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HARVARDgazette



TRANSFORMING EDUCATION

New doctoral program will train education
leaders to fix failing U.S. schools.

Online Highlights

HARVARD FORUM EXTOLS NEW GENERAL EDUCATION REQUIREMENTS

In a celebratory forum in Lowell Lecture Hall Sept. 3, Harvard President Drew Faust and others explain and extol Harvard's new General Education requirements, which take effect this year with the Class of 2013.

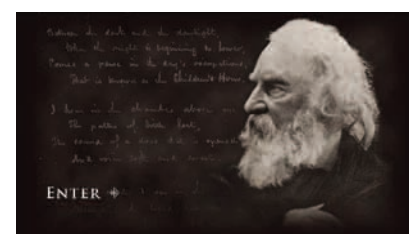
► news.harvard.edu/gazette/story/2009/09/welcoming-gen-ed/



WILSON, WATSON REFLECT ON PAST TRIALS, FUTURE DIRECTIONS

A conversation between DNA discoverer James Watson and biologist E.O. Wilson was moderated by Robert Krulwich at Sanders Theatre in Memorial Hall. They reflected on their lives and careers and talked about the future of biology.

► news.harvard.edu/gazette/story/2009/09/wilson-watson-reflect-on-past/



WIND COULD BE CHINA'S ANSWER

A team of environmental scientists from Harvard and Tsinghua University has demonstrated the enormous potential for wind-generated electricity in China.

► news.harvard.edu/gazette/story/2009/09/china-energy-needs-wind/



HARVARD FILM ARCHIVE ACQUIRES JUST FILM STILLS

Lothar and Eva Just have recently made their collection of film stills and other publicity materials available to the Harvard Film Archive.

► news.harvard.edu/gazette/story/2009/09/harvard-film-archive-acquires-just-film-stills/

LONGFELLOW EXHIBIT RECOGNIZED

The ACRL Rare Books and Manuscripts Section has selected the online exhibition "Public Poet, Private Man: Henry Wadsworth Longfellow at 200" as a winner of the 2009 Katharine Kyes Leab and Daniel J. Leab "American Book Prices Current" Exhibition Award.

► news.harvard.edu/gazette/story/2009/09/longfellow-online-exhibition/

Police Log Online ► www.hupd.harvard.edu/public_log.php

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POISED TO MAKE IT THREE

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This fall, Harvard's traditional phone directories are going the way of the dinosaurs, with paper savings measured in tons.

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IT'S TIME TO TRANSFORM EDUCATION

A new doctoral degree at Harvard Graduate School of Education aims to train a corps of education leaders to enact system-level change and transform K-12 education in America.

KUDOS, CRITICISMS FOR U.S. CONSTITUTION

In honor of Constitution Day, scholars will discuss the historic document's merits and shortcomings. Included is a conversation between retired U.S. Supreme Court Associate Justice David Souter and Harvard Law Professor Noah Feldman.

Harnessing fun for serious science

Researchers from chemistry, computer science, and astronomy learn a trick or two from video games and investigating a new kind of computing based on graphics processing units.

By Alvin Powell | Harvard News Office

For a billion years after the Big Bang, the universe experienced its “dark ages,” a time when space was a vast sea of atomic hydrogen. That period ended with the birth of stars, galaxies, and black holes, ultimately leading to our brilliant night skies.

“The basic building blocks of our universe formed during the dark ages,” said Lincoln Greenhill, a senior research fellow and lecturer on astronomy at the Harvard-Smithsonian Center for Astrophysics (CfA). “But our understanding of this incredibly important time is in fact based on very little hard data.”

Greenhill, together with U.S., Australian, and Indian colleagues, is planning to map the dark ages in search of clues about this time. They’re building a revolutionary radio telescope — 8,000 antennas spread across 1.5 kilometers of desert — deep in the Australian outback. The antennas will generate so much data, however, that without a new kind of computing, faster but lower power, the project would be impossible.

That’s where teenage boys and their computer games come in.

Greenhill’s Murchison Widefield Array (MWA) is one of a trio of projects at Harvard whose massive computing needs have prompted investigators to join forces to pioneer new computing techniques that will benefit not just radio astronomy, but quantum chemistry and neuroscience as well. The three projects have come together in an effort called “SciGPU” (www.scigpu.org), which was founded at the Harvard Initiative in Innovative Computing (IIC) and which recently received a prestigious National Science Foundation Cyber-Enabled Discovery and Innovation grant.

The investigators have been at work on computers that rely on GPUs, or graphics processing units, to do the heavy lifting. In more traditional computing, the processing is done by one or more of the machine’s central processing units, or CPUs. CPUs have long been considered the computer’s brains and excel at complex operations.

GPUs were developed over the past two decades to speed up computers as they manipulated ever-larger and more-detailed computer graphics imagery. Handling these computer-generated images consumed more and more CPU resources, which were not available for other functions. In response, manufacturers developed a second kind of processing unit that could handle computer graphics and video and leave the CPU to do other things.

The explosion of the video game industry in the



Alán Aspuru-Guzik, assistant professor of chemistry and chemical biology, said that GPU-based computing has sped up by 15 times calculations for some problems in quantum chemistry.

1990s and 2000s drove the development of ever-more-complex GPUs, as gamers demanded faster and more physically realistic action sequences.

First-generation GPUs were designed for one essential purpose: to decide what color each pixel on a computer screen should be at any one time. They are very good at doing that operation, multiplied by millions of pixels on a screen, repeatedly and rapidly to form the changing images seen in video games.

Richard Edgar, a computational research scientist at the IIC, said two important events made GPU computing practical today. In the late 1990s, the first programmable GPU was developed, and roughly two years ago, the programming language to program it, called CUDA, was released by video card manufacturer Nvidia Corp. Once CUDA was released, programmers outside the video game industry could take the cheap, powerful, off-the-shelf GPUs built to play war games or shoot monsters and turn them to scientific purposes, where they excel at “massively parallel” problems similar to those for which they were designed.

Computers containing both a CPU and a GPU can cycle back and forth between the two processors as appropriate, outperforming a conventional CPU-driven machine.

In Australia’s outback, hundreds of kilometers off

the electrical grid, GPU computing was a requirement for Greenhill’s radio telescope.

When the Murchison Widefield Array begins operations in late 2010, it will generate so much raw data that it must be processed by computers as it comes off the telescope. It just can’t be stored for later analysis.

“We have volumes of data so enormous that no storage system in existence could hold it all for any useful length of time,” Greenhill said. “Just one day of data could fill about 200 of the largest hard disks now on the market. Yet the MWA needs to operate every night for months and months on end.”

Instead of storing and transporting raw data, the MWA will process it on-site, crunching it down to about one disk per day. To process that much data on a traditional machine would require a computer too large to operate and cool in the desert, given the site’s diesel generators, so researchers needed to find a less-power-intensive way to do the computing. A GPU-driven supercomputer, Greenhill said, can be 10 times smaller than one built around CPUs alone.

Harvard has become one of a handful of pioneering centers around the world pushing GPU computing ahead and has participated in several international events designed both to share information and to

bring new people into the field. Most recently, the National Nanotechnology Infrastructure Network and the Harvard Center for Nanoscale Systems hosted a mid-August workshop, organized by Michael Stopa, director of the National Nanotechnology Infrastructure Network Computation Project. The workshop introduced CUDA to those interested. In addition, Gordon McKay Professor of the Practice of Computer Science Hanspeter Pfister at the School of Engineering and Applied Sciences (SEAS) is teaching an introductory GPU computing course to students at Harvard and the Harvard Extension School.

Harvard's main GPU cluster is called Orgoglio and is integrated with the Faculty of Arts and Sciences' research computing cluster, a centrally located and administered supercomputer available for researchers who need high-powered computing. A second GPU cluster, called Resonance, is at SEAS and is mainly used for instruction.

Alán Aspuru-Guzik, assistant professor of chemistry and chemical biology, said he got started with GPU computing as an experimental project for an undergraduate summer researcher. Through the IIC, he met Greenhill and another faculty member interested in the same thing: Pfister.

Aspuru-Guzik said that GPU-based computing has sped up by 15 times calculations for some problems in quantum chemistry – a field on the border of chemistry and physics that applies the principles of quantum mechanics to chemistry.

“Usually these quantum chemistry problems are cast in a series of matrix equations, so you have these huge matrices – arrays of numbers – and you need to multiply them with each other,” Aspuru-Guzik said. “The [GPUs] work like a swarm of ants, rather than like central processing units, that are like a big, slow scarab beetle: smarter than an ant, but slower to perform a single task.”

Pfister, an expert in computer science, is involved in the Connectome Project – an ambitious effort to map all the connections in the brain and peripheral nervous system of model animals, such as the lab mouse. The effort, using high-resolution microscopy, requires painstaking identification and tracing of the nerve axons that make up the body's wiring.

Pfister said that humans looking at the images can easily identify the axons and trace them through images of slices of the brain. With the brain's enormous complexity, the job would go far faster if the process could be automated, but the process is proving difficult for computers. Pfister and other experts on the project have designed a computer algorithm that is beginning to help, though it still needs to be checked by humans. Running the program on a GPU-based computer gives much higher performance, Pfister said.

GPU computing, of course, has its difficulties. A new level of precision is being built into the chips to meet exacting standards of research computing not necessary when computing pixels on a screen. Right now this higher precision comes at the cost of lower performance. Another issue is that GPU computing requires a specialist who understands how to manipulate the unique architecture of the GPUs in order to use them effectively.

Despite those issues, Pfister sees new applications for GPU computing in areas such as biomedical imaging, which is producing more and more detailed images, requiring ever-more powerful computing to manipulate and analyze the data.

Pfister also believes that GPU computing shouldn't be relegated to the niche of massively parallel problems. Rethinking how computers approach other types of problems could make them amenable to quick resolution by GPUs as well.

“I think projects like the Connectome, MWA, and quantum chemistry are just the tip of the iceberg,” Pfister said.

New online encyclopedia makes life searchable

Harvard is part of an ambitious project with the goal of nothing less than documenting all of the 1.8 million known living species on Earth.

By Alvin Powell | Harvard News Office

One hundred and fifty thousand species down, 1.65 million to go.

That is the tally for the online Encyclopedia of Life (www.eol.org/), an ambitious two-year-old project with the goal of nothing less than documenting in one place all of the 1.8 million known living species on Earth and making the information available to everyone with Internet access.

The effort is being mounted by Harvard and five other cornerstone institutions: the Smithsonian Institution, the Marine Biological Laboratory, the Missouri Botanical Garden, the Field Museum of Natural History, and the Biodiversity Heritage Library, itself a consortium of 10 major natural history libraries, including two from Harvard.

The Encyclopedia of Life (EOL) passed several major milestones in August, including the 150,000 species pages mark and \$12.5 million in renewal funding from the MacArthur and Sloan Foundations. EOL also announced that its overall architecture is 75 percent complete, with placeholders for up to 1.4 million species.

Agassiz Professor of Zoology and Museum of Comparative Zoology (MCZ) Director James Hanken serves as the chairman of the EOL's Steering Committee. He said the effort has gained steam as different Web sites providing species information began to ask if their material could be represented on EOL. The result has been a growing sense that EOL could serve as a portal for those interested in finding out about life on Earth, an entryway that not only contains species descriptions and images, but that also provides links to a wide array of resources available on other Web sites.

“It's natural for people to think of this exclusively as a biodiversity site, but it also provides a portal to comprehensive information for all species,” Hanken said.

Marie Studer, who heads EOL's MCZ-based Learning and Education Group, said it is critical that the public, researchers, and other users know that EOL's information is accurate, so each entry is vetted by experts. Despite that, Studer said EOL is intended to be highly participatory and provides ways for citi-

zen-scientists to contribute. Images or text can be added by anyone, but they go onto the site with a yellow background that indicates the material has not yet been reviewed by an expert. Those seeking information can adjust a slider bar for how authoritative they want the information to be, showing just expert-written content or everything.

More than 30,000 still images and video have been uploaded to the EOL by tools that have been added to the site allowing public contributions.

Some funding organizations believe that the EOL can be an instrument for scientific discovery as well as a repository of information. The Ellison Medical Foundation has funded an effort by Holly Miller at the Marine Biological Laboratory to relate EOL information to medically relevant concepts, which would allow researchers to organize and extract information such as relative life spans of different species. It is the beginning, Hanken said, of an effort that could allow EOL to be used to illuminate broad, cross-species biological trends.

“Some patterns and phenomena are discernible only when viewed from afar,” Hanken said.

EOL is already being used for education. Instructors at four universities, including Harvard, are having students create species pages as part of class projects.

“It's about contributing to a real-world project. If the students do their job properly, it will go online,” Hanken said.

Part of the project involves linking to important past research, such as scientific papers in which species are first described. A large amount of material is being digitized by the Biodiversity Heritage Library, which has access to a vast collection of biodiversity-related material in member libraries.

EOL has started the process of getting content from regional groups in local languages, which is often translated into English. EOL has inaugurated regional groups in the Netherlands, China, and Australia.

“The point of EOL is to be as flexible as possible. We don't know what the end user wants to use it for,” Studer said.



Carlin Wing '02 assembles her exhibit at the Carpenter Center.

Visiting faculty bring art along

Exhibit highlights the work of eight visiting faculty at Harvard's Department of Visual and Environmental Studies.

By Corydon Ireland | Harvard News Office

After college, All-Ivy squash player Carlin Wing '02 moved to Holland and played for two years on the professional circuit.

Today she looks like she could still slam a 125 mph kill shot. But Wing instead makes a living as an artist. Art and athletics share a lot, she said. Practitioners are looked at, they entertain, and they inhabit a world of fervent economic activity.

This year, Wing is among eight artists who step into temporary teaching positions at Harvard's Department of Visual and Environmental Studies. The others: Thomas Eggerer, Sarah Jane Lapp, David Lobser, Daniel Sousa, Sophie Tottie, Andrew Witkin, and Michele Zalopany.

They are being celebrated on the ground floor of the Carpenter Center with "Visiting Faculty 2009-10," an exhibit of paintings, photographs, installations, and avant-garde video.

Most of the working artists will be on campus for just one semester to help students use paint and pixels to explore the far borders of creation.

And most will deliver Carpenter Center public lectures, starting Sept. 24 with the Berlin-based Tottie. Her "Written Language" is a display of large-scale ink drawings in the exhibit. In them, she said, "mistakes and deviations form an unexpected image."

In late August, Wing helped install her portion of the show: 11 photos, large and small, and one looping art video (about squash). The video fills the gleaming-floored, high-windowed gallery space with the popping and squeaking sounds of match play.

"I hope to grab people visually so they come forward and then engage with the ideas," Wing said of her work, whose layers invite successive meanings. "There's a lot more to it if you stick around. An artist always hopes people stick around longer."

Stick around, for instance, to watch the creations of David Lobser, a New York City animator. His effulgent, surreal, and witty work carries a hint of Tim Burton and David Lynch (both inspirations).

Lobser's computer-animated worlds are inventive and cleverly scored. They are layered with joy and danger and the one life condition that combines them both: sex.

"Video," he said of his art form, "was my first love, before high school even."

"Arcade" is a 4-minute film made in 2000 that Lobser said helped him figure out what kinds of films he wanted to make. "Elephant Girl" (2007) pursued some of the same themes. The two films share bright outer worlds that devolve to inner worlds rife with danger, mystery, secrets, and death.

By comparison, "The Hunt" (2007) is set to a sparkling fragment of Mozart and "feels like a doodle," said Lobser. It's only 45 seconds long, and unfolds as lightly as the pig-shape clouds that float around in it. "I wanted to express an emotion," he said, "without investing the time in making a longer, more intense piece."

"Mother's Day" (2008) is a 2-minute animation that reprises the biting, eating, and eroticism of Lobser's earlier films — but in a lighthearted way. A caterpillar

Online ► Exhibit and lecture schedule:
www.ves.fas.harvard.edu/vesNewFacultyExhibition.html

turns into a cocoon, then into a flying bug that emerges into a world of botanical enticement: snapping plants with jagged teeth and tentacles, all with some kind of come-on. The plant that finally eats the bug is a pretty-faced, motherlike plant with double rows of succulent teats. Thanks to this mother though, here is life after death. With a fartlike heave, she excretes more caterpillars.

Zalopany, who lives in Manhattan's fabled Chelsea Hotel, is a painter whose exhibit watercolors re-imagine photographs of native women in 19th century Hawaii (where her grandfather was born). How were racial differences depicted — what was hidden and what assumed?

"They're not the pretty hula girls," she said of the subjects on display in her three paintings: solemn native girls with broad, dark faces. "These paintings are based on photos — the earliest from 1860."

Zalopany — a student, lately, of racial depictions — has painted from photos of all-black police lineups and of 1950s-era Japanese women who were pearl divers. "I have always been interested," she said, "in 'The Other.'"

Of her penetrating, realistic paintings, Zalopany added, "I want people to look at the work and start asking questions."

Sarah Jane Lapp, a Seattle animator and filmmaker whose work is widely available online, will get you thinking, too. Recline in front of the exhibit video screen showing "Chronicles of a Professional Eulogist" (2009), slip on the headphones, and glide into her magical world of jiggling, bright-painted animation, archival photos, and sonorously wise voiceover.

"I could live in my own drawings," said Lapp recently in a whimsical artist's statement. "They are tidier than my own studio."

Then comes her artist's view of the practicality of a life surrendered to observation and interpretation: "Drawing," wrote Lapp, "engenders and documents discovery."

Wing remembers visiting-faculty shows at the Carpenter Center from her undergraduate days at Harvard. And she remembers the visiting faculty themselves, and how valuable it was to have both artist and art in one place.

"It was nice," said Wing, "to have all those voices."

Norton Lectures interrogate the novel

Orhan Pamuk, winner of the 2006 Nobel Prize for literature, will deliver Harvard's traditional Charles Eliot Norton Lectures, in a series of six talks on novels and novelists that begin Sept. 22.

By Corydon Ireland | Harvard News Office

The Charles Eliot Norton Lectures, a tradition at Harvard since 1926 and missed in only eight of those years, enjoy their 55th iteration beginning this month, with a Sept. 22 talk by Turkish novelist Orhan Pamuk, the winner of the 2006 Nobel Prize for literature.

Pamuk, born in 1952, is a celebrant of his native land and the author most recently of "The Museum of Innocence" (2008). He is the 2009-10 Charles Eliot Norton Professor of Poetry at Harvard, a lectureship established in 1925 to advance the understanding of "poetry in the broadest sense."

The post has been held by a Who's Who of luminaries in art, poetry, and music, including T.S. Eliot, Robert Frost, Igor Stravinsky, Lionel Trilling, and Leonard Bernstein, who delivered his lectures punctuated by illustrations on a piano.

Pamuk will deliver six free public talks, in a series called "The Naïve and the Sentimental Novelist." They are the first Norton Lectures to explicitly address the novel as a literary form.

His first lecture, "What Happens to Us as We Read Novels," is at 4 p.m. Sept. 22 at Sanders Theatre, 45 Quincy St. The others are all at the same time and at the same venue: "Mr. Pamuk, Did You Really Live All This?" (Sept. 29); "Character, Time, Plot" (Oct. 13); "Pictures and Things" (Oct. 20); "Museums and Novels" (Oct. 26); and "The Center" (Nov. 3).

The Norton Lectures are traditionally published by Harvard University Press (though Frost's and a few others never were). Pamuk's lectures may appear in book form by 2011.

What happens to us as we read novels? Pamuk will only reveal that on Sept. 22, when he opens the series with a look at that question.

But he has already told us what happens to novelists when they try to write novels, an activity that Pamuk in his Nobel acceptance speech said required "patience, obstinacy, and joy."

Writing novels, he said, depends on "the crucial task of sitting down at the table and patiently turning inwards. To write is to turn this inward gaze into words."

Patience trumps inspiration for writers, according to Pamuk, who in Stockholm likened writing novels to an old Turkish saying: "to dig a well with a needle."

To be sure, the "angel of inspiration" makes visits, Pamuk added, but inspiration always "favors the hopeful and the confident."

Writing is made of "stories, images, and dreams," he said in the same speech, but discontent is also required — that "basic trait that turns a person into a writer."

As a young man, Pamuk's discontent was with Turkey, which gave him "the sense of being marooned in the provinces." The same discontent was felt by his businessman father, who periodically escaped to Paris and elsewhere to write and experience culture.

His father "read novels to escape his life and flee to the West," said Pamuk, "just as I would do later."

But in later life, for the younger Pamuk, came turnabout. Now Istanbul is "for me the center of the world," he said — "its streets, its bridges, its people, its dogs, its houses, its mosques, its fountains, its strange heroes ... this world I had made with my own hands."

That small world contains "the collective humiliations, vulnerabilities, slights, [and] grievances" of the larger world, Pamuk said, and it prompts a realization "that the great majority of people on this earth live with these same feelings."

Maybe that is what happens to us as we read novels: We see ourselves, in others.

"All true literature rises from this childish, hopeful certainty," said Pamuk, "that all people resemble each other."



Orhan Pamuk is the Charles Eliot Norton Professor of Poetry at Harvard, a lectureship established in 1925 to advance the understanding of "poetry in the broadest sense."

The sound of music

Students perform and perfect their talents as they tap into a Harvard tradition.

By Colleen Walsh | Harvard News Office



The following is a list of some of Harvard's upcoming musical offerings. For more information on a specific performance or for tickets, visit the Office for the Arts at Harvard at <http://ofa.fas.harvard.edu/ofa>. All of the events listed below will take place at Sanders Theatre at 8 p.m.

The Harvard-Radcliffe Orchestra will present a program of works by Debussy and Tchaikovsky on **Oct. 24**.

In addition to performing during Harvard's football games, the Harvard University Band will join the Harvard Wind Ensemble and the Harvard Jazz Band for a 90th anniversary concert on **Oct. 30**.

On **Nov. 20**, the Harvard-Radcliffe Chorus will open its 30th anniversary season with a performance of part I of Handel's "Messiah" and the "Hallelujah" chorus.



Holly Hajare rehearses for the Summer School Orchestra inside the basement of Memorial Hall.

Music was in the air on the Harvard campus this past summer.

On many a night in June and July the sounds of a baritone or tenor, clarinet or trumpet, flute or violin could be heard floating through the Yard on a soft breeze.

In keeping with a long summer tradition, students, children, and adult musicians of all ages and skill levels took part in three of the musical options offered by the Harvard Summer School.

For years the Harvard Summer Pops Band, the Harvard Summer School Chorus, and the Harvard Summer School Orchestra have provided a musical outlet not only for students taking classes on campus during the summer months, but community members looking to get involved with a musical ensemble.

Both the orchestra and chorus hold auditions, while the band is open to any brass,

woodwind, or percussion player who is ready and willing. Players for each group range in age from their early teens to their 70s, and their experience runs the gamut from beginner to advanced. The season is a brief one; weekly rehearsals begin in June for each group and their concerts are performed in July or early August.

This year, the orchestra, under the direction of Judith Zuckerman, performed with Keisuke Wakao, assistant principal oboist for the Boston Symphony Orchestra. As it has done in the past, the pops band, conducted by Thomas G. Everett, director of the Harvard University Bands, performed one of its concerts at the Hatch Shell in Boston. This year's program for the chorus, led by Jameson Marvin, director of Choral Activities at Harvard and Radcliffe Colleges and senior lecturer on music, included a selection of works by Handel and Haydn.



Online ►► Audio slide show: news.harvard.edu/gazette/story/2009/09/summer-music

Justice for all

‘The book invites readers to grapple with some of the big questions of civic life,’ says its author.

By Sarah Sweeney | Harvard News Office



HARVARD BOUND



THE ADVENTURES OF AN IT LEADER

(Harvard Business School Press, April 2009)
By Robert D. Austin, Richard L. Nolan, Shannon O'Donnell

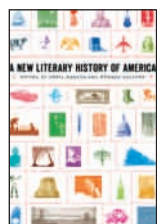
Austin and Co. team up to create Jim, a fictional IT manager, who stumbles in his first-year duties only to (what else?) save the day. You'll never look at your computer guy — or gal — the same way again.



CLOSE CALLS WITH NONSENSE: READING NEW POETRY

(Graywolf Press, March 2009)
By Stephen Burt

In 30 essays Burt serves up literary criticism like you've never seen it before — his charming, excited prose unknots the web of poetry and knits a tapestry.



A NEW LITERARY HISTORY OF AMERICA

(Harvard University Press, September 2009)
Edited by Greil Marcus and Werner Sollors

This compilation of original essays features a myriad of voices from Harvard. Ingrid Monson, Peter Sacks, Cass Sunstein, Helen Vendler, and others take on Americana's finest: porn, country music, and J.D. Salinger.

Thank goodness for Michael Sandel.

On the heels of his popular Harvard course “Justice,” the Anne T. and Robert M. Bass Professor of Government has authored a new book unpacking today's most prevailing political and ethical quandaries.

In “Justice: What's the Right Thing to Do?” (Farrar, Straus & Giroux, 2009), Sandel traverses income inequality, affirmative action, same-sex marriage, torture and terrorism, whether killing is ever morally required, and more. These are issues that make your head hurt, but that you inevitably have a stance on — right?

“The book invites readers to grapple with some of the big questions of civic life,” says Sandel, whose goal in writing “was to show how contemporary public debate can be deepened and enriched by an engagement with some of the big ideas of political philosophy.”

Sandel was a graduate student at Oxford when he “decided to give political philosophy another try.” As an undergraduate student he'd found it “too daunting,” but the second go-round was just right.

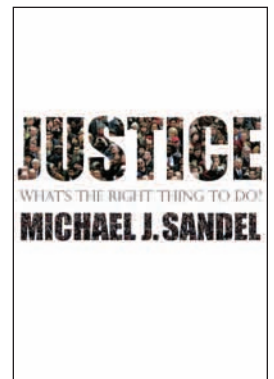
“I became hooked, and haven't managed to escape since,” he says.

With his clear, engaging voice, Sandel has done the unthinkable: made philosophy accessible, even charming. Conjuring contemporary culture in his arguments, Sandel places Oprah, the Simpsons, Walmart, and Barack Obama side by side with figureheads Aristotle, John Rawls, and Immanuel Kant. He even links the soft drink Sprite's slogan with a Kantian insight (Obey your thirst, anyone?).

“Part of the fun of the course is the lively exchange that takes place as students argue with one another, with the philosophers, and with me,” he says. “In the book, I've tried to create for the reader the same sense of exploration and suspense that unfolds in class by posing moral and political dilemmas that raise philosophical questions.”

This semester, WGBH Boston will air a 12-part lecture series, taken directly from Sandel's Sanders Theatre classroom. The first episode will air Sept. 20.

“The book took me a year to write, from start to finish,” he says. “But in a way, this is a book I've been working on for the past 30 years.”





COVER STORY

It's time to transform education

A new doctoral degree at Harvard Graduate School of Education aims to train a corps of education leaders to enact system-level change and transform K-12 education in America.

By Colleen Walsh | Harvard News Office

The numbers paint a grim picture.

Graduation rates are dismal for many areas of the country. In the 50 largest cities in the United States, only 52 percent of students graduate from high school.

Internationally, the nation still lags well behind. A recent assessment of math and science literacy for 15-year-olds from 30 industrialized countries found the United States ranked No. 25 and No. 21, respectively.

And the achievement gap — a national performance disparity between white and minority students — still defies attempts to eliminate it.

Across the education sector, there are calls for reform. But sweeping reform will require a new generation of leaders who are as well versed in education issues as they are in the ways of management, according to many education experts.

“Education is the civil rights issue of this time because it provides access to the American dream; you can’t be successful in America without an education,” said Kathleen McCartney, dean of the Harvard Graduate School of Education (HGSE) and Gerald S. Lesser Professor in Early Childhood Development.

Together HGSE and Harvard are helping lead the way for change.

A new initiative, based at HGSE in collaboration with faculty from the Harvard Business School (HBS) and the John F. Kennedy School of Government (HKS), aims to radically transform the American education system. In the fall of 2010, 25 men and women will arrive at Harvard for a three-year,

practice-based advanced degree. They will graduate with a tuition-free Harvard doctorate in education leadership (Ed.L.D.).

The innovative program will attack the problem of failing U.S. schools, say its founders, by developing a corps of education leaders: men and women trained to lead school districts, nonprofit organizations, mission-based for-profit organizations, government agencies, and philanthropic organizations, all key players in the changing education landscape.

The program also will foster a network of education professionals and organizations who are working to transform education.

“You want the very best people, with good networks that they can reach out to when they need help or support in trying to solve really difficult or challenging problems,” said Heather Anichini, vice president for career leadership initiatives at Teach For America, who was on campus this past spring with representatives from about 20 other potential partner organizations to discuss the new Harvard degree.

“This program really creates that kind of national, cross-sector, cross-organizational network for people.”

Teach For America, founded in 1990 by Wendy Kopp, who developed the idea for an organization that trains recent college graduates to work as teachers in low-income schools as her college thesis, has 17,000 alumni. More than 60 percent of them continue to work in the education sector, according to Anichini, and many of them complain about the lack of training opportunities for people who want to take on system-level leadership roles in education.

“They are saying to us, ‘There isn’t a way for us to build our skill set to step into those roles. We can do it if we want to be a principal, we can do it if we want to be a superintendent, but where is the program

that speaks to us if what we want to do is serve in these senior management positions?’” said Anichini.

The problem cuts both ways.

Harry Spence, HGSE professor of practice and lecturer on education at HKS, used the example of the effort to overhaul the New York public school system to illustrate another reason the new HGSE program is so critical. Several years ago, Joel Klein, the newly appointed chancellor of the New York City Department of Education, was eager to find talented people to help run the city’s massive public school system. Looking for top management skills, he turned to the nation’s leading consulting firms.

“I think Joel would agree that today, a number of years later, they lost crucial time because they did not have enough people who had both a deep knowledge of education and the management skills he was seeking,” said Spence. “Our goal is to produce a steady stream of graduates with both skill sets.”

Harvard’s new program, said Spence, who co-chairs its development committee with Richard Elmore, Gregory R. Anrig Professor of Educational Leadership, combines those key elements in an innovative curriculum.

Using a multidisciplinary approach, involving faculty from HGSE, HBS, and HKS, the degree incorporates training in education, management, and leadership, as well as politics and policy. The inter-faculty component is fundamental to the leadership degree, said its developers.

“The faculty work as an integrated team,” said Elmore, “to model the teamwork we expect students to model in their own leadership practice.”

How does a large, complicated, entrenched field change, and how do individuals standing on different platforms cause that change to happen, asked Mark Moore, a member of the degree planning committee.

Dean of the Harvard Graduate School of Education Kathleen McCartney and the School’s Academic Dean Robert Scwhartz helped develop the new Doctorate in Education Leadership.

Photo by Stephanie Mitchell | Harvard News Office

Teach For America corps member Gaby Barahona works with students at the John M. Tobin School in Cambridge, Mass.



“If you try to address that from any one particular perspective you would probably make pretty significant errors.”

Moore is also Herbert A. Simon Professor in Education, Management, and Organizational Behavior at HGSE and Hauser Professor of Nonprofit Organizations at HKS.

His principal interest since coming to Harvard has been professional education. But the question of how to effect systemwide change, he said, “could only be answered by an interdisciplinary faculty.”

The first year’s curriculum is organized into three strands: the education sector, learning and teaching, and leadership and management. The doctoral program will involve some traditional classroom work, but typical courses will be replaced with newly created learning modules that vary in length and scope depending on the topic. The work will also be heavily action-oriented. Students will spend time in teams working on projects and simulations, as well as in school systems helping diagnose and solve specific problems.

“They have to be able to execute good ideas,” said the program’s Executive Director Elizabeth City, who compared the new degree’s learning experience to that of a medical student who receives practical training with patients.

“This is a very action-oriented type of pedagogy; it is much more oriented towards action and hands-on work.”

“You can’t just do it in the classroom,” agreed Spence of the new curriculum. “The training has to include experience and practice and time to reflect with researchers and academics about how the process of change is effectively carried out.”

Participants will customize their second year to fit their individual interests and will select classes from across the University that relate to their particular leadership focus.

In their final year, students will be placed in a residency with one of several partnering organizations including nonprofits or for-profits with an educational mission, or government organizations geared toward education reform. There they will plan and

implement an initiative that is part of that organization’s own effort at transforming education.

The program is not without precedent at Harvard. In 1990, HGSE developed its successful Urban Superintendents Program, a doctoral degree for those wishing to take on a direct leadership role in education at the superintendent level. To date it has produced 26 superintendents, 25 deputy superintendents or chief academic officers, and 24 assistant or area superintendents. The new degree will expand on the superintendents program to cover the increasing demand for a wide range of leadership roles in education.

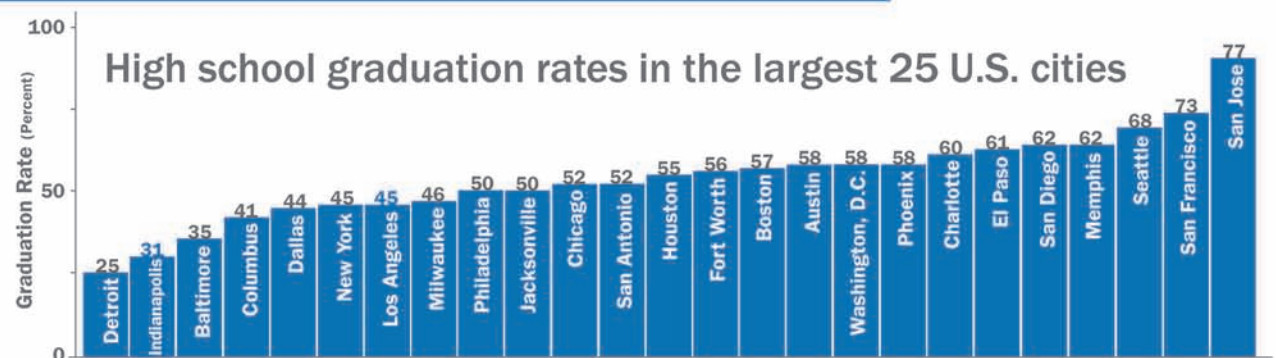
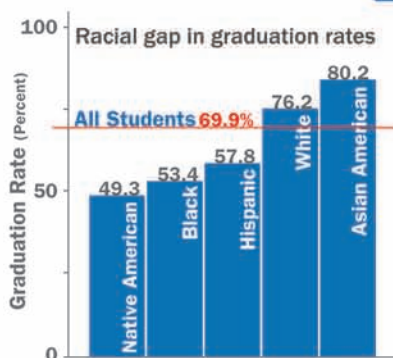
While school departments and districts are still essential agents of change, other key players in the education sector now include nonprofits such as Teach For America and New Leaders for New Schools, which trains educators to become principals of urban public schools. In addition, mission-driven companies in the for-profit sector, as well as government groups, charter schools and networks, and philanthropic organizations are all using unconventional ways to solve the problems with the American education system.

“All of these public, private, for-profit, not-for-profit organizations are playing an increasingly important role in the [education] debate; in structuring the alternatives; in providing the support services that are going to determine the outcome. All of them need leaders,” said Marc Tucker, president and CEO of the nonprofit National Center on Education and the Economy, another organization partnering with Harvard in the new degree.

Such organizations will work in collaboration with Harvard throughout the program and will play an

(see *Education* next page)

Graduation gaps



Source: Editorial Projects in Educational Research Center (2008) based on 2003-04 data from the U.S. Department of Education. City graduation rates are for the principal school district serving the city.

Graphic by Gervis A. Menzies Jr. | Harvard News Office

Education

(continued from previous page)

integral role, serving not only as a training ground for the new generation of leaders, but also as innovators of reform.

“We will be working with them in a very collaborative way to both help them be more effective in their work in the moment, and to learn from them about what they are doing,” said City. “We are thinking of them as places that will host our students for the third-year residency, but also as places that we will draw on for the curriculum.”

Students who are accepted to the program won’t have to worry about how to pay for it. The new degree is tuition-free and will be supported through grants from organizations, including the Wallace Foundation, as well as from individual donors. The decision is a bold effort by the program’s creators to attract top talent in part by eliminating a heavy financial burden.

“We are trying to remove the barriers to access in the same way that Harvard tried to remove barriers to access for undergraduates — because it’s the right thing to do and because we want to get more of the best and the brightest,” said McCartney, adding, “We feel like we are on a mission here, and it’s very exciting. We don’t plan to disappoint.”

The following is a current list of partner organizations that will be collaborating with Harvard’s new Doctorate in Education Leadership:

Achieve, Inc., Achievement First, Aspire Public Schools, Atlanta Public Schools, Charlotte-Mecklenburg Public Schools, Chicago Public Schools, Denver Public Schools, Education Trust, Jobs for the Future, KIPP (Knowledge Is Power Program), Massachusetts Department of Education, National Center on Education and the Economy, New Leaders for New Schools, New Schools Venture Fund, The New Teacher Project, New Visions for Public Schools, New York City Department of Education, Oregon Department of Education, Philadelphia Public Schools, Portland (Ore.) Public Schools, Public Education Network, and Teach For America.



A conversation with retired U.S. Supreme Court Associate Justice David Souter (far left) and Harvard Law Professor Noah Feldman will conclude the Constitution Day event.

Kudos, criticisms for U.S. Constitution

In honor of Constitution Day, scholars will discuss the historic document’s merits and shortcomings. Included is a conversation between retired U.S. Supreme Court Associate Justice David Souter and Harvard Law Professor Noah Feldman.

By Colleen Walsh | Harvard News Office

The U.S. Constitution, the cornerstone of the American federal system of government, will be under close scrutiny at Harvard on Thursday (Sept. 17) as a collection of scholars examines both its merits and shortcomings.

A panel of constitutional experts will explore the impact and significance of the landmark document in a discussion titled “The U.S. Constitution: What Should We Celebrate and What Should We Criticize?” The program will be followed by a conversation between retired U.S. Supreme Court Associate Justice David Souter and Harvard Law School’s Noah Feldman, Bemis Professor of Law.

The discussions will be part of a celebration commemorating Constitution Day, a yearly event to honor the signing of the U.S. Constitution.

Organizers hope to provoke a spirited debate and invite commentary on the revered text — which outlines citizens’ rights, the law of the nation, and the role of the government’s three branches (judicial, executive, and legislative).

“I was fortunate to get participation from five renowned legal scholars who have strong views on the contributions and limitations of constitutional law for American democracy,” said Nancy Rosenblum, chair of Harvard’s Department of Government, who helped coordinate the program in collaboration with the University’s Office of the Provost.

Rosenblum, the Senator Joseph Clark Professor of Ethics in Politics and Government, also included panelists familiar with comparative constitutional law “so they can [discuss] how our Constitution is different from other constitutions and make some judgments about that.”

“We should celebrate the Constitution as a symbol of our nation’s aspirations to promoting justice and the general welfare, to quote the preamble, and we should criticize some of the structures embedded in the Constitution that make it difficult for us to do so,” said panelist Mark Tushnet in a preview of the discussion.

Tushnet, William Nelson Cromwell Professor of Law at Harvard Law School (HLS), served as a law clerk to Justice Thurgood Marshall and specializes in constitutional law and theory, including comparative constitutional law.

While panelist Charles Fried, Beneficial Professor of Law at HLS, acknowledged that the Constitution should be honored for its style, endurance, and flexibility, he said that some of its structural faults hamper its effectiveness.

Online ► Live Webcast begins 1 p.m. Sept. 17: <http://livevideo.harvard.edu>

“Obviously there are severe defects,” said Fried, former solicitor general of the United States, “and there’s a question whether we can, within its terms, deal with them.”

Other members of the panel include Michael Klarman, Kirkland & Ellis Professor of Law at HLS; Alex Keyssar, Matthew W. Stirling Jr. Professor of History and Social Policy at Harvard’s John F. Kennedy School of Government; and Sanford Levinson, professor of government at the University of Texas Law School whose most recent book, “Our Undemocratic Constitution: Where the Constitution Goes Wrong (And How We the People Can Correct It),” was published in 2006.

The discussion, moderated by Rosenblum, will begin at 1 p.m. in room 105 of Emerson Hall, and will be immediately followed by the conversation with Souter and Feldman.

The Harvard event is in keeping with a 2004 law that mandates all educational institutions receiving federal funding hold an educational program relating to the U.S. Constitution.

If you miss the live Webcast (1-4 p.m. Sept. 17 at <http://livevideo.harvard.edu>) it will be archived (http://video2.harvard.edu:8080/ramgen/vpf_ufs/Constitution2009.rm) for future viewing.

This summer, Bomblies brought her studies from Max Planck, where she was a postdoctoral fellow in the lab of Detlef Weigel, to Harvard, where she began work as an assistant professor of organismic and evolutionary biology.

NEW FACULTY INTRODUCED

Assistant Professor of Organismic and Evolutionary Biology Kirsten Bomblies is among 70 new faculty members who are joining the University's various Schools this year. With the start of the new year, Harvard has hired 41 new assistant professors, six associate professors, and 23 new full professors, and promoted 20 existing faculty members to tenured professor positions.

The Office of Faculty Development and Diversity (FD&D) serves as Harvard's central faculty affairs office and has launched a new Web site designed to support Harvard's mission to find, develop, promote, and retain the world's best scholars. The site provides information related to faculty recruitment, resources designed to support faculty teaching and scholarship, and detailed descriptions of institutional policies, benefits, and services.

The site will also serve as a vehicle to introduce faculty to the broader Harvard community and the public. The Web site's home page will provide links to this year's new faculty on a rotating basis.

Working closely with colleagues across the University, FD&D oversees and guides institutional policies and practices in all areas of faculty affairs, providing intellectual leadership and coordination across Harvard's Schools.

To view detailed profiles of some of Harvard's newest faculty members or to learn about the Office of Faculty Development and Diversity, please go to www.faculty.harvard.edu.



FACULTY PROFILE

Growing her own answers

Assistant Professor Kirsten Bomblies examines plant immune responses for clues about genetic divergence.

By Alvin Powell | Harvard News Office

It was the sick-looking plants that intrigued Kirsten Bomblies as she worked on plant genetics at the Max Planck Institute for Developmental Biology over the past few years.

The plants were stunted and yellow with shriveled leaves. Their immune systems were in high gear, but they hadn't been attacked by a pathogen or pest. They were born that way.

Bomblies, a plant geneticist and molecular biologist, tracked the condition to a kind of plant autoimmunity, where the plants' internal defenses, originally intended to fight external pests, fungi, and bacteria, were switched on and instead attacked the plants' own tissues.

The condition, called hybrid necrosis, has long been known to affect crosses of different plant varieties, or hybrids. Bomblies and her colleagues were the first scientists since a disregarded 1929 report to track the problem to plant immune responses. They were also the first to clone the genes involved.

In July, Bomblies brought her studies from Max Planck, where she was a postdoctoral fellow in the lab of Detlef Weigel, to Harvard, where she began work as an assistant professor of organismic and evolutionary biology. Bomblies received her doctorate from the University of Wisconsin, Madison, in 2004 and last fall won a prestigious MacArthur Foundation Fellowship, a \$500,000 no-strings-attached grant given annually to creative, original individuals who the foundation judges have the potential to make important contributions to society.

Bomblies believes the relationship between hybrid necrosis and plant immunity is a result of the evolutionary divergence of different varieties of the plant involved in the study, *Arabidopsis thaliana*, an unassuming member of the mustard family that has become a favorite study subject of plant geneticists. In pursuit of what the plant could tell her about the roots of genetic diversity, Bomblies crossed many different strains of *Arabidopsis* and studied the hybrid plants that resulted.

"We did a screen to see how many of them would be normal and how many would have problems. We found that 2 percent had very severe problems," Bomblies said. "It turns out that's from massive amounts of cell death. The tissue just dies off. These plants are just completely overactivating their immune systems."

Because immune genes are forced to rapidly evolve to keep pace with the constant onslaught of bacteria, viruses, fungi, and pests, Bomblies believes the hybrid necrosis results from the large diversity among *Arabidopsis* immune genes. Since one hallmark of different species is their inability to reproduce with each other, the findings may highlight one mechanism through which *Arabidopsis thaliana* varieties evolve into different *Arabidopsis* species.

"It's kind of a model for some of the earliest events happening in population divergence. I can't say any will speciate, but it's an interesting model," Bomblies said.

Bomblies wants to continue to study the phenomenon at the molecular level and to investigate how temperature affects it. Plant immune systems become less responsive as temperature increases beyond its normal environmental range.

Bomblies is also interested in investigating another type of *Arabidopsis* diversity, that of *Arabidopsis arenosa*, known to grow under widely differing environmental conditions.

New Crimson Kids Program offers free football and more

Fan Zone starts two hours prior to game;
halftime and post-game activities to be offered

By Lauren Marshall | Harvard News Office

Harvard University is kicking off the 2009 football season with a new “Crimson Kids” program.

Beginning Sept. 25 at the home opener and continuing through the rest of the season, all Harvard football games played at Harvard Stadium will be free to children 12 and under.

Children, families, and football-lovers of all ages are also invited to attend the Fan Zone, starting two hours prior to game time and at half-time, where they can take part in activities such as face painting, music, games, prizes, raffles, and more.

Children will also have access to the field after the game, where they can enjoy Harvard Stadium from the players’ perspectives.

“We’re incredibly fortunate to have a supportive fan base in our surrounding communities,” said Bob Scalise, Nichols Family Director of Athletics. “We want to welcome even more youth to be able to experience Harvard Football.

“This program will also build on our players’ ongoing efforts to engage with local children and provide positive role-models for youngsters from our neighborhoods,” he added.

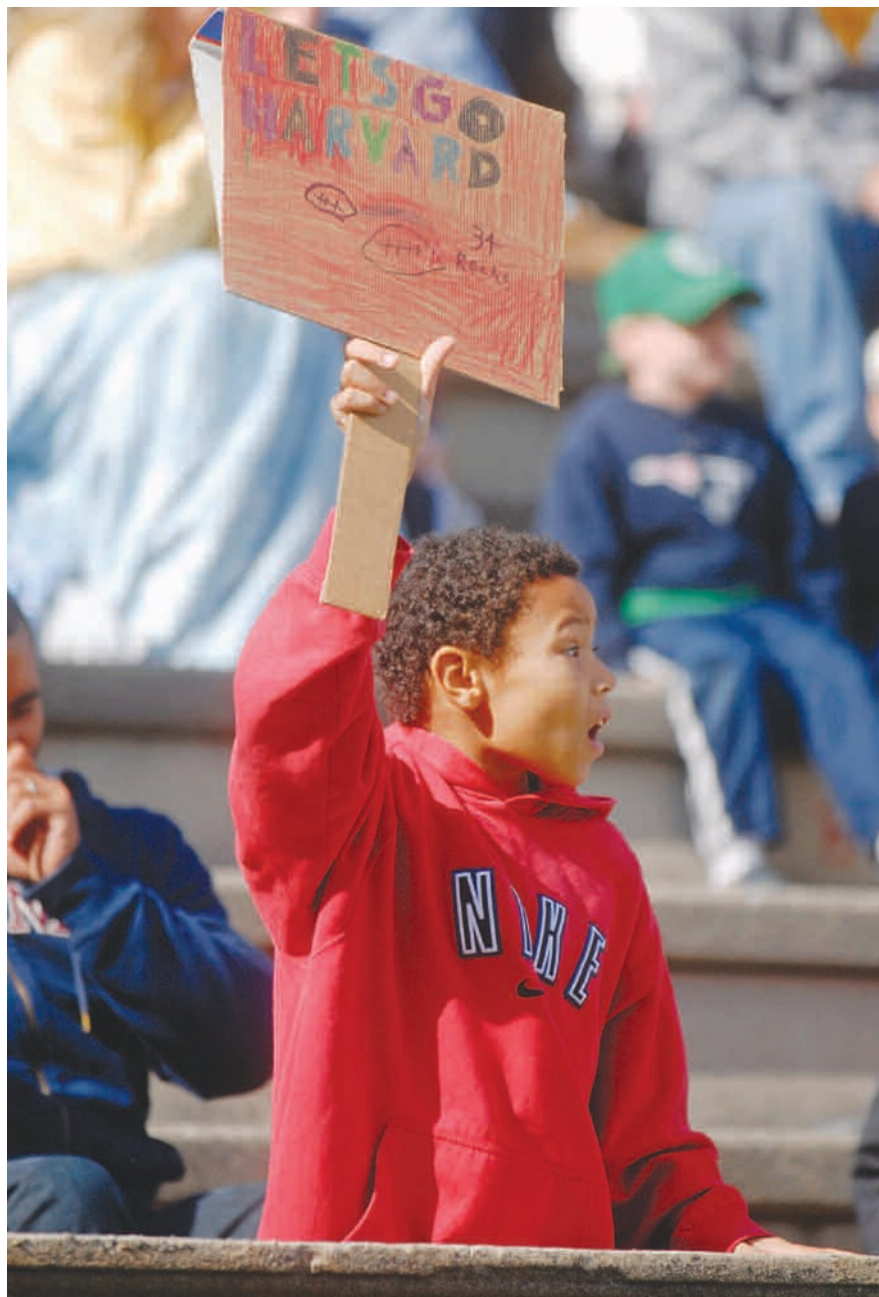
Each year hundreds of student-athletes from Harvard’s 41 intercollegiate athletic teams participate in multiple community outreach efforts.

Recently, the men’s soccer team held a clinic for children from the Boston Public Schools and the women’s volleyball team hosted a clinic for Big Sisters of Boston. The Harvard men’s lacrosse team visited the Boys and Girls Club of Cambridge to teach the basic skills of lacrosse to youngsters. They also volunteered to help build houses with Habitat for Humanity.

With 41 varsity sports, Harvard has the largest Division 1 school athletics program in the country. The following fall sports are free to the public: cross country, field hockey, men’s and women’s golf, men’s and women’s soccer, men’s and women’s tennis, women’s volleyball, and men’s water polo. Schedules and venues are available on GoCrimson.com.

For Harvard football tickets, tailgating packages, and youth football fundraising opportunities, visit GoCrimson.com or call 617.495.2211.

For other programs at Harvard that link Harvard students, faculty, and research with local communities, go to www.communityservice.harvard.edu/programs.



More Campus & Community Online
[news.harvard.edu/gazette/
section/campus-n-community](http://news.harvard.edu/gazette/section/campus-n-community)



FALL 2009 ARCHAEOLOGY
DIG ON CAMPUS



HARVEY COX EXERCISED
HIS RIGHT TO GRAZE A
COW IN HARVARD YARD

Poised to make it three

Crimson look for their third consecutive title.



Harvard will take the field Sept. 19 against Holy Cross.

By Gervis A. Menzies Jr. | Harvard News Office

No one has won three consecutive Ivy League Championships since Dartmouth in 1992, but the Crimson are poised to do just that.

Harvard, voted the Ivy favorite for the third time in four seasons at the annual Ivy football media day, will open the season on Saturday (Sept. 19) at Holy Cross. The Crimson are aiming for their third-straight Ivy League championship and 14th All-Time.

Despite being voted the preseason favorite, the Crimson will need to fill a few critical holes created by a number of senior departures. Ivy Player of the Year quarterback Chris Pizzotti '09, All-American and All-Ivy League cornerback Andrew Berry '09, and last year's captain, first-team All-Ivy defensive tackle Matt Curtis '09, were all essential to the success of last year's team.

"Anytime you lose as many great players like we lost last year, [including] the Ivy League Player of the Year, it takes some time to fill that void," said head coach Tim Murphy, who enters his 16th season coaching the Crimson. "Quite frankly, we're not there yet. We certainly believe we will be, but we have a long way to go."

Senior captain Carl Ehrlich '10, who was named All-Ivy Honorable Mention last season, will be the Crimson's anchor on defense, which returns five starters this season.

"Carl Ehrlich has done a great job. Obviously when the players elect the captain, you expect to get a good leader in every way. Carl was a great leader all summer, and he's been an inspiration in practices. It starts with him."

An experienced and talented secondary will be the defense's strength, led by 2008 Ivy Rookie of the Year Matthew Hanson '12 at cornerback and safety Collin Zych '11, who finished second on the team in tackles last season.

Returning on special teams are kicker Patrick Long '10, who was a 2008 All-Ivy Honorable Mention selection and second in the conference in field goal percentage, and punter Thomas Hull '10, who averaged 35.2 yards per punt last season.

On the offensive side of this ball, Harvard returns eight starters, including preseason All-American offensive tackle James Williams, and is both strong and deep at the wide receiver and running back positions.

Gino Gordon '11 and Cheng Ho '10 will share time in the backfield for the Crimson, with the junior receiving the bulk of the carries. Gordon ran the ball well last year rushing for 578 yards, fourth in the league, and was a second-team All-Ivy selection.

At wide receiver, Harvard returns its top five pass catchers. Senior Matt Luft, a 2008 first-team All-Ivy League selection who was second in the Ivy League with 875 receiving yards and fifth in receptions with 53 last season, will be the team's top option at re-

ceiver in front of a number of capable and veteran wideouts.

The graduation of Pizzotti — who finished second in career passing yards, touchdowns, completions, and attempts at Harvard — is the biggest concern for the team.

The Crimson hope Collier Winters '11 will be the answer at quarterback, as the most experienced quarterback on the team. He saw action in six games as a freshman and recorded two rushing touchdowns, but missed the entire 2008 season with an injury.

"Collier has done a really good job. He's a very bright kid. He's a tough kid and he's [developing] nicely," said Murphy about the Claremore, Okla., native. "We have the same expectations of him as a Harvard quarterback as we've had of others."

Although he is confident Collier can get it done behind center as the Crimson stand as the Ivy League's team to beat, Murphy's philosophy is to take it one game, one moment at a time.

"I've said this before; I don't think we know how to win championships, but we do know how to win the next game," said Murphy. "That's our whole focus."

Online ► See complete coverage, athletic schedules at: www.gocrimson.com

Newsmakers



Harvard Law School Dean Martha Minow (left) is introduced to the faculty and staff by President Drew Faust during a Sept. 2 reception.

LLOYD M. AIELLO RECEIVES ALPERT PRIZE FOR PREVENTING BLINDNESS IN PATIENTS

Lloyd M. Aiello, a Harvard Medical School (HMS) clinical professor of ophthalmology at Joslin Diabetes Center's Beetham Eye Institute, will receive the 2008-09 Warren Alpert Foundation Prize on Sept. 29. The day's celebration will feature a talk at a symposium, beginning at 2 p.m. at Joslin Diabetes Center. As an Alpert Prize recipient, Aiello joins an elite group of physician-scientists and researchers, seven of whom have also won the Nobel Prize.

Aiello will receive this \$200,000 award for pioneering treatments he developed for a complication of diabetes in which weak, leaky blood vessels proliferate in the retina, leading to hemorrhage and vision loss.

Today, the vast majority of patients with this disease (diabetic retinopathy) retain their vision thanks to a treatment Aiello and his father-in-law, William P. Beetham, pioneered in 1967.

"Lloyd M. Aiello's contribution to the prevention of blindness in diabetic patients is huge," says George King, HMS professor of medicine and research director at Joslin Diabetes Center. "Before the laser treatment, 95 percent of diabetic patients would go blind if they lived long enough. Blindness in the diabetic patient is now only 5 percent."

HSPH'S BLOOM NAMED RECIPIENT OF NATIONAL AWARD

Barry R. Bloom, Harvard University Distinguished Service Professor and Joan L. and Julius H. Jacobson Professor of Public Health at the Harvard School of Public Health, will receive the 2009 Prix Galien USA Pro Bono Humanum award at a ceremony on Sept. 30 at the American Museum of Natural History in New York City for "bringing the best of modern

biological and economic science to the poorest corners of the globe." The ceremony will be emceed by broadcast journalist Charlie Rose.

The Prix Galien USA recognizes the technical, scientific, and clinical research skills necessary to develop innovative medicines. The award committee comprises 11 individuals, including seven Nobel Laureates.

Prior to the event, there will be a roundtable discussion about improving human health through innovative science and clinical research featuring Prix Galien USA candidates and Pro Bono Humanum winners.

To read the full story, visit www.hsph.harvard.edu/news/press-releases/2009-releases/bloom-named-recipient-prix-galien-usa.html.

FIVE HARVARD GRADUATE STUDENTS RECEIVE JULIUS B. RICHMOND FELLOWSHIPS

Five Harvard graduate students have been named to receive Julius B. Richmond Fellowships from the Center on the Developing Child at Harvard University.

The five students, all doctoral candidates pursuing research related to child health or development, will each receive a dissertation grant totaling \$10,000 from the Center to fund independent research during the 2009-10 academic year.

Applications soared this year for the fellowships, with nearly three times as many students vying for the grants as in the previous year. In response to the impressive applicant pool, the center increased the total number of awards to five, from last year's four. The center awarded three Richmond Fellowships in 2007-08, the program's inaugural year.

For the full story, visit www.developingchild.harvard.edu/content/fellowships.html.

FAS NAMES SIX FULL PROFESSORS WITH TENURE

The following faculty have been named full professors with tenure in the Faculty of Arts and Sciences, effective July 1:

David Damrosch, professor of comparative literature, is interested in literary history and the way in which texts come to enter the modern construct known as "world literature." He was previously professor of English and comparative literature at Columbia University.

Florian Engert, professor of molecular and cellular biology, is a pioneer in the development of the larval zebrafish as a system for

study of neural circuits and behavior. He has been on the Harvard faculty since 2002.

Donhee Ham, Gordon McKay Professor of Electrical Engineering and Applied Physics, has miniaturized a nuclear magnetic resonance (NMR) system to handheld size, which could bring lifesaving changes in biomolecular sensing and disease screening. He has been on the School of Engineering and Applied Sciences faculty since 2002.

Melissa McCormick, professor of Japanese art and culture, is a scholar whose broad study of medieval Japanese art draws upon literary, gender, religious, and cultural studies. She has been on Harvard's faculty since 2005.

Ann Pearson, professor of Earth and planetary sciences, brings genomics, isotope geochemistry, and biochemistry to bear on the study of the Earth's history. She has been a member of the faculty since 2001.

Michael Szonyi, professor of Chinese history, has studied the past 600 years of Chinese social history, informed by rigorous fieldwork and close attention to once-inaccessible local archives in China. He has been a member of the faculty since 2005.

For complete announcements, www.fas.harvard.edu/home/news-and-notice/news/press-releases.shtml.

GREYSER HONORED BY INSTITUTE FOR PUBLIC RELATIONS

Stephen A. Greyser, the Richard P. Chapman Professor of Business Administration Emeritus at Harvard Business School, has received a special award for his contributions to public relations education and research from the Institute for Public Relations, a nonprofit organization that supports public relations research and its application to practice. Greyser has recently published two articles on corporate communications and marketing: "Aligning Identity and Strategy," published in the spring issue of *California Management Review*, and "Corporate Brand Reputation and Brand Crisis Management" in the journal *Management Decision*.

PROGRAM ON U.S.-JAPAN RELATIONS ADDS 16 ASSOCIATES AND RESEARCH FELLOWS

The Program on U.S.-Japan Relations has announced its 16 program associates and advanced research fellows for the 2009-10 academic year. Co-sponsored by the Weatherhead Center for International Affairs and Edwin O. Reischauer Institute of Japanese Studies, the program enables scholars and professionals from government, business, fi-



Barry R. Bloom will receive the 2009 Prix Galien USA Pro Bono Humanum award at a ceremony on Sept. 30.

nance, journalism, nongovernmental organizations, and other fields to come together at Harvard.

This year's class of program associates includes scholars, professors, government officials, businesspeople, and journalists from Japan, the United States, and elsewhere.

While at Harvard, the associates and fellows will conduct independent research, which will be presented publicly as part of the program's Tuesday seminar series, and will complete a paper to be published as part of the program's Occasional Papers series.

For more information on the Program on U.S.-Japan Relations and a list of its 2009-10 program associates and advanced research fellows, visit www.wcfia.harvard.edu/us-japan/.

HKS PRESENTS ROY FAMILY AWARD

Harvard's John F. Kennedy School of Government (HKS) will present the 2009 Roy Family Award for Environmental Partnership to the Mexico City Metrobus, a bus rapid transit system that reduces air pollution and greenhouse gas emissions while improving the quality of life and transportation options in one of the largest cities in the world.

The award — given biannually to celebrate an outstanding public-private partnership project that enhances environmental quality through the use of novel and creative approaches — will be presented to the recipients at an HKS event later this fall. The purpose of the Roy Family Award is to draw attention to an exceptional partnership and its achievements while inspiring others to replicate or expand upon its success.

Metrobus opened in 2005 and has reduced carbon dioxide emissions from Mexico City traffic by an estimated 80,000 tons a year. The buses, which operate on clean-burning ultralow sulfur diesel fuel, make more than 450,000 trips per day.

SHORENSTEIN CENTER ANNOUNCES 2009-10 FALL FELLOWS

The Joan Shorenstein Center on the Press, Politics and Public Policy, located at Harvard's John F. Kennedy School of Government, has announced its fall fellows.

"The Shorenstein Fellows this semester represent a diverse and highly experienced mix of professionalism and scholarship, and Dan Okrent — our visiting lecturer who is teaching a course heavily weighted toward writing — is without question one of the best writers and editors in the country," said Alex S. Jones, director of the Shorenstein Center.

Okrent, the first public editor of The New York Times, will be the Visiting Edward R. Murrow Lecturer on the Practice of the Press and Public Policy. He will be teaching a course on writing and reporting on politics and public policy.

To read more on the fellows, see www.hks.harvard.edu/news-events/news/press-releases/shorenstein-fellows-fall-sept09.

— Compiled by
Gervis A. Menzies Jr.
and Sarah Sweeney

HOT JOBS

DEPUTY DIRECTOR, REUNION GIVING REQ. 37045, GR. 059

Harvard College Fund FT (7/10/2009)

WRITER (CASE WRITER) REQ. 37533, GR. 055

Harvard School of Public Health/FXB Center FT (8/28/2009)

DEAN FOR ADMINISTRATION, HARVARD COLLEGE REQ. 37517, GR. 063

Faculty of Arts and Sciences/Harvard College FT (8/26/2009)

INVENTORY SYSTEM DEVELOPMENT LEAD AND ARCHITECT: CONNECTING RESEARCH RESOURCES ACROSS AMERICA REQ. 37549, GR. 058

Harvard Medical School/CTSC FT (8/28/2009)

RESEARCH ASSISTANT I REQ. 37539, GR. 052

Harvard Medical School, FT (8/28/2009)

Online ► See complete opportunity listings at www.employment.harvard.edu or contact Employment Services at 617.495.2772.

HOW TO APPLY

To apply for an advertised position and/or for more information on these and other listings, please visit our Web site at www.employment.harvard.edu to upload your resume and cover letter. Harvard is strongly committed to its policy of equal opportunity and affirmative action.

JOB SEARCH INFO SESSIONS

Harvard University offers information sessions that are designed to enhance a job-seeker's search success. These sessions may cover topics ranging from preparing effective resumes and cover letters, targeting the right opportunities, and successful interviewing techniques. Sessions are typically held monthly from 5:30 p.m. to 7 p.m. at the Harvard Events and Information Center in Holyoke Center, 1350 Massachusetts Ave., in Cambridge. More specific information is available online at <http://employment.harvard.edu/careers/findingajob/>.



Cherry A. Murray (pictured) was welcomed by President Drew Faust as the next dean of the School of Engineering and Applied Sciences. Murray stands in front of a portrait of Cecilia Payne-Gaposchkin, who in 1925 became the first person to earn a Ph.D. in astronomy from Radcliffe.

Online ►► news.harvard.edu

Around the Schools



Harvard Divinity School

In his Harvard Divinity School (HDS) convocation address in 2008, Donald K. Swearer, Distinguished Visiting Professor of Buddhist Studies and director of the Center for the Study of World Religions (CSWR), emphasized a worldview that considers ecology not in specific biological terms but instead in its broadest sense, noting that “an ecology of human flourishing ... is an understanding of the world as organically inter-related and interdependent.”

This year, the CSWR, in conjunction with Harvard’s Weatherhead Center for International Affairs, Harvard’s Center for the Environment, and the Initiative on Religion in International Affairs at Harvard Kennedy School, will expand on that notion with a series of lectures designed to explore “the ecology of human flourishing’s” religious, ethical, environmental, historical, and literary dimensions.

The first lecture in the series, “A World in Crisis: The Relevance of Spiritual-Moral Principles,” will take place on Thursday, Oct. 1, from noon to 2:30 p.m. in the CSWR Common Room, located at 42 Francis Ave. Chandra Muzaffar, president of the International Movement for a Just World, will deliver the address. The respondent will be Ronald Thiemann, HDS Bussey Professor of Theology.

For a full list of lectures, visit www.hds.harvard.edu/cswr/events/theme.html.

— Colleen Walsh



Faculty of Arts and Sciences

What’s small, four-legged, and leaves dusty paw prints on telescope mirrors? That’s what astronomers at the Harvard-Smithsonian’s Whipple Observatory in southern Arizona were trying to find out.

The mystery visitor first appeared in 2008, wandering into a building that holds the MEarth project — eight robotic telescopes designed to search for distant planets. Over the months that followed, the stealthy critter (or critters) returned, eventually marring five of the modest-sized telescopes.

With a little ingenuity and a live trap, the mystery was finally solved: The nighttime visitor proved to be a ringtail cat, a member of the raccoon family native to arid regions of North America, particularly the American Southwest.

The ringtail cat was released unharmed at a spring some distance away from the mountaintop observatory. Not long after, a second ringtail also was trapped and released. Yet another ringtail was captured on film (www.youtube.com/watch?v=clcvUtmOJEI) snatching a snack at the Whipple Observatory base camp.

Anyone can watch for the nocturnal interlopers via the MEarth Webcam: <http://meearth.sao.arizona.edu/live/>.

“We’re considering making the ringtail cat the unofficial mascot of the MEarth project,” said project leader David Charbonneau. “With those big eyes, they’ve certainly got the night vision to be natural-born astronomers!”

— Christine Pulliam



School of Engineering & Applied Sciences

On Sept. 8, President Drew Faust and FAS Dean Mike Smith held a formal reception to welcome Cherry A. Murray, who officially began her post as dean of Harvard’s School of Engineering and Applied Sciences (SEAS) on July 1.

Faust praised Murray’s record of exceptional leadership and her willingness to “face a challenge,” referring to her decision to study applied physics at MIT after receiving a dare from her older brother.

To highlight Murray’s “hands-on approach” to solving problems, Smith offered another anecdote — and safety lesson. As a young researcher, Murray used sticky tape to hold a laser mirror in place. Once activated, the powerful laser melted the tape, causing the mirror to drop and the laser beam to freely slice through equipment and burn a hole in a window. Murray, thankfully, remained unscathed and went on to become one of the leaders in light scattering.

Describing her new home, Murray said, “We are small, but think big and accomplish big things,” and listed recent endeavors at SEAS such as the development of robotic bees, the deployment of a citywide sensor net, and the revival of the Harvard Water Program. “We do some really cool stuff!” she added, laughing.

— Michael Rutter

edu/gazette/section/campus-n-community



Harvard School of Public Health

A new center that will focus on mathematical modeling of drug resistance, seasonal infectious diseases, and intervention allocation will be established, announced the Harvard School of Public Health (HSPH) in early September. The Center for Communicable Disease Dynamics will be funded through the National Institutes of Health's Models of Infectious Disease Agent Study (MIDAS), which is aiming to increase capacity to model disease spread, evaluate different intervention strategies, and help inform public health officials and policymakers.

Marc Lipsitch, HSPH professor of epidemiology, will lead the center. He is a noted expert in modeling infectious disease outbreaks and has been tapped by the Centers for Disease Control and Prevention and the President's Council of Advisors on Science and Technology to help guide policy in the current H1N1 flu outbreak. He also helped lead the development of a model to quantify and predict the spread of severe acute respiratory syndrome (SARS) in 2003.

The expected funding total for the Center for Communicable Disease Dynamics at HSPH is approximately \$15.6 million over five years.

For more, visit www.hsph.harvard.edu/news/press-releases/2009-releases/communicable-disease-dynamics-center.html.

— Christina Roache



Accreditation process advances

For the past year and a half, Harvard has been preparing for its 10-year re-accreditation by the New England Association of Schools and Colleges (NEASC). Margo Seltzer, Herchel Smith Professor of Computer Science, chaired the committee that prepared a self-study report addressing NEASC's 11 standards (chapters) for accreditation, now available at www.provost.harvard.edu/institutional_research/accreditation.php.

The report focuses on various dimensions of the University, ranging from academics and the libraries to governance and finance. The format of the report is prescribed by the accreditors. Because most of Harvard's graduate and professional Schools are separately accredited, standards concerning the Academic Program (4), Faculty (5), and Students (6) focus on the Faculty of Arts and Sciences and the College. These sections were reviewed by a variety of Faculty of Arts and Sciences (FAS) committees with student, faculty, and staff representation, including the Educational Policy Committee (EPC), Committee on Undergraduate Education (CUE), Undergraduate Council (UC), Committee on House Life (CHL), Committee on College Life (CCL), and Faculty Council. The FAS Faculty, Administrative Council, and Council of Deans also reviewed the complete report.

The next step of the process is a comprehensive evaluation visit that will take place Oct. 18-21 by a team organized under the auspices of NEASC. Georgetown University

President John J. DeGioia will chair the evaluation team, which includes faculty and administrators from peer institutions. The team will visit campus to explore issues raised by the self-study and gain a direct understanding of Harvard's organization, governance, and educational programs. The team will make a recommendation regarding Harvard's accreditation status to the commission, and following a review process, the commission itself will make a determination regarding accreditation.

In advance of the visit, the public is invited to submit comments that address substantive matters related to the quality of Harvard University to:

Public Comment on Harvard University
Commission on Institutions of Higher Education
New England Association of Schools and Colleges
209 Burlington Road
Bedford, MA 01730-1433
E-mail: cihe@neasc.org

Written, signed comments must be received by Oct. 21 and will not be confidential. Comments should include the name, address, and telephone number of the person providing the comments.

There will also be opportunities for members of the Harvard community to meet with the evaluation team while the team is at Harvard in October. Details are forthcoming.



MEMORIAL SERVICES

Tosteson memorial service on Sept. 30

Daniel C. Tosteson, the Caroline Shields Walker Distinguished Professor of Cell Biology, who served an extraordinary two decades as dean of Harvard Medical School, from 1977 to 1997, died peacefully on May 27 after a long illness. He was 84 years old.



A memorial service will be held to honor the life of Tosteson at the Memorial Church, Harvard Yard, Cambridge on Sept. 30 at 3 p.m. Please join us as we recognize his many contributions to Harvard Medical School and to the advancement of medical education and science.

In lieu of flowers, donations to The Daniel C. Tosteson Fund for Innovation in Understanding and Healing the Human Being will be accepted at the Harvard Medical School, Office of Resource Development, 401 Park Drive, Suite 22W, Boston, MA 02215.

To read Tosteson's full obituary, visit news.harvard.edu/gazette/story/2009/06/dean-tosteson-dies-at-age-84/.

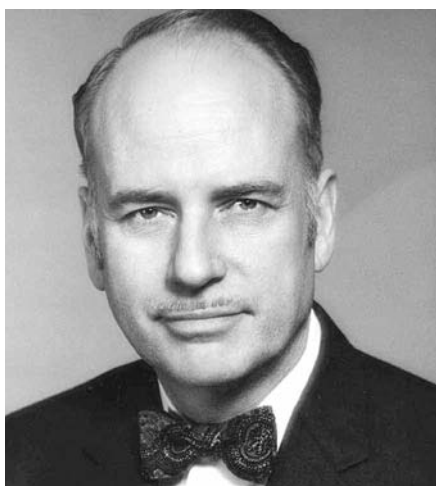
MEMORIAL MINUTES



Robert Timmons McCluskey

Robert T. McCluskey, a pioneer in the field of immunopathology, died June 29, 2006 at the age of 83. McCluskey was a leader in academic pathology and nephrology and his major scientific contributions were related to the immunopathogenesis of renal diseases.

For full Memorial Minute, visit news.harvard.edu/gazette/story/2009/09/robert-mccluskey/.



Thomas Carlyle Jones

The veterinary profession lost one of its most influential and respected leaders and the American College of Veterinary Pathologists lost its founder, Thomas Carlyle Jones, who died at the age of 95.

For full Memorial Minute, visit news.harvard.edu/gazette/story/2009/09/thomas-jones/.

Service for Ernest May, Sept. 23

A memorial service for Ernest May, a renowned historian of international relations and foreign policy and professor of history, will be held Sept. 23, in Memorial Church. May, who died at the age of 80 after complications following surgery on June 1, served as dean of Harvard College from 1969 to 1971 and was a member of the Harvard faculty for 55 years. The service is set to begin at 3 p.m.

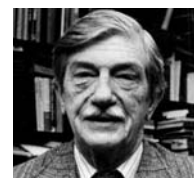
To read May's full obituary, visit news.harvard.edu/gazette/story/2009/06/ernest-may-harvard-professor-and-eminent-historian-of-international-relations-dies-at-80/.



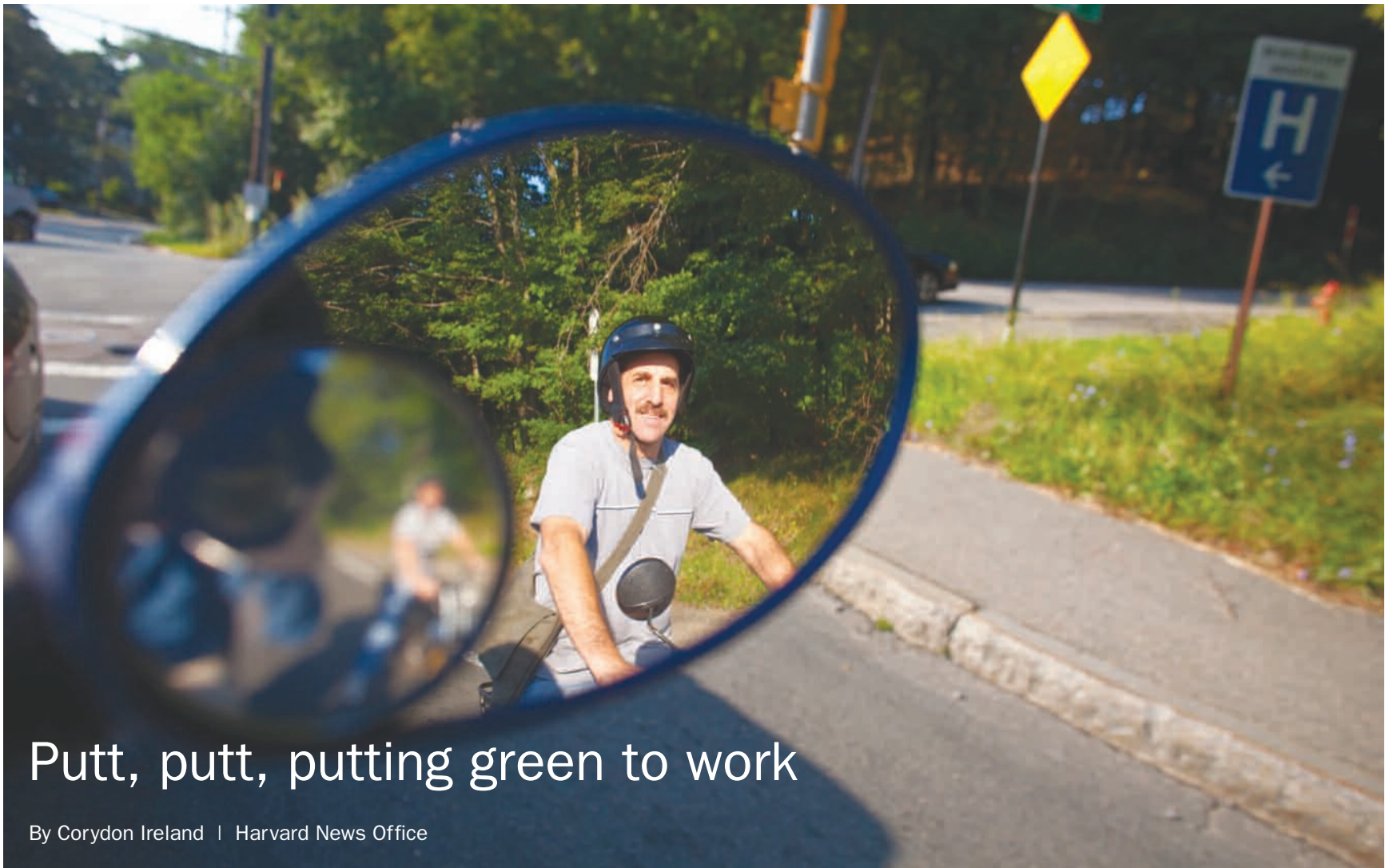
Memorial service for Samuel H. Beer, Oct. 2

A memorial service in Memorial Church will be held for Samuel H. Beer, longtime professor emeritus of government at Harvard, on Oct. 2 at 3 p.m. He died April 7 at the age of 97. Rev. Professor Peter J. Gomes, the Plummer Professor of Christian Morals and Pusey Minister in the Memorial Church, will preside and a reception will be held afterward at the Faculty Club. For more information, call (617) 868-7938.

To read Beer's full obituary, visit news.harvard.edu/gazette/story/2009/04/samuel-h-beer-harvard-scholar-dies-at-97/.



ON THE JOB (AND OFF)



Putt, putt, putting green to work

By Corydon Ireland | Harvard News Office

Every day, every week, and all year — rain or shine — Adams House dining hall general manager David A. Seley commutes to Harvard on a moped.

He has a fleet of nine of the lightweight motorized bicycles in his Woburn (Mass.) garage, many of them rescued from the trash. Behind Adams House one day, he showed off his restored Batavus HS50 — cherry red, with a slim one-gallon tank and a slender silver engine. It weighs 75 pounds and gets 170 mpg.

Seley's 110-mile weekly commute uses less than a gallon of fuel. Each leg takes 30 minutes — “shorter than a car,” he said, “and much shorter than the bus.”

The five-year Harvard staffer has bought and registered more than 600 mopeds since 1972, and has run up half a million moped miles, including a trip from New York City to Key West, Fla.

Though not a member, he identifies with a loosely confederated national group called Moped Army, and on most Wednesdays he meets local riders for a collective run. “We know we are different,” said Seley, who

dons a snowmobiling suit for winter rides, “and we celebrate that.”

Commuting on a little pedal-fitted bike used to earn him more incredulity than admiration. Then came \$4-per-gallon gas. “Overnight,” said Seley, “I went from nutcase to visionary.”

Mopeds are inexpensive to buy, easy to fix, and require no insurance or license plates. (In Massachusetts, they cost \$20 a year to register.) Riders use the bicycle lane and park at bike racks. But what appeals most to Seley are the moped's environmental benefits.

Factor in mileage, maintenance, parts, and cost of manufacture and you get green transportation, said Seley — even despite particulars from the two-stroke engines. His entire fleet of nine mopeds, he said, has a carbon footprint “less than one-tenth of a car.”

Moped commuting “gives me economic and environmental excellence,” he noted — as well as the freedom to see more, to sense more, and to slow down during rush hour.

For those who live closer to work, added

Seley, a greener commute might simply involve walking or riding a bike. “We all have to find our balance,” he said. “My real hope is to get people thinking about how they get here.”

Seley, a one-time pre-med student at New York University who grew up in Manhattan, is more than just the moped guy. He learned the food business at a Westchester County resort and dude ranch, drove part time at harness racing tracks, and for 13 years co-owned a corporate food service.

At Adams House — where he and a staff of 26 deliver 1,200 meals a day — Seley produces two student plays a year and (at age 54) plays goalie for the House hockey team.

He has also spread his green wings, taking charge of recycling and composting for Harvard University Dining Services at large events, where recovery rates are close to 90 percent — double the national average.

That's dramatic, personal, and important, said Seley — not unlike, he added, “the green commute.”

STUDENT VOICE



Pulling up service by the roots

Weissman fellow spends 10 weeks in South Africa empowering youth through soccer and education.

By Tannis Thorlakson '11 | Environmental Science and Public Policy

When I learned about Grassroot Soccer, I signed up without even looking at the job description. I couldn't believe that I had found an organization that combined my passion for soccer, interest in global health, and love for Africa.

Grassroot Soccer (GRS) is a nonprofit organization that harnesses young people's interest in soccer to deliver HIV education across Africa. Through the generosity of the Weissman Fellowship, I spent 10 weeks this summer interning at GRS in Cape Town, South Africa.

Yes, I was an intern. I had to run packages to the post office, organize files, and break down cardboard boxes. But GRS also gave me the opportunity to get out in the field, own some projects, and really take on substantial responsibilities.

One of my projects was helping to organize a weeklong soccer and HIV education camp for kids during their school holidays. While conducting focus group interviews as part of our Monitoring and Evaluation Team, I was surprised when each kid told me that by far the most memorable part of the camp wasn't the free lunch or the afternoon soccer matches, but the opportunity to learn about HIV. They all know AIDS made their aunt sick or their best friend's dad die, but no one had explained to them what it is or how they can avoid becoming infected. For many in South Africa, HIV is a taboo subject, and the chance to have an open discussion with a knowledgeable adult really was the most meaningful thing for GRS participants about their school holidays.

At the graduation ceremony at the end of the week, as I stood handing out certificates and shaking each kid's hand in congratulations (which is no easy feat in

South Africa, where there seems to be at least 10 different ways one can shake hands), I felt electrified with the energy of 100 empowered youth who had finally been given the tools and knowledge they needed to remain HIV free.

The crowning jewel of my experience — better than the great surfing, beautiful hikes, delicious wine, or the tangible event planning skills that I acquired — was joining the GRS family. The people I met were truly amazing. The passion and dedication I saw in each of my co-workers gave me hope that despite the endless problems our world faces — from the HIV epidemic, to sex trafficking, to rising temperatures — there are people out there who care and are working to make a difference.

Back on campus, everyone is asking, "How was your summer?" Yet it's impossible for me to express in a sentence my experience, which was so rich in memories made, lessons learned, passions uncovered, and friendships formed.

I've returned to campus with a renewed sense of passion and purpose. Suddenly my work for the Millennium Campus Network, a student run-nonprofit that aids student groups fighting for the realization of the United Nations Millennium Development Goals, seems much more meaningful. Yes, the problems we face today are real, difficult, complex, and often overwhelming. But my experience this summer has helped me believe that we can make real the dream of a world without poverty, a world where millions no longer die from curable diseases each year, and a world where human populations live in harmony with the natural environment. And I know I want to spend the rest of my life helping to make this dream a reality.

Print directories canceled

This fall, Harvard's traditional phone directories are going the way of the dinosaurs, with paper savings measured in tons.

By Corydon Ireland | Harvard News Office

Not long ago, Dara Olmsted '00 was a teaching fellow in a Harvard course about dinosaurs, a cast of creatures that disappeared 65 million years ago.

Olmsted is now an anthropologist armed with a master's degree in environmental policy and works in Harvard's Office for Sustainability (OFS). She is still on the lookout for dinosaurs of a sort: the outdated, everyday practices in office settings that waste resources and that — unlike the allosaurus and pterodactyl — actually deserve extinction.

Take printed directories, for instance. These 8½-by-11-inch books are traditionally distributed at Harvard in November, but by the end of the academic year they contribute tons to the waste and recycling stream. "You'd see piles of them around — just everywhere," said Olmsted, who manages office "green teams" at Harvard's Faculty of Arts and Sciences.

Beyond the waste, directories get quickly outdated. At least 10,000 phone changes — affecting a third of all numbers — are made at Harvard in the average year, according to the University Information Systems (UIS) telecommunications office.

So starting this fall, don't expect the usual pile of directories to appear in your office or dormitory. Instead, look for the same phone information online (www.harvard.edu/directories/index.php). For maps and building addresses — also traditional content in directories — go to www.uis.harvard.edu/harvard_directory/.

To the very end, printed directories had a lot of fans, said Laurie Gamble, manager of billing and directory services for UIS telecommunications. In January, her office conducted a formal poll of directory users, and 75 percent at least liked the idea of directories in print.

But for three years, Gamble said, UIS recognized the resource drain print directories represent, and had been investigating how and when to phase them out.

Olmsted offered to help, and took additional initiative. She and an OFS team polled departments and Schools that order directories. Were they willing to cut back on numbers?

They discovered that about 25 percent of respondents were willing to reduce or even eliminate their directory orders. The Harvard School of Public Health and the Harvard Kennedy School, for instance, offered to cut their bulk orders to zero.

If Olmsted's survey results had taken effect, the University this year would have cut 25 percent of its usual output of directories, saving more than 3 tons of paper.

When the budget crunch came, bringing the whole total of Harvard directories to zero seemed like a good idea — but sustainability remained the biggest factor. "We felt we should err on the side of conservation," said Gamble. "This seemed like the right time to stop."

Eliminating 29,000 Harvard directories and another 6,000 yellow pages will save more than 20 tons of paper a year, or about 250 trees, said Olmsted. (Nationally, 5 million trees are cut down to print phone directories.)

There are also savings in energy, pollution, and work hours that are harder to calculate: It takes energy and time and truck exhaust to print, ship, distribute, throw away, recycle, and haul paper directories, Olmsted said. "That's a lot of labor, time, and resources."

If you are authorized to use HARVIE's PeopleSoft feature, it is possible to save even more printing costs by opting out of mailing lists for the Harvard University Gazette, Harvard Magazine, and Harvard Resource. Once in PeopleSoft, click on "Self Service," then on "Harvard Publications," and then click on the opt-out buttons.

Calendar

HIGHLIGHTS FOR SEPTEMBER 2009

su	m	tu	w	th	f	s
september		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

The deadline for Calendar submissions is Wednesday by 5 p.m., unless otherwise noted. Calendar events are listed in full online. Please submit events via the online form at news.harvard.edu/gazette/calendar-submission. E-mail calendar@harvard.edu with questions.



A Sept. 22 talk at the Law School examines medical care and finances.

SEPT. 18

Jewish High Holidays.

Rosh Hashanah, the Jewish New Year, begins at sundown. Harvard Hillel holds four High Holiday services: Student Conservative, Worship & Study Conservative, Orthodox, and Reform. Descriptions, times, and locations are on the Hillel Web site: www.hillel.harvard.edu. Students with Harvard ID do not need tickets. For others, donations are requested.

SEPT. 22

When Medical Care Compromises Financial Health: Causes and Possible Solutions.

Room 102, Pound Hall, Harvard Law School, 5 p.m. Melissa Jacoby, UNC School of Law; Cathy Schoen, Commonwealth Fund; Matt Selig, Health Law Advocates Inc.; Christopher Robertson, HLS. Free and open to the public.

SEPT. 23-24

Biomedical Research Equipment and Supplies Exhibit.

Countway Plaza Courtyard, HMS, Longwood Ave., 10 a.m.-3:30 p.m. More than 150 biomedical suppliers and VWR International, Harvard's laboratory supply vendor partner, will display their latest wares to lab personnel, researchers, and purchasing agents. Admission is free with a University, hospital, or corporate ID.

SEPT. 26

Maize at the Museum!

Peabody Museum, 11 Divinity Ave., 1-4 p.m. Come explore the importance of maize and corn throughout the Americas. Take home corn stories, recipes, and "amaizing" corn facts. All activities

free admission for two: www.peabody.harvard.edu/calendar.

SEPT. 29

Sidewalk Through Time.

Harvard Museum of Natural History, 26 Oxford St., 1-5 p.m. An art and sci-

ence collaborative event featuring "Sidewalk Sam." Observe the creation of a large, chalk-illustrated mural depicting Earth's 4.6 billion-year history on the walkways outside HMNH and visit student-staffed TimeTables. Rain date is Oct. 6. www.hmnh.harvard.edu.



SEPT. 30

Zanzibar: Photographs by Joanna Lipper.

Thompson Room, Barker Center, 12 Quincy St., noon-1:30 p.m. Joanna Lipper, filmmaker, Sea Wall Entertainment. Free and open to the public. <http://dubois.fas.harvard.edu/events>.

Joanna Lipper, "Seaweed Farmers," 2009

are free with admission and are appropriate for grades K-6. Download a Smithsonian Museum Day pass for

See complete Calendar online ► news.harvard.edu/gazette/section/calendar



Harvard Rituals: Annenberg Hall by the numbers

Online ► [news.harvard.edu/gazette/
story/2009/09/annenberg-hall](https://news.harvard.edu/gazette/story/2009/09/annenberg-hall)

Annenberg Hall, arguably the most extraordinary 9,000 square feet on Harvard's campus, has served since 1874 as a gathering place, dance hall, Commencement location, reception venue, exam hall, and, since 1994, as the dining hall reserved for freshmen in Harvard College. Serving approximately 3,400 meals each day, students eat more than 1,500 local apples, 2,000 slices of pizza, and consume more

than 40 gallons of New England clam chowder a week, all while surrounded by 20 paintings, mostly depicting Civil War soldiers; 25 sculptures and busts; and 18 windows that make up a veritable museum of 19th century American stained glass. Window No. 19 remains unfinished and will be completed in memory of Roger Annenberg '62 for whom the hall is named.

Photographs and text by Justin Ide | Harvard News Office