher in her fifth year at KIPP, says, “The minute, in fifth grade, when they walk through the door, we say to them, ‘You’re going to college. You’re going to college. You’re going to college.’”

And although their walk around campus is intended to be special for the students, Bloomfield tries to convince them that they are special too — and that community KIPP in fifth grade has gone on to higher education. And of those who do go to college, nearly three-fourths of the students graduate.

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The researchers’ stories

www.news.harvard.edu/hwm/congo/

Michael VanRooyen: Rebuilding places that peace abandoned

Jocelyn Kelly: Seeking the whole picture of Congo violence

Jennifer Scott: Being there for atrocity’s survivors

Congo

Covering the Congo

Researchers from the Harvard Humanitarian Initiative (HHI) have been working in the Democratic Republic of the Congo for several years examining the roots of the violence against women that has plagued this war-torn region.

A team from the Harvard News Office traveled with HHI researchers in February to document their ongoing work. The full package of videos, photos, and stories is available on the Harvard World Media Web site at www.news.harvard.edu/hwm. Stories and photos from the project will run periodically in the Harvard Gazette.

Harvard World Media

www.news.harvard.edu/hwm/congo/

Men with guns (video 2:36)

L’Incident (video 3:17)

Damages of war (video 3:27)

The researchers’ stories

www.news.harvard.edu/hwm/congo/

(Continued from page 13)

ving among themselves in subdued tones. Another half-dozen in full uniform, automatic weapons ready, paced around the perimeter of the small compound of beaten earth.

Villagers gathered to silently watch the proceedings: old men, women, and groups of children, dirty in tattered clothing. Though they were familiar with the men — some lived in the area — the villagers knew something unusual was happening.

Two Swahili-speaking interviewers from CAMPS worked inside a nearby hut, while Kelly and HHI Co-Director Michael VanRooyen, associate professor at HSPH and at Harvard Medical School and director of Brigham and Women’s Hospital’s Division of International Health and Humanitarian Programs, talked to Mai Mai commanders and advised CAMPS national coordinator Justin Kabanga about the conduct of the interviews.

VanRooyen and Kabanga said the partnership benefits both their organizations. CAMPS’s deep roots in the community and connections in the military command structure are essential for HHI researchers to do their work. HHI researchers, on the other hand, provide analysis of the problems affecting the people CAMPS seeks to assist.

“We’ve been so busy, we haven’t had the time to do research,” Kabanga said. “The scientific collaboration with HHI has been indispensable for beginning to understand the complexity of the problem.”

Information gathered in the interviews is now being analyzed. Still, with 251 interviews complete, Kelly said a picture of the soldiers’ lives is emerging. Responses indicate that the men already have conversations about sexual violence and that they get their news and information predominantly from the radio. The responses also reveal where the men go to seek social support and what barriers, such as transportation costs, make it difficult for them to obtain help.

“We’ve asked a lot of soldiers why they joined. ... They tell you unimaginably painful stories where they watched their father die or they watched their brother die,” Kelly said. “I don’t think I’ve ever seen a clearer example of how violence feeds on itself.”

VanRooyen knows Kelly is onto something special.

By daring to go to remote Congolese villages — where few researchers venture — and then daring to ask armed men about atrocities they or their comrades have committed, Kelly is not only showing great personal courage, she is collecting data that exists in few other places.

“These are active militia who are in the middle of it still,” VanRooyen said. “The stuff she’s doing ... everyone wants to know about it: the U.N., the State Department.”

Using the information generated by HHI, VanRooyen said, aid groups, governments, and nonprofit organizations can better design programs to meet particular needs — or even decide whether to create a program in the first place.

Information, of course, is HHI’s coin in trade. The founders, VanRooyen and Jennifer Leaning, professor of the practice of global health at HSPH, started the organization in 2005 with the belief that the collection and analysis of data could help improve humanitarian responses in man-made and natural disasters around the world.

Though the organization also has ongoing projects in Sudan’s Darfur region, in Chad, and in several other trouble spots, VanRooyen said the cluster of projects in the Congo provides a team-based model for how HHI would like to approach certain key issues such as gender-based violence.

An oasis for abused women

Even as Kelly was talking to militia leaders in the compound at Katokota, another HHI researcher was a two-hour drive north, at Panzi Hospital in the provincial capital of Bukavu. Jennifer Scott, a resident in gynecology and obstetrics at Beth Israel Deaconess Medical Center (BIDMC), was attacking the same problem from a different angle.

HHI’s research team is taking a multigrounded approach toward sexual violence against women in the DRC. The main focus for the two-year-old effort has been Panzi Hospital, a general hospital founded in 1999 that specializes in treatment of the survivors of sexual violence.

Panzi Hospital founder Denis Mukwege said many of the women suffer not only emotional problems from the rapes, but also physical injuries. Women are sometimes mutilated during the attacks or are raped with bottles, sticks, or even knives, causing tears between the vagina and the bladder, or between the vagina and the anus. These tears, called fistulas, allow urine or feces to leak from the body, making the women incontinent. The fistulas can only be treated with surgery.

HHI’s work at Panzi Hospital began with a clinical collaboration that brought high-level medical support to the hospital. Administered through Harvard-affiliated Brigham and Women’s Hospital, the clinical work was soon joined by a Harvard-organized research effort focused on the records of patients who had suffered sexual violence. Researchers began analyzing the information included in thousands of intake forms, held in row after row of thick binders that fill a wall in the office of PMU Interlle, a Swedish aid organization that is assisting Panzi and that has become another important local partner for HHI.

Mukwege told one story that illustrates the assaults’ viciousness and their societal consequences. A pastor’s wife, who had become pregnant after being publicly raped by an armed group, came to the hospital to give birth. During the attack, the soldiers also raped her two daughters, shot her two sons when they tried to intervene, and then killed the pastor.

Her remaining family refused to let her come home unless she abandoned the child.

“It’s terrible for the woman but also for this young child,” Mukwege said. “It destroys all the family connections. Rape is not just physical destruction, it’s a destruction of the psychology; not only of the victim but of her family and all her relations. Finally, it’s a destruction of the entire society.”

HHI researcher Susan Bartels, associate director of BIDMC’s International Emergency Medicine Fellowship, began the records review in 2007. With assistance from Scott, Kelly, and Sadia Haider, BIDMC’s division director of family planning, the study has already produced results that describe more

(See Congo, next page)
An eye to the future

Though the records review is ongoing, that phase of the project is nearing its end. Despite that, VanRooyen said that HHI’s work in the Congo will continue. Future projects are being considered that will focus on mining communities, on demobilized soldiers, and on children of rape, who are outcast and at risk. Data gathering on the victims of sexual violence may also continue at Panzi and elsewhere.

VanRooyen said the work with the military will also continue. The interviews so far are for a pilot study whose results can be evaluated and used to both seek funding and design follow-up studies. VanRooyen wants to expand the project on demobilized soldiers, and on children of rape, who are outcast and at risk. Data gathering on the victims of sexual violence may also continue at Panzi and elsewhere.

BPA, chemical used to make plastics, found to leach from polycarbonate drinking bottles into humans

In 2008, Scott Elfenbein ‘11 (above) was part of a two-week study to determine if drinking from popular hard-plastic bottles increased levels of the chemical bisphenol A (BPA). The results of the study showed a two-thirds increase of BPA in the subjects’ urine.

By Todd Datz

HSPH Communications

A new study from Harvard School of Public Health (HSPH) researchers found that participants who drank for a week from polycarbonate bottles, the popular, hard-plastic drinking bottles and baby bottles, showed a two-thirds increase in their urine of the chemical bisphenol A (BPA). Exposure to BPA, used in the manufacture of polycarbonate and other plastics, has been shown to interfere with reproductive development in animals and has been linked with cardiovascular disease and diabetes in humans.

The study is the first to show that drinking from polycarbonate bottles increased the level of urinary BPA, and thus suggests that drinking containers made with BPA release the chemical into the liquid that people drink in sufficient amounts to increase the level of BPA excreted in human urine.

In addition to polycarbonate bottles, which are refillable and a popular container among students, campers, and others, and are also used as baby bottles, BPA is also found in dentistry composites and sealants and in the lining of aluminum food and beverage cans. (In bottles, polycarbonate can be identified by the recycling number 7.) Numerous studies have shown that it acts as an endocrine-disruptor in animals, including early onset of sexual maturation, altered development and tissue organization of the mammary gland, and decreased sperm production in offspring. It may be most harmful in the stages of early development. “We found that drinking cold liquids from polycarbonate bottles for just one week increased urinary BPA levels by more than two-thirds. If you heat those bottles, as is the case with baby bottles, we would expect the levels to be considerably higher. This would be of concern since infants may be particularly susceptible to BPA’s endocrine-disrupting potential,” said Karin B. Michels, associate professor of epidemiology at HSPH and Harvard Medical School and senior author of the study.

The researchers, led by first author Jenny Carwile, a doctoral student in the Department of Epidemiology at HSPH, and Michels, recruited Harvard College students for the study in April 2008. The 77 participants began the study with a seven-day “washout” phase in which they drank all cold beverages in them; heating has been shown to increase the leaching of BPA from polycarbonate, so BPA levels might have been higher had students drunk hot liquids in the bottles.

Canada banned the use of BPA in polycarbonate baby bottles in 2008 and some polycarbonate bottle manufacturers have voluntarily eliminated BPA from their products. With increasing evidence of the potential harmful effects of BPA in humans, the authors believe further research is needed on the effect of BPA on infants and on reproductive disorders and on breast cancer in adults.

“This study is coming at an important time because many states are deciding whether to ban the use of BPA in baby bottles and sippy cups,” said Carwile. “While previous studies have demonstrated that BPA is linked to adverse health effects, this study fills in a missing piece of the puzzle — whether or not polycarbonate plastic bottles are an important contributor to the amount of BPA in the body.”

The study was supported by the Harvard University Center for the Environment and the National Institute of Environmental Health Sciences Biological Analysis Core, Department of Environmental Health, HSPH.

Carwile was also supported by the Training Program in Environmental Epidemiology.

Study pdf

The study appears on the Web site of the journal Environmental Health Perspectives and is freely available at: www.ehponline.org/members/2009/0900604/0900604.pdf

Related story

Undergrads volunteer for bottle BPA study

www.news.harvard.edu/gazette/2008/05.15/09nalgene.html

Exposure may have harmful effects

In 2008, Scott Elfenbein ‘11 (above) was part of a two-week study to determine if drinking from popular hard-plastic bottles increased levels of the chemical bisphenol A (BPA). The results of the study showed a two-thirds increase of BPA in the subjects’ urine.
Harvard College students have been awarded grants to carry out summer projects on a variety of important subjects. The students will use the grants to conduct research in the United States or abroad, as well as write reports, articles, or senior theses. Each grant supports living and research expenses up to $3,000.

**The grant recipients**

**Christine Baugh** ’10, a history of science concentrator, will undertake research examining the Bayh-Dole Act of 1980, which allows universities to patent (and thereby profit from) research. As part of her senior thesis research, Baugh will examine the relationship between universities and the Bayh-Dole Act, asking more specifically whether the post-Bayh Act university is maximizing scientific profit at the possible cost of both social and scientific benefit.

**Jonathan Gould** ’10, a social studies concentrator, will explore the positive rights tradition in America in light of a commitment to active democratic citizenship. Drawing on democratic theory, distributive justice, and American history, Gould will ask what economic prerequisites exist for democratic citizenship. He will argue that a robust conception of participatory and deliberative democracy requires citizens to have access to a minimum level of education, housing, and health care, and will articulate an outline of the civic approach to the American welfare state.

**Laura Kaplan** ’10, a history concentrator, will explore the ethics of health care delivery in New Orleans during the Great Depression, and will investigate the ways in which national developments impacted a culturally distinct region; in other words, “Did the economic crisis and the New Deal affect the city government’s recognition of a moral responsibility for the physical well-being of the city’s inhabitants?” Kaplan will consider how different populations — hospital administrators, city poliymakers, health professionals, and patients — constructed beliefs about the right to health care.

**Joanna Naples-Mitchell** ’10, a social studies concentrator, will undertake senior thesis research in South Africa on approaches to transitional justice. She will interview teachers and students in an attempt to understand how the country’s approach to post-conflict justice affects collective memory and stems the possibility of future atrocities. Naples-Mitchell hopes to answer the question: “What role does justice play in the process of transforming a society after conflict?”

**John Sheffield,** a graduating senior concentrating in social studies, is writing a critique of the ethical guidelines that govern research procedures for social and behavioral research. He will posit that the founding principles of current regulations often contravene the objectives of academic work in the social sciences, especially human rights research. His paper will discuss the concept of potential “harms” to subjects involved in corrupt, criminal, or other dangerous activities; ask why social concerns should guide researchers’ decisions; and set out a new framework for regulating social and behavioral research that addresses these shortcomings.

The Lester Kissel grants are made possible by a gift from the late Lester Kissel, a graduate of Harvard Law School and longtime benefactor of Harvard’s ethics programs. For further details about the Kissel grants, visit www.ethics.harvard.edu.

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**The American Psychological Foundation (APF) Board of Trustees named Kathleen Corriuveau, a student at the Harvard Graduate School of Education, as a 2009 APF Elizabeth Munsterberg Kopitz Fellows recipient. The $25,000 fellowship will support Corriuveau’s research during the 2009-10 academic year.**

Corriuveau has a B.S. in cognitive neuroscience from Brown University, an Ed.M. in mind, brain, and education from Harvard, and an M.Phil. in education from the University of Cambridge. Her research investigates cues children use to determine whether an information source is trustworthy, examines how well children view a majority opinion as opposed to a minority opinion, and how they use this information when learning from adults. Corriuveau has published multiple articles, made numerous conference presentations, and has served as an instructor and teaching fellow at Harvard.

**Werner Kopitz** made a bequest of more than $4 million to APF to support talented graduate students in child psychology in honor of his late wife, Elizabeth Munsterberg Kopitz, Ph.D., a school and educational psychologist, who died of leukemia in 1985.

For more information, visit www.apf.org/apf.

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**Bouncing home**

As summer break approaches, Iman Taylor ’12 carries some of her stuff, including a little trampoline, past Dudley House.

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**Five Harvard grad students named Rappaport Fellows**

Five Harvard graduate students — Meghan Haggerty, Devin Lyons-Quirk, Jessica Hohman, Antoniya Owens, and Michael Long — are among the 12 local graduate students who will spend the summer working in key state agencies as Rappaport Public Policy Fellows. The students were selected from among 100 applicants and will be working in Boston’s Office of Administration and Finance, Boston’s Emergency Management Service, the Boston Public Schools, and the Commonwealth Connector the Massachusetts Office of Refugees and Immigrants.

Now in its ninth year, the Rappaport Public Policy Fellowship is a program that gives talented young graduate students from throughout the greater Boston area the opportunity to help public officials address key problems, and in doing so, learn more about how public policy is created and implemented. The fellowship is funded and administered by Harvard’s Rappaport Institute for Greater Boston, which strives to improve the governance of the region by strengthening connections between scholars, students, officials, and civic leaders.

**Rappaport Public Policy Fellows**

Harvard Kennedy School

Meghan Haggerty will be working in the city of Boston’s Office of Administration and Finance on improving internal operations of the constituent relationship management system in three pilot departments in the city of Boston. Haggerty, who has a bachelor’s degree in social studies from Harvard College, was a neighborhood coordinator for the South End/Bay Village neighborhoods of Boston for Mayor Thomas M. Menino and was an intern for the Rappaport Institute for Greater Boston.

Devin Lyons-Quirk will be helping the leaders of Boston’s Emergency Management Service (EMS) to develop a performance management strategy for the department. The project will involve setting basic performance goals and indicators, collecting relevant data, and analyzing the data to provide useful insights on Boston EMS performance. Lyons-Quirk, who has a bachelor’s degree in psychology from Harvard College, was a senior consultant at Booz Allen Hamilton and was rescue squad EMS captain in the Arlington County Volunteer Fire Department in Virginia.

Antoniya Owens will be working at the Massachusetts Office of Refugees and Immigrants conducting research on immigrant-related topics, such as the impact of abolishing bilingual education in the state of Massachusetts on the academic outcomes of students with limited English skills. Owens, who has a bachelor’s degree in economics from Mount Holyoke College, was a research associate at the New England Public Policy Center at the Federal Reserve Bank of Boston and for LECG’s energy practice group in Cambridge, Mass.

Harvard Medical School

Jessica Hohman, who is the first medical student to receive a Rappaport Public Policy Summer Fellowship, will be working for the Commonwealth Health Insurance Connector. Hohman, who has a bachelor’s degree in chemistry and history from Miami University in Ohio and a master’s degree in health policy, planning, and finance from the London School of Economics (LSE), is a visiting research fellow at LSE Health.

Harvard School of Public Health

Michael Long, a doctoral student, will work at the Boston Public Schools Department focusing on expanding and improving the school breakfast program. Long has a bachelor’s degree in politics from Princeton University and a master’s degree in public health from Yale University. He has been a research assistant at the Yale Rudd Center for Food Policy and Obesity and was an account supervisor at Coln and Wolfe in San Francisco, Calif.

In addition to working full time for their host agencies, the fellows will get together weekly to learn more about key issues in the region and to discuss progress on their projects with each other. At many of these sessions, they are joined by 12 law students who are working in similar internships via a fellows program run by the Rappaport Center for Law and Public Service at the Suffolk University Law School.
concerts


Sun., June 7—"The Donkey Show." (Harvard Box Office) Concert by students of European Academy of Music and Art Inc., under the tutelage of Bella Eugenia Oster. Program includes Chopin, Liszt, Schumann, and others. Sanders Theatre, 2 p.m. Free. Tickets are required; limit two per person. Harvard Box Office (617) 496-2222, www.boxoffice.harvard.edu.


Sun., June 14—"Ligeti & Strauss: Concerto Competition Winner." (Harvard Box Office) Concert by Boston Youth Symphony Orchestra, directed by Federico Cortese. Sanders Theatre, 3 p.m. Tickets are $30/$25 general; $5 off students/senior citizens. Harvard Box Office (617) 496-2222, www.boxoffice.harvard.edu.


comedy


Sun., June 14—"Ligeti & Strauss: Concerto Competition Winner." (Harvard Box Office) Concert by Boston Youth Symphony Orchestra, directed by Federico Cortese. Sanders Theatre, 3 p.m. Tickets are $30/$25 general; $5 off students/senior citizens. Harvard Box Office (617) 496-2222, www.boxoffice.harvard.edu.


American Repertory Theater

"Shakespeare Exploded!" festival.

Thu., May 28–Thu., June 18—"DUETT." (Cambridge Forum) A mix of original music from Incubus and sound design by Tetsuo Hara. 'DUETT' brings your favorite bad guys while skewering the antics of young and old alike.

- Performances take place at Zero Arrow Theatre, corner of Arrow St. and Mass. Ave., various times. See Web site for full schedule. Tickets are $25-35 general; $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.

Wed., July 22–Sun., Aug. 2—"Audelia's Obitario." (American Repertory Theater) In this daring display of stage illusion, inspired by the magic of music hall and circus, starring her daughter Aurélia Thierrée, granddaughter of Charlie Chaplin.

- Performances take place at American Repertory Theater Center Experimental Theatre, 64 Brattle St., various dates. Tickets are $12 general; $8 students/senior citizens. Harvard Box Office (617) 496-2222, www.boxoffice.harvard.edu.

Wed., June 24–Sat., June 27—"A Workshop of Original Student Plays." (American Repertory Theater) A mix of original music written and performed by students. Each performance will be followed by a talk-back with the director, playwrights, and actors.

- Performances take place at American Repertory Center Experimental Theatre, 64 Brattle St., 7:30 p.m. Tickets are $8 general; $6 students/Harvard ID/senior citizens. Harvard Box Office (617) 496-2222, www.boxoffice.harvard.edu.
June 6—Almodóvar’s “Pepi, Locu,oco,” in the “New Wave” at 7 p.m., followed by “What I Have Done To Deserve This?” at 9 p.m.

June 7—“Labyrinth of Passion,” in U.S.A.

June 8—Almodóvar’s “Dark Hearts” at 7 p.m.

June 9—“Turkish Delight,” July 9—No screenings

Real Collegio Comunale
Films are presented at Real Collegio Comunale. Spanish with English subtitles. Free and open to the public. (617) 495-3536. www.fas.harvard.edu/realcollegio

June 16—Romano and Soroyan’s “8:30” at 7:30 p.m.

Radio

Harvard Radio WHRB (95.3 FM)
WHRB provides a wide variety of programming, including jazz, underground rock, and sports programming, and has 24-hour sports programming. (617) 495-4818, mailwhrb@gmail.com, www.whrb.org.

“Hiiffany at Harvard”— Saturdays, 9 a.m.—3 p.m.

Living on Earth, National Public Radio’s journal of the environment, hosted by Steve Curwood, Department of Earth and Planetary Sciences. Features productions in cooperation with Harvard University, is aired every Friday, and is heard nationally — and on more than 400 outlets internationally. In Eastern Massachusetts, on WHRB, 90.9 FM, Sunday afternoon, 1-5 p.m. (617) 868-8810, loe@npr.org, www.loe.org.

Exhibitions

Arnold Arboretum
“Science in the Pleasure Ground” provides a captivating retrospective on the arboretum in the nation. The central feature of the exhibit is a 16-foot scale model made of the Arnold Arboretum that includes historical vignettes and present-day attractions. (Ongoing)

Humphrey House, 79 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) 542-1718, www.arboretum.harvard.edu.

“Where Art and Science Meet: A Celebration of the Science and Art of Erst Helen” celebrates Helen’s life as one of the great female botanists — and Bostonians are particularly proud of her 99 years — by showcasing her large collection of more than 20,000 flowering plants. (Ongoing)

Humphrey House, 79 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) 542-1718, www.arboretum.harvard.edu.

Graduate School of Design
“The Road Not (Yet) Taken: The Interstate Highway Reconsidered” presents future visions for the Mass Pike corridor, from I-95 to Allston. Design proposals were received from a Web-based contest organized by Loeb Fellows Rob Lane, Jim Brown, and others are presented in models and drawings. (Through May 30)

“Gund Hall Lobby, GSD, 48 Quincy St. (Ongoing)

University, www.gsd.harvard.edu/events/exhibitions/current.html.

Butman Museum
“Step Into Art” features artwork and with the participating students from the Epiphany School in Dorchester, Mass. The exhibit is inspired by promotions from the Harvard Art Museums. (Through June 5)


Harvard Art Museum
Sackler Museum
“The Wild West” includes selections from the Fogg, Busch-Reisinger, and Sackler museums together for the first time. The show includes Western art from antiquity to the turn of the last century, as well as Italian, Spanish, and European and American art since 1900. (Ongoing)

“The Sackler Museum is located at 456 Broadway, The Harvard Art Museum’s fourth floor. Main gallery hours are Tues.-Sun., 10 a.m.-5 p.m.; Sat., 10 a.m.-1 p.m.; Sackler@fas.harvard.edu, www.ves.fas.harvard.edu.

Collection of Historical Scientific Instruments
“Time, Life, & Matter: Science in Conception” is the exhibition of scientific activity at Harvard, and explores the relationship of affected by religion, politics, philosophy, art, and commerce in the last 400 years. The exhibition includes hundreds of objects, which are enclosed in glass cabinets. (Ongoing)

“Time-Lapse of Passion” at 7 p.m.

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June 25—Romano and Soroyan’s “8:30” at 7:30 p.m.

Courtney Landscape Museum “Deductions from the Reproductive Health Collections” features newly acquired manuscripts of John Opie, an American painter known for his con- tractorpine oil with Arthur T. Hirtig, and draws on the literature of the reproductive sci- entists, physicians, and activists involved in reproductive health. The exhibit also includes ephemera, photographs, correspondence, and artifacts from the reproductive health movement. (Ongoing)

First floor, Courtyard Library. (617) 432-6196.

“Modeling Reproduction” The Teaching Museum of Anthropology” features an early birth pioneer who developed a renowned collection of reproduc- tion models to present the evidence that broadened the understanding and accept ance of normal childbirth. The models are enclosed in glass cabinets. (Ongoing)

First floor, Courtyard Library. (617) 432-6196, courtyard.library@harvard.edu.

“The Warren Anatomical Museum” presents the classic anatomical models used in biology classes, and events. (617) 495-3045, whnh Harvard.edu.

“Dodos, Troglodytes, & Mototobs: Treasures of Nature and Science at Harvard” features hundreds of specimens from the Harvard University Natural History Museum and extensive scientific, educational, and cultural experiences, including a 42-foot long Whaling Ship. (Ongoing)

“Climate Change: Our Global Challenge” presents a selection of Darwin’s books, manuscripts, illustrations, portraits, and ephemera. (Through June 5)

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Important deadline information

The last issue of the academic year will be June 11. The June 4 and June 11 issues will list events happening through August. The deadline for those issues is TODAY (Thursday, May 28) by 5 p.m. There will be NO exceptions. Please call (617) 496-2651 without questions.

Dreams and visions, which deal with themes of desire and loss from the point of view of selected protagonists. Openings on Tuesdays at 4 and Fridays at 5 p.m. (May 29-June 24)

—Halegall Gallery, Houghton Library, 7 Divinity Ave. 4:30 p.m. Free and open to the public. (617) 495-4244.

“Southwest by Northeast” is Heather Meri Stewart’s imaginative exploration of the means by which we mediate between the rational and sensual elements of painting. Inspired by recent travels, these paintings investigate the landscape and built environment of the southeastern and southwestern U.S. (June 26-July 5)

—Halegall Gallery, Houghton Library, 7 Divinity Ave. 4:30 p.m. Free and open to the public. (617) 495-4244.

“Greece at a Glance” showcases photographs of eight different sites in Greece: Athens, Mykonos, Santorini, the beauty, beaches, and architecture of Greece. (July 4-Aug. 23)

—Halegall Gallery, Houghton Library, 7 Divinity Ave. 4:30 p.m. Free and open to the public. (617) 495-4244.

“From Film to Digital: Fresh Images Over Digital Editions” is an exhibition of photographs of ten different sites in different parts of the world. From film to digital, the exhibition includes photographs from ten different sites in ten different parts of the world. (July 24-Aug. 26)

—Landscape Institute, 30 Chauncy St. 4:30 p.m. Free and open to the public. (617) 495-4244.
ready for the future? creating figures
why people
summer 2009 registration
mon., june 8–fri., june 12
"Accessorize/ongoing programs"
the annual wilfred Gould mon., june 8–fri., june 12
"multitalented"
all programs meet noon-1:30
summer school of philosophy
"the cold war and the Kuwait War: Mental Health Care After Military and Civilian Trauma.
"21st Annual Erich Landesman Annual Birds & Bards Festival.
weekends, featuring the connections among urban communities, nature, and art. Taking place across various venues in metropolitan Boston, and at the southern end of Boston's Emerald Necklace. Enjoy expert-led bird walks, poetry explorations, musical performances, and live raptor demonstration.
6:30 p.m.-5 p.m. Free and open to the public. www.arboretum.harvard.edu/events/3986/.
"summer neighborhood"
harvard neighborhoods offers a variety of programs and events for the Harvard community and the surrounding area. www.harvard.edu/hnrs.

computer
Harvard's computer Product & Repair Center offers walk-in help, computer troubleshooting, and complete computer repair services. www.computer.harvard.edu/helpcenter.

special events
may 28–29, may 31–june 4:
annual Birds & Bards Festival.

architects: the Modernists
architects: Modernist architecture in Boston

classes etc.

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may 28–29, may 31–june 4:
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architects: the Modernists
architects: Modernist architecture in Boston

**Harvard Wellness Programs**

For a recorded listing of programs, (617) 495-19771.

- **Active Release Technique (ART)**
  - One-hour appointments with a Licensed Massage Therapist
  - Sundays and Mondays, midday, after-noon and evening appointments

- **Massage Therapy, 1-Hour Appointments**
  - One-hour appointments with Licensed Massage Therapists
  - Mondays, Fridays, afternoon and evening appointments

- **Massage Therapy, 1/2-Hour Appointments**
  - 1/2-hour appointments with Licensed Massage Therapists

- **Acupuncture, 1-Hour Appointments**
  - One-hour appointments with Jeffrey Matzen, L.Ac.

- **Tobacco Cessation Classes**
  - Offered weekly at the Dana-Farber Cancer Institute, dates and times may vary.

- **Weight Watchers at Work**
  - Classes are available Tuesdays, 1:15-2 p.m.

- **Relief**
  - One-hour appointments with Faris Ayad, Judy Farthing, Lisa Santoro, LMTs

- **Open Awareness Sangha**
  - (617) 632-2099.

**Harvard Film Archive** (HFA) presents a new series of documentaries about the United States by directors from abroad—‘America As Seen By...’—May 28-30. See film, page 20, for details.

LEFT: ‘South (Sudáy)’ screens at the HFA Friday, May 29, following ‘The Short Life of José Antonio Gutierrez’ at 7 p.m.

**Open Awareness Sangha** meets every Monday evening at 7:30 p.m. for meditation and discussion at Cambridge Friends Meeting House, 1 Longfellow Park (located at about 100 8th Street). For information, call (617) 547-6670.

**Cambridge Forum**

- The First Parish in Cambridge, Unitarian Universalist, 3 Church St., (617) 495-2177, www.cambridgeforum.org.

- **Christian Science Organization**
  - Meets in the Phillips Brooks House every Tue. at 7 p.m. for religious readings and testi-monies. (617) 876-7853.

- **The Church at the Gate**
  - Sunday Services: 4 p.m., www.thechurchatthegate.org.

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  - Sunday Services: 4 p.m., www.thechurchatthegate.org.

- **Radcliffe Institute**
  - **“Radcliffe Day.”**

- **HDS Wednesday Noon Service**
  - “Divinity School Service” for degree candidates of the Divinity School, their families, and mem-bers of the Faculty of Divinity at 4:30 p.m.

- **HDS Wednesday Noon Service**
  - 12:00 p.m. (617) 384-7571, jon.wald@hhs.harvard.edu.

- **HDS Thursday Morning Eucharist**
  - 8:30 a.m. (Continued on next page)
The salary ranges for each job grade are available at http://www.employ ment.harvard.edu. Target hiring rates will fall within these ranges. The 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 contracts determine salary levels for these positions.

Other Opportunities:

- All non-faculty job openings currently available at http://www.employment.harvard.edu are listed on the Web.

Within Harvard's 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 veteran.

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 1530 Massachussetts Avenue in Harvard Square. More information is available online at http://employment.harvard.edu/careerdevelopment/index.x.shtml.
Judah Folkman was born Moses Judah Folkman in 1933. The son of a rabbi, he became inspired to become a physician as a young boy when visiting ailing members of the congregation with his father. He soon became fascinated with science and medicine, and as a high school student he devised a perfusion system in his basement that maintained the viability of a beating rat heart for days after surgical removal. This led to his admission at age 15 to nearby Ohio State University, where Judah worked part-time all four years in the surgical laboratory of Dr. Robert Zollinger. He quickly mastered surgical skills and became an active participant in the exciting world of academic surgery. Judah entered Harvard Medical School at 19, where he was welcomed into the laboratory of Dr. Robert Gross, then Surgeon-in-Chief at Children’s Hospital. There, he invented the first implantable heart pace-maker. Based on his scientific contributions, Judah was elected to the AOA and received the Boylston Medical Prize, Soma Weiss Award, and Borden Undergraduate Research Award in Medicine, when he graduated magna cum laude from HMS in 1957.

Judah became a surgical resident at Massachusetts General Hospital where he had his first introduction to Pediatric Surgery under the mentorship of Dr. W. Harry Hendren. Midway through his residency, Judah married the love of his life, Paula Prial, who was to become the mother of his wonderful daughters, Marjorie and Laura, and his closest confidant for the rest of his life. Soon thereafter, Judah enlisted in the United States Navy to fulfill his military obligations for two years. He did research on artificial blood substitutes at the National Naval Medical Center. In the course of this work, he invented the first implantable device for sustained drug-release that was later known as Norplant, which he donated patent-free to the World Population Council for use as a contraceptive. While in the Navy, Judah also observed that tiny fragments of tumor could remain viable, but would not grow beyond approximately one millimeter in diameter, when implanted into an isolated perfused thyroid. This led to his provocative proposal that tumors must stimulate growth of new blood capillaries to provide oxygen and nutrients necessary for their continued proliferation and expansion as a process known as “tumor angiogenesis.” He also reasoned that cancer growth might be held in check by inhibiting this process.

Judah Folkman returned to MGH to complete his training in 1962, and became Chief Resident. There, he jury-rigged materials to create a renal dialysis system for a patient with acute renal failure, and saved the patient’s life. He assumed his first faculty position as Assistant Professor of Surgery on the Harvard Surgical Service at the then Boston City Hospital in 1965. In a tiny laboratory in the basement of the Sears Surgical Building, he began to earn his career-long study of tumor blood vessels that would ultimately open up the new field of tumor angiogenesis research. Based on his intelligence, outstanding clinical skills and scientific promise, Judah was soon selected to succeed Gross as the Surgeon-in-Chief at Children’s Hospital. However, he chose to acquire six months of additional Pediatric Surgery training under Dr. C. Everett Koop at the Children’s Hospital of Philadelphia, before he assumed his position at the unprecedented young age of 35 in 1967.

As faculty member and surgeon at HMS and Children’s Hospital, Judah was known as a talented and caring surgeon, a gifted teacher, and a master of differential diagnosis. Crowds of students and residents swarmed around him on rounds because of his ability to meld medical science with clinical reality. Judah was the recipient of numerous HMS teaching awards for his introductory lectures to first and second year students. His devotion to patients and families was legendary, as was their appreciation of his technical skills and personal warmth. Judah even made time for those he had never met but who sought his counsel, returning phone calls every day when he returned home from the lab late at night, to be sure that he addressed each patient’s needs. When as a young man, Judah told his father that he would become a physician instead of a rabbi, his father responded, “then you will become a rabbi-like doctor”; and that is exactly what Judah did.

With his heavy administrative burden and extensive surgical responsibilities, Judah remained passionate about his mission as physician-scientist, and continued to expand his research efforts focused on tumor angiogenesis. In 1974, Judah changed academic medicine and Harvard University by accepting the first large industrial-funded research grant from Monsanto Company to support his cancer research. As a result, for the first time, Harvard permitted its faculty to submit patents covering medical inventions. Judah’s successful experiment in corporate funding also paved the way for industrial support of academic research laboratories at universities and research institutions across the nation, which is commonplace today.

In 1981, Judah elected to relinquish clinical leadership of the department of Pediatric Surgery, to work full-time in his laboratory. Although Judah lacked formal expertise in biochemistry or cell biology, he had an uncanny ability to ask penetrating questions. But he had a single-mindedness and tenacity of purpose that was beyond description. He initially attracted HMS students, and gradually postdoctoral fellows and visiting scientists to work in his Surgical Research Laboratory in the Enders Building at Children’s Hospital, and systematically began to build the case for the tumor angiogenesis hypothesis.

Judah’s angiogenesis theory was initially met with great skepticism because he proposed that cancers secrete a ‘tumor angiogenesis factor’ to stimulate neovascularization, but it had not yet been identified or purified. He realized that the major obstacle was the lack of bioassays to identify this activity. As a great innovator, Judah developed multiple new experimental systems to measure and study angiogenesis factors, including the first capillary endothelial cell cultures, in vitro angiogenesis models, and sustained release polymers for testing of putative angiogenesis modulators in rabbit corneas. The availability of these assays led to the purification of the first tumor angiogenic factor, basic FIBRONECTIN growth factor in 1984. This discovery was followed by the isolation and cloning of multiple angiogenic factors by researchers around the world, which confirmed the critical role of angiogenesis for tumor growth as well as many other diseases. Thanks to Judah’s perseverance, adoration quickly became admiration and, as he used to say, “my critics soon became my competitors”.

Judah’s tumor angiogenesis hypothesis launched an era of discovery and validation, during which his team at Children’s Hospital discovered numerous additional angiogenic factors, as well endogenous molecules that inhibit capillary growth, including angiostatin, seprastatin, and angiostatin-like proteins and they began deciphering the molecular basis of angiogenic control. This work led to development of numerous anti-angiogenic drugs, as well as novel combinations of drugs, including TNP-470, Thalidomide, and ENDOstatin. There are now multiple angiogenesis inhibitors approved for clinical use, which are benefiting more than one million people worldwide. Judah’s impact on cancer alone was impressive in that the FDA now recognizes anti-angiogenesis as an entirely new modality for the treatment of cancer, along with chemotherapy, radiation therapy and surgery. Equally impressive is that angiogenesis inhibitors have restored sight in patients who are blind due to age-related macular degeneration; these drugs have become the clinical standard of care in Ophthalmology.

Judah authored some 400 peer-reviewed papers and more than 100 book chapters and monographs. Over 38,000 articles have been published on angiogenesis, the field that he pioneered. He received scores of awards and honors for his distinguished research, including the National Institutes of Health’s Christopher Columbus Discovery Award in Biomedical Research, American Cancer Society’s Medal of Honor for Basic Science, Bristol Myers Squibb’s Award For Distinguished Achievement in Cancer Research, HMS’s Warren Alpert Prize, Canada’s Gairdner Founders International Award, Israel’s Wolf Foundation Prize in Medicine, Germany’s Ernst Schering Prize, the Italian Association of Cancer Research in Rome’s Gold Medal, the United Kingdom Society for Endocrinology’s Dale Medal, and Switzerland’s Dr. Josef Steiner Cancer Research Award. Judah also was elected to the National Academy of Sciences, Institute of Medicine, American Academy of Arts and Sciences,AmericanPhilosophicalSociety, and membership on the President’s Cancer Advisory Board, in addition to receiving numerous honorary degrees from leading universities around the world. The research lab he founded with a single assistant when he arrived at Children’s Hospital in 1967 had, by the time of his death, grown into a 125 scientist-strong Vascular Biology Program. And, more than 1000 labs around the world are now pursuing angiogenesis research, yielding thousands of angiogenesis-related publications each year.

Judah’s contributions in the laboratory have permanently transformed our thinking about cancer and many other diseases, and they have pointed the way to novel strategies for their treatment. But Judah also was known for illuminating lectures that left his listeners spellbound, whether experts or novices, and that created innumerable new scientific conve rts as he traveled around the globe spreading his vision. His lecture style was enthralling, his enthusiasm contagious, and his self-deprecation leaving his listeners breathless. He turned it further, Judah walked forth boldly, turned it over and found a diamond. He did this with experiments, but more importantly, he did this with people, whether patients, students, technic nicians, women, colleagues or competitors. His death on January 14, 2008 was a terrible loss to our community, and to the entire world. We will all miss him greatly.

Donald Inger, MD,PhD (Chair, Folkman Memorial Minute Committee)
Patricia Donahoe, MD
Michael Gimbrone, MD
W. Hardy Hendren, MD
Michael Klagsbrun, PhD
Marsha Moses, PhD

Faculty of Medicine — Memorial Minute
GAZETTE: By all measures, this has been an extraordinary year in the markets. How would you characterize your first 10 months at the helm of HMC?

MENDILLO: The markets during this time have moved extremely rapidly, both globally and with regard to individual asset classes and strategies. We’re also fortunate that the strong team here at HMC is able to very actively manage the portfolio, throughout this crisis. The Harvard portfolio was certainly not immune to strong market forces over the last year, and we have felt their impact. But over the long term, the endowment has done very well and we’re confident it will continue to do well in the future, given the strategies and the plans we have in place.

GAZETTE: Back in December, the University reported that the endowment was down at least 22 percent through the end of October and that you’re anticipating a negative 30 percent return for the fiscal year. Do those predictions hold?

MENDILLO: We’re still estimating a negative 30 percent for the fiscal year, but given the volatility in the markets and the many assets we hold that are not traded on the public markets, it is difficult to predict with total accuracy what returns will ultimately be for the year. It is important to keep in mind that over the 10 years ending June 30, 2008, the average annual return on the endowment was 13.8 percent. It was a 20-year period ending June 30. Those returns are significantly higher than what we expect on average over the long term. So it stands to reason that returns will go well below what they have been over the last couple of decades. But we believe that we are well positioned, with a good mix of assets and strategies for facing the future.

We should note that although our returns during the economic crisis have been negative, they are not as sharply negative as many of the returns generated by our peers. Many of our peer universities continue to beat the returns generated by the S&P 500 and incrementally taking advantage of the economic crisis have been negative, which will impact our returns. But over the long term, diversification has done very well for Harvard’s portfolio, over time, will recover and flourish.

GAZETTE: What have you learned as an investor over the past year?

MENDILLO: I think all investors have gotten a lesson in how fast and how far the markets can move. In recent months the value of our hybrid model of money management has become even more apparent — we are able to have a very close feel for the markets, trading every day here at HMC, and we can react to opportunities and threats on a more immediate basis than the average endowment. The combination of our team of internal money managers, who work exclusively for Harvard, with a set of carefully chosen external managers in different markets and asset classes across the globe is immense, powerful. The depth of understanding and the close feel for the markets we gain through the internal staff, and the breadth and global perspective we get through our external managers, give us a perspective that we think is unique to endowment management. The hybrid model really gives us the best of both worlds.

GAZETTE: Some blame the level of leverage in Harvard’s portfolio for its current challenges. Is this fair?

MENDILLO: From where we stand today, we can see there was a large mis-pricing of risk in many markets over the last several years. Investors simply were not being paid a very high price to assume risk, and so many investors across the world added in increasing levels of risk to their portfolios, as they attempted to earn higher returns. The sense of balance between the expected return from these incremental investments and the amount of risk that was being added to the portfolios was lost. Some of Harvard’s tail risk hedging strategies were based on this imbalance. After many years, the markets reached a tipping point this past year — risk was suddenly apparent everywhere — and prices dropped precipitously as investors sought to curb their losses. Looking back, such a meltdown was probably in the cards for many reasons, whether we cite easy lending practices, inadequate credit ratings, or an excess of capital, on a worldwide basis. The trade-off between return and risk was clearly out of kilter.

GAZETTE: What advice would you give an individual investor reading this interview? What lessons can be learned from the last year, and how should we think about the year or years ahead?

MENDILLO: No. The recent staffing changes were part of a rebalancing plan that I implemented as the new CEO, a plan that was formed beginning in the first days after I returned to HMC. Remember, I had 15 years of experience working closely with how we managed the portfolio and the staffing and support related to the variety of asset classes in which we operate. As a result, I had some thoughts on how the company should be organized when I returned. I developed a plan for optimizing the structure of the company with the new CEO of HMC and the heads of our internal and external management teams. The staffing plan currently reflects a strategic balance between investment strategy and support functions that we think is very appropriate to the portfolio and the management activities we anticipate going forward.

GAZETTE: Some blame the high earning power of the Harvard Management Company, where we use internal managers to actively manage a good portion of the endowment portfolio, is significantly less than the average in the field of investment management, and our performance is significantly better. The HMC board also reviews the compensation arrangements regularly to ensure that it is consistent with the trends in the industry and appropriate for the University.

Unlike employees at a traditional investment company, our top managers are attracted to HMC because they want to help support the University and its mission. I spend a lot of time with them researching this and I am continually impressed by those who are willing to forgo top-dollar compensation arrangements in order to be a part of this mission and team.

GAZETTE: Harvard University’s enduring excellence is due in large part to its historical endowment return, the best of the best. That is as apparent at the Harvard Management Company as it is at the University. In truth, however, the cost of investment management at HMC, where we use internal managers to actively manage a good portion of the endowment portfolio, is significantly less than the average in the field of investment management, and our performance is significantly better. The HMC board also reviews the compensation arrangements regularly to ensure that it is consistent with the trends in the industry and appropriate for the University.

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MENDILLO: From where we stand today, we can see there was a large mis-pricing of risk in many markets over the last several years. Investors simply were not being paid a very high price to assume risk, and so many investors across the world added in increasing levels of risk to their portfolios, as they attempted to earn higher returns. The sense of balance between the expected return from these incremental investments and the amount of risk that was being added to the portfolios was lost. Some of Harvard’s tail risk hedging strategies were based on this imbalance. After many years, the markets reached a tipping point this past year — risk was suddenly apparent everywhere — and prices dropped precipitously as investors sought to curb their losses. Looking back, such a meltdown was probably in the cards for many reasons, whether we cite easy lending practices, inadequate credit ratings, or an excess of capital, on a worldwide basis. The trade-off between return and risk was clearly out of kilter.

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GAZETTE: What have you learned as an investor over the past year?

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Evolution

(Continued from page 1)

for the Study of Latin America Jonathan Losos; the evolution of mammalian ear bones from analogs in reptilian jawbones, on which former Museum of Comparative Zoology Director Fuzz Crompton worked; and Anthropology Professor Maryellen Ruvolo’s work on the molecular roots of humankind.

The exhibit tackles several major topics in evolution, including variation, which it terms the “raw material” of natural selection, natural selection itself, adaptive radiation, and convergent evolution, among others. It also presents a timeline of life, showing the progression from microbe to simple animal to complex animal to — very near the timeline’s end — humans.

The exhibit unequivocally highlights evolution’s central role in modern biological science, stating prominently that “evolution is a fact” and calling it “an essential truth supported by overwhelming scientific evidence.”

The evolution gallery is the first that visitors pass through when they enter the Museum of Comparative Zoology (MCZ), one of the HMNH’s three parent museums. Though that location is partly due to available space, HMNH Executive Director Elisabeth Werby said the location is important because “Evolution” underlies the exhibits visitors will find beyond, in galleries dedicated to the development and use of color in nature and to the enormous diversity of arthropods, and in halls dedicated to fossils, mammals, and other creatures.

The exhibit was paid for with a gift from members of the Class of 1958, which last year celebrated its 50th reunion. MCZ Director James Hanken, Agassiz Professor of Zoology, said there was tremendous interest from class members in having Harvard weigh in directly on the issue, which has been under scrutiny in broader society.

“The enthusiasm was really overwhelming,” Hanken said.

Michael Margolies, a member of the Class of 1958 who spearheaded the fundraising effort, said the donation to the museum was separate from the Class Gift typically made at reunion time and that a significant number of those approached agreed to give.

“What resonated a good deal — and surprised us — was that many people felt it was an important statement to make in the culture wars in this country,” Margolies said. “I was delighted to have the privilege to be part of it.”

Werby said the new permanent exhibit is the museum’s most significant achievement during Darwin Year, a celebration of the 150th anniversary of the publication of “On the Origin of Species” and the 200th anniversary of Charles Darwin’s birth.

In addition to specimens from the MCZ’s collections, the exhibit includes interactive video terminals and a small theater space, where visitors can hear Harvard faculty members talk about major topics in evolution and in their own work. Werby said the space will also serve to give the museum a place to host gallery talks on other topics. The exhibit includes several displays that are designed to be changed, allowing the HMNH exhibits staff to update the gallery with new developments or to highlight the work of different faculty members. “It will evolve,” Hanken said.