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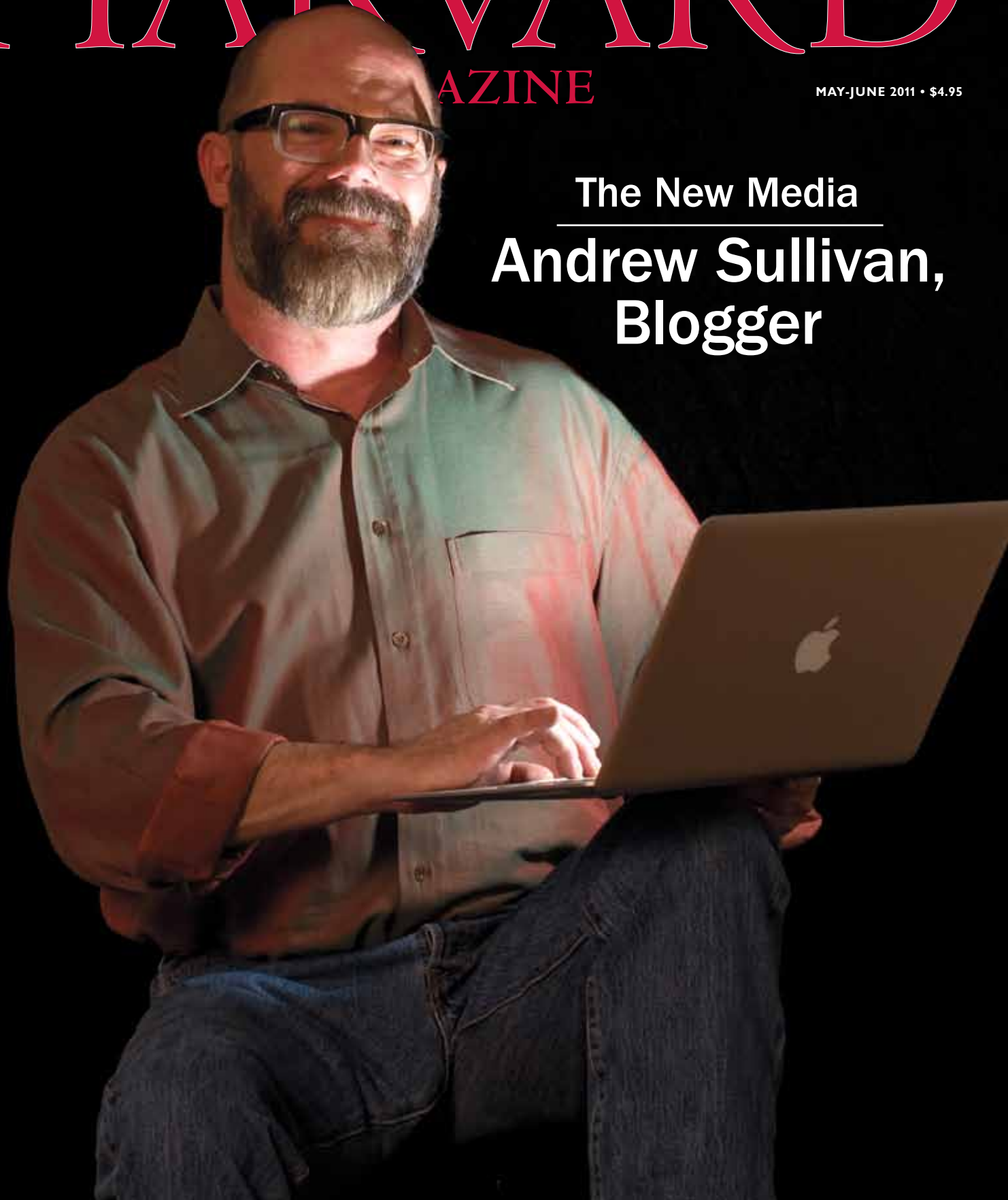
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MAGAZINE



ROSE LINCOLN

page 45

FEATURES

27 Fathoming Metabolism

A new way of studying humanity's inner chemistry promises deep insights into health and disease

by JONATHAN SHAW

32 Vita: Leverett Gleason

Brief life of a comics impresario: 1898-1971

by BRETT DAKIN

34 World's Best Blogger?

Andrew Sullivan, fiscal conservative and social liberal, navigates the changing media landscape

by JESSE KORNBLUTH

40 Why Whales?

A surprising discovery about whales' role in the ocean ecosystem complements a scientist's reexamination of the Endangered Species Act

by JOE ROMAN

45 John Harvard's Journal

ROTC formally recognized again, bioengineering blossoms, Harvard Yard's caretakers, the University prepares to celebrate being 375 years young, reenact-

ing early action—and admissions and tuition data, thoughts on teaching, public perspectives on social-science priorities, policing a prohibited plant, building community for graduate students, remembering the Reverend Peter J. Gomes, the Undergraduate and the meaning of life, a lefty pitcher and his grips, and a basketball breakthrough

FRED FIELD

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DEPARTMENTS

- 4** Cambridge 02138
Communications from our readers

- 9** Right Now
Safe crossings for four-footed friends, the power of proximity, modern malaise

- 8A** Commencement and Reunion Guide
"The best day of the year," the essence of the occasion in images, a graduate's commitments, lots of luncheon choices, events of the week, and more

- 15** Montage
Harvard's Indian College in fiction, honeybees on the move, street-level ballet, Gandhi's unresolved struggles—and India's, poetry to the people, a paean to cities, and more

- 60** The Alumni
A writer's resonant Central Valley roots, comings and goings, rethinking classes and reunions, choristers reconvened, and Overseer and director candidates

- 64** The College Pump
Presidents Everett, Lincoln, and Washington, and William James's salary woes

- 72** Treasure
An exotic coconut

- 65** Crimson Classifieds

On the cover: Photograph by Jim Harrison



page 18



JEREMY WINN/WOODS HOLE OCEANOGRAPHIC INSTITUTION

page 40

page 27

Cambridge 02138

Quotable Harvard, Vietnam, polygyny

PARTISAN PERSPECTIVES

OBSERVING THAT 90 percent or more of Harvard graduates in Congress are Democrats, Peter McKinney '56 concludes that "the development of independent and critical thinking...is not happening at Harvard College" (Letters, March-April, page 7). But according to polls, vast numbers of the party McKinney favors believe that global warming is a hoax, that evolution is a fraud, that Barack Obama is a Muslim born in Indonesia, and that the moral high ground belongs to serial adulterers. One wonders who really missed out on a Harvard education.

CHARLES M. EPSTEIN '69, M.D. '73
Atlanta

PETER MCKINNEY might be interested in a recent national survey of thousands of

college students by Matthew Woessner, April Kelly-Woessner, and my late colleague at Smith College, Stanley Rothman. Among their findings: seniors leave college with virtually the same political affiliation that they had when they were freshmen (31 percent and 32 percent Democrats, respectively). The authors deem the belief that college professors turn their students into liberals "a popular misconception."

RICHARD OLIVO, PH.D. '69
Boston

PETER MCKINNEY'S comment rests on two false assumptions.

The first and less egregious fallacy is that Harvard students are susceptible to faculty indoctrination. I recall most of my college classmates as being politically sophisticated and established in their views

Harvard at 375: Your Experiences and Expectations

Harvard's 375th anniversary is fast approaching; see page 48 for a report on the official festivities planned for this fall and beyond. As *Harvard Magazine* prepares its coverage of the University's recent past (focusing on the past quarter-century, from before you used the Internet or recognized China and India as rising economic powers), and its prospects (up to the fourth-century mark), we invite you to reflect on:

- how your experiences and education in the College or the graduate and professional schools shaped your life, work, and perspectives;
- how those experiences and your Harvard education could have been more effective; and
- how you would improve Harvard for the future, if you were returning to the University today to prepare for the rest of your life, or advising a young person—your child, a relative, a friend—embarking on that stage of growth and learning.

Please share your thoughts, and comment on those of your fellow correspondents, at www.harvardmag.com/375th. We look forward to incorporating some of the most vivid accounts and ideas into future issues.

~The Editors



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Photo: Stuart Darsch

when they arrived, and far more likely to modify or adapt those views because of interactions with their fellows than because of what they heard in the lecture hall. This was even truer of my law school classmates. Decades of interviewing applicants to the College has impressed me with how politically precocious they are even before they are admitted, and how well developed their sense of civic commitment. Indeed, this last is one of the few rays of hope I see in the present downward national spiral.

The second and greater fallacy is the assumption that because there are two major political tendencies in this country, properly educated people should divide roughly equally between them. This presumes that both are equally possessed of rational arguments, and this is unfortunately not true. Although the Republican Party, within living memory, disposed of leaders and ideas that could be called rational, for the last 30 years to be a Republican has increasingly meant to deny scientific truth, to subscribe to patent fantasies regarding our national history, recent or more distant, to espouse social and economic theories whose bankruptcy was demonstrated 80 years ago, to work for the enrichment of the few and the impoverishment of the many, and generally to substitute magical thinking for reason. That so few Harvard graduates enter Congress as Republicans can only be seen as a confirmation of the soundness of their education.

JOEL Z. EIGERMAN '63, J.D. '67
Cambridge

PETER MCKINNEY suggests that the strong Democratic skew among Harvard's alumni in Congress might be due to "the ideological imbalance of the faculty." Perhaps he should spend a few minutes reviewing the current Republican Party before looking for more complicated ex-

planations. In my grandfather's GOP, a degree from an "elite" university was an asset: it was evidence that a politician was smart, or hard working, or, sadly, that he was at least from the right sort of family. In Sarah Palin's GOP, "elite" is an insult. What's more, in Palin's faith-based GOP, candidates are all but required to espouse the view that the world is 6,000 years old, that the "theory" of evolution is false, and that anthropogenic climate change is a sinister liberal myth. I certainly hope that very few Harvard graduates share these views. Twenty-six years ago, Ronald Reagan invited the Reverend Peter Gomes to speak at his second inauguration. While Gomes was in some ways a conservative Christian, he supported a much more nuanced view of the Bible, and of Christianity, than the current GOP tolerates. Given the state of today's GOP, I'm surprised that any Harvard graduates, however conservative and qualified, have won GOP nominations for Congressional seats.

ROBERT STAFFORD '86
Belmont, Mass.

WHILE PETER MCKINNEY's letter raises the question whether Harvard's liberal atmosphere is an explanation of why most Harvard degree holders are Democrats, I have a different take on this. I think it is fair to assume that most Harvard graduates are of above average intelligence and education and tend to believe in such things as evolution and global warming. It seems most Republicans do not.

EDWARD G. SHUFRO, M.B.A. '58
New York City

PETER MCKINNEY implicitly assumes that, absent bias, the distribution of political affiliation among alums elected to Congress would be horizontal, with an equal number of Republicans and Democrats or, perhaps, even skewed in the opposite direction. He believes that students in fair and full exercise of truly independent and critical thought could not possibly be more Democratic than Republican in their party affiliation. Evidence, please?

ALISON A. SOMMERS '71
Louisville, Ky.

AFTER A MOMENT'S consideration, it is obvious that the party distribution of alumni in Congress is a ridiculous estimator for the party distribution of alumni in

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SPEAK UP, PLEASE

Harvard Magazine welcomes letters on its contents. Please write to "Letters," *Harvard Magazine*, 7 Ware Street, Cambridge 02138, send comments by e-mail to yourturn@harvard.edu, use our website, www.harvardmagazine.com, or fax us at 617-495-0324. Letters may be edited to fit the available space.

general: The members of Congress chose their party before they were elected. Perhaps alumni who are Republicans feel they have better things to do with their time than run for and serve in Congress. Perhaps alumni who are Republicans are reluctant to be associated with the contemporary Republican Party, whose leading lights include such nitwits as Scott Walker, Sarah Palin, Michele Bachmann, Rush Limbaugh, and Glenn Beck. Perhaps the alumni who ran as Democrats were just better campaigners than those who ran as Republicans. Perhaps alumni generally prefer to live in cities, and hence run in districts that tend to vote Democratic.

MICHAEL ANDERSON '64
Bellevue, Wash.

THE NEWS THAT not one of the Harvard matriculants now in Congress is a woman caught my attention, reminding me of the summer between my freshman and sophomore years, spent working on a woman's campaign for the Massachusetts legislature and discovering the challenges that face women running for office. Nearly four decades later, many barriers have fallen; perhaps the greatest impediment to expanding women's representation is the paucity of women who put themselves forward as candidates. Approaching a once-in-a-decade opportunity—the first election after redistricting and reapportionment, when open seats are most common—this alum has shifted from the micro view (one woman's campaign) to the macro, helping the nonpartisan 2012 Project ask baby-boomer women to consider running, and then pointing them toward resources they need to win. If you're a woman who'd like to see a Congress (or state legislature) that looks more like you, please consider this your invitation to run! For details, visit www.the2012project.us.

KATHY KLEEMAN '74, Ed.M. '77
Center for American Women and Politics
Kendall Park, N.J.

MORE ON QUOTES

IN "QUOTABLE HARVARD" (March-April, page 30), Bob Shrum is cited for his hilarious observation that the Republican Party's idea of a diverse ticket is "Presidents of two different oil companies." Here's another quote for your collection: the Democratic Party's idea of a diverse ticket is "Lawyers who went to different law

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LETTERS

schools." All 11 Democratic candidates for president or vice president since Jimmy Carter—eight election cycles and 31 years ago—went to law school and all but Al Gore received their law degrees (Michael Dukakis and Barack Obama from Harvard). Not only were the three finalists for the 2008 nomination—Obama, Hillary Clinton, and John Edwards—lawyers, but their spouses were lawyers as well. Further, of the 11 Democratic attorney nominees, only Geraldine Ferraro and John Edwards practiced much law: the other nine embarked on public careers within two or three years of their degree. Whatever one's political predilection, a fair assessment would be that Republican candidates over the same period have had much more diversity of education and career.

D. ALLAN GRAY, M.B.A. '79
Downers Grove, Ill.

THE QUOTATION "Writing is easy. Just put a piece of paper in the typewriter and start bleeding" is incorrectly attributed to Thomas Wolfe. The correct attribution should have been to the sportswriter Red

Smith, who said, "There's nothing to writing. All you do is sit down at a typewriter and open a vein."

EDWARD TABOR '69
Bethesda, Md.

Fred Shapiro responds: When I compiled the Yale Book of Quotations, the earliest evidence I had for this quote was the attribution to Thomas Wolfe. However, prompted by Tabor's letter, I have now found earlier evidence, and it indeed points to Red Smith. In Walter Winchell's column, printed in the Logansport (Indiana) Pharos-Tribune, April 8, 1949, the following appears: "Red Smith was asked if turning out a daily column wasn't quite a chore.... 'Why, no,' dead-panned Red, 'You simply sit down at the typewriter, open your veins, and bleed.'"

ON VIETNAM

I AM A GRADUATE of Harvard Business School. I am also a graduate of the United States Military Academy '68. HBS was a remarkable experience, and I have remained active in fundraising for Harvard for over 30 years. I value the institution.

My view of *Harvard Magazine* is

The Quotes Queue

Alongside the March-April cover story, "Quotable Harvard," compiled by Fred Shapiro, we asked readers to forward their own candidates for this informal canon. Selections from the resulting nominations appear here; read the full roll, and contribute to the conversation, at <http://harvardmag.com/quotations>.

~The Editors

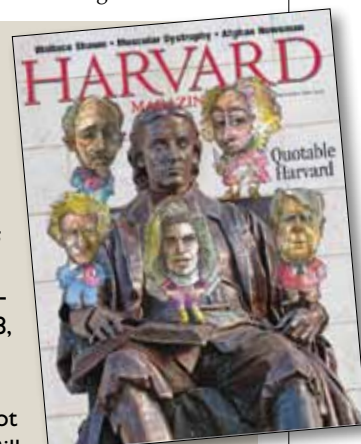
"I know I asked the bartender for more ice, but this is ridiculous...."—Attributed to John Jacob Astor IV, class of 1888, aboard the *Titanic*

"It's not easy getting up here and saying nothing. It takes a lot of preparation."—Barry Toiv '77, then serving as President Bill Clinton's deputy press secretary

"A teacher affects eternity: he can never tell where his influence stops."—Henry Adams, A.B. 1858, in *The Education of Henry Adams*

"In any battle between the literati and the philistines, the philistines invariably win."—Harry T. Levin, professor of comparative literature, following the 1961 court ruling adverse to Grove Press, in the Boston censorship trial for having published Henry Miller's *Tropic of Cancer*.

"I am a professor of comparative literature, not of comparative lust."—Harry T. Levin, testifying in the same trial, responding to the prosecutor's question: "Professor Levin, which do you think would more excite lewd and libidinous desires in the mind of a young girl—Shakespeare's 'Rape of Lucrece' or Henry Miller's *Tropic of Cancer*?"



not as favorable. The article on Bao Luong (Vita, March-April, page 28) is a case in point, and could only have been written by someone who was either indifferent to the Vietnam War or ignorant of the circumstances. I was an infantry company commander in the 173rd Airborne Brigade in RVN in 1970-1971. The atrocities I saw conducted by North Vietnamese and Viet Cong as a matter of policy make those of other wars pale in comparison. To eulogize an individual who supported and perhaps participated in such behavior is a disgrace to those who value human values. To characterize the NVA invasion of South Vietnam as a revolution rather than the brutal conquest that it was is a willful misreading of history.

Harvard Magazine should consider whether such editorial decisions reflect the spirit of Veritas.

CRAIG S. CARSON, M.B.A. '75
Plainfield, Ind.

Professor Hue-Tam Ho Tai responds: The reader accuses me of committing a willful misreading of history. Unfortunately, his letter amounts to a willful misreading of the article. The Vietnam War took place a good 30 years after Bao Luong was active in politics (from 1927 to 1929). At the time of her arrest, the Indochinese Communist Party was just being formed; she was not part of it, let alone part of the invasion of South Vietnam by the North or a member of the National Liberation Front. The Vita presented a young woman—she was 20 at the time of her arrest—who yearned for more educational opportunities for women and for independence from French colonial rule. These two themes seemed to me appropriate for Harvard Magazine since Harvard is an institution of higher learning that was deeply involved in America's own struggle for independence.

GOVERNANCE RECONCEIVED

THE JANUARY-FEBRUARY 2011 issue details the reformation of the Corporation ("The Corporation's 360-year tune up," page 43). While the changes are newsworthy, aren't the Fellows missing something?

Governance is about more than assigning committees and adding trustees. Boards are fiduciaries of the financial and academic health of their institutions. They ultimately ensure the academic excellence that will empower students—and make alumni proud. But many alumni are concerned that undergraduate education at Harvard can be improved and that the

Corporation isn't paying adequate attention.

The new plan, which expands the Corporation's alumni affairs and development roles, underscores a common but misguided view that the trustees' job is to raise money, spend money, and get out of the way.

The new Corporation intends to address academics as a committee of the whole and to defer to the visiting committees of the Overseers. In other words, it intends to do in the future for education what it's done in the past. According to the article, the new Corporation will offer the opportunity for trustees in different stages of their careers. Perhaps, too, it might offer the opportunity for a different kind of trustee: one who would raise urgent matters concerning the education and lives of Harvard College students—a coherent core, renewed emphasis on teaching and learning, promotion of free speech, and formal recognition of ROTC.

ANNE D. NEAL '77, J.D. '80
President, American Council of
Trustees and Alumni
Washington, D.C.

Editor's note: See page 45 for news on ROTC.


POLYGyny PERSPECTIVE

I LOOK AT THE ISSUE of polygyny from the viewpoint of a woman who wants more choices. I would rather be one of several wives of the man I liked best, than the only wife of a man I liked less. I should be able to ask any man to father my child (and he should have the right to say no); I believe the incidence of child neglect and child abuse would decrease if women had this choice.

Our marriage forms are those of the people who happened to have the guns, germs, and steel; they are not forms selected for by evolution; much less were they ordained from on high. Monogamy, the socialism of women one per man, may have originated in prehistory when men fought because they were bribed with the promise of a captive woman: see Euripides's *The Trojan Women*.

Divorce is not necessarily an evil; how else are the captives to escape?


The whole issue of marriage needs rethinking. We need socially acceptable forms of association and responsibility that promote the happiness of men and




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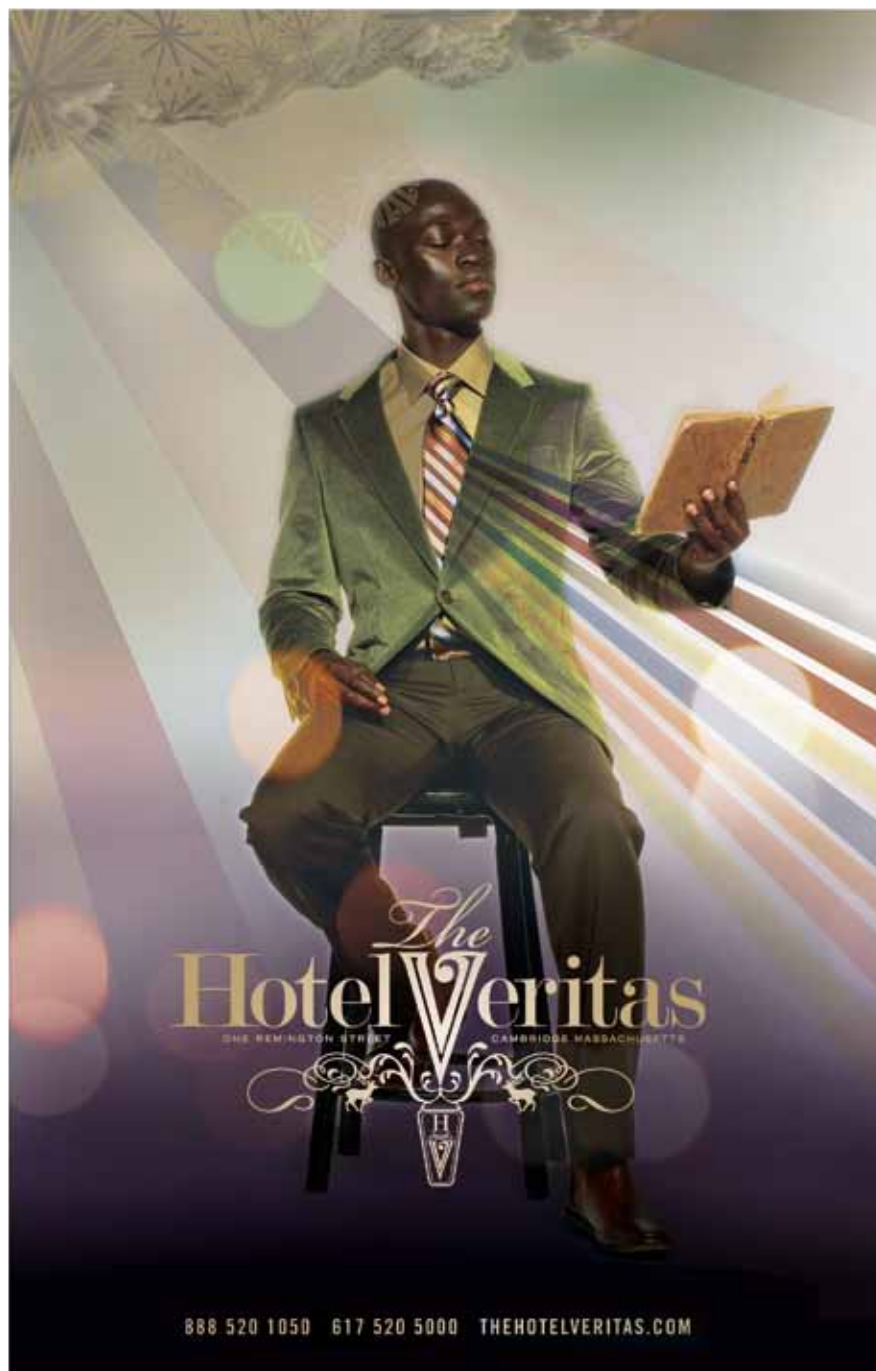
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LETTERS

women and children. Present forms do not.

DIANA AVERY AMSDEN, Ed.M. '56
Santee, Calif.

THOSE (not me) who wish to justify polygyny could refer to Darwin (where the strongest male with, presumably, the best genes has the most females) or the Bible (where there are often references to multiple wives, explicit and implicit, e.g., "He had 70 sons"). In the contemporary world, as others have often noted, there is serial polygamy and polyandry and concubines are now mistresses.

ELROY LACASCE, A.M. '50
Brunswick, Me.

WALLACE SHAWN

CRAIG LAMBERT'S article on the wonderful Wallace Shawn ("Famous Comedian, 'Dangerous' Playwright," March-April, page 35), quotes playwright and author Robert Brustein: "I don't know why he isn't more respected, because his work is as intelligent as anything being written today." I believe Brustein has answered his own question.

JOSEPH E. SULLIVAN, M.B.A. '72
Del Mar, Calif.

WHEELCHAIR STIGMA

I WAS DISAPPOINTED to find language and images straight out of Dickens in "The Gene Hunter" (March-April, page 22). Wheelchairs are instruments of liberation, not confinement, and they have come a long way since the ungainly model pictured in the article was designed in the 1950s. No one is wheelchair bound anymore, if they ever were.

If you were sitting naked in an out-sized and ill-fitting wheelchair you'd be pretty unhappy, too. Do doctors usually require kids to strip down to their underwear to demonstrate how they stand up?

Doctors and writers can do the most for the well-being of those with Duchenne Muscular Dystrophy by giving them respect. See www.levelwithme.org for some simple ideas that go a long way.

GUS REED '71
Pittsboro, N.C.

Editor's note: The images for the article were not intended as a comment on wheelchairs or those who rely on them. The illustrations were selected to depict the disease as clearly as possible.

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GUIDE 2011

- “The Best Day of the Year”
- The Essence of Commencement
- In the Valley
- Pleasing Palates
- Ambitions Realized
- Commencement Calendar

Undergraduate Joy

College seniors celebrate as their degrees are conferred (here, in June 1998—but the emotions are timeless). See more from three decades of graduation moments in “The Essence of Commencement,” page 8H.

Photograph by Jim Harrison

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"The Best Day of the Year"

The Commencement emcee on keeping the ceremonies festive while making the trains run on time

THE RITUAL OF Harvard's Commencement exercises has remained virtually unchanged for more than a century. Perhaps nobody knows this as well as Jacqueline A. O'Neill, who has attended the annual event for more than 30 years and now, as University marshal, presides over the morning program.

As Harvard's chief protocol officer, O'Neill oversees care of the honorands (and all other important visitors to the

campus throughout the year), and plays a central role as organizer and emcee of Commencement. "The art is to have it look festive and joyful while still making the trains run on time," she reports. To that end, she arrives at work at 6:30 A.M. on the fateful day and confers with Commencement director Grace Scheibner before putting on her robes and heading over to Massachusetts Hall. There, the honorands—whose names, with the exception of the Commencement speaker's,

Jacqueline A. O'Neill





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have not yet officially been made public—have gathered to don their own regalia and prepare for the ceremony.

At precisely 8:45 A.M., O'Neill steps into place at the head of the procession of honorands, alongside University president Drew Faust, and walks, with appropriately measured tread, behind the sheriff of Middlesex County from the Old Yard into Tercentenary Theatre and on to the dais set up in front of Memorial Church. There she stands and awaits the sign from three faculty members charged with assuring that students, their families, and all others in attendance have entered the theater and are settled enough for the pageantry to begin.

With a tilt of her baton, O'Neill signals Commencement electrician Robert Brown to ring the bell of Memorial Church, and then, stepping to the center of the stage, she utters that age-old request to the sheriff, "Pray, give us order." "The sheriff, who in years past rode in on a white horse, proceeds with a giant staff and bangs it on the floor three times," O'Neill explains, and declares the meeting "in order," as scripted in the official Commencement instruction guide, *The Form of Conferring Degrees*. "I loved the bombast of the late sheriff, James DiPaola," she adds. "It set the whole very serious and also tongue-in-cheek tone."

With the singing of the "Star Spangled Banner" (introduced to the program in 2002), followed by the opening prayer (to be given this year by Bernard Steinberg, director emeritus of Harvard Hillel), the annual rite that draws more than 30,000 people is off and running. "It is the only time of the year," O'Neill notes, "that all of the Harvard family gathers together in one place, which is a very special thing."

The rest of the day, she says, "I am off the hook." This is not exactly true—she still has honorand duties and returns to the dais as a guest for the afternoon's alumni exercises: the annual meeting of the Harvard Alumni Association, during which President Faust and the Commencement guest speaker address the assembly. The final recession does not take place until around 4:30 P.M., at which point O'Neill takes a slow walk back to her office at Wadsworth House, "enjoying the

COMMENCEMENT & REUNION GUIDE

chance to revel in the remains of the day, watching the proud graduates connect with their families, pose for pictures, and say goodbye to friends, and, if all has gone well, feeling grateful for participating in yet another Commencement, the best day of the year at Harvard."

ALL THE REST of the year, O'Neill's role at the University is not entirely dissimilar from her Commencement Day efforts. She and her office coordinate upwards of 150 visits to Harvard annually by heads of state and other high-level international and American officials: most come from Asia and Europe, but an increasing number are African. "As Harvard becomes more global in its reach, we have seen an increase in the number of visitors from around the world," she says.

She is the tenth University marshal, a job that dates from 1896, when it was determined that someone needed to be in charge of arranging and directing the ceremonial aspects of University gatherings. Previously, O'Neill was chief of staff to then-president Lawrence H. Summers, who appointed her marshal in 2004. She has also served as a senior University communications and community-relations official and oversaw external relations for the Allston initiative. She now reports to President Faust.

Autumn brings the most guests; it's not unusual for Harvard to see half a dozen heads of state within several weeks. "We make them all feel welcome and appreciated," O'Neill says. "People leave here feeling about this place that it is a human institution, not just a big name."

Guests invited to campus by the University or a Harvard division—a step involving its own protocol—are generally asked to give a free public talk, typically open to the Harvard community (if sometimes only by lottery, as happened when the Dalai Lama spoke at Memorial



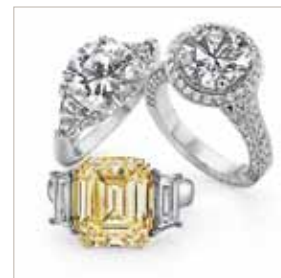
O'Neill radiates joy on the dais during the 2008 Commencement.

Church). "Under this system, students can stand up and ask a head of state a question—and they do," she notes. All visitors also sign the official Harvard guest book. O'Neill hosts people when Faust is unable to, and oversees Harvard's official presence at other institutions' events, coordinating Faust's off-campus forays or finding suitable delegates to stand in for her. "It takes weeks and months to organize visits and schedules," O'Neill says, especially for guests requiring tight security. "Visits are very prescribed," she adds: guests cannot just run off to see the glass flowers.

The marshal's office also holds a wealth of information on Harvard and general issues of protocol, including proper use of academic regalia, the correct way to address a dignitary, flag etiquette, or appropriate gifts for international visitors (visit www.marshal.harvard.edu/gifts.html to see what's on offer).

It is such protocols and rituals that O'Neill says many people find comforting—and that mark the communal life at the University. So when Commencement rolls around again this year, she will be ready to play her part in enacting the annual drama. "There isn't anything else like it," she asserts. "It's the celebration of the promise of the future with a wonderful mix of tradition and ancient ceremonial meaning that launches the next generation. I never get tired of it." ~ N.P.B.

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The Essence of Commencement

A photographer captures three decades of graduation moments and emotions. • by Jim Harrison



GRADUATION morning unfolds with moments that range from solemnity to frivolity. From every direction, seniors enter the Yard with their House-mates, some marching to the mournful sounds of bagpipes, others dancing in step to the staccato beat of a ragtime combo. After the requisite photos of the honorands are taken, the faculty members begin their slow parade through the rows of imminent graduates lining the walkways. During the exercises, the assembly clutch their programs in an effort to follow the Latin oration and laugh in all the right

places, while the student speakers inspire with the sincerity of their rhetoric. In the end, the band plays, the “Harvard Hymn” is sung, and everyone marches off to respective futures (or just to lunch).

Yet beyond all the tradition, costumes, and kinetic energy of the proceedings, what has most impressed me in the 31 years I have photographed this annual rite of passage are the more than 30,000 people who attend—the wonderful tapestry of faces and emotions all gathered together for a short

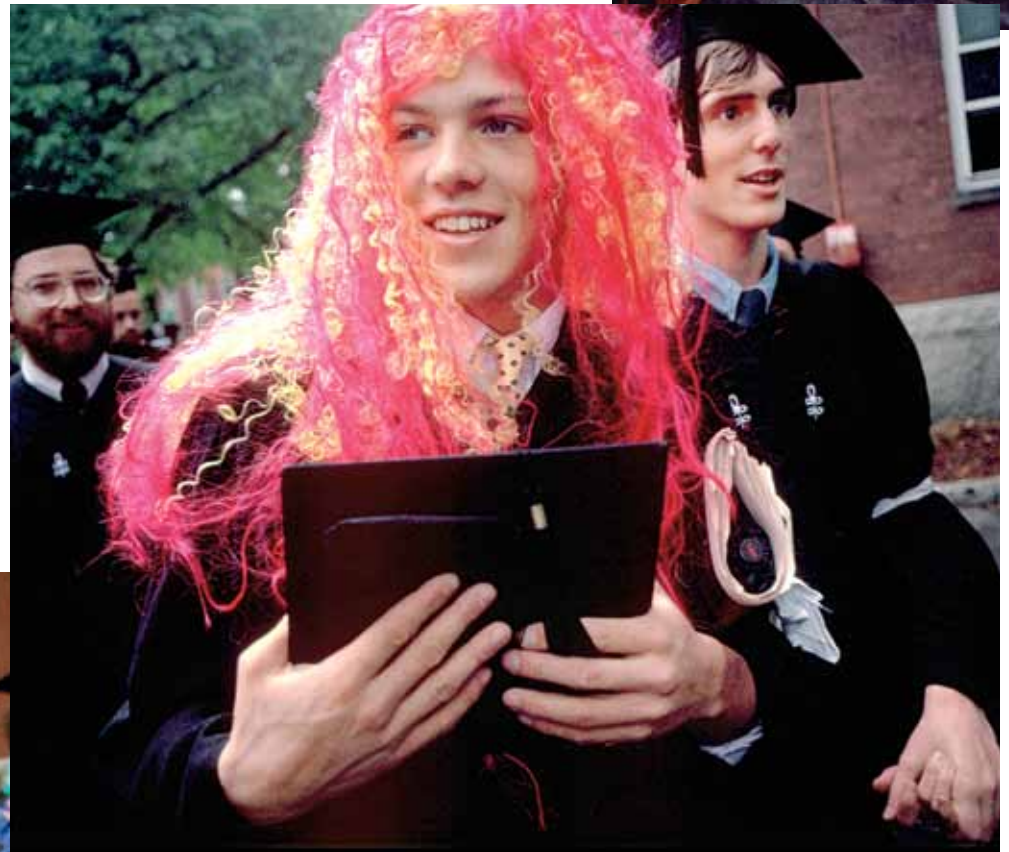
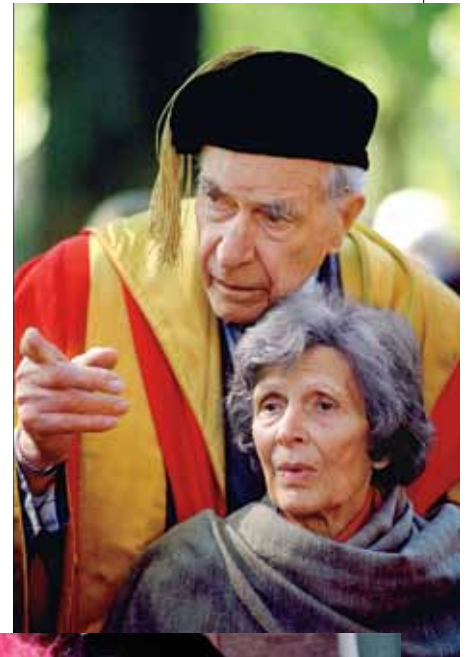
time in this small quadrangle, sharing a bond to Harvard—and to each other.

For despite the very public nature of Commencement, and its seemingly overwhelming scope, it is the countless private, personal moments—three young friends hugging each other and crying; a relative beaming with pride, his camera at the ready; a University president showing his surprise as

a head of state breaks for a pinch of snuff—that photographs express so well. And it is these moments that give this centuries-old rite its freshness: they cut through both the momentousness and the levity to reveal the very human meaning of it all. ~JIM HARRISON



Visit harvardmag.com/ extras to see additional images of Commencement's past.



Facing page (clockwise, from left): Eliot House roommates Rulonna Neilson of Salt Lake City, Alexandra Brown of Los Angeles, and Gouita Bozorgi of Lake Forest, Illinois (1991); President Derek Bok and honorand Jacques-Yves Cousteau observe West Germany's chancellor, honorand Helmut Schmidt, pause for a pinch of snuff (1979); Junichi Hayami traveled all the way from Kyoto, Japan, to see Naomi Fukumori '91, of Lowell House and Hastings, Nebraska, graduate. This page (clockwise from top): Honorand Stephen Hawking (1990); Professor John Kenneth Galbraith and his wife, Catherine (Atwater) Galbraith (1991); Olympic swimmer David Berkoff '88, of Huntingdon, Pennsylvania, in his merman wig; carrot-top Ana Vollmar '08, of the Dudley House Co-op and Hamden, Connecticut; and a contemplative Richard Busby, M.B.A. '92, of Scarsdale, New York.

COMMENCEMENT & REUNION GUIDE



Clockwise from left: Exuberant M.B.A.s wave the flags of many nations; after delivering the Commencement afternoon address, retiring President Bok is hugged by president-elect Neil Rudenstine (1991); Maria V. Mavroudi, Ph.D. '98, of Berkeley, California, caps her son George.



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In the Valley

A path to public service—and to Harvard
by Michael Zuckerman

Harvard graduations don't occur only in May—degrees are conferred in November and March as well. With more and more undergraduates taking semesters off to study, work, and volunteer far from Cambridge, the College hosts a special mid-year observance for degree recipients who can't make the spring ceremony. Michael Zuckerman '10, of New Brunswick, New Jersey, a social studies concentrator from Lowell House, delivered this graduation address at that celebration on December 9, 2010. ~The Editors

CONGRATULATIONS on making it to this day. Twelve years ago, I stepped away from playing an auto-racing computer game with a friend to answer a ringing telephone. The call was from my parents' doctor. The next thing I

knew, I was in the passenger seat of a 1992 Mercury station wagon, watching my mother speed through red lights like one of the characters on the computer screen. Fifteen minutes later, as we pulled into an inner-city emergency-room park-

ing lot, I learned that my father was dead. I was 12 years old, almost exactly half the age I am today.

At the time, that seemed like a pretty



Michael Zuckerman

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rotten thing for the universe to do. And, for a long time, I didn't talk about it much. My thoughts on the subject were mostly expressed through my actions, which, during my career as a middle-school student, were likely to wind up with me in front of a principal, a police officer, or even a judge. Which, in turn, I took as further evidence that the universe held something deeply against me.

What I didn't realize at the time is that if my father—a man who almost never brought his work home with him—hadn't died, I never would have been at his funeral to hear the story of an 80-year-old African-American woman he'd helped sue a racist cop who'd pushed her down a flight of stairs. Or that his payment for the years of pro bono litigation had been a sequence of sweet-potato pies.

Likewise, if I hadn't kept getting into trouble, an important adult in my life would have never told me I had to start doing community service after school, which means I never would have had to do art projects with a six-year-old boy named Tyshawyn, who lived in the motels outside Trenton, New Jersey—and who'd had a much worse life than I'd had. Which means I, at age 14, never would have become a friend to Tyshawyn, and he, at age six, never would have become one of the greatest teachers in my life.

IF THOSE THINGS hadn't happened, I might never have come to the knowledge that domestic public service ran in the family, or, more importantly, had the epiphany that it was something I could take great joy in doing. And if those revelations hadn't come, I probably would never have had the opportunity to eat breakfast, lunch, and dinner at Harvard with all the extraordinary people who populate Lowell House, or help get a president elected with all the extraordinary people who populate the state of Ohio. I certainly wouldn't have had the opportunity to share this happy afternoon with all of you.

There is a trite version of what I'm saying, which is that "when God closes a door, She opens a window."

There is also an elegant version of what I'm saying, which is that "Even in our sleep, pain that cannot forget, Falls drop by drop upon the heart, And in our own despite, against our will, Comes wisdom to us by the awful grace of God."

I don't know who came up with the first one. The second one comes from the ancient Greek tragedian Aeschylus, though the line was more famously used by Bobby Kennedy on April 4, 1968, when fell to him the heartbreaking task of informing a huge African-American crowd at one of his campaign rallies that Dr. Martin Luther King Jr. had just been assassinated. That was in Indianapolis, Indiana, the only major American city that didn't erupt into riots that night.

Perhaps the looting and burning and killing didn't come to Indianapolis because Kennedy had reminded the city of an ancient truth: that in the midst of great



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hardship is often born the seed of great insight, and even success.

The reason I am sharing this with you today is that we are entering a phase of our lives in which at least some of the things we love will be taken away from us. They may be loved ones, or things we hoped were true about ourselves, or dreams we had about who we planned to become. Though many of us have survived childhood with a lot of these things intact, there has never in the history of humanity been a person who didn't have to lose at least one thing that he or she cared about.


I HOPE FOR ALL OF US that these things will be weathered by the years as little as possible. But I also hope that, when the storm clouds do inevitably gather over some part of our lives, we will be quick to locate the shards of light that just as inevitably will pierce that darkened sky, and follow them up to new heights.

It may be, as Thomas Mann once wrote, that happiness and success often signal decline because they need time to reach us, "like the light of an overhanging star, which, when it shines most brightly, may well have already gone out."

Whether or not that is true, I have come to trust that sorrow and despair often signal the beginning of a great ascent. And that is because they leave us in the valley beneath a great mountain. And it's in the climbing that we learn to see again—as for the first time—everything it is that we love about living.

That's the end of my speech. But before I go, there is a larger point I need to make: that no one survives alone. Somewhere sitting in the audience is my mother, who not only kept food on the table and kept me in school, but also stuck with me and continued to love me even when I seemed to be doing everything I could to make her life as difficult as possible. So thank you, Mom. You're an inspiration and I wouldn't be here without you.

And thank you all, for four—well, more than four—wonderful years, and for letting me speak to you today.

And congratulations, class of 2010-11. Thank you. 



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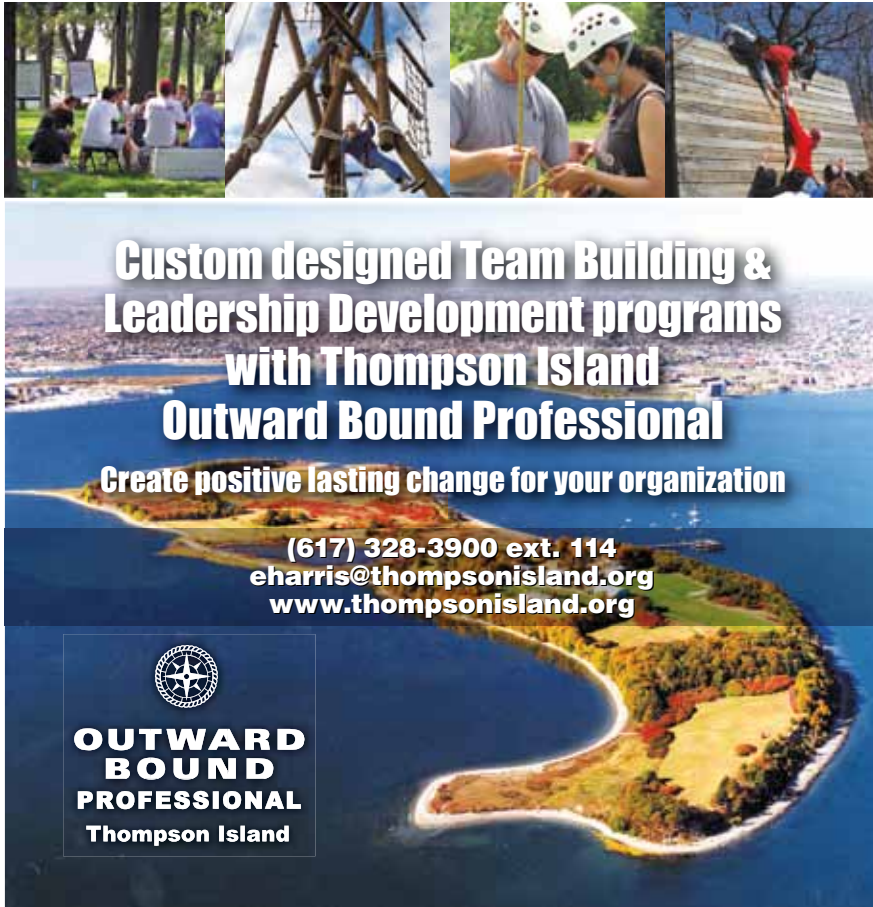
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Harvard Square offers plenty of lunch spots.

THE RED HOUSE restaurant serves its Mediterranean- and Euro-pean-style fare on a gracious outdoor patio that sits on a side street closed to traffic: the perfect place for an afternoon meal amid the hubbub of Commencement and reunion week. Though the menu changes often, the fish is always fresh, as are the salads (which include a pickled Harvard beet dish with roasted pecans, for \$10), and the sandwiches (try the Maine crab cake with chipotle-caper remoulade at \$13). 98 Winthrop Street; 617-576-0605.

Upstairs on the Square offers slightly more exotic dishes, including the *Cubano*

en la Plancha (\$12) a slow-roasted pork roulade sandwich with melted Gruyère cheese, spicy aioli (with yam chips on the side), and the succulent eggplant melanzane (\$13). Afternoon tea is also served on Saturday and Sunday, with treats like the restaurant's "famous" milk-chocolate-dipped praline turtles (three for \$8). 91 Winthrop Street; 617-864-1933.

If a New England-inspired raw bar is appealing, Harvest offers local oysters and seafood ceviche, along with shrimp cocktail (items range from \$11 to \$16). The



Linger at lunch in Upstairs on the Square's festive "Monday Club Bar" section.

wider menu has classic dishes such as an open-faced smoked turkey sandwich (\$12) and eggs Benedict (\$16) made with fresh, local eggs. The restaurant's terrace is also among the prettiest—and most private. 44 Brattle Street; 617-868-2255.

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food buffets (\$8.95 per person) at either **Cafe of India** (52A Brattle Street; 617-661-0683), which has front windows that open from floor to ceiling, or **Tamarind Bay** (75 Winthrop Street; 617-491-4552), set in a homey lower level.

Also speedy is the self-service salad bar (hot and cold food) at **Market in the Square** (60 Church Street; 617-441-2000). You can eat your lunch on a blanket in the sun at the adjacent Radcliffe Quadrangle. Other picnic items are available at **Cardullo's**, which is filled to the brim with European and American chocolates, fine wines, and other gourmet delicacies. Deli sandwiches, including an Italian imported meats special and a luscious *caprese* (mozzarella, tomatoes, and basil) start at \$8. 8 Brattle Street; 617-491-8888.

Or you may walk five minutes from the Square to **Darwin's** (148 Mount Auburn Street; 617-354-5233), where what could be the best sandwiches for miles around are named for local streets. Among our favorites is "The Longfellow," made with ham, sliced green apple, aged cheddar, Dijon mustard, lettuce, and tomatoes (\$7.35), which may be eaten under shady trees at nearby Longfellow Park.

For earnestly healthy food, try **Dado**, where you can talk over pots of all kinds of tea while munching a carefully prepared pesto tofu salad and a choice of fruits (\$7.25), or the Korean rice dish with vegetables known as *bi bim bap* (\$10). **Dado** is one of the only cafés that also serves beer and wine, always a pleasant alternative to a hectic bar. 50 Church Street; 617-547-0950.

For additional vegetarian options, try a newcomer to the Square, **Clover Food Lab** (7 Holyoke Street), which offers a small menu of fresh, cheap, perky comestibles. Some of us are hooked on the in-house French fries with rosemary (\$3), and love the falafel-like chickpea fritter and the sweet potato sandwiches (\$5 each). **Veggie Planet** at **Club Passim** (47 Palmer Street, 617-661-1513; the club doubles as the dining room during the day) churns out delicious homemade soups prepared in what some consider an older, hippie style, salads, and flat-bread pizzas with too many combinations to name, along with entrées like peanut udon

noodles and macaroni and cheese (\$7 to \$12 range).

Pizza lovers should try the yummy super-thin crust variety (\$8 to \$19) at **Cambridge 1**, a modern-style, sit-down place with low lights, beer and wine, pasta dishes, and thoughtful salads (27 Church Street; 617-576-1111). Or duck into Holyoke Center Arcade for a crispy slice topped with garlicky eggplant, spinach, and feta

cheese at **Oggi's Gourmet Food** (617-492-6444). A great new entry is **Otto's** (1432 Mass. Ave.; 617-499-3352), with its unusual toppings (such as cheese tortellini, apple and bacon, or pulled pork with mango). And of course, there's still **Pinocchio's** (74 Winthrop Street; 617-876-4897) to fulfill that hankering for a saucy, doughy Sicilian square; it's *always* good—even when you're not swinging by at 1:30 A.M. ~N.P.B.

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Harvard Law School's "Northwest Corner" project—at the intersection of Massachusetts Avenue and Everett Street—will make tangible fundamental changes

in legal education. An unusually complex project—a quarter-million square feet of space sited atop much subterranean parking (it displaced a former garage on the site)—its ungainly name reflects a multifaceted program: Wasserstein Hall, Caspersen Student Center, and the Clinical Wing. The first is the major block of space, on Mass. Ave., containing modern classrooms that better accommodate the school's smaller first-year course sections, and the burgeoning offerings in a course catalog now brimming with international and other new subjects of interest. The Caspersen space, link-

ing to Harkness Commons, provides room for both student legal organizations and socializing. And the Clinical Wing, on Everett Street, will sensibly organize the

The Law School's "Northwest Corner"



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COMMENCEMENT & REUNION GUIDE

operations of nearly 30 in-house hands-on programs—an essential element in professional training. As a whole, the structure redefines the entry to the school's campus, while creating, away from the street, an attractive new quadrangle.

It's too soon to tell, from the work-site, how the wholesale reconstruction of the Fogg Art Museum into a new museum and teaching complex will appear to future pedestrians and visitors. In the meantime, the extremely delicate work (if an 85,000-pound crane can be called delicate) of stripping the old building to its façade, shoring that up, and then excavating deep underground for new space—without bringing the whole thing tumbling down—is a feast for sidewalk superintendents and a refresher course in the highly skilled, dangerous work that construction entails. Hard hats, indeed.

None of this comes cheap. The law school's building, which began with the relocation of historic houses from the site, and the Fogg work are both high-end, long-life institutional undertakings carried out in difficult, dense, congested spaces (Robert A.M. Stern is lead architect for the law school, Renzo Piano for the re-envisioning of the Fogg). Together, the projects will ultimately cost an estimated half- to two-thirds of a billion dollars when occupied this fall (law school) and two years later (the museum). But each promises to redefine the institution around it—and to reawaken academic aspirations around Harvard.



The Fogg Art Museum



Visit harvardmag.com/ extras to see more images of the Fogg renovation.

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The Week's Events

COMMENCEMENT WEEK includes addresses by Harvard president Drew Faust and Liberian president Ellen Johnson Sirleaf, M.P.A. '71. For details and updates, visit www.harvardmagazine.com/commencement.

TUESDAY, MAY 24

Phi Beta Kappa Exercises, at 11, with poet Henri Cole and orator Joyce Carol Oates.

Baccalaureate Service for the Class of 2011 at 2, Memorial Church, followed by class picture, Widener steps.

Senior Class Family Dinner and Party, at 6. Athletic complex.

WEDNESDAY, MAY 25

ROTC Commissioning Ceremony, at 11, with President Drew Faust and a guest speaker TBA. Tercentenary Theatre.

Kennedy School Commencement Address by Kolokotronis University Professor Paul Farmer, M.D. '88, Ph.D. '90, followed by a reception. Time and place TBA.

Senior Class Day Exercises, at 2, with the Harvard and Ivy Orations and actress Amy Poehler. Tercentenary Theatre.

Law School Class Day, 2:30, with actor Alec Baldwin, followed by a reception. Holmes Field.

Business School Class Day Ceremony, 2:30, with Kathy Giusti, M.B.A. '85, founder and CEO of the Multiple Myeloma Research Foundation, followed by a reception at 4. Baker Lawn.

Masters' Receptions for seniors and guests. The Undergraduate Houses.

Graduate School of Education Convocation at 3. Radcliffe Yard.

Graduate School of Design Class Day at 4,

with Chris Anderson, curator of TED, followed by a reception. Gund Hall.

Divinity School Multireligious Service of Thanksgiving, 4:30. Memorial Church.

Harvard University Band, Harvard Glee Club, and Radcliffe Choral Society Concert, at 8. Tercentenary Theatre.

THURSDAY, MAY 26

Commencement Day. Gates open at 6:45.

The 360th Commencement Exercises, 9:45. Tercentenary Theatre.

Senior Luncheon and Diploma Ceremonies, 11:30. The Undergraduate Houses.

The General Alumni Spread, 11:30. The Old Yard.

The Tree Spread, for College classes of 1919-1960, 11:30. Holden Quadrangle.

Graduate School Diploma Ceremonies, from 11:30 (time varies by school).

Alumni Parade, 1:45. The Old Yard.

The Annual Meeting of the Harvard Alumni Association, 2:30, with speeches by President Faust and President Sirleaf. Tercentenary Theatre.

Medical and Dental Schools Class Day Ceremony, at 2, with HMS professor and author Atul Gawande. HMS Quadrangle.

FRIDAY, MAY 27

Radcliffe Day Luncheon, 12:30, with Radcliffe Medal recipient Ela Bhatt, founder of the Self-Employed Women's Association. Radcliffe Yard.

For updates on Harvard reunions, Radcliffe Day, and events for graduating seniors, visit www.commencementoffice.harvard.edu, or contact the Harvard Alumni Association (124 Mount Auburn Street, Cambridge) at 617-495-2555; haa@harvard.edu; or www.haa.harvard.edu. For information on all other professional or graduate school events, visit their respective websites.

The Harvard Information Center, Holyoke Center, is open every day except Sunday, 9 to 5 (telephone: 617-495-1573).

A Special Notice Regarding Commencement Exercises

Thursday, May 26, 2011

Morning Exercises

TO ACCOMMODATE the increasing number of those wishing to attend Harvard's Commencement Exercises, the following guidelines are proposed to facilitate admission into Tercentenary Theatre on Commencement Morning:

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

Note: A ticket allows admission into the Theatre, but does not guarantee a seat. Seats are on a first-come basis and can not be reserved. The sale of Commencement tickets is prohibited.

- Alumni/ae attending their reunions (25th, 35th, 50th) will receive tickets at their reunions. Alumni/ae in classes beyond the 50th may obtain tickets from the College Alumni Programs Office by calling (617) 496-7001, or through the annual Tree Spread mailing sent out in March with an RSVP date of April 29th.

- Alumni/ae from non-reunion years and their spouses are requested to view the Morning Exercises over large-screen televisions in the Science Center, and at designated locations in most of the undergraduate Houses and graduate and professional Schools. These locations provide ample seating, and tickets are not required.

- A very limited supply of tickets will be made available to all other alumni/ae on a first-come, first-served basis through the Harvard Alumni Association by calling (617) 496-7001.

Afternoon Exercises

THE ANNUAL MEETING of the Harvard Alumni Association convenes in Tercentenary Theatre on Commencement afternoon. All alumni and alumnae, faculty, students, parents, and guests are invited to attend and hear Harvard's President and featured Commencement Speaker deliver their addresses. Tickets for the afternoon ceremony will be available through the Harvard Alumni Association by calling (617) 496-7001.

~Jacqueline A. O'Neill, University Marshal

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- 5/1 The 28th Annual Mayfair
- 5/5 Cinco de Mayo
- 5/8 Mother's Day!
- 5/23 Patios in Bloom Kickoff
- 5/26 360th Harvard Commencement
- 6/11 The Dance for World Community Festival in Harvard Square
- 6/18 4th Annual Make Music Harvard Square!
- 6/19 Father's Day
- 7/10 Bastille Day Festival on Holyoke Street!
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WHEN SPECIES COLLIDE

Throughways for Wildlife

IN THE ROCKY MOUNTAINS of Colorado, Interstate 70 cuts from east to west across what wildlife biologists call the Mountain Corridor—a 144-mile-wide swath of mixed habitat flowing north and

south between Denver and Glenwood Springs. The corridor is a major throughway for mountain goats, bear, Canada lynx, moose, deer, fox, and other animals roaming in search of food and mates. As traffic on the

highway has increased and regional development has claimed more habitat, more animals have died in collisions with vehicles.

To counter this trend, a group of transportation and wildlife agencies in the United States and Canada launched a competition last year to design wildlife crossings for the nation's roadways. The organizers chose a crossing site near West Vail Pass—one of the deadliest stretches of I-70 for animals—and challenged landscape architects and engineers “to reweave landscapes for wildlife using new methods, new materials, and new thinking.”

Designs arrived from 36 teams in nine countries, representing more than 100 firms. Chairing the five-member international jury that reviewed the five finalists was Charles Waldheim, Irving professor of landscape architecture, chair of that department at the Graduate School of Design (GSD), and a leader in the emerging field of landscape urbanism. “Wildlife crossings, which are common in Europe, are a long-overdue response to the ecological damage the...interstate highway and civil defense systems have done in this



The winning wildlife-crossing design distills multiple habitat types from the surrounding landscape into parallel bands that act as corridors for various animal species. Wide bands provide an open field of view, while narrow forest and shrub bands provide enclosed corridors. Below: A site cross section



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KEVIN JENNINGS '85

Background: Kevin Jennings serves as the Department of Education's Assistant Deputy Secretary for Safe and Drug-Free Schools. As a high school teacher, Jennings founded the Gay, Lesbian and Straight Education Network (GLSEN) to end anti-LGBT bias in K-12 schools and make schools safe for every student. Under his leadership, GLSEN increased the number of Gay-Straight Alliances in schools from under 50 to 4,300+.

Harvard Gave Him: Jennings grew up living below the poverty line. A Harvard scholarship made him the first in his family to attend college and created limitless opportunities. "Harvard gives people a chance to succeed, to not stay poor and marginalized forever," he explains. Harvard's commitment to equal opportunity and access to education for all has inspired his life's work.

A Harvard Grad Gives Back: Jennings serves on the board of the Harvard Alumni Association, and as a co-chair for undergraduate relations. Why? "Harvard changed my life, and I am so incredibly grateful. I will always be proud to be a Harvard man and help the university be a strong and vibrant place." **BMW of North America is pleased to support Kevin and his efforts with a donation to Harvard's Open Gate.**

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RIGHT NOW



The HNTB and Michael Van Valkenburgh Associates design uses pre-cast modular vaults for ease of construction.

country," he says. Cities, he notes, began to redress the social costs of routing highways through neighborhoods decades ago, but the public has yet to stem the destruction of wildlife habitat and populations by highways in more remote areas.

In January, the jury unanimously chose a design called *hypar-nature*, submitted by HNTB Engineering, of New York City, teamed with Michael Van Valkenburgh Associates (MVVA), a landscape architecture firm founded by the GSD's Eliot professor in practice in the department of landscape architecture, with input from ecology consultants Applied Ecological Services. The winning design takes its name from its lightweight, super-strong "hypar (hyperbolic paraboloid) vaults"—V-shaped concrete ribs, bent obliquely and pinched at each end—that span the highway. "A wildlife crossing must support loads five times greater than conventional bridges, due to the combination of soils needed to support landscape, plus an allowance for snow and robust landscape growth over time," explains Ted Zoli, an HNTB vice president who is an expert on bridges. The hypar vaults are an adapta-

tion of the common pre-cast concrete beam, he explains: "Each vault serves as abutment, pier, beam, and slab, all in a single, repetitive element." The team designed the low-cost, modular structure as a prototype that can be easily modified and replicated in a regional network.

The design does more than simply knit together the natural landscape on both sides of the highway to facilitate wildlife crossing passively. It also distills and intensifies the four main types of surrounding habitat—scree, forest, shrub, and meadow—



Visit harvardmag.com/extras to view images from the other four finalists.

into discrete corridors that induce animals to cross by providing protective tree cover, areas with open sightlines, and thick plantings of favorite food sources (grasses, sedges, and fruiting shrubs) that extend across the bridge. To keep creatures from straying over the sides, an exposed hypar vault borders each side of the landscape, creating a V-shaped concrete barrier eight feet deep with a 60-degree slope.

At its southwest end, the bridge forms a level plateau between the mid-slope of a ridge and the overpass. The northeast end descends to a seasonal wetland that captures water to attract wildlife. Here animals as large as lynx and coyotes can enter a tunnel to cross beneath the road. Atop the bridge, the bands at each end fan out

A design from Zwarts & Jansma Architects (below) emphasizes curves as a design principle; a design from the Olin Studio (bottom) uses preplanted modules to add vegetation to the crossing.



HNTB AND MICHAEL VAN VALKENBURGH & ASSOCIATES

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into the surrounding wild landscape, following routes where ecologists have identified existing animal activity. “Along the edges of these corridors we proposed to fell existing pine trees that have been affected by the pine beetle [a prolific pest],” Zoli explains. “The felled trees are then arranged along the edge of the corridor to serve as both habitat and as a natural obstruction, eliminating the need for conventional fencing.”

MVVA, Van Valkenburgh says, was “essential in merging the imperatives of structural design with the imperatives of ecological systems.” In particular, his firm “provided the landscape framework for the structure developed by HNTB, found low-impact ways to accommodate the grade change on both sides, and created the appropriate conditions for plants and trees to thrive and grow.” MVVA had not designed a wildlife bridge before, he says, but is often called upon to build landscape connections across infrastructure, minimize environmental impact, and work creatively within ecological parameters: “The unusual part was that these concerns were much more in the foreground, whereas the social and cultural use of the landscape, which is usually very important to the projects we undertake, was not really a determining factor.”

Outwardly, the five final designs looked strikingly similar. But the winning proposal, one juror wrote, “is not only eminently possible; it has the capacity to transform what we think of as possible.” Specifically, Waldheim says, the HNTB design “prioritized the flora and fauna over the other considerations, yet the transportation engineering was equally strong and thoroughly integrated—you didn’t see a compromise in which wildlife was secondary to bridge design, or vice versa. The outcome was greater than the sum of individual components.”

—JANE ROY BROWN

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PROS OF PROPINQUITY

The “Water Cooler” Effect

CHATTING around the water cooler may yield more than office gossip; it may help scientists produce better research, according to Harvard Medical School (HMS) investigators.

The benefits of collaboration are well accepted in the scientific world, but researchers with the HMS Center for Biomedical Informatics wondered whether physical proximity affects the quality of those collaborations: Do scientists who have more “face time” with colleagues produce higher-impact results? To test the hypothesis, they examined data from 35,000 biomedical science papers published between 1999 and 2003, each with at least one Harvard author. The articles appeared in 2,000 journals and involved 200,000 authors.

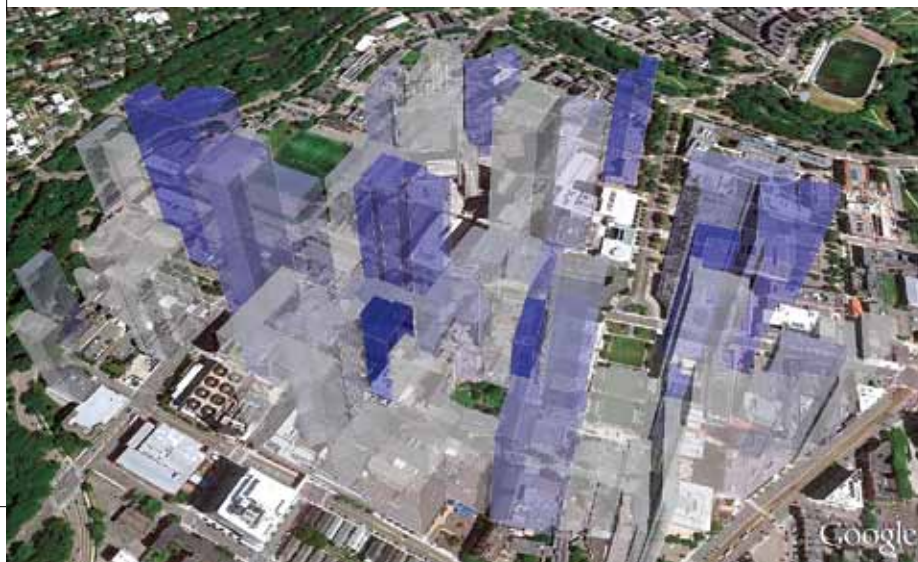
After analyzing the number of citations each paper generated (a standard way to gauge article quality) and the distances between coauthors, they concluded that personal contact, especially between an article’s first and last authors,

still matters—even in an age of e-mail, social networking, and video conferencing. (Their analysis, “Does Collocation Inform the Impact of Collaboration?” appeared in the online journal *PLoS ONE* in December.)

“Our data show that if the first and last authors are physically close, they get cited more, on average,” says research assistant Kyungjoon Lee. As that distance grew, citations generally declined. (Typically, the first author is a graduate student or postdoctoral fellow and the last is a more senior faculty member; they are often affiliated with the same lab, but do not necessarily work closely together.) The effect didn’t hold true for other author combinations, such as first and third; in fact, the middle authors normally don’t interact much on a project, Lee notes. The team also found that, on average, a paper with four or fewer authors based in the same building was cited 45 percent more than one with authors in different buildings—“So if you put people who have the potential to collaborate close together,” he says, “it might lead to better results.”

Lee was first author on the study; the principal investigator was center co-director Isaac Kohane, the Henderson professor of pediatrics and health sciences and technology. Kohane had long suspected that proximity promotes collaboration, despite a lack of hard evidence, so he secured funding

In this 3D representation of the relationship between collaboration and mean citation impact in the Longwood Medical Area, each building’s height reflects the number of citations of papers originating in the building, while the color gradient (from gray/low to blue/high) represents the proportion of publications originating from that building in which both first and last authors work in the building.



and recruited Lee and others for the study.

Gathering data was much harder than Lee expected. A team of 15 undergraduates used floor plans, staff directories, and their feet to track down the specific office and laboratory addresses of the



Visit harvardmag.com/extras to see a map of collocation and collaboration at Harvard Medical School.

7,300 Harvard authors across several Harvard campuses and Massachusetts General Hospital, as well as addresses for the non-Harvard scientists included in the

study. Then they built a three-dimensional image of authors' locations, calculated the distances separating them, and evaluated the relationship between citations and distances.

More research is needed to explain why proximity seems to enhance scientific productivity, the group says, but Lee knows firsthand the difference it can make. Early on, he worked on the fourth floor of Countway Library, while Kohane was one flight above. Eventually, Kohane moved to Lee's floor, and the two wound

up chatting a lot in the center's kitchenette. "I became more active in exchanging ideas because of this experience," Lee recalls. "Science is all about communicating your ideas so others can build on them."

—DEBRA BRADLEY RUDER

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MINING "WHOOSH" MOMENTS

The Dilemma of Choice

IN HERMAN MELVILLE'S *Moby Dick*, Captain Ahab pursues a great white whale that years earlier bit off his leg. Ahab, says Sean Dorrance Kelly, is on a monomaniacal quest to answer an existential question: Did the "inscrutable" whale act unthinkingly, or with calculated malice? Caught up in "monotheistic fanaticism," Ahab wants to know if there is purpose behind what happened to him—and, by extension, in the universe. But Ahab is asking the wrong kind of question, Kelly believes: the kind that can never be answered.

Kelly, chair of Harvard's philosophy department, is embarked instead on a project to understand how, in what he characterizes as a largely post-monotheistic world, one can live a meaningful life. In a society without widespread belief in God, and increasingly without a shared set of common cultural values, he sees the potential for nihilism, the rejection of all religious and moral principles to the point that noth-

ing matters. "The contemporary threat of nihilism is different from the one faced by nineteenth-century Victorians," he says, because never before have people had so much individual autonomy. Until relatively recently, shared culture largely dictated how people would live their lives: there was a system of beliefs, reinforced by so-

cial hierarchy, that meant people had very few, if any, existential choices to make. But today, the burden of choice has been thrust upon the individual. The problem is how to choose in such a way that one constructs a worthy life.

Kelly believes it is possible to train our characters to respond reflexively during meaningful moments in life. His first book for a lay audience, *All Things Shining: Reading the Western Classics to Find Meaning in a Secular Age*, draws on the traditional canon of Western literature, from Homer to Dante to Melville, as a means of laying out a solution to the problem of contemporary nihilism: the cultivation of a knowledge or understanding so deep that when the need to choose is called for—however unexpectedly—its possessors will act correctly almost without thinking, drawing from their community or cultural heritage the knowledge of what to do. One of the few such sacred or "whoosh" moments (as Kelly calls them) left in modern life occurs, he says, when a crowd rises spontaneously to cheer a great play in a sports arena. Most people can identify with that reaction, and he hopes awareness of this visceral understanding can lead to the development of other kinds of consequential, shared experiences.

"We're a bit like Melville's Ishmael," Kelly says of his coauthor, Hubert



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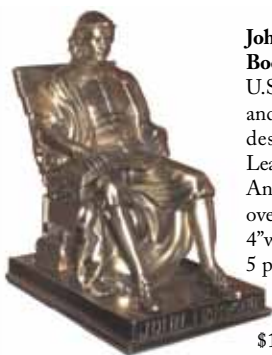
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Dreyfus of the University of California, Berkeley, and himself. "We're taking readers through the history of the West, looking for places where they might find or recognize some way of life that's worthy of admiration" so they "can decide whether to appropriate any of that for themselves." The book adopts "a master-apprentice" model of learning, "except that some of your role models can be literary characters...who recognize distinctions of worth in the world" that make "their lives become meaningful."

Although the book's argument is grounded culturally in the Western tradition, "the general strategy of finding texts that you can relate to" applies to other cultures as well, he points out. During a recent speech in China on general education, he recalls, he told the story of his wife's 92-year-old grandmother, whose education from the age of seven consisted primarily of memorizing enormous quantities of classical Chinese literature and philosophy—500 lines of poetry a day as she grew older.

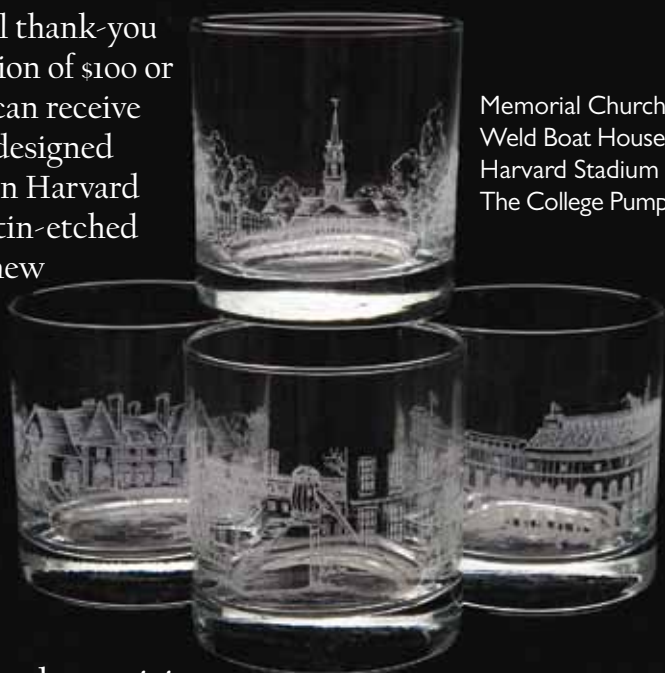
"At a certain point she asked her mother, 'Why do I have to do this? These poems don't mean anything to me,'" Kelly relates. "And her mother said to her, 'It is true they don't mean anything to you now. But someday, an event will occur in your life and the moment it occurs, a line of poetry will pop into your head, totally unbidden. And the event will make sense in terms of the line of poetry and the line of poetry will make sense in terms of the event, and in that way, the meaning of your life will be tied up with the history of your entire culture. You will become a person who lives on the shoulders of the great culture that you have been brought up in.'"

Kelly believes everyone has "the ability to cultivate in ourselves the skills required to let us be grabbed by distinctions of meaning and worth" in the same way. Individuals have to work hard to become open to such revelatory moments, to learn to see and respond to the world in the context of cultural history. But humans, he believes, "are the kind of being that has the capacity to bring ourselves and everything around us out at its best."

~JONATHAN SHAW

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- 16 Open Book
- 18 Street-level Ballet
- 19 Do or Die
- 22 Poetic Paschen
- 25 Off the Shelf
- 26 Chapter and Verse

Pulitzer Prize winner Geraldine Brooks at home on Martha's Vineyard, one setting in her new novel

These days, now a mother of two, she works from the quiet of her home on Martha's Vineyard—the source of inspiration for her newest book. *Caleb's Crossing*, appearing this May, tells the story of Caleb Cheeshahteaumauk, a member of the Vineyard's Wampanoag tribe, whom Brooks first discovered on a map marking the birthplace of Harvard's first Native American graduate. "I thought it would be really interesting to talk to him about that experience, because I was thinking civil-rights era, maybe 1965, kind of vintage-y," Brooks recalls. "And then I learned it was 1665 and that was an incredible sort of mind-shift experience...I started to wonder about Harvard and what it was like in the seventeenth century."

It's those austere beginnings that *Caleb's Crossing* endeavors to recreate as it covers Cheeshahteaumauk's journey from the Vineyard wilderness to the rigid world of English Puritanism. Narrated by Bethia Mayfield—a precocious minister's daughter whose frustrations with Puritan life find an outlet in Caleb—the novel un-

Pride of the Indian College

A new novel stars Harvard's first Native American graduate, A.B. 1665.

by AMELIA ATLAS

NOT EVERY NOVELIST can say she owes her career to the Nigerian secret police, but the Pulitzer Prize-winning Australian writer Geraldine Brooks, RI '06, likes to give credit where credit is due. While investigating Shell Oil malfeasance in the Niger Delta as a foreign correspondent for the *Wall Street Journal*, Brooks ended up on the wrong side

of Sani Abacha's military regime. "To cut a long story short, they didn't like reporters looking into that, and they threw me in the slammer in Port Harcourt," she says. Her first reaction wasn't fear of prison but of her biological clock: "I thought, 'Oh, gee, if they keep me for too long I'll be too old to get pregnant,'" Brooks recalls, explaining her decision to trade journalism for the relatively risk-free world of fiction.

earth's a little-known chapter of Harvard history: the establishment of an Indian College, funded by idealistic missionaries (who aimed to expand the reach of their faith among Native Americans) and abetted by administrators (who hoped to milk the missionaries for funds during Harvard's leaner years; Brooks quotes then-president Charles Chauncey lamenting "the loud groans of the sinking college"). Harvard's 1650 charter specifies that the College's purpose was to provide for "the education of the English and Indian youth of this country, in knowledge and godliness." (Alas, with the escalation of hos-

The Harvard of 1661 is as alien to Caleb as it would doubtless be to recent graduates.

tilities between the Wampanoags and the English settlers in King Philip's War of 1675-76, this aspect of Harvard's founding mission all but disappeared.)

The Harvard of 1661 is as alien to Caleb, newly arrived in Cambridge, as it would doubtless be to recent graduates accustomed to luxurious dining halls and manicured athletic fields. Bethia vividly describes the down-at-the-heels institution: "I had heard that some had deemed

the college building too gorgeous for a wilderness. But the grace of its design cannot have been matched by skill in its construction, for its shingle roof sagged woefully in several places and the sills showed signs of well-advanced rot." The young scholars, only a handful per class, survive on carefully rationed meals, sometimes even paying their tuition with an all-too-rare side of beef. "I was laughing because everybody was up in arms about

O P E N B O O K

Honeybee House Hunting

Beekeepers have long observed, and lamented, the tendency of their hives to swarm in the late spring and early summer. When this happens, the majority of a colony's members—a crowd of some ten thousand worker bees—flies off with the old queen to produce a daughter colony, while the rest stays at home and rears a new queen to perpetuate the parental colony. The migrating bees settle on a tree branch in a beardlike cluster and then hang there together for several hours or a few days. During this time, these homeless insects

will do something truly amazing; they will hold a democratic debate to choose their new home.

This book is about how honeybees conduct this democratic decision-making process. We will examine the way that several hundred of a swarm's oldest bees spring into action as nest-site scouts and begin exploring the countryside for dark crevices. We will see how these house hunters evaluate the potential dwelling places they find; advertise their discoveries to their fellow scouts with lively dances; debate vigorously to choose the

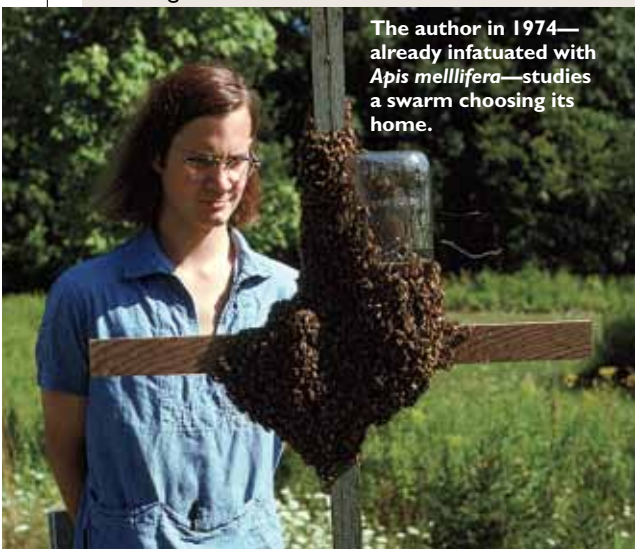
The more scientists study the social insects, the more they are amazed. Thomas D. Seeley, Ph.D. '78, professor and chair of neurobiology and behavior at Cornell, combines vocation and avocation, most recently in his delightful new book, *Honeybee Democracy* (Princeton, \$29.95). He has the confidence and good humor to include a photograph of himself in 1974, longer of hair and more casual of dress, studying a swarm of his favorite species. The author note on the book jacket advises that he is "a passionate beekeeper." His writing, beginning with this excerpt from the prologue, does his subjects honor.

best nest site, then rouse the entire swarm to take off; and finally pilot the cloud of airborne bees to its home. This is typically a hollow tree several miles away.

My motive for writing this book about democracy in honeybee swarms is twofold. First, I want to present to biologists and social scientists a coherent summary of the research on this topic that has been conducted over the last 60 years.... The story of how honeybees make a democratic decision based on a face-to-face,

consensus-seeking assembly is certainly important to behavioral biologists interested in how social animals make group decisions. I hope it will also prove important to neuroscientists studying the neural basis of decision making, for there are intriguing similarities between honeybee swarms and primate brains in the ways that they process information to make decisions.... One important lesson that we can glean from the bees... is that even in a group composed of friendly individuals with common interests, conflict can be a useful element in a decision-making process. That is, it often pays a group to *argue* things carefully through to find the best solution to a tough problem.

My second motive for writing this book is to share with beekeepers and general readers the pleasures I have experienced in investigating swarms of honeybees. I can thank these beautiful little creatures for many hours of the purest joy of discovery, interspersed among (to be sure) days and weeks of fruitless and sometimes discouraging work. To give a sense of the excitement and challenge of studying the bees, I will report numerous personal events, speculations, and thoughts about conducting scientific studies.



The author in 1974—already infatuated with *Apis mellifera*—studies a swarm choosing its home.

JOHN G. SEELEY

not getting a hot breakfast,” Brooks jokes, referring to the 2009 *scandale* in which Harvard’s dining-hall cutbacks made the *New York Times*. “I was like—*hot breakfast?!?*”

Like her previous works (*Year of Wonders*, *People of the Book*, and the Pulitzer-winning *March*), *Caleb’s Crossing* borrows liberally from the historical record. Brooks has a journalist’s zeal for fact-finding, but tries not to let her reportorial impulses overtake the imaginative work. “I like to let the story tell me what I need to know. I love libraries and archives but I try not to get carried away to the point where some fantastic bit of research I stumbled on is going to shape the plot rather than vice versa.”

Because very few letters and diaries from seventeenth-century American women survive, the process of conjuring the narrator’s voice became one of the pleasures and challenges of *Caleb’s Crossing*. Whereas Caleb, his friend Joel Iacoonis—who would have been a fellow Indian graduate had he not been murdered by seafaring marauders on the way to Commencement—and even Bethia’s family are drawn from real-life figures, Bethia herself is wholly fictional.

Caleb Cheeshahteaumauk, A.B. 1665, as imagined by Stephen Coit ’71, M.B.A. ’77

“It was intriguing to take the scant evidence and try to build a portrait of somebody who is plausible,” Brooks explains. Still, the depth of her research is more than evident: Bethia’s musings take her on detours into everything from the grammar of the Wampanoag language to the dangers of colonial midwifery.

Fittingly, Brooks began researching the novel while a fellow at the Radcliffe Institute. Although she found few remaining traces of seventeenth-century Cambridge to inspire her, Harvard archaeologists have since excavated part of the foundation of the Indian College in the Yard, near present-day Matthews Hall (see “Pay Dirt in Yard Dig,” July-August 2008, page 80). Brooks’s excitement

about recovering this lost part of history is palpable: “My dream is, they find a shard of pewter with CC carved in the bottom of it.”



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SKITS IN THE DINING HALL.

Street-level Ballet

A woman, some orphans, and some dancers in Panama

UNLIKE TEACHING or medicine, the arts don't offer an obvious mechanism for community service. Yet Anna Else Pasternak '07, who grew up as both a California surfer and a versatile dancer (ballet, modern, jazz, Afro-Cuban, Afro-Brazilian) educated at San Francisco's School of the Arts, had long hoped to find a way to combine dance with some form of social outreach. Last spring, she launched Movement Exchange (www.movementexchanges.org), and attracted an international group of volunteers to Panama to teach dance to orphans and other at-risk youth; on July 4, the artists performed with their students at Panama's National Theater. Pasternak speaks Spanish fluently, but "The amazing thing about doing this with dance," she explains, "is that the language barrier doesn't exist. People connect."

After college, Pasternak did some globe-trotting—traveling in the Middle East, for example, and teaching surfing in the Basque region of Spain—and fetched up in Panama, where she ran a volunteer program with European and American students for a nongovernmental organization (NGO), Global Brigades. Meanwhile, she wondered how to keep up her dancing. (In college, she had traveled to Cuba to pursue that passion, and also took time off to perform as a Brazilian *passista*—those samba-dancing women in spectacular, skimpy costumes celebrating *Carnaval* in Rio—for three months in Japan.) Fortuitously, she met Lila Troitino,

director of the National Ballet of Panama, who had recently launched her own NGO to connect social service and dance and was encouraging her dancers to volunteer with youths at risk.

Reflecting on "what a huge difference dance had made in my life, in things like self-esteem and body awareness," Pasternak felt a click when she learned of the century-old Malumbo Orphanage outside Panama City, housing mostly girls, many HIV-positive, between the ages of nine and 17. Recognizing an opportunity, she invited members of a California dance network she belonged to down to Panama to teach the orphans dance. Panama's minister of culture donated use of the baroque, century-old National Theater for a community dance event, the U.S. embassy's cultural-affairs department helped fund necessities like security at the theater.

Fourteen volunteers joined Pasternak that June; ranging in age from 17 to 48, they came from both coasts of the United States and even Singapore, and included modern dancers, ballerinas, a tap dancer, and a Chinese ribbon dancer. "What united them was their belief in dance as a way to foster cross-cultural understanding, self-esteem, and youth empowerment," Pasternak says.

The National Theater event on July 4 put more than 70 dancers onstage; for many of the orphans it was their first public performance. Admission was free, and more than 250 people at-



tended. "The

U.S. embassy staff were beside

themselves—they got a huge amount of great publicity,"

Pasternak says. "And the best part of it all was the growth rate in the kids. You could see it backstage in things like trust." (The original volunteers, who lived both at the orphanage and in the city during their visit, formed continuing relationships, now kept up on Facebook, with the Panamanian dancers.)

Donations made at the performance, and received from other sources, generated enough revenue to pay local teachers to maintain weekly dance classes at the orphanage. In January, Indiana University sent a second wave of dancers, who lived at the orphanage and worked each night with two other groups of at-risk

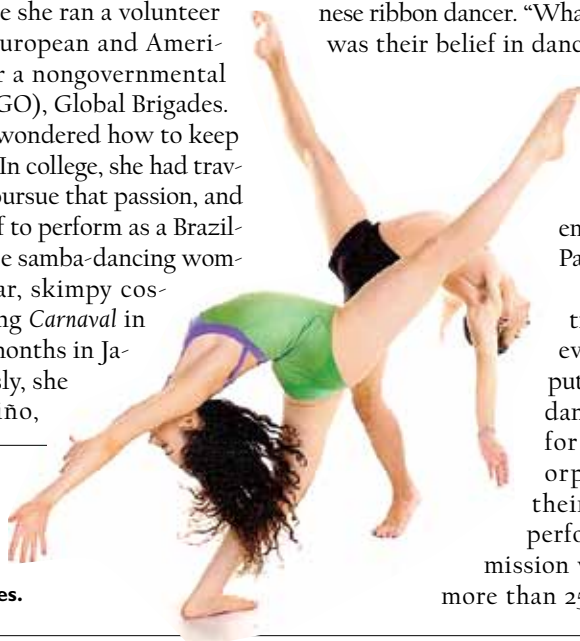
youths. "We put together a kind of flash mob in a square in the old district of the city—bringing dance to the streets," Pasternak says. "We did a huge performance in public." Last year's volunteer group, plus many additions, will return and prepare another National Theater performance this July 4.

"I feel like I did it backwards," Pasternak says. "I've talked to people in Silicon Valley who are social entrepreneurs—they have this idea, then they build this website and try to find funding, and then implement the idea. I did all the implementation first, and all these things happened—but I didn't have a website, didn't write a mission statement, or plan things out." Even now, Pasternak lives "nowhere—I have no home base." She is applying for a Fulbright Scholarship in Mexico City, and is in love with the idea of international travel and "building communities through dance," she says. "I also need to figure out how I'm actually going to make a living at this!" ~CRAIG LAMBERT



Visit harvardmag.com/extras to see videos of Anna Pasternak's works.

Anna Pasternak leaps, flies, and does what can look like advanced yoga poses as she dances.



Do or Die

The enigma of Mahatma Gandhi

by SUGATA BOSE

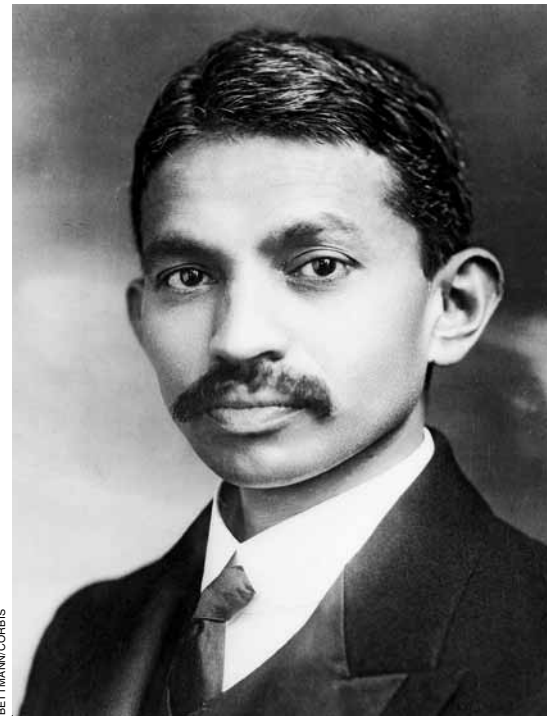
WHEN INDIA won independence at the famous midnight hour of August 14-15, 1947, Mahatma Gandhi stayed away from the festivities in New Delhi. Instead, he fasted in a predominantly Muslim neighborhood of Calcutta, quietly mourning the great human tragedy that accompanied what he called the vivisection of his motherland. The “great soul,” having been unable to prevent the subcontinent’s partition into two countries along ostensibly religious lines, was afflicted with a sense of failure.

Joseph Lelyveld, *Great Soul: Mahatma Gandhi and His Struggle with India* (Knopf, \$28.95)

The supreme leader of India’s struggle for freedom from British rule had struggled with India to transcend its

myriad differences of religion and caste. It is the latter struggle that forms the subject matter of this absorbing new book by Joseph Lelyveld ’58, A.M. ’60, the Pulitzer Prize-winning former executive editor of the *New York Times*.

“I merely touch on or leave out crucial periods and episodes,” Lelyveld tells us in his author’s note, “in order to hew in this essay to specific narrative lines I’ve chosen.” The spotlight is trained on Gandhi the social reformer, rather than on “the generalissimo of *satyagraha*,” as the Mahatma described himself—especially *satyagraha* (his technique of passive resistance) in the sense of a quest for truth through mass political activity. Lelyveld’s journalistic postings in New Delhi and Johannesburg sparked an intellectual curiosity that enables him to probe the deep connections in



BETTMAN/CORBIS

A formal, undated portrait of Gandhi as a young man

Gandhi’s life that spanned two widely separated shores of the Indian Ocean.

V.S. Naipaul once described Gandhi as the least Indian of Indian leaders. Lelyveld

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deftly explores this paradox, focusing on the ways in which Gandhi's early South African experience formed the later Mahatma. It was a slow transformation. The young man who arrived in South Africa as a lawyer in 1893 to represent an Indian Muslim mercantile firm did not take up the cause of the hapless Indian indentured laborers in that country until 1913. It took time for this campaigner for Indian rights to shed the racial prejudice that he harbored toward Africans. Gandhi's views on the evils of caste-based untouchability took shape in South Africa. His first political speeches were delivered within the precincts of South Africa's mosques, a sign of the commitment of this Hindu leader to making common cause with the Muslims.

That Gandhi honed satyagraha, and his approach to crafting Indian unity across lines of caste and religion, in South Africa between 1906 and 1913 is well known. He would deploy both on a much wider scale in India from 1919 onward. What is new in Lelyveld's treatment of Gandhi's South African years is the analysis of "the most intimate, also ambiguous relationship of his lifetime": with Hermann Kallenbach, an architect of German Jewish background, with whom Gandhi set up Tolstoy Farm in the Transvaal, leaving his wife behind. Sifting through the letters that "Upper House" (Gandhi) wrote to "Lower House" (Kallenbach), Lelyveld seeks to answer the question, "What kind of couple were they?" He devotes an entire chapter to this relationship, but its relevance to the overall aim of the book is unclear. Key cultural differences between American and Indian attitudes to same-sex friendships make Lelyveld's suggestion of a homoerotic and possibly homosexual relationship speculative at best. Whatever its nature, it is a huge exaggeration to see the relationship as the "most intimate" of Gandhi's life. After parting ways in 1914, Kallenbach briefly returned to India in 1937 to make an unsuccessful attempt to enlist Gandhi's support for the Zionist cause. Gandhi consistently supported the rights of Palestin-



Gandhi (center) as a practicing attorney in South Africa.

ians to their land from 1919 onwards.

The satyagraha of 1913 leading to the repeal of the £3 annual tax on indentured workers provided the perfect finale for Gandhi's two decades in South Africa, firmly establishing, on the eve of his return to India, his reputation as a leader of passive resistance. As an expatriate patriot himself, Gandhi was quite comfortable with a conception of India that transcended the territorial limits of the subcontinent. Lelyveld ably recounts the story of Gandhi's ascent to the leadership of the Indian National Congress with the support of Indian Muslims distressed about the fate of the Turkish Khilafat (Caliphate) and the loss of Ottoman territories at the end of World War I. The Mahatma fused the symbols of Indian nationalism and Islamic universalism—the spinning wheel and the crescent—together in the anti-colonial mass movement of non-cooperation between 1920 and 1922. Mohammad Ali Jinnah, the votary of a transnational Islamic movement with a lasting legacy, was his closest Muslim comrade in those years. Lelyveld notes that the remote cause of the Khilafat was important in the rise of Gandhi, even though he adds the unnecessary clarification that "it would be simply wrong, not to say grotesque, to

KEystone-FRANCe/GAMMA-KEystone VIA GETTY IMAGES

set up Gandhi as any kind of precursor to bin Laden.” During later years of religious conflict, Gandhi would often look back nostalgically on the “glorious days” of Hindu-Muslim unity during the non-cooperation and Khilafat movement.

Gandhi led mass agitations against the British raj in roughly decennial cycles. Lelyveld mentions the civil disobedience movement launched in 1930 with the salt satyagraha (protesting the government’s tax on salt) as its centerpiece, but his narrative thread for the Depression decade is supplied by the debates on the caste issue between Gandhi and B.R. Ambedkar, a member of and spokesman for the “Depressed Classes.” Ambedkar, who stood for the destruction of the caste system, found Gandhi’s attitude toward the “untouchables”—Harijans, or children of God, as he dubbed them—a trifle patronizing. Lelyveld skillfully unravels the story of Gandhi’s fast in 1932 against separate electorates for the “Depressed Classes,” his anti-untouchability campaign of 1933, and his stunning characterization of the Bihar earthquake of 1934 as divine chas-

possessed ‘do or die’ Gandhi, the fervent commander.” “Your president,” Gandhi had said to Louis Fischer, a young American journalist and future biographer, in June 1942, “talks about the Four Freedoms. Do they include the freedom to be free?” The fervent commander of the Quit India movement (described by Gandhi as “the biggest struggle of my life”) is not the person of primary interest to Lelyveld. He turns quickly instead to the struggle within and Gandhi’s final efforts to grapple with the Hindu-Muslim question.

Gandhi was prepared to be more generous toward Mohammed Ali Jinnah and Muslim political aspirations than his erstwhile lieutenants, Nehru and Vallabhbhai Patel, who by then were at the helm of the Indian National Congress. Yet by the summer of 1946, once the British had decided to quit India, Gandhi was not needed any more and those who had for decades been his “yes-men” had turned into “no-men.” “If he’d pushed his case forcefully and publicly,” Lelyveld argues plausibly, “the Congress might have found it difficult to proceed without him.” But Gandhi chose not

Gandhi would often look back nostalgically on the “glorious days” of Hindu-Muslim unity.

tisement for the sin of untouchability. The unreason inherent in that statement elicited a rebuke from none other than Rabindranath Tagore, the poet who had granted Gandhi the “Great Soul” epithet.

Lelyveld’s analysis of Gandhi on caste and of the vexed Gandhi-Ambedkar relationship is brilliant. But his lack of interest in covering what he describes as “the political ins and outs of the movement” entails a loss and a missed opportunity to explore Gandhi’s ties with younger radicals like Jawaharlal Nehru and Subhas Chandra Bose. Gandhi was, after all, primarily the leader of India’s anti-colonial movement and had vigorous debates with these compatriots on the social and economic reconstruction of free India.

Lelyveld is right on the mark in suggesting that Gandhi was “never more elusive or complex” than in the final decade of his life, as he sought to balance his values with “the strategic needs of his movement.” The decision to call upon the British to “quit India” in August 1942 reveals, in Lelyveld’s words, “a flash of the fully

to do so. Instead, in the autumn and winter of 1946, he put himself “almost as far in an eastward direction as he could get in what was still India from the center of political decision making in Delhi.” This was the district (now in Bangladesh) of Noakhali, where the Muslim majority had attacked Hindu inhabitants in October 1946, and where Gandhi wished to prove the two communities could still live in amity.

Lelyveld gives the reader a moving description of a tragic lonely figure walking for peace from village to village in Noakhali. Gandhi’s trial by fire in restoring a semblance of Hindu-Muslim unity, which had been one of his life’s missions, was connected in complex ways, Lelyveld contends, to a renewed experiment with his vow of celibacy. (This experiment took the form of his sharing a bed with his grand-niece Manu, much to the consternation of some of his devoted followers.) By “any secular this-worldly accounting,” Gandhi’s four months in Noakhali did not yield any political or social gain. He could not avert partition. Yet Lelyveld is right in

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observing that in a more intangible way, the Mahatma's final stand remains to this day a source of inspiration—as was brought home to Lelyveld during a visit to Bangladesh in 2008. In Dhaka and Noakhali, Lelyveld found people who remembered the Mahatma with reverence.

Gandhi's final fast was *not* directed against the British raj; rather, it was de-

signed to pressure the government of independent India to be less mean-spirited in sharing assets with Pakistan, and to treat its own Muslim citizens with dignity and honor. The Mahatma had long had a premonition that he would be killed by an assassin's bullet. When that moment finally came, it was a Hindu extremist who pulled the trigger, believing Gandhi to be

pro-Muslim. The "great soul" fell with the name of the god-king Ram on his lips. ▽

Sugata Bose is Gardiner professor of history. His books include A Hundred Horizons: The Indian Ocean in the Age of Global Empire and the new His Majesty's Opponent: Subhas Chandra Bose and India's Struggle against Empire, a study of his great-uncle.

Poetic Paschen

The Chicago poet has spread the good wordings via book, CD—and subway.

POET ELISE PASCHEN '81 certainly grew up in an artistic home. Her mother, Maria Tallchief, was the first American prima ballerina: from 1947 to 1960 the beautiful daughter of an Osage Indian father and a Scots-Irish mother was the star of the New York City Ballet. Tallchief and principal choreographer George Balanchine were married from 1946 to 1952, but Paschen is the only child of Tallchief and her second husband, Chicago contractor Henry "Buzz" Paschen. As a girl, Paschen did try ballet, briefly, but "knew at a young age that I wanted to be a writer," she says. She recalls reciting Blake's "The Tiger" for her mother at the age of eight. "I lived in my imagination," she says, "and loved writing poems, short stories, plays."

As author of the collections *Infidelities* (1996) and *Bestiary* (2009), Paschen has evoked poignant moments, feelings, and ideas in lines crafted with lapidary care, working in traditional meters and forms and often using rhyme. Among poets she

admires is Richard Wilbur, A.M. '47, JF '50 (see "Poetic Patriarch," November-December 2008, page 36); he returns the regard, writing that Paschen's poems "draw upon a dream life which can deeply tincture the waking world." He observed of "Oklahoma Home"—a quiet, haunting verse that draws on the poet's Osage ancestry—that it "magically and movingly enters the consciousness of another person in another time and place."

Paschen also helped bring the poetic art to millions of listeners and readers through her work as executive director of the New York-based Poetry Society of America (PSA) from 1988 until 2001. In

1991 she secured an international grant from the National Endowment for the Arts to send two poets, both Native American women, to England on a reading tour, and went with them. While traveling by Tube in London, Paschen looked up to see a seventeenth-century sonnet by Michael Drayton—"Since there's no help, come let us kiss and part"—displayed in the car, and imagined something similar in New York City subways and buses. She dismissed the idea as unrealistic, but several months after her return to New York, got a call from New York City Transit: its president had been traveling in London, seen the Poems on the Underground displays, and wondered

This Poetry in Motion poster offers a Chicago-specific version of Paschen's poem "Taxi."



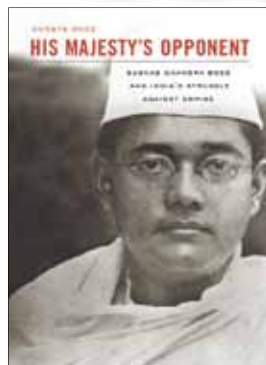
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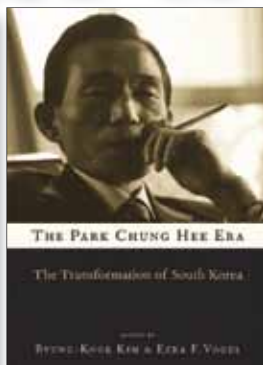
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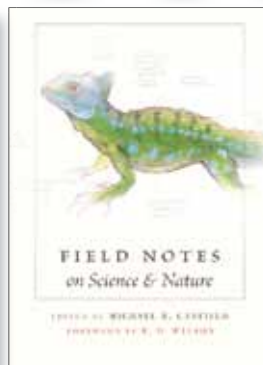
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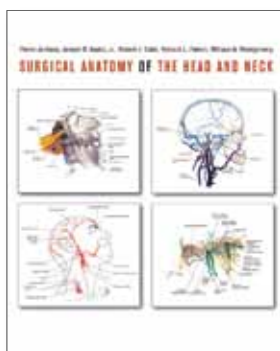
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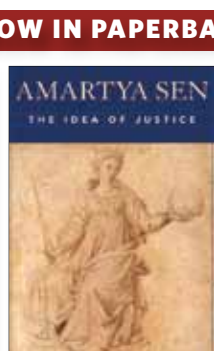


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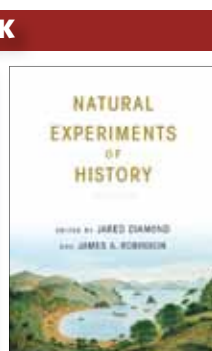


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MONTAGE

if the PSA might help start an analogous initiative. Poetry in Motion, launched in New York in 1992, went national in 1996, spreading to more than 20 cities. By 2001, Paschen says, “We were reaching more than 13 million people a day with poetry in subways and buses across the country.”

When she ran the PSA, Paschen’s ambition was “to put poetry at the crossroads of American life, to make poetry visible, to make poetry accessible.” Since then, she has edited a series of print anthologies: *Poetry Speaks*, *Poetry Speaks to Children*, and the most recent, *Poetry Speaks Who I Am*; all three include CDs of poets reading

“We reached more
 than 13 million people
 a day with poetry.”

their works, as well. The first two made the *New York Times* bestseller list, “which is unheard-of for poetry,” she says, and each sold more than 100,000 copies. Since 1999, she has continued her poetry-fostering mission by teaching in the Writing Program at the School of the Art Institute of Chicago.

Paschen was fortunate in her mentors. At Harvard she studied with Seamus Heaney and Robert Fitzgerald, and was poetry editor of the *Harvard Advocate*. “You should go to Houghton [Library] and look up Yeats’s manuscripts,” Heaney told Paschen at one point. She did. “I discovered how extensively Yeats revised his work,” she recalls. “At the time, as a sophomore, I would write a poem and I thought I was finished with it—that was it! Seamus very gently nudged me to realize that I had to work on my poem and craft it. That moment influenced the rest of my life as a writer—I revise copiously. But it also awakened in me a passion for William Butler Yeats. I went to Oxford after Harvard and did an M.Phil. degree in twentieth-century literature and wrote my D.Phil. dissertation on Yeats’s revisions.” With Fitzgerald, she studied versification, which she compares to a pianist practicing scales. “Everything I write is in some form, or meter, or rhythm, like iambic tetrameter,” she says. “I’m now experimenting with prose poems, but it is challenging; I enjoy writing in a set form because it allows me to work in a confined

Off the Shelf

Recent books with Harvard connections

Impressionist Children: Childhood, Family, and Modern Identity in French Art, by Greg M. Thomas, Ph.D. '95 (Yale, \$65). Analyzing works iconic and otherwise from afar (he is chair of fine arts at the University of Hong Kong), the author decodes art to “illuminate adults’ imaginings” about the little ones’ lives.

Justice for Hedgehogs, by Ronald Dworkin '53, LL.B. '57, LL.D. '09 (Harvard, \$35). The legal and moral philosopher (of NYU and University College London) delivers perhaps his most imposing book: a wide contemplation of value and skepticism, in which he broaches basic, hard issues: “It is always appropriate to ask why morality requires what we say it does, and never appropriate to say it just does.”

It Happened on the Way to War: A Marine’s Path to Peace, by Rye Barcott, M.P.A.-M.B.A. '09 (Bloomsbury, \$26). From founding a nongovernmental organization in the Kibera slum of Nairobi to serving as a marine intelligence officer in Iraq and elsewhere, the author vividly describes a young life bridging radically different kinds of service.

Sex and the River Styx, by Edward Hoagland '54 (Chelsea Green, \$27.50; \$17.95 paper). This tenth collection of essays (and that’s but *half* his output) finds the author again exploring subjects from his interior state of mind to the world’s wild places and people, from a more aged perspective: “There’s a flutter to society now, a tremulousness,” one piece begins.

Agewise: Fighting the New Ageism in America, by Margaret Morganroth Gullette '62, Ph.D. '75, RI '87 (Chicago, \$29). A full-throated analysis of and attack on a pernicious new “ism.” Sample chapter title: “Hormone Nostalgia.”

Changing Planet, Changing Health, by Paul R. Epstein, associate director, Center for Health and Global Environ-

ment, and Dan Ferber (California, \$29.95). The bad news about the effects of climate change on water supply; favorable habitats for disease-bearing ticks; and why warmer oceans promote cholera.

With ideas for better outcomes.

Give Smart, by Thomas J. Tierney, M.B.A. '80, and Joel L. Fleishman (PublicAffairs, \$23.99). The authors—a Bain leader and then founder of Bridgespan Group, and a Duke scholar of philanthropy, respectively—provide a primer on “philanthropy that gets results.”

Confederate Minds, by Michael T. Bernath, Ph.D. '05 (North Carolina, \$39.95). In this Civil War sesquicentennial year, the University of Miami historian delivers a sweeping overview of the neglected intellectual and cultural currents accompanying the Southern struggle for political and national independence.

Heat & Light: Advice for the Next Generation of Journalists, by Mike Wallace and Beth Knobel, M.P.P. '87, Ph.D. '92 (Three Rivers/Crown, \$14 paper). A veteran journalist and a Fordham University assistant professor of communication and media studies merit some attention—if only for their hopeful subtitle alone.

The Elusive West and the Contest for Empire, 1713-1763, by Paul W. Mapp, Ph.D. '01 (North Carolina, \$49.95). As European powers jostled for primacy across the Atlantic Ocean, they knew little about the western two-thirds of North America. Mapp, of the College of William and Mary, pioneers a diplomatic and continental history that extends far beyond the Eastern seaboard.

All Is Forgotten, Nothing Is Lost, by Lan Samantha Chang, M.P.A. '91, RI '01 (Norton, \$23.95). In her third book of fiction, the director of the Iowa Writers’ Workshop creates a novel about a writing school, a poet-professor, and her students.

Truth, Beauty, and Goodness Reframed, by Howard Gardner, Hobbs professor of cognition and education (Basic, \$25.99). Daring to invoke the classical virtues anew, the author continues his quest to influence twenty-first-century education to nurture values and ethics as well as information-age pizzazz.

In the Valley of the Shadow, by James L. Kugel, Starr professor of Hebrew literature emeritus (Free Press, \$26). The author of *How to Read the Bible* and teacher of “The Bible and Its Interpreters” (see “Final Architect,” January-February 2004, page 36) uses his cancer diagnosis to explore the wellsprings of religious belief.

Triumph of the City, by Edward Glaeser, Glimp professor of economics (Penguin, \$29.95). A zesty explanation of why, “On a planet with vast amounts of space...we choose cities.” The author celebrates the great urban invention as



Mumbai, India's commercial hub, exemplifies urban life—even as it juxtaposes a luxury golf course and slums.

the center of innovation, of environmental benefit, and of cultural gain.

In the Shadow of Slavery, by Judith A. Carney and Richard N. Rosomoff '78, G '79 (California, \$50; \$18.95 paper). The African slaves worked the cotton and tobacco fields, but planted crops they brought with them: millet, sorghum, coffee, okra, and watermelon, as freshly explained in this journey through “Africa’s botanical legacy,” winner of the Frederick Douglass Book Prize.

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MONTAGE

space—knowing where I have to break my line."

Those lines tend to be few in number. Paschen's poems are sharp arrows piercing some target in her personal landscape. *Infidelities* explores both the pleasures and hazards of eros, while the poems in *Bestiary* take animal life as both their ruling metaphor and, quite often, subject. In traditional forms like the sonnet, villanelle, and even the ancient Eastern ghazal, she plumbs primal themes: birth, death, sex, parenthood, aging. At times the poet's Osage heritage shines through the words, and one finds in her language the kind of hard-won grace her mother achieved in dance.

~CRAIG LAMBERT



Visit harvardmag.com/extras to see more images from *Poetry in Motion* and to hear Paschen read some of her poems.

Chapter & Verse

Correspondence on
not-so-famous lost words

More queries from the archive:

"The dawgondist skaw/that a man ever saw/I saw on Vesuvius side/as I wandered one day/in the middle of May...." (From a poem, possibly by the American artist and writer Peter Newell, describing the 1872 eruption of Mount Vesuvius.)

"What was Karl Marx but Macaulay with his heels in the air?"

"What the rugged soil denies/The harvest of the mind supplies." (Attributed to "a sweet New England poet.")

"Reflecting one night on the pains and toils...encountered by those in search of what this world calls Pleasure...I had resolved to quit my native land forever...and in some remote country...to establish a new character." (A passage copied into a commonplace book kept by a merchant seaman from 1849 to 1852.)

Send inquiries and answers to "Chapter and Verse," *Harvard Magazine*, 7 Ware Street, Cambridge 02138, or via e-mail to chapterandverse@harvardmag.com.

FATHOMING THE STUDY OF METABOLITES DOES AN END RUN AROUND GENOMICS TO PROVIDE TELLING CLUES TO YOUR FUTURE HEALTH METABOLISM

A THIMBLEFUL OF YOUR BLOOD. To Robert Gerszten, that's like a window on your well-being. In some cases, it may even let him see into the future of your health. Gerszten and his colleague Greg Lewis work at the leading edge of an emerging new field—metabolomics—that promises powerful insights into the mechanisms of human health and disease. They study blood metabolites: circulating small molecules, such as amino acids, lipids (fats), nucleotides, and carbohydrates, that are involved in metabolism. Metabolites not only reveal much about your current health—how well you burn fats or how deep you can dig when exerting yourself physically—but can provide hints of what's to come. Research on the major metabolic killers—diabetes, kidney disease, and heart disease—reveals critical signs of systemic dysfunction at the molecular level years before clinical symptoms appear.

In their efforts to understand the human body and cure disease, scientists thought knowing all the 20,000 to 25,000 genes in the genome would lead to answers. But the genome encodes—as a rough approximation—more than a *million* proteins, each with a special function. Even more frustrating, changes to those proteins (from bonding with lipids, carbohydrates, and so on) lead to more than *10 million* functionally distinct modified proteins. Compared to unraveling the effects and associations with illness of these numerous entities, metabolomics has a decisive edge: there are only, at current best guess, about 3,000 to 6,000 metabolites of interest.

Metabolomics, so named because it describes the metabolic products of the human genome, has existed—at least as a modern scientific concept—since Linus Pauling proposed in the 1950s that one could study breath condensates in order to capture human physiology. But the field has taken off only recently, explains Lewis, a cardiologist at Massachusetts General Hospital (MGH) and an assistant professor of medicine at Harvard Medical School (HMS). “If you look back to 2002,” he says, “there were very few cited papers in the world literature, and many of those [looked] only at the metabolites contained in a single cell. Even as recently as 2005,

there were very few human studies.” But a steep increase in the number of published papers demonstrates how the field has grown exponentially since. Improvements in technology and lessons from genomics, proteomics, and transcriptomics—other broad, data-intensive disciplines of biological science and engineering—have fueled the pace of discovery.

Unlike genomic and proteomic strategies for probing human disease, metabolomics may make an almost immediate clinical impact by allowing doctors to deliver personalized medicine, based on metabolic profiling of patients. In an astonishing breakthrough published in *Nature Medicine* in March, for example (see “The



BY JONATHAN SHAW



Robert Gerszten

man disease.” “Say you go to the doctor and have a blood test,” he continues. “What do we capture in terms of metabolism? Not a ton”: cholesterol, triglycerides, and glucose. He points to a densely lined, heavily annotated chart on his computer that looks as if someone has been twisting strands of spaghetti into patterns with a fork (see illustration). “That’s every known metabolic pathway,” he explains. “Ideally, *that* is what we would be tapping if we had the tools.”

THE EXERCISE EFFECT

LAST YEAR, Gerszten and Lewis ran an experiment to examine the effects of just 10 minutes of exercise on about 200 common metabolites. The pair had asked a group of patients that included healthy people—the “worried well”—to run for approximately 10 minutes on a treadmill. Blood samples were taken before exercise, at peak exercise as the test ended, and again an hour later.

Both men knew that exercise confers many health benefits, and Lewis, a former Olympic rower, has a background in exercise physiology—the study of the physical changes that take place in the body in response to exercise. Fit individuals, for example, have greater blood volume, more efficient hearts, and a better ability to extract oxygen from the blood for the use of working muscles; even their mitochondria (the energy-producing organelles within cells) are more abundant. Finally, after adjusting for age, peak exercise capacity is the most powerful known predictor of the risk of death among healthy people and those with cardiovascular disease. Even among those with cardiovascular disease, Gerszten notes, those

KEGG

AS THE MOST PROXIMAL REPORTERS, METABOLITES CAPTURE WHAT IS ACTUALLY HAPPENING IN THE BODY.

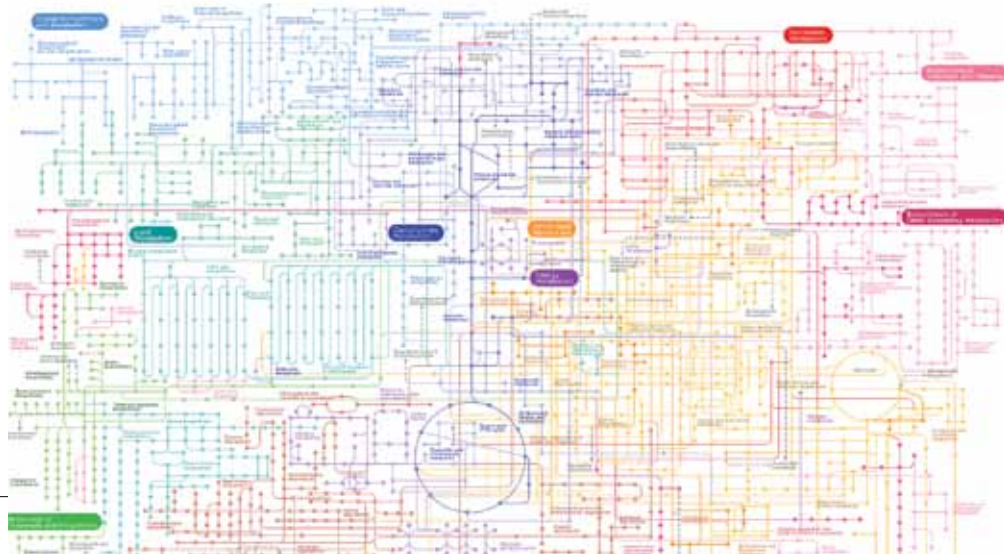
Fingerprints of Diabetes....,” page 29), Gerszten and colleagues describe markers that identify people likely to develop diabetes more than a *decade* before any sign of the disease itself appears.

Gerszten, the director of clinical and translational medicine in MGH’s cardiology division and an associate professor of medicine, explains: “A gene makes transcripts, transcripts make proteins, and proteins (or enzymes) make metabolites.” Many steps separate a gene from its ultimate expression, perhaps as a disease, meaning that someone with a gene variant linked to heart disease may never become sick. But because metabolites are “downstream of genetic variation, transcriptional changes, and post-translational modifications of proteins,” Gerszten says, they capture what is actually happening in the body: “They are the most proximal reporters of any disease status or phenotype.”

They also capture the environment. “If you eat some noxious metabolite in your Big Mac,” your blood will reflect that, he says. Genes won’t.

For these reasons, Gerszten believes the metabolome is “equally, if not more, important than the human genome” for capturing “the fingerprint of hu-

A map of the known metabolic pathways in the human body shows in dizzying complexity the chemical reactions that occur within cells to form metabolites.



THE FINGERPRINTS OF DIABETES...AND OTHER DISEASES

IF EXERCISE is such a bellwether of health, and one's metabolic profile reflects fitness and well-being, might the opposite also be true? Could there be metabolic signatures associated with human disease? To find out, Robert Gerszten of Harvard Medical School (HMS) teamed with fellow associate professor of medicine Thomas J. Wang, a cardiologist at Massachusetts General Hospital affiliated with the Framingham Heart Study, to see whether metabolic signatures might presage the onset of disease. They began with diabetes, the most metabolic of diseases, in which the body loses its ability to control blood sugar.

"The Framingham study, the seminal study that identified risk factors associated with heart disease, was begun in 1948," Gerszten explains. "Researchers followed these people epidemiologically: participants would come religiously every couple of years, give blood, and be subjected to a number of different tests." Such longitudinal studies are considered the gold standard in research because they follow a large population over a long period of time and eliminate "selection bias": in this case, the participants were chosen solely on the basis of geography (they all lived in Framingham, Massachusetts), not because of preexisting health conditions, race, gender, or some other factor. In 1948, none of the participants knew whether they would develop a disease.

In 1972, more than 3,000 of the original participants' offspring were also enrolled in the study. "Over time, the phenotyping or characterization of these people got more and more sophisticated," Gerszten says. Researchers had begun to do "CT scans, exercise tests, and so on. What Tommy [Wang] pointed out to me was that in 1994 everyone underwent a stress test for diabetes."

The OGTT (oral glucose tolerance test) delivers a high dose of sugar in the form of glucose and then measures the body's ability to respond. Although glucose is "one of the last things to go wrong" during the onset of the disease, the test is still the best way to diagnose prediabetes and diabetes. Using blood samples taken in 1994 from 200 people who later developed diabetes, and a matched group who shared all the same risk factors but did *not* develop the disease, Gerszten and Wang tried to detect differences in the metabolic responses of the two groups to the oral glucose challenge years *before* any of the diabetic group became ill. They hoped that one or more of the amino acids in the blood samples would reveal a difference that might identify those individuals who were going to get diabetes a decade or more later.

"We matched [the prediabetic subjects] to controls chosen on the basis of age, body mass index, fasting glucose, and whether or not they had hypertension," says Gerszten. "This was by design. We didn't want to compare fat people to thin people, because that would not add information. We raised the

bar as high as you could raise it" by excluding thin, fit people outright from the study population. "People who develop diabetes are also likely to have a higher fasting glucose level but we wanted to make glucose equal" to see if anything else was affecting the response.

"We were struck by what we saw," he reports. "There were some unbelievably significant differences at baseline in the blood." Six amino acids were higher in the people who became diabetics than in the controls. Isoleucine, leucine, and valine, as well as phenylalanine, tyrosine, and tryptophan, were elevated. "It turns out that these are the most greasy, hydrophobic amino acids," Gerszten says. Individuals in the top quartile—those in whom these amino acids were highest—were more than 400 percent more likely to develop diabetes. In contrast, the common genetic variants associated with diabetes risk represent just a 20 percent increase in the chance of getting the disease, he explains. "This is an order of magnitude more."

"These changes [later replicated in a population from Malmö, Sweden] are occurring a dozen years before people develop diabetes, says Gerszten, who justifiably refers to the findings as the highlight of their biomarker research so far. "Many people have realized the importance of metabolism. But to use it on an equal footing with genetics? Not so many people think so yet." He and his colleagues are now trying to duplicate the diabetes research using lipids (circulating fats) rather than amino acids. And they are working to find markers that will identify individuals at risk of developing heart and kidney disease in the future.

This is important, Gerszten notes, because if the results prove generalizable, physicians will know where to intervene. For example, a study by professor of medicine David M. Nathan demonstrated that either intensive lifestyle interventions (including diet and exercise) or use of the drug metformin can prevent diabetes. "Now," says Gerszten, "you could identify and focus on those populations most at risk, and get more bang for your buck."

Gerszten and his colleagues believe that they can now identify at least one representative metabolite from every known metabolic pathway in humans. But the library of metabolites and metabolic signatures of disease that he and his colleagues are assembling is not what intrigues him most. Each metabolite is a stepping stone in a pathway that leads to health or disease, and Gerszten is less interested in the biomarkers themselves than in finding pathways leading to new insights that might cure diseases. "We still don't really have a clue, for example, *why* diabetes leads to heart disease," he points out. "These amino acids are altering some fundamental metabolic response in cells and we just don't know what it is—yet."

individuals who nevertheless can exercise intensely on a treadmill have the same risk of sudden death as "the guy who has *never* had a diagnosis of heart disease." The challenge is to understand *why* exercise counteracts disease.

Despite the brevity of their treadmill challenge, Gerszten and Lewis discovered that profound changes took place in the biochemical profiles of their patients' blood. Glycerol, a marker of

the body's ability to burn fat, was up. Glucose-6-phosphate, an indicator of the use of energy stored as glycogen in the liver and muscles, increased. So did pantothenate, a modulator of fatty acid oxidation, and allantoin, a marker of oxidative stress. The human body turns on the systems of energy utilization and the mechanisms for dealing with the potentially harmful by-products of oxidative processes (free radicals) very quickly.



A technician scans a cardiac patient's heart before and after exercise to detect physical changes. Similarly, measuring metabolites in the blood reveals metabolic changes that offer a snapshot of both current and future health status.

The study not only validated the usefulness of circulating metabolites as a snapshot of metabolism, it demonstrated that metabolic changes can be persistent. “Take-away

message number one,” says Gerszten, “is that the blood is a beautiful place to sample.” That had not been entirely obvious, he says, because the by-products of many metabolic processes were thought to be retained within cells. But with “exquisitely sensitive new techniques” being pioneered at the Broad Institute of MIT and Harvard, where Gerszten helped launch the metabolomics program, “we can now pick them up outside cells.”

Take-away number two is that “an hour *after* exercise, more things had changed than at peak exercise”—as though exercise had initiated a cascade of signals throughout the body. After 10 minutes of exercise, heart rate and blood pressure return to normal in five or 10 minutes, but the metabolic changes persist. The study supports epidemiological claims that three spells of exercise a day, each of as little as eight to 10 minutes’ duration, are enough to confer health benefits. “These are the quintessential metabolic data,” Gerszten says, “suggesting that even short bouts have unanticipated prolonged effects.”

But the study also raised more

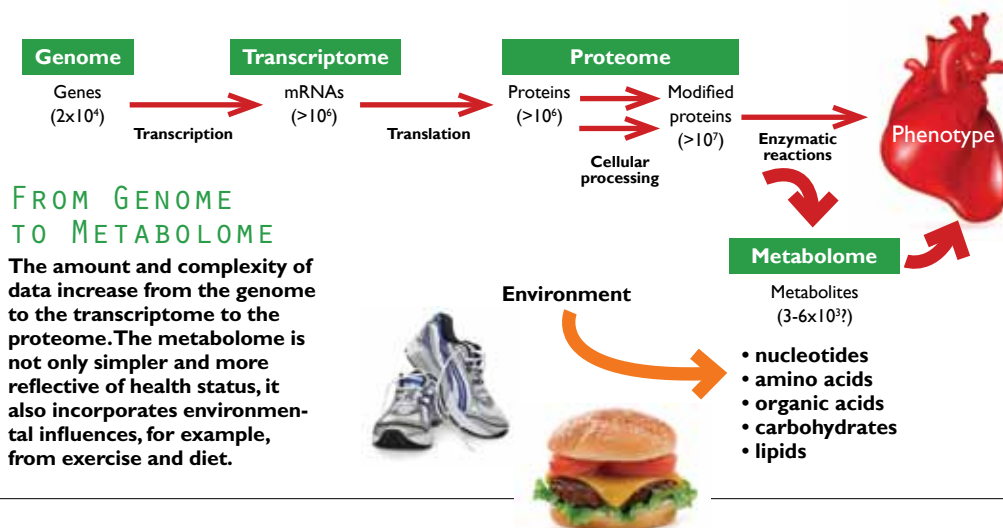
questions than it answered. Fit participants, defined as being in the upper half of the sample, burned fat twice as well as the less fit. “There was more than a 100 percent increase in glycerol in more fit individuals,” reports Lewis, “compared to less than a 50 percent increase in the less fit.” When they extended the study to include runners in the Boston Marathon, they discovered that participants’ post-race lipolysis—the rate their bodies burned fat—was *11 times* the rate of the least fit group. The marathoners had run for three and a half hours, but Gerszten believes that even if they had run only for 10 minutes, they would still have been in the highest quartile.

The researchers also noticed that levels of niacinamide, a compound that can help prevent or alleviate the symptoms of diabetes, rose most in the leanest individuals. “Now all of sudden we have these markers that distinguish what is happening in the more fit versus the less fit,” says Gerszten. “The million-dollar question is: Is that because of training, genetics, or

diet? Those answers are what we are working toward.”

What they do know is that the metabolites that increase with exercise are not just *markers* of health—they actually *promote* it. They found that sprinkling muscle-cell specimens in a petri dish with a cocktail of the six metabolites that had multiplied the most activated a gene program involved in energy balance. They are now testing the dietary effect of this combination by feeding metabolites to laboratory mice.

They have also devised a human experiment to discover where the metabolites are created and how they are distributed during exercise. All organs and tissues in the body generate metabolites, but “our working hypothesis is that exercising limbs are sending global signals to the body to do certain things,” Gerszten says. “We now have to prove that.” As a first test of this theory, the researchers catheterized 10 individuals pedaling a stationary bike, in order to sample blood simultaneously from two different arteries: one tied to the general circulation and one more closely tied to the working muscles in the legs. This allowed them to compare the concentration of metabolites from the two locations and to discover that they are enriched in blood from the legs, probably generated during muscle contractions.



Their findings in the exercise test are “just an initial description,” Gerszten emphasizes. They have no idea why these metabolites cause beneficial changes, or why they work only in combination, or even how long the effects of these metabolic changes last.

Further research will answer these questions, but Lewis already sees the potential for using metabolic signatures to help his heart patients track their health progress as they follow a prescribed regimen of weekly physical activity. He has embarked on studies of the effects of exercise training among a broad spectrum of individuals, including employees of the hospital, seeking to define normal metabolic signatures by age, sex, ethnicity, and fitness level. “It may be that people have different responses to training,” he explains, and that might affect their metabolic profiles differently. Some people quickly lose weight when they exercise, for example, while others cannot.

But even though metabolic signatures may vary, Lewis suspects that the chronically overweight can still become fit, and that detectable metabolic changes occur to some extent in everyone. One metric commonly used to measure whether individuals are benefiting from exercise, he points out, is whether they lose weight—and “some people get discouraged if their weight doesn’t change after six to eight weeks of a training program, and they quit. If you could show people tangible evidence—‘These six metabolites that predict the future onset of cardiovascular disease changed 35 percent by virtue of doing this exercise’—that is potentially powerful” as a motivational tool.

A PILL THAT COULD SUBSTITUTE FOR EXERCISE? “HOW COULD YOU?!” SOME PEOPLE ASK.

Manipulating levels of metabolites to improve health—to use them as drugs—may also be possible, Lewis says. “These are naturally occurring small molecules already in your body, not potentially caustic drugs that may have side effects we will find out about only 20 years after people are exposed to them.” In fact, he has a bottle of one particular metabolite, glutamine, on a windowsill in his office. A white powder that can be purchased at any health-food store, it is metabolically active if ingested, and has the potential to regulate glucose tolerance. “Some people,” he says, “have this angry response to the idea of creating a pill that could substitute for exercise: ‘How could you?!’ they ask. Nobody is interested in dissuading people from exercise. But if we can have a better understanding of what is happening *in response to* exercise, then we can truly embark on a pathway of individualized programs that will optimize the health status of each patient. I think it is really hard to argue with the merits of doing that, particularly for people with diseases that preclude them from exercising.”

THE FUTURE OF A FIELD

GERSZTEN AND LEWIS’S exercise research is a “perturbational study,” in which participants serve as their own controls. They



Gregory Lewis

have conducted such studies before and after weight loss, before and after the administration of drugs (to track drug levels and observe the metabolic changes they cause), and even before and after planned heart attacks (used to reduce the size of enlarged hearts), in which they identified metabolic markers associated with the death of cardiac muscle. Ultimately, they hope to develop metabolic profiles for patients that will allow them to identify physiological factors that limit performance. Is it the skeletal muscles? The heart? The lungs? Knowing the metabolites involved might lead to interventions that range from something as simple as putting supplements in a drink (Gerszten and Lewis are exploring the potential of so-called nutraceuticals, and have been in touch with a sports drink manufacturer) to new ways of investigating pathways involved in disease, to gain better understanding and, eventually, cures. And

because some dietary metabolites appear to be harmful, Gerszten is feeding them to mice to learn whether they lead to atherosclerosis and diabetes.

Researchers today recognize that the relative contributions of genetics, behavior, and environment to maintaining health, on the one hand, and triggering metabolic diseases (even including some cancers), on the other—remain unclear. “Part of me wants to believe that there is some precise molecular pathway and an enzyme that we are going to identify and make a drug for,” Gerszten admits. “But then the other side of me slaps my head and says, ‘Wait a minute. Let’s hope it is *not* a molecular pathway, but something where we can intervene in a much easier way.’” A silver bullet would be nice, he agrees, but most likely, the metabolic disorders will turn out to be complex. “Watching what you eat can help a hell of a lot,” he says, “but for some people, there will be a genetic component as well.” Metabolomics, he predicts, will help to provide those answers. ▢



Visit harvardmag.com/ extras for video clips with Robert Gerszten and Gregory Lewis.

Jonathan Shaw '89 is managing editor of this magazine.

Leverett Gleason

Brief life of a comics impresario: 1898-1971

by BRETT DAKIN

JULY 1941. In his bunker, the Führer and his henchmen finalize schemes for world domination. Hitler peers into a crystal ball. “Blitzkrieg!” he proclaims. London is about to be leveled. Hope is lost. *But wait*—who is that, crouching on the other side of the wall? It’s Daredevil, infiltrating the Nazis’ inner sanctum to learn their plans. “I’ve a message for the Fuehrer!” he cries, bursting through the door and landing his first punch. Then, leaving Hitler and his cronies to nurse their wounds, the superhero flies off to warn Churchill. All in a day’s work.

Daredevil Battles Hitler, a bold call for U.S. intervention in Europe, was a rare comic book with an overtly political message. The man responsible was Leverett Stone Gleason ’20, a Harvard dropout and one of this country’s first, and most controversial, comic-book publishers. Most of his peers were hardscrabble New Yorkers, many of them Jewish; he had grown up in a comfortable Protestant home near Boston, attending Andover before entering Harvard. When the United States declared war on Germany in 1917, he dropped out to fight in France; when he came home, he tried magazine sales before taking a job in New York with Eastern Color Printing, where the modern comic book was born.

Gleason saw money in comics, and in 1939 started his own firm, releasing *Daredevil* and then *Crime Does Not Pay*, which chronicled the real-life adventures of convicted criminals. *Crime Does Not Pay* was soon beating out *Captain Marvel* and *Superman*, attracting readers wary of the aw-shucks wholesomeness of men in tights.

Daredevil Battles Hitler reflected Gleason’s politics. Arriving in New York in the depths of the Depression, he was stunned by the Hoovervilles in Central Park. And he became convinced that his country had an obligation to stem the rise of fascism. New Deal support for New York’s artists created a powerful anti-fascist movement that Gleason relished. He published screeds like *Sabotage: The Secret War Against America*, about domestic fascism, and *The Incredible Tito! Man of the Hour*. His business approach reflected his convictions. Although comics artists generally were paid poorly and had little control over their content, Gleason established a profit-sharing arrangement with his editorial team, giving them partnership status and substantial autonomy.

After Pearl Harbor, Gleason re-enlisted, serving stateside for two years. But postwar, as fears of domestic subversion grew, his activism and his business came under fire. By December 1945, the *New York World-Telegram* had labeled him a “pro-Communist fellow-traveler.” The House Un-American Activities Committee named a group he supported, formed to aid Spanish Civil War refugees, a “communist-front organization.” For refusing to name names, Gleason and fellow board members were convicted of contempt

of Congress in 1947. In 1950, he felt the need to declare “I am not a Communist” in his own publications. “We are in a period of a reactionary swing in this country...which holds many of the elements of potential fascism,” he wrote. “There must be no denial of civil liberties to anyone....Any drive against the rights of one is a threat to the rights of all.” Opponents responded with voting records showing that he had registered as a Communist in the 1930s.

Meanwhile a boom in comics’ popularity—and a perceived spike in juvenile delinquency—had raised concerns about their effect on children. Gleason, as president of the Association of Comics Magazines Publishers, came to the defense of the industry. In the *New York Times*, he decried “the insidious effort in some quarters to set up an intellectual dictatorship over the reading habits of the American people....Millions of American adults prefer [Westerns], for example, to the finest production of *Macbeth*. This is their privilege.” Gleason asserted that many comics readers were adults, and in *Today’s Health* stated, “Comics...can actually help mold their young readers into happier, more intelligent adults.” Then came the rise of horror comics and publication of psychiatrist Fredric Wertham’s 1954 bestseller, *Seduction of the Innocent*. At U.S. Senate hearings on comics that year, Wertham was the star witness, and the only publisher called to testify was William Gaines of Entertaining Comics, purveyor of titles like *Tales from the Crypt*, *Vault of Horror*, and *Haunt of Fears*. Gleason pleaded in vain for a chance to testify and tore into Wertham as a “Freudian fanatic...creating utterly false fears among parents.” Although he persuaded his fellow publishers not to ban the word “crime” from comics outright, the industry’s revised self-censorship code accepted Wertham’s view that comics were strictly for kids. It outlawed stories detailing criminal planning, dooming *Crime Does Not Pay*. By late 1955, the offices of Lev Gleason Publications were closed.

So abrupt was his departure, some speculated he’d fled to Alaska or Cuba. In fact, he became a small-time real-estate agent, selling patriotic ornaments to make ends meet. He remained an activist. “My greatest satisfactions have been doing what I can politically to make ours a better country and the world a little more peaceful,” he wrote in his fiftieth-reunion report. “I have been strongly opposed to the Vietnam War since the outset. And I do hope for better things. Probably because of the efforts of today’s youth, especially the militant ones, who have more guts than we had.”

Brett Dakin, J.D. ’03, author of *Another Quiet American: Stories of Life in Laos* (Asia Books), is writing a biography of Lev Gleason, his great-uncle.



Visit harvardmag.com/ extras to see more examples from Lev Gleason comic books.



Lev Gleason and some of his publications.
The photograph probably dates from the late 1940s.

World's Best Blogger?

Andrew Sullivan's views are predictable in only one way: always stimulating.



by Jesse Kornbluth

Andrew Sullivan
in his "blog cave"

IT WAS NOON IN WASHINGTON, D.C., when the shooting began in Tucson. Across the country, reporters and media executives rushed to cover the story of the gunman, the Congresswoman he shot at close range, and the 14 other victims. But the news couldn't reach one of the Internet's most important writers. For Andrew Sullivan, M.P.A. '86, Ph.D. '90, the editor of a blog called TheDish.com, the weekend is a time for rest, and having teed up on Friday afternoon a half-dozen evergreen posts for Saturday, he had turned off his communication devices and was sleeping in.

Sullivan had been lightly ill that week, so he slept unusually late, until almost two in the afternoon. Before he was quite ready to deal with the world, he checked his mailbox—and woke up fast. Along with the news of the shooting was an urgent question from readers: *Andrew, where are you?*

Sullivan winced. He e-mailed his four young assistants: "We have to go cable"—that is, pump out blog posts 24/7. Then he climbed four unpainted wooden steps to what anyone else would call a large windowed closet and he calls "the blog cave." He pulled a velvet curtain shut to seal himself off from his husband and their beagles, settled into an armchair with his laptop, and began a siege of blogging that would last six days.

Sullivan and his team had worked like this before. During the 2010 protests in Iran, they had scoured Facebook messages, Twitter bleats, Al Jazeera dispatches, and Iranian blog posts. The eclectic charm of the Dish (formerly TheDailyDish)—poems, philosophical and religious speculation, photographs from the windows of readers, the latest Sarah Palin outrage, and videos by The Pet Shop Boys—disappeared. The site became all Iran, all the time, and the Dish quickly became the Web's go-to site for news and context. In the process, the site's traffic spiked.

The Dish's coverage of the Tucson shootings paralleled its Iran coverage. While other bloggers ascribed blame, Sullivan filtered new reports, asked important questions, grieved for the victims—and avoided partisan speculation. Once again, his audience grew.

But this round of blogging was different. Andrew Sullivan is a lifelong asthma sufferer. He has sleep apnea, and at night wears a mask connected to a machine that regulates his breathing. And since 1993, he has been HIV-positive. Although Sullivan isn't the only writer with HIV to have survived for almost two decades, no other HIV-positive writer publishes anything like 300 blog posts a week, year after year; he needs to monitor his health.

Shortly after the week of Tucson, the Internet's Iron Man faltered—exhaustion and an unusually cold winter created so much bronchial distress that his doctor ordered him to take to his bed. During his unprecedented two-week silence, governments toppled in the Middle East. While his assistants did great work, friends teased Sullivan: "Andrew, you're missing an entire revolution."

When Sullivan returned, he had news of his own—he was leaving the *Atlantic* website, his home for the last four years, to join TheDailyBeast.com and *Newsweek* magazine, both edited by Tina Brown. In the traditional media paradigm, it's a promotion for a writer to move from the website of a highbrow monthly magazine like the *Atlantic* (circulation: 400,000) and the occasional article for that publication to America's second-largest weekly news magazine (circulation: 1.5 million) that has just become the

partner of a website with five million monthly readers. But when the writer in question has a blog that's more popular than the websites of many publications, it's clear that *Newsweek/Beast* got something equally important in this deal.

"The Dish has twice as many readers as the *New Republic* and more than *National Review*," Sullivan says. And on the *Atlantic* site, the Dish also ruled. Some days, according to Alexa.com, which measures site traffic on the Internet, the Daily Dish accounted for more than half of the visitors to TheAtlantic.com. In cold numbers: Andrew Sullivan—one blogger, with a small budget and a minimal staff—has presented Tina Brown with a gift of about 1.3 million Internet readers.

Blogging Brahmin

AMERICAN MEDIA HAVE THREE CASTES. At the top is "The Village," a term created by a progressive blogger who calls herself "Digby" to describe a rarefied league of highly paid bold-faced names—think David Brooks, Peggy Noonan, Howard Kurtz—who move easily between print columns and television punditry. In the middle is the working press, a stressed-out group of reporters and columnists employed by increasingly desperate newspapers and magazines; to their daily tasks has been added blogging on their publications' websites. At the bottom are bloggers.

Most of the Internet's 150 million blogs serve up highly personal dispatches, the equivalent of those year-end letters that arrive in Christmas cards. Very few of those bloggers post news and views as a primary activity—there's no money in it. So blogging as a professional journalistic activity really involves at most a few thousand independent writers.

These elite bloggers are serious and knowledgeable, but they are often described as the untouchables of American media—unemployed, unemployable pajama-clad slackers who live with their parents and tap out overwrought screeds on basement computers. That view is not the verdict of critics who have visited the sites of elite bloggers; it's a media god's throwaway line. (NBC News anchor Brian Williams, for example: "All of my life, developing credentials to cover my field of work, and now I'm up against a guy named Vinny in an efficiency apartment in the Bronx who hasn't left the efficiency apartment in two years.") Beyond a general disdain for the Internet, the reason is often personal—bloggers don't just write about politicians, they also attack the media. And because media potentates don't welcome criticism, they lash back.

Andrew Sullivan also moves easily from blogging and print journalism to TV, but his resemblance to the Villagers ends there. For one thing, his views are ever-changing and all over the map; a TV producer can't count on him to speak for any one constituency. For another, although he has a résumé that qualifies him as a media elitist, he has dramatically redefined his idea of success. At 47, his concerns are no longer those of the overachieving wonder boy he used to be.

Sullivan earned a first-class degree (equivalent to a *summa*) in modern history and modern languages at Oxford, where, in his second year, he was president of the Oxford Union, the debating body that claims to be "the most illustrious student society in the world." He won a Harkness Fellowship to the Kennedy School in 1984; back in London, he interned at the think tank of one of his idols, Margaret Thatcher. He returned to Harvard in

He had made a mistake—"the darkest political misjudgment of my life." Now he had to pay for it.

1989 to write his doctoral thesis, "Intimations Pursued: The Voice of Practice in the Conversation of Michael Oakeshott," which won the government department's Toppan Prize, for the best dissertation "upon a subject of Political Science." In 1991, when he was just 27, he was named editor of the *New Republic*; under his leadership, the magazine grew impressively in both circulation and advertising. He left the *New Republic* five years later, "at the tail end of a series of differences," says *New Republic* owner Martin Peretz, Ph.D. '66. Sullivan moved on to write books and become a contributing writer for the *New York Times Magazine* and a columnist for the *Sunday Times* (of London).

To see such precocity is to be mystified—why would a writer with such impeccable credentials cast his lot more with bloggers than with people of his own kind?

"He's Catholic and gay and an exile," says the writer and feminist historian Naomi Wolf. "That's all very helpful—his background forces him not to be confined in any single identity."

Sullivan is bald, bearded, and bespectacled; in photographs he has an intellectual's intensity. At the same time, he's quite adept in social settings, and has immense personal charm. Hendrik Hertzberg '65, IOP '85, who knew him in Cambridge and preceded him as editor of the *New Republic* before joining the *New Yorker*, recalls Sullivan as "a strikingly beautiful young man...who had to fend off the women with a cricket bat." David Frum, J.D. '87, a Harvard colleague who went on to become a speechwriter for George W. Bush, M.B.A. '75, describes Sullivan as a social powerhouse: "Over drinks, Andrew dazzled a table of teaching assistants with his knowledge of pop bands. We knew nothing, but it wouldn't have made a difference—we were spellbound."

The motivation behind Sullivan's accelerated trajectory and outsized personality is grittier. He may have seemed sophisticated in Cambridge, but he was raised in Sussex by parents who hadn't gone to college; their marriage was less than happy, and his mother bipolar. "I had to be independent quite early," he explains, "and I had to get out. The escape was my brain."

At 11, he commuted three hours a day to attend a school for gifted boys. His protection was his Roman Catholic faith. He'd been an altar boy; now he drew crosses in the margins of his books "to ward off evil" and, in art class, refused to draw anything unrelated to the Bible. His ambition could not have been more conventional—to become a Tory member of Parliament.

Sullivan was 23 when he acknowledged his homosexuality and jettisoned his virginity. Years later, when his byline started to matter, he went public. "Every day, you have to say who you are, or live in fear," he explains. "I thought, 'If I do this, I'll never get to be a Tory MP.' And I

said, 'Screw it.' I knew I wanted even more to be happy, have love and sex."

He had, by his account, a great deal of sex. In 1996, when he revealed he had contracted HIV, a friend asked whom he had unprotected sex with. In *Love Undetectable*, his 1998 book about "friendship, sex, and survival," Sullivan writes that he admitted it could have been anyone. His friend was incredulous: "Anyone? How many people did you sleep with, for God's sake?"

In the book, Sullivan held nothing back. "Too many. God knows. Too many for meaning and dignity to be given to every one; too many for love to be present at each; too many for sex to be very often more than a temporary release from debilitating fear and loneliness."

That is classic Sullivan: the unsparing candor, the over-sharing, the spiritual afterthought. Three years later, when he started to blog, that kind of writing would become his signature—and, for all its outsider status, the first really comfortable identity he'd known.

Neocon Renegade

WHEN SULLIVAN LAUNCHED a website in 2000, he thought of it as nothing more than an archive of his magazine articles. He knew nothing about technology—every time he wanted to add another article, he had to ask a friend for help. Sullivan is a prolific writer; for his friend, this routine quickly grew old. "Do it yourself," he advised.

Self-publishing was liberating. Under a "Daily Dish" headline, Sullivan started adding short posts. Readers sent suggestions. Soon he was updating his site several times a day; if a blogger is defined as a single writer who regularly posts news and commentary, Sullivan was among the first. And, from the beginning, he was popular; within a year, his request for contributions brought

in \$27,000.

The creation of a community was thrilling. So was the absence of an editor. But that freedom can be a trap for a writer who prides himself on writing from the heart as well as the intellect. Sullivan made what he has come to consider his first significant, sustained blunder after the attacks of September 11, when he compared antiwar dissenters and liberals to traitors: "the enemy within the West itself—a paralyzing, pseudo-clever, morally nihilist fifth column that will surely ramp up its hatred in the days and months ahead."

That was the start of a new Andrew Sullivan: a Brit applauding every escalation of White House rhetoric and cheerleading the invasion of Iraq. "I was caught up in emotion," he says, beginning a monologue that has not become less painful with the passage of years.



Sullivan circa 1992

COURTESY OF ANDREW SULLIVAN



Sullivan (right) at home with his husband, actor Aaron Stone, and their two beagles

“We had every reason to be outraged, and I had a desire to match the magnitude of the event with words of the same magnitude. Sending a few Special Forces units to take out a criminal didn’t seem serious enough.”

Toppling a dictator in Iraq did. Sullivan was committed to that idea—even more committed, he says, than his friend Donald Rumsfeld.

“The son of one of Rumsfeld’s closest friends was a friend of mine,” Sullivan says. “We met in a gay bar. That’s how I came to have dinner with Rummy and stay at his house in Taos. He liked to rag me about the blog: ‘You’ve done this for years and made no money. When will you make money?’ And we fought about gays in the military. But when it came to war in Iraq, I was more bellicose than he was.”

Here Sullivan was right in sync with other neo-conservatives. And he stayed in sync until he saw the photographs from Abu Ghraib: “That was the heartbreaker—torture destroyed all moral basis for the war.”

Sullivan’s Catholicism didn’t allow for situational morality. Neither did his boyhood hero, George Orwell. He had made a mistake—“the darkest political misjudgment of my life.” Now he had to pay for it, and because he was a blogger, he had to pay in public.

“When you write as I do, there’s nowhere to hide,” he says. “I had gone so far that I faced a crisis as a writer. So, first, I had to stand up, acknowledge my error, and make a good-faith apology. Then I needed to analyze what went wrong. And that’s when my doubts about neo-conservatism began.”

The institutions that Sullivan believed in disappointed him so greatly during the Bush administration that in 2004, for the first time, he endorsed a Democrat for president. “I’ve met so many gay soldiers I wasn’t aware there were any straight people in the

military,” he says, deadpan, but official recognition of gays in the armed forces made no headway in those years. In the ’90s, long before most gay men thought gay marriage was a possibility, Sullivan had been an activist in that cause; he was furious when the president advocated a constitutional amendment defining marriage as a heterosexual partnership only. And as a fiscal conservative, he disagreed with the Bush administration’s enthusiasm for off-the-books funding of expensive wars and medical programs.

But the breaking point was, first and always, torture. In 2006, John McCain—who had once sponsored legislation to ban American military personnel from using torture—abandoned his opposition and supported the Military Commissions Act, which gave the president the right to torture. Sullivan was shattered. “That night, I got on my bike and rode to the Jefferson Memorial,” he recalls. “I didn’t know what else to do. I couldn’t believe America had done this.”

When Andrew Sullivan changes his mind, he often goes from one extreme to another. Not long ago, he was the subject of one of those interviews that, for most, is an opportunity to display some wit and warmth. Sullivan did—to a point. Then the Politico.com interviewer asked: “You’re president of the United States for enough time to make only one executive decision. What is it?” Without hesitation, Sullivan replied: “Announce a full Justice Department investigation into the war crimes ordered by and admitted by George W. Bush and Dick Cheney.”

Relentless Heterodoxy

ANDREW SULLIVAN DID NOT support John McCain in 2008. The torture flip-flop would have been enough of a reason. Then McCain added Sarah Palin to the ticket. The combination of her scant government experience and “raw political talent” terrified Sullivan—and with only two months between her

nomination and the election, he started hammering.

"I was told: 'Don't touch this, it will hurt your reputation,'" he says. During a campaign when most pundits were, at worst, quizzical about Palin, Sullivan filled his blog with questions she was never going to answer. Did he pay a price? "I have become more of an outlaw in this town because I couldn't hide my amazement from my peers—I've definitely become more alienated from mainstream media."

Since the election, Sullivan has continued to press for clarification about a rumor the mainstream media won't touch: that Trig is not Palin's son. Sullivan hasn't flung any accusations at Palin; he's just pounded her ever-changing stories about Trig's birth, and her unwillingness to provide a birth certificate for him. In

the heated conversation that surrounds all things Palin, nuance has been lost—and Sullivan has been cast as a crank who takes pleasure in badgering a woman who may have no political future. His response: "Early on, I figured out that anything I write about her can only help her, but I don't care about that. The job of a journalist is to find the truth."

This relentlessness has led to continuing analyses of other issues that most media avoid. Once a strong supporter of Israel, for example, Sullivan came to question its settlements in Gaza. His language is not always temperate: "It staggers me to read defenses of what the Israelis have done. They attacked a civilian flotilla in international waters breaking no law. When they met fierce if asymmetric resistance, they opened fire. And

From the Blog Cave

ON BLOGGING

A blog is not so much daily writing as hourly writing. And with that level of timeliness, the provisionality of every word is even more pressing—and the risk of error or the thrill of prescience that much greater....Blogging is therefore to writing what extreme sports are to athletics: more free-form, more accident-prone, less formal, more alive. It is, in many ways, writing out loud.

THE LIMITS OF BLOGGING

I'm pretty protective about the people in my life. I never write about Aaron without asking his permission, and normally it's a very, very discreet mention.... I can't write about my private life without mentioning my husband.

GAY MARRIAGE

The core difference between those who favor marriage equality and those who oppose it....we see this as both-and; they see it as either-or. I love and revere heterosexual marriage and want it defended and celebrated alongside my own; they regard my civil marriage as an abomination to be banned and kept inferior to their own. I think that core difference is why we're winning—because, in the end, Americans like to see freedom expanded, not curtailed, and they are adult enough and secure enough to live with those they disagree with.

ABU GHRAIB

The person who authorized all the abuse and torture at Abu Ghraib, the man who gave the green light to the abuses in that prison, is the president of the United States, George W. Bush. Those ghastly pictures of naked, hooded prisoners? Bush approved nudity

and hooding of prisoners. Hypothermia? Sleep deprivation? Bush signed a memo removing the most baseline protections for all human beings under the Geneva Conventions. Waterboarding? Bush knew full well....Bush's crimes are far greater than Nixon's—because war crimes are far graver than burglaries. And there is no statute of limitations for war crimes.

SARAH PALIN

I asked an intern to go back and double fact-check the 12 documented lies that Sarah Palin has told on the public record. These are not hyperbolic claims or rhetorical excess. They are assertions of fact that are demonstrably untrue and remain uncorrected. Every single one of the lies I documented holds up after several news cycles have had a chance to vet them even further....So for the record, let it be known that the candidate for vice-president for the GOP is a compulsive, repetitive, demonstrable liar.

LIBYA

This is the worst decision yet made by Barack Obama as president. I watched the president stand idly by as countless young Iranians were slaughtered, imprisoned, tortured, and bludgeoned by government thugs by day and night. I believed that this was born of a strategy that understood that, however horrifying it was to watch the Iranian bloodbath, it was too imprudent to launch military action to protect a defenseless people against snipers, murderers, and torturers. Now I am told that "we cannot stand idly by" as tyrants tell their people they will be given no mercy.... This administration is willing to throw out its entire strategy and principles in this period of Middle Eastern revolt—in defense of rebels about whom we know almost nothing, whose strategy is violence, not nonviolence, and whose ability to resist Qaddafi even with Western help is unknowable.



On the Dish's first morning, "Our traffic grew sixfold in a moment. It was like Hoover Dam had broken."

we are now being asked to regard the Israelis as the victims."

Unsurprisingly, he has provoked others to respond in kind.

A few years ago, Sullivan had a dustup about his Jewish "problem" with Leon Wieseltier, JF '82, a former colleague at the *New Republic* and a friend. Wieseltier wrote long, and he wrote harsh, concluding, "And this is not all that is disgusting about Sullivan's approach." Asked to comment for this article, Wieseltier wrote back: "Sorry, I'm sick of the subject."

Martin Peretz takes a longer view: "I'm curiously soft on Andrew. I don't really understand his attitude toward Israel and Zionism. I hope these turbulent days in the Arab world will help him grasp that the Jews of Israel live in a very dangerous environment and that one can't contemplate peace treaties here the way they're contemplated in other regions."

Sullivan's impassioned prose is matched only by his willingness to change his mind. When Sullivan supported Barack Obama in 2008, it was the final break with his former allies. Of a dozen prominent neo-conservative writers contacted for this profile, only one responded—to decline. His onetime allies have, however, been quite willing to deride him in their blogs, like Jonah Goldberg, writing in *National Review*: "Once a voice of restraint and reason, Sullivan now specializes in shrill panic: mercurial ranting full of operatic arguments, steeped in bad faith, aimed at people he once praised."

Sullivan's reasoning exasperates his former friends because it's as much psychological as it is political. "When I read *Dreams from My Father*, I read it as a gay book," he says. "That is, Obama discovered he was black at the same age that others of us learned we were gay. The world had no place for him. He had to make a place for himself."

Sullivan continues to praise Obama, though as a fiscal conservative, he has some grievances with the president—and with everybody else in Washington: "We all know what the Congress should be doing about the debt right now, don't we? It should be debating which mix of long-term entitlement and defense cuts and the least economically damaging tax increases would lower the long-term debt, restore global confidence in the long-term solvency of the U.S., and thereby ignite more business confidence and job growth.... What do we have instead? A president too calculating to take a stand and an opposition so focused on drastic cuts to discretionary spending and overreaching on collective bargaining that it is already making independents and moderate Republicans queasy."

Sullivan doesn't just criticize. He proposes solutions. He dreams of a Republican candidate who is "a real fiscal conservative, socially inclusive, open to serious tax reform and politically adult conversation to regain the center ground." Currently he is extremely enamored of Indiana's Republican governor, Mitch Daniels, who is not, as of this writing, a presidential candidate.

"Intellectual Diva"

DAVID BRADLEY, owner and publisher of the *Atlantic*, courted Andrew Sullivan for six years. When Sullivan signed on, TheAtlantic.com had 200,000 unique visitors a month—"less than

accidental visits to the *New York Times*," Bradley says. On the Dish's first morning, the publisher had his laptop open: "Our traffic grew sixfold in a moment. It was like Hoover Dam had broken—we were awash with traffic."

Bradley and Sullivan talked frequently and intimately, and in one of those conversations, Sullivan shared a deep truth about himself. "All my life," he said, "I've been disappointed by powerful men." Bradley took that to heart. "I made a private vow that, whatever happens, I'm not going to be his next disappointment."

He wasn't. Sullivan and Bradley had their differences about money—the Dish may have accounted for as much as \$2 million in advertising revenue each year, and Sullivan has long wanted a cut—but Bradley says he was quite willing to share equity. The catch: Sullivan would have to broaden the site, so its success didn't depend only on him. But in the end, the issue really was Sullivan's innate restlessness.


These days, that restlessness is limited to Sullivan's professional life. A few years ago, he was in "one of the sleaziest clubs in Washington at 3 A.M." when he spotted Aaron Tone. "It was the thunderbolt—a total cliché," he says. "I didn't want to believe it."

In 2007, the short blogger and the tall actor got married in Provincetown, where they spend two weeks each summer, to get off the grid. The rest of the year, they live with two beagles in the large studio apartment that Sullivan bought in 2000 with his profits from day trading. It's a quiet life; their biggest social event is usually their weekly hosting of the new *South Park* episode.

In 2005, an exhausted Sullivan thought he needed to quit the Dish. When he thought that again in 2010, the hiring of assistants changed his mind. Now there seems to be nothing that makes him dream of slowing down.

"I have a profound professional admiration for the Dish as an editorial enterprise," Hendrik Hertzberg has blogged. "It's a kind of internet gyroscope. I find that it orients me in cyberspace. It fends off motion sickness. It gives pleasure. I almost always feel a little better after paying it a visit, even when the news of the day is unusually depressing. There ought to be a name for what the Dish is—'blog' doesn't capture it, somehow. There are many excellent blogs out there in blogland...but Andrew's 'The Daily Dish' is the best."

Andrew Sullivan is an intellectual diva, prone to epic battles. He's a showman; call what he does a show. But he performs in the open, without rehearsals, and he reveals everything to his readers, never sparing himself. And then, because he has an acute sense of pacing, he varies his posts with features that have nothing to do with politics, torture, or Palin.

So be warned: Sullivan sometimes posts dozens of times a day. If you've never read him, it might be better not to start. A curiosity can lead to a habit, and a habit to an addiction. And then, without quite knowing how it happened, you may find yourself beginning a sentence with, "As Andrew said...." 

Jesse Kornbluth '68, a New York-based writer, edits HeadButler.com.



Visit harvardmag.com/ extras to watch videos of some of Sullivan's TV appearances.



A humpback
whale, *Megaptera
novaeangliae*

Why Whales?

On learning from nature and the Endangered Species Act

by JOE ROMAN

Among the environmental-protection and natural-resources laws enacted in the United States during the 1970s, the Endangered Species Act (1973) suffers from a uniquely bad reputation. Why should the mighty Tennessee Valley Authority's Tellico Dam be held up by a nondescript fish called the snail darter? What self-interested North Carolina landowner wouldn't clear-cut longleaf pines after learning that red-cockaded woodpecker habitat might be rendered undevelopable? In such cases, where tangible rewards appear to conflict with protecting species that have no known economic constituency (often, indeed, creatures no one has even heard of before), conservation doesn't count for much.

Joe Roman '85, who earned his Ph.D. in organismic and evolutionary biology in 2003 (with a master's in wildlife ecology and conservation from the University of Florida in between), set himself the task of visiting the scene of some of America's most heated, and revealing, endangered-species controver-

sies. An advocate, he has nonetheless crafted sympathetic portraits of the issues at stake, while making the case for the value of nature and of species protection. The result is his second book, *Listed: Dispatches from America's Endangered Species Act* (to be published in May by Harvard University Press). In this excerpt that draws on his own research, he presents a surprising discovery about the vital role whales (some species endangered, others not) play in maintaining the biological productivity of their ocean habitats.

Unlike snail darters, of course, whales are reasonably familiar and well known, even beyond their past economic significance (and controversies over continued hunting). That Roman, now at the Gund Institute for Ecological Economics at the University of Vermont, could make such a basic finding about these popular mammals suggests what may be at stake throughout nature for the thousands of other endangered species that are studied scarcely, if at all.

~The Editors

I STOOD ON THE BOW of the *Nereid*, a 27-foot research vessel, as it crossed the Bay of Fundy. There were no whales in sight on the choppy sea, one of the last known feeding grounds of the endangered North Atlantic right whale. The late-summer sun lifted slowly over Nova Scotia. My mind started to wander: what would the bay have been like 500 years ago, before commercial whaling began? Hundreds of rights were probably feeding on copepods, minute planktonic crustaceans, leaving their bushy V-shaped blows at the surface. There would have been finbacks, humpbacks, minke—and maybe, just maybe, an occasional gray.

The disappearance of the gray whale from the Atlantic remains a mystery. Was it hunted to extinction? Had it already disappeared before humans took to the sea with lances and harpoons?

There was a slick on the chop, and then the enormous head of the first right whale broke through. Right whales are incredibly buoyant; that they floated after death made them more attractive to whalers—made them the “right” whale to kill and now among the most endangered. Some rose with their rostrums covered in mud from a deep foraging dive in search of large patches of zooplankton. Before they fluked, a few mud-brown

logs were released at the surface: whale turds. They floated out of view.

A couple of months later, when I started my master's degree at the University of Florida, I read that grizzlies played a role in dispersing marine nutrients into the forests surrounding salmon streams. When the fish returned to their natal streams to spawn, most died, releasing nitrogen into the waterways and thus to riverine plants and trees. Bears preyed on them and then spread the nutrients even farther when they defecated and peed. About a sixth of all the nitrogen found in spruce trees surrounding salmon streams comes from the sea; bears release the great majority of it.

That night, an idea floated up through the beery haze of a biker bar, where my master's adviser held informal lab meetings late into the night. What about those whales diving for energy-rich crustaceans, then rising from the depths to breathe, and poop?

The classic story in the ocean is one of sinking. In many areas of the Gulf of Maine, nitrogen levels at the surface are so low in the summer that they approach zero, limiting the growth of phytoplankton. Copepods and other zooplankton often feed on

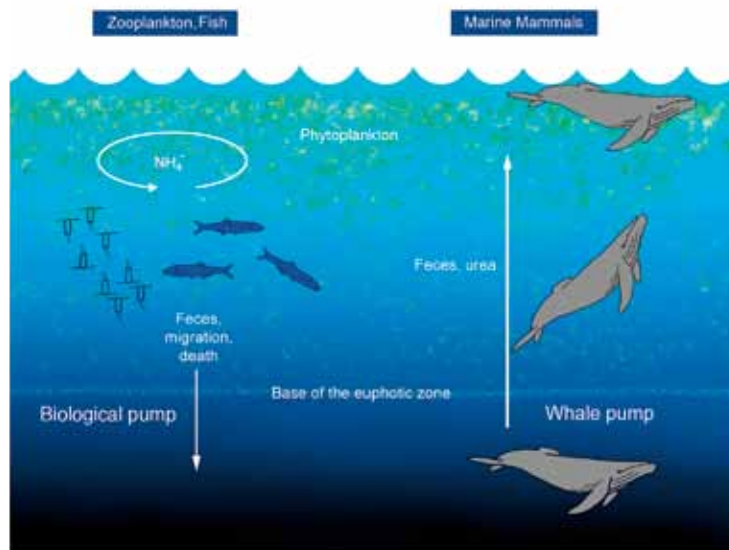
algae along the surface at night, then migrate down the water column to escape predators by day. When they go deep, the ammonia they excrete takes nitrogen away from the surface. Their fecal pellets sink. Their own deaths take nitrogen, phosphorus, carbon, and iron away from the surface layer, reducing primary productivity. As it is too dark at the bottom for phytoplankton to grow, the nutrients are considered lost. This pattern is known as the *biological pump*, as if all living beings contribute only to a downward flow.

But watch a whale long enough, and you'll see a different pattern. Many whales feed at depth and poop at the surface. (In case you were wondering, right whales often produce brown or red logs, which float at the surface before breaking up. Humpbacks and many other fish-eating whales tend to release broad plumes.) Their upward movement is obligatory—they have to come to the surface to breathe. By releasing nutrients there, they could be creating a *whale pump*. But did they transfer enough nitrogen to make a difference? Jim McCarthy, professor of biological oceanography and co-adviser on my Ph.D. committee at Harvard, suggested that we look at all the air-breathing vertebrates in the Gulf of Maine. Our work showed that whales, along with seals and seabirds, transfer thousands of tons of nitrogen to the surface in areas where they feed: they are, in a sense, fertilizing their own garden, bringing more nitrogen into the gulf than all rivers in the region combined do.

A few researchers welcomed the idea. Marine mammalogist Sam Ridgway and a colleague had written in the 1980s that cetaceans could lift nutrients from deep waters, in a process that resembled oceanographic upwelling. He told me that when he had watched dolphins from an underwater acrylic chamber in the Pacific their feces came out and disappeared “in a cloud within a very few meters and very few seconds.” The nutrients appeared to be released immediately, close to the surface.

Others resisted the concept, suggesting that large-bodied and relatively rare animals couldn't have much impact on ocean productivity. And there were major policy implications: as marine mammals have recovered from being overhunted, some countries have insisted that whales and other predators should be culled to reduce competition with human fisheries. This position is championed by the Japanese government, in part to justify its “scientific” whaling program and resume commercial whaling: If whales eat “our” fish, the thought goes, then killing them is an efficient way to protect fisheries and harvest some high-priced *kujira*, or





Left: Joe Roman with a sample of whale feces; his research demonstrated (center) that whales play a critical role in recycling oceanic nutrients because, unlike fish, they excrete waste at a level in the water column different from their preferred feeding zone. Above: Phytoplankton (top), the base of the ocean food chain, and a copepod. Lower left: A humpback at the water's surface, where ships put the whales at risk.

CLOCKWISE FROM UPPER LEFT: UNIVERSITY OF VERMONT; PETER ROPHARINE; JOE ROMAN AND JAMES J. MCCARTHY; NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION/NOAA PROJECT: MATT WILSON/JAY CLARK; NOAA NMFS/AFSC; JEREMY WINNIWOODS HOLE OCEANOGRAPHIC INSTITUTION



IN JULY, I BOARDED THE *Nancy Foster* on its first leg, up from Woods Hole to Stellwagen Bank, an underwater plateau north of Cape Cod, where every summer several hundred humpbacks come to feed. Also aboard the ship were a group of scientists, two whale observers, and a crew of 22.

On the horizon, a container ship made its way into Boston Harbor. For years, the shipping channel had gone through the productive feeding grounds of humpbacks and right whales, putting dozens of them at risk of being run over. For years, Wiley and his colleagues had collected data, showing the shipping patterns and where and when the whales fed. The ships passed right through some of the densest feeding areas for whales and seabirds. Rather than bringing his work to a government agency, Wiley took his charts and graphs directly to the shipping companies. "We showed them that by moving the channel slightly to the north," Wiley said, "we could avoid potential collisions." It was a straightforward argument—it wouldn't cost all that much in fuel or time. With the shippers on board, it was easy to persuade the Coast Guard and other federal agencies to support the idea; the International Maritime Organization confirmed the move, and the lane was shifted in 2007. Whale collisions have decreased.

Off the stern, a huge vertical spout rose, deep as a foghorn, then glints of stainless steel flashed off a slate-blue flank that arched above the water: a finback, large and fast—more streamlined than the humpbacks—passed like a racehorse, ending with a relatively tiny dorsal fin, the mammal so big that even the time it had taken to surface had seemed enormous.

Near the horizon, a humpback breached, twisting 360 degrees. A calf began to lob tail, moving its dark fluke in the air. Humpbacks are the splashy ones, playful, interactive. To Melville they were "the most gamesome and light-hearted of all the whales, making more gay foam and white water generally than any of them." To at least one biologist, they were cute but exhausting, like three-year-olds or puppies. "They're always like, 'Look at me. Look at me.'"

And then there were the right whales, the first cetacean I had got to know, rare and brooding, plying the waters with an enormous scowl and a train wreck of cornified skin covered in whale lice—callosities. They had already left for the more productive

whale meat, in the process. Several recent studies have shown that marine mammals have a negligible effect on fisheries. And the whale pump hypothesis suggested that cetaceans actually increased productivity in areas where they feed. The relationship between whales and their prey was far more complicated than whalers would have you believe.

One of our reviewers had had a good point: there were feeding aggregations of whales not far from the lab at Harvard where we had done some analyses—why hadn't we gone out there and tested our hypothesis? I e-mailed Mason Weinrich, who has studied humpbacks off the coast of Massachusetts for years, asking if he had any humpback poop available. Within a few minutes, he replied: "I have several samples sitting on my desk, actually—preserved in alcohol—and we carry a 'pooper scooper' net with us wherever we go." When did I need them?

Great. But the trouble with analyzing ammonium is that you really need fresh feces. How quickly does the dung break down? How long does it stay at the surface? Do phytoplankton use it? I'd have to go to sea to find out. After a few months of discussions, Dave Wiley, a whale biologist and research coordinator on Stellwagen Bank off the coast of Massachusetts, offered me a berth on a 187-foot research vessel. As chief scientist on a project to learn everything about humpback whales—Where do they feed? What do they eat? How much time do they spend in busy, risky shipping lanes?—he thought our nutrient work, while admittedly quirky, would complement his team's research. One of the great joys of science has to be turning a thought that surfaced one night over a few beers into a full-blown field project.

One biologist has likened the intersection of ships serving busy ports with whales to raising your kids on the interstate.

deep waters of the Bay of Fundy by the time we arrived on Stellwagen. These surly Goths of the North Atlantic had recently been dubbed the urban whale—they feed near Boston and raise their offspring off Jacksonville, Florida, one of the busiest ports in the country. One biologist has likened it to raising your kids on the interstate: to the enormous 800-foot ships in the region, these 40-foot whales were little more than possums to an eighteen-wheeler. Right whales, greatly reduced by overharvesting a hundred years ago, have been protected since the 1930s—but until recently, only against intentional hunts.

As Michael Moore of Woods Hole Oceanographic Institute, who has done more than his share of whale necropsies, likes to say, the United States is still one of the biggest whaling nations on Earth—but we do it through negligence, with ships and commercial fishing gear, rather than with harpoons. When caught in a net or line, humpbacks relax and let a team get to work, but right whales, Moore has discovered, need sedation. Both whale species are subject to the same risks, but humpbacks have rebounded to more than 10,000 in the North Atlantic, with estimated growth rates of more than 3 percent a year. For a large-bodied, long-lived species, that was quite good, testament to the success of the moratorium on commercial whaling put into place in 1986.

As we floated over Stellwagen Bank, Boston nothing more than a callosity on the horizon, suddenly there was a spout of coral, then rust. Up ahead, a whale rose, arching her back and kicking with her flukes. Somebody called out, “Poop!” It was as big as our Zodiac, a plume of weak green tea. This cloud of unknowing descended several meters down the water column. I eased a plankton net through the plume and captured a bit in the cod end, stowing it in a cooler.

I had worried that, collecting and processing fetid fecal sam-

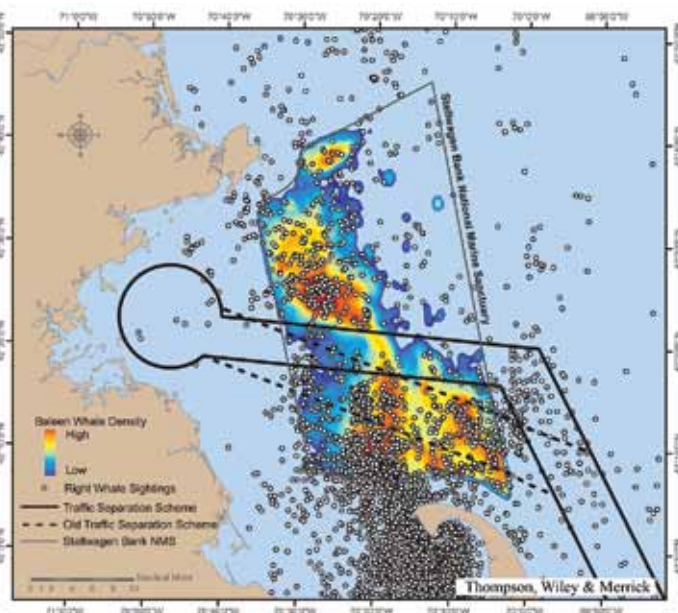
ples, I would get seasick aboard the *Nancy Foster*, which rolled, if not exactly like a well-greased pig, then like one in clover. But humpback feces came up roses compared to that of right whales. Roz Rolland, a senior scientist at the New England Aquarium, has used the samples to check lipid levels, revealing the nutritional status of each whale; to test for protozoan parasites; to assay hormone levels, which reveal sexual maturity, pregnancy, and stress; and to measure biotoxins found in harmful algal blooms—paralytic shellfish poisoning may be curbing the whale’s ability to recover from centuries of exploitation....

DAVE WILEY DIDN’T START AT Stellwagen. His first offshore assignment after graduating from the University of Massachusetts was as a marine-mammal observer—off Dumpsite 106. Back then, New York City and New Jersey shipped their sewage 12 miles offshore, dumping an average of eight million tons each year on the continental shelf. Bacterial levels rose. Heavy metals contaminated the seafloor. Were the dolphins and other whales in the area affected? There weren’t many in the area, but Wiley had learned something critical to my analysis: the sludge sat above the thermocline, the border between the nutrient-rich bottom waters and the light-filled upper surface, exactly as I suspected whale poop did. Whale feces could enhance biological activity—but the millions of tons of concentrated and contaminated human sludge created a hypoxic environment, a “dead zone,” where oxygen levels were so low, many fish and invertebrates couldn’t survive. Shellfish beds were closed. Fisheries were closed. New York City finally stopped dumping its sewage there in 1992, but around the world, dead zones are still growing, caused in many

Right: A diving humpback shows its flukes—a favorite sight for whale watchers. Below right: Yearly, some 2,000 large commercial vessels serving Boston harbor cross the Stellwagen Bank National Marine Sanctuary (below), intersecting with these mammals. (The map’s dots show right whales; the colors, the density of baleen whales.)



CLOCKWISE FROM UPPER RIGHT: JEREMY WINNIWHOI; NOAA; DAVID WILEY AND MICHAEL THOMPSON/NOAA



cases by the runoff of excess fertilizer. The discharge from the Mississippi River has created a hypoxic area that at times grows as large as New Jersey.

Away from these dead zones, the upper layer of many coastal systems becomes nitrogen depleted as the growing season proceeds. In the spring, plankton bloom as temperatures warm, and a boundary layer is formed between the cold, nutrient-rich waters and the upper surface. Only in this upper layer—the euphotic zone—is there enough light for photosynthesis. There, phytoplankton, the base of the marine food web, grow until they use up much of the nitrogen, iron, or other essential nutrients.

Meanwhile, the cold dense water nearer to the bottom remains rich in these nutrients. Here's where the whale pump comes into play: after this boundary layer has formed, many cetaceans actively feed at the bottom, rising to the surface to breathe—and poop....

BACK IN THE SHIP'S WET LAB, my fears of seasickness proved unfounded. The humpback specimens smelled mostly of brine; there was the slightest bit of ash—some sand lance scales and bones—at the bottom of the liter jar. I filtered the fecal samples and added reagents to measure the nitrogen in the plumes: the

darker they turned, the higher the concentration of ammonium. I ran the spec—ammonium levels were through the roof for those that were deepest blue. Although the ambient levels approached zero, the water from the fecal plume had a concentration of more than 30 micromoles: the humpbacks were releasing plumes of nitrogen more highly concentrated than the rich bottom waters where they fed. Here was our first field evidence that whales were fertilizing their gardens.

Just as trees had become more than board feet or timber, whales were far more than the number of barrels inscribed in a logbook or the number of pounds of *kujira* or *hvalkjøtt* on the market. Whales could increase primary productivity in the gulf, helping to sustain fisheries and even, perhaps, fight climate change by pumping iron, a limiting nutrient, to the surface of the southern oceans. Despite attempts to show that whales were our competitors—they eat our fish, therefore they should be caught—it looked as if, in fact, more whales meant greater productivity and more fish. Just increasing the standing stock of whales could help, their massive bodies sequestering carbon after they died, like fluking forests in the seas.

Maybe it is better to watch whales than to eat them....



Endangered Species Economics

WHALE WATCHING is big business: tourists spent more than \$125 million on tickets and travel to Stellwagen in 2008. They spent about \$2.1 billion to see cetaceans around the world. According to whale biologist Roger Payne, it is essential that such visitors “become awestruck by whales.” Whale watchers, not scientists, are going to determine their fate.

Here are a few things that endangered species have done for local communities. Manatees attract hundreds of thousands of visitors to Florida each year, where they spend more than \$23 million to see the sirenids in Blue and Homosassa Springs. Reef-based tourism around the Florida Keys is almost entirely dependent on the dominant (and federally listed) staghorn and elk-horn corals; the industry employs more than 43,000 people whose annual wage income totals \$1.2 billion. Reefs supply more than half a billion people with food and work, buffering coastlines from waves and producing sand for the beaches—each hectare of reef generates up to \$130,000 of ecosystem services, the benefits that nature provides for free. The bad news: more than 200 species—a third of all reef-building corals—are at risk (from bleaching and other diseases), and the buildup of CO₂ from the burning of fossil fuels is likely to change the entire chemistry of the seas. Only amphibians appear to be in a tighter death spiral.

Americans spent more than \$120 billion hunting, fishing, and wildlife watching in 2006. That's more than the Super Bowl. It's more than professional football. It's more than was spent on all spectator sports, amusement parks, casinos, bowling alleys, and ski slopes combined. Hard to believe, until you consider that more than 71 million Americans spent more than \$45 billion just on observing and photographing wildlife. They spent the money on food, lodging, and transport, on guides and fees to access public and private lands, on bird food, binoculars, spotting scopes, and backpacking equipment, on nature maga-


zines and guidebooks. This passion for simply watching nature resulted in more than a million jobs.

A common complaint is that wild areas reduce the tax base in a community—I heard it in Boiling Spring Lakes. I heard it in Florida. But the Departments of the Interior and Commerce and the Census Bureau have been gathering data since 1955. The most recent study showed that wildlife watching brought in almost \$9 billion in tax revenues to state and local governments. And this doesn't even include other local services such as storm protection or the provision of fish and freshwater, or global ones like climate regulation.

The figures for bird-watchers alone are staggering: there are 48 million in the United States, compared to about 33 million anglers and hunters. Most birders just enjoy keeping an eye on their feeders and the birds that visit their backyards; but around 20 million travel each year to see birds, averaging about two weeks on the road. That's a lot of birders, and a lot of cash. Just as cities compete for stadiums and factories, communities should vie for parks and charismatic fauna. Whooping cranes in Aransas and Necedah, bald eagles at Mason's Neck, and ivorybills—well, maybe in Arkansas.

There's always the risk that visitors will outnumber—or out-race—their subjects. As dolphin tourism grew in Shark Bay, Australia, the number of dolphins declined. A single tour operator had no discernable effect; but once a second boat began operating, one in seven dolphins left the bay, calving rates declined, and areas with no tour boats showed an increase in these small cetaceans. So the Minister of the Environment revoked one of the licenses as a necessary sacrifice to keep the dolphins—and the tourists—in the bay. Shark Bay, remote and small, was a pretty easy call. On Stellwagen, more than a dozen whale-watching companies have agreed to voluntary guidelines created to avoid whale strikes and to keep whale-watching vessels from pursuing, tormenting, or annoying them. Will that prove good enough for the whales?

JOHN HARVARD'S JOURNAL



DONE DEAL. U.S. Secretary of the Navy Ray Mabus and President Drew Faust sign the ROTC agreement as (left to right) Vice President and General Counsel Robert Iuliano, Assistant Secretary of the Navy Juan M. Garcia III, Dean of Harvard College Evelyn Hammonds, and Vice Admiral Mark E. Ferguson III look on.

ROTC Returns

AN AGREEMENT signed on March 4 by President Drew Faust and U.S. Secretary of the Navy Ray Mabus clears the way for the Naval Reserve Officers Training Corps

(NROTC) program to return to Harvard's campus once the "Don't Ask, Don't Tell" (DADT) policy's repeal—enacted by Congress in December—takes effect. That is expected to happen as soon as this summer, ending nearly 40 years of formal sepa-

ration dating from the Vietnam War era.

The agreement provides for:

- appointment by the University of an NROTC director at Harvard, with office space, and access to classrooms and athletic fields (for drilling and military exercises) for participating students; and

- resumption by Harvard of direct financial responsibility for the costs of student participation in the program (such costs have been covered in recent decades by alumni donations).

Harvard Navy and Marine Corps midshipmen will continue to take their NROTC classes at MIT, home to the courses and faculty who have trained

IN THIS ISSUE

- | | | | |
|----|------------------------------|----|-----------------------|
| 46 | Designing from Life | 52 | Beyond Ramen Noodles |
| 47 | Harvard Portrait | 53 | Brevia |
| 48 | Harvard's 375th | 56 | The Undergraduate |
| 49 | Reenacting Early Action | 58 | Sports |
| 50 | Learning about Teaching | 59 | Historic Hoops Season |
| 51 | The Public's "Hard Problems" | 60 | Alumni |
| 51 | Yesterday's News | 64 | The College Pump |

area students enrolled in the program recently. (Military leaders have indicated it is uneconomical to expand the number of ROTC programs to multiple campus sites that each serve a potentially small number of students.) The news release announcing the new arrangement noted that maintaining the current consortium arrangement is “best for the efficiency and effectiveness” of the operations. From Harvard’s perspective, this means that issues of faculty appointments and class credit for ROTC courses within the College curriculum—potential deal-breakers—do not arise now.

Faust had previously indicated strong support for renewing ties to ROTC once the prohibition on military service by openly gay men and women was abolished. She attended commissioning ceremonies during Commencement week, and seemed to establish a strong rapport with General David H. Petraeus (now leading U.S. military operations in Afghanistan) when he spoke at the 2009 exercises. In the news release, Faust said, “Our renewed relationship affirms the vital role that the members of our Armed Forces play in serving the nation and securing our freedoms, while also affirming inclusion and opportunity as powerful American ideals. It broadens the pathways for students to participate in an honorable and admirable calling and in so doing advances our commitment to both learning and service.”

Mabus called the agreement “good for the University, good for the military, and good for the country. Together, we have made a decision to enrich the experience open to Harvard’s undergraduates, make the military better, and our nation stronger.” The decision may have resonated for Mabus on several levels: he rose to the rank of lieutenant during his own navy service; holds a Harvard Law degree (J.D. ’75); and was in Cambridge at the start of junior parents’ weekend (daughter Elisabeth is a student in the College).

Harvard is also pursuing discussions to renew formal ties with ROTC programs serving other military branches. And Faust will form an ROTC implementation committee chaired by Cabot associate professor in applied science Kevin (“Kit”) Parker, an army major who has served three tours in Afghanistan. (His bioengineering research has recently been expanded to include traumatic brain injury, prompted by his military experience.)

Twenty undergraduates now participate in ROTC programs, including 10 in NROTC. In addition to Faust’s interest in restoring the program, Harvard may be enjoying a bit of geographic luck—in the proximity of the current ROTC opera-

tions just downriver at MIT—in gaining an ROTC presence on campus so quickly. Other institutions that have taken steps to re-establish ROTC in the wake of DADT’s repeal, including Stanford and Yale, are less fortunately situated.

Designing from Life

AS A PIECE OF ENGINEERING, the human body is a marvel. It maintains its balance even while executing complicated movements; it senses and adapts to heat and cold. Every 20 seconds, it circulates blood through even its most far-flung extremities. It has cells capable of replacing wounded tissue, finding and destroying dangerous invaders, and interconnecting to produce thoughts and emotions. Utilizing all these functions, our bodies—and all living systems—can accomplish tasks far more sophisticated and dynamic than any artificial entity yet designed by humans.

Harvard’s Wyss Institute for Biologically Inspired Engineering (wyss.harvard.edu) is taking on the ambitious task of applying the astounding capabilities of living systems to better engineer artificial ones. Its projects range widely: robots that self-organize, materials that adapt to the environment, medical devices that sense and respond to subtle biological rhythms, engineered cells that use nature’s building blocks to manufacture fuel or attack a disease. But beyond pursuing research in these areas, the institute focuses on transforming its discoveries into devices—transferring ideas from academia into the hands of private industry. The two-year-old institute has a growing project portfolio and institutional and corporate partnerships that have the potential to expand Harvard’s research in new ways. Its applications range from vibrating insoles that could help prevent falls in the elderly to a device that rapidly diagnoses sepsis, a potentially fatal condition.

The institute grew out of a larger initiative at Harvard to develop a vision for bioengineering. One faculty proposal was an institute for biologically inspired engineering; that received seed funding from the University in 2008. The following January, the program received an enormous boost when Swiss entrepreneur Hansjörg Wyss donated \$125 million to launch the institute, the largest gift in Harvard history (see “Life Sciences, Applied,” January-February 2009, page 34).

“My goal has always been to improve patient care,” Wyss says. An engineer by training and chairman of the medical-device manufacturer Synthes, he became interested in the effort while meeting with several leaders in biology and medicine at Harvard; he saw an opportunity to create an institution that would help engineers



Donald Ingber

STEPHANIE MITCHELL/HARVARD NEWS OFFICE

and biologists work together and connect multiple disciplines to solve practical problems.

The intention was to build an entirely new organization at the University: not a traditional research center producing discoveries and scientific papers alone, but a place focused on creating new technologies and applications that—thanks to industrial collaborations—can directly benefit both human health and the environment. Don Ingber, Folkman professor of vascular biology at Harvard Medical School (HMS) and professor of bioengineering at the School of Engineering and Applied Sciences (SEAS), was named founding director. (He and David Mooney, Pinkas family professor of bioengineering, were instrumental in developing the original vision for the institute.)

The resulting Wyss Institute is, Ingber says, like “a start-up in the midst of the world’s greatest academic environment.” Wyss himself says Ingber “has done a fantastic job” in moving the institute’s work forward. The institute is not housed within any Harvard school; its research



An early design concept for a vibrating insole to improve balance and sensation.

staff includes 16 core and several associate faculty members representing the Faculty of Arts and Sciences, HMS, and SEAS, as well as Boston University, the University of Massachusetts Medical School, Beth Israel Deaconess Medical Center, Brigham and Women’s Hospital, Dana-Farber Cancer Institute, and Children’s Hospital Boston. The institute also has its own technical and administrative staff, and office and lab space in both the Longwood Medical Area and Cambridge.

THE INSTITUTE’S WORK aims to use lessons learned from biology to develop engineering innovations, Ingber says, because

HARVARD PORTRAIT



The Yard Crew

Every spring, after the desiccating winds of winter, lush green grass sprouts in the Yard, reaching maturity just in time for Commencement—when throngs of jubilant students and proud parents promptly trample it again. Harvard Yard is a tough environment for plants of all kinds because it is so well loved and used. The team that tends this urban oasis on behalf of the institution and its barefoot summer scholars, its Frisbee players, and its casual passers-by works year-round to sustain the inviting plane of green that spreads beneath high-branching trees. Pictured in this February photograph, from left to right and front row to back, are foreman Art Libby, with Donald Ford and Ryan Sweeney; Ray Pacillo, Frank Lemos, and John Patti; Tiago Pereira, arborist Mark Muniz, and the crew’s supervisor, associate manager for grounds Paul Smith, who has been caring for Harvard Yard for 19 years. “Winters are tough,” Smith says, “but the other eight months are great.” Come spring, they work at a whirlwind pace, mulching and mowing, sweeping walks, fixing irrigation lines, pruning shrubs and trees. When Smith started at Harvard, it took tons of fertilizer to revive the Yard’s viridescent lawns each year. But today, he reports, the landscape is maintained organically: leaves and trimmings are raked and vacuumed up each fall, shredded and chipped, and later returned to the soil as “compost teas and humates.” Earthworms, once scarce, are now abundant (although the crew still needs to aerate). Smith confesses he would never have believed how much more natural activity there is underfoot. His crew likes “working to make the grounds of a worldwide institution look nice. Within a city, it’s a tough thing to do.”

science has recently generated a great deal of fundamental knowledge about how living systems work. “We’re really beginning to understand how nature builds,” he explains. Those insights can be brought to bear on a wide array of disciplines, including materials science, architecture, medicine, computer science, and engineering. New engineering tools, meanwhile, make it possible to interface with biological systems in novel ways.

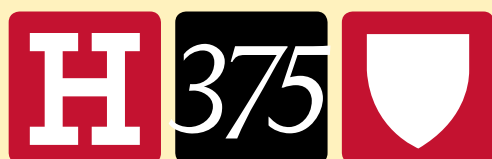
Perhaps most important, by bringing together scholars whose work already

bridges traditional departmental divides—through fields such as genomics, tissue engineering, synthetic biology, and robotics—the institute offers opportunities for unexpected collaborations that can advance research even more. And rather than housing investigators’ individual work in separate labs, Wyss projects are organized into six Enabling Technology Platforms, each focused on developing new technology capabilities that could have numerous applications.

Ingber is leading a project in the Biomi-

metic Microsystems platform that creates microchip-like devices containing living cells that can mimic the functions of real organs. Last June, the team announced that they had made a flexible, coin-sized chip containing chambers of human cells that reproduce the workings of a lung, even “breathing” by stretching and relaxing in response to changing air flow. Pharmaceutical companies are beginning to partner with institute researchers to explore whether these devices can be used to develop drugs and perform toxicology screenings without relying on laboratory animals. Meanwhile, the team’s system for rapidly diagnosing sepsis is a significant advance beyond current practice, where identifying this dangerous condition definitively can take days.

Not all applications have a medical fo-



HARVARD

You’re going to see plenty more of this logo, as Harvard prepares to commemorate its anniversary in the next academic year.

Plans for celebrating the University’s journey since 1636, and how it will evolve, are still in the making, but reflect “the opportunity to bring the members of

our community together not just to mark our history and traditions but also to celebrate what is distinctive about Harvard today and what we aspire to be in the future,” as University marshal Jackie O’Neill puts it—while maintaining a suitably reserved tone. A 375th anniversary is not a 400th, and the economy does not justify extravagance. The aim, O’Neill says, is to showcase contemporary Harvard—a place that has become progressively “more diverse, global, and outward-looking” since its last milestone, in 1986—in ways that emphasize exciting work by faculty members, engage students, and connect alumni. Likely elements include:

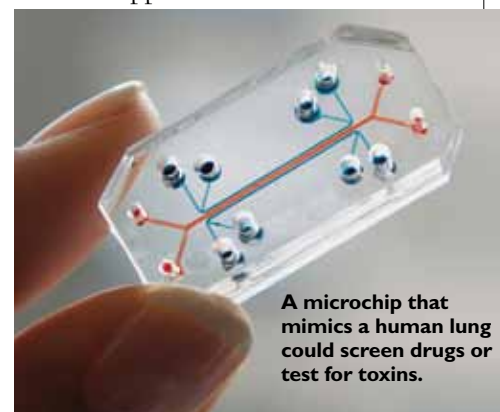
- A birthday party. It wouldn’t be a proper occasion without merrymaking. Accordingly, Friday, October 14—coinciding with freshman parents’ weekend, the Harvard Alumni Association’s fall meeting, and the Harvard College Fund assembly—has been reserved for festive dinners and receptions for students, faculty and staff members, and alumni in the Houses and other sites, followed by processions, led by student performers from diverse cultural traditions, to Tercentenary Theatre. There, further artistic performances, a light show, and other entertainments are scheduled, along with socializing encouraged by dessert buffets and a community dance.

- Academic perspectives. Faculty panels on various subjects will be convened throughout the year, emphasizing the work of younger professors whose research, ideas, and teaching will shape the University and the world at Harvard’s fourth-century birthday. A presidential forum may, separately, examine universities’ roles in society.

- Alumni experiences. The University communications and development staffs are collaborating on “Harvard Stories,” an interactive online library of video recordings of graduates talking about their formative experiences at the University, momentous memories, and more (inspired in part by National Public Radio’s Story Corps series).

- A speaker series. Prominent alumni from various walks of life are expected to participate in campus lectures and perhaps panel discussions.

Reflecting continuity with tradition, a new Harvard picture book is being produced for the occasion (to be published by Harvard University Press). Reflecting change during the past quarter-century, this year’s events will be coordinated through a dedicated website, launching in the summer. Reflecting the eternal verities, O’Neill (who worries about such things at each Commencement) is trying to assure clement weather on October 14. President Drew Faust is expected to unveil anniversary details during this year’s Commencement exercises, on May 26.



A microchip that mimics a human lung could screen drugs or test for toxins.

cus—others will affect the environment or improve industrial design and manufacturing. The Bioinspired Robotics platform, for instance—building on work by assistant professor of electrical engineering Robert Wood, its co-leader—is designing small, delicate robots that look like houseflies; such devices could help pollinate crops in places where bees are threatened (see “Tinker, Tailor, Robot, Fly,” January-February 2008, page 8). Berylson professor of materials science Joanna Aizenberg is leading efforts in the Adaptive Architecture platform to develop materials with special properties inspired by objects in nature; lotus leaves, for instance, are extremely efficient at repelling water, and the Wyss team seeks to capitalize on this property to develop a material that could prevent ice formation on airplane wings.

Ingber explains that the platforms—the others are Anticipatory Medical Devices (developing electronic devices to detect and prevent medical problems before

Reenacting Early Action

Starting this fall, students will again have the option of applying to the College under a nonbinding early-action program.

In 2006, the College decided to eliminate early action for applicants as of the fall of 2007 and move to a single January 1 deadline. Administrators voiced concerns that early action favored students from affluent families and communities; then-president Derek Bok said students of lesser means tended to wait for the January deadline to apply, so that in April they could compare financial-aid offers from all schools that accepted them.

Although Princeton and the University of Virginia made similar changes, no other prominent institutions followed suit. Meanwhile, the number of applications to selective schools continued to swell, making admissions ever more competitive and increasing applicants' interest in an early option (and swamping admissions offices with thousands more files to review by the single spring deadline). Last November, Virginia announced it would reinstate early-action admissions beginning this fall. And after analyzing trends during the four intervening admissions cycles, Harvard said it had found that students from families across the income spectrum were showing greater interest in early admissions given the uncertain economy and competitive conditions.

"Many highly talented students, including some of the best-prepared low-income and underrepresented minority students, were choosing programs with an early-action option, and therefore were missing out on the opportunity to consider Harvard," said Faculty of Arts and Sciences dean Michael D. Smith. Princeton announced a similar policy change the same day: "In eliminating our early program four years ago, we hoped other colleges and universities would do the same, and they haven't," President Shirley M. Tilghman noted. "One con-

sequence is that some students who really want to make their college decision as early as possible in their senior year apply to other schools early, even if their first choice is Princeton."

Under the restored early-action option, students who apply to Harvard College by November 1 will receive a decision and financial-aid information by December 15. Students who apply by the regular deadline of January 1 are notified on April 1; the deadline for all students to declare their intent to attend is May 1.

(Meanwhile, on March 30, the College announced that it had offered admission to 2,158 applicants to the class of 2015, out of 34,950, for an acceptance rate of 6.2 percent.)

• **Term bill.** In conjunction with the announcement, the College released the tuition, room, and board costs for the 2011-2012 academic year: a total of \$52,560, an increase of 3.6 percent from \$50,724 this year. Undergraduate financial aid will increase 1 percent, to \$160 million. (Since 2008, the College has borne the full cost for undergraduates from families with incomes of \$60,000 or less; from that level to \$120,000, the annual cost scales up from 1 percent to 10 percent of family income, and remains at that upper level for those with incomes up to \$180,000.)

Peer institutions have announced diverse tuition and financial-aid strategies for next year. Princeton—citing the economy and its own strong endowment and fundraising results—will raise undergraduate costs 1 percent (its lowest increase in 45 years), to \$50,689. Yale, on the other hand, raised its term bill 5.8 percent, to \$52,700, while boosting its financial-aid budget 8 percent (to \$117 million) and redirecting that aid: students from families with incomes of \$65,000 or less (formerly \$60,000) will now receive full scholarships, while those with incomes from \$130,000 to \$200,000 will now pay an average of 15 percent of their income (up from 12 percent previously); those in the cohort between these ranges pay about 10 percent of income.

they happen), Programmable Nanomaterials, and Biomaterials Evolution—create a structure in which projects can build on one another; one platform may enable many different types of applications or fields of research. In choosing projects, the institute's leaders emphasize high-risk ideas that might not obtain support from conservative funding agencies that typically emphasize incremental advances.

THE WYSS IS MEANT in particular to help speed to market new products that might otherwise languish in research laboratories. An early example is a project initiated by James Collins, a professor of biomedical engineering at Boston University: vibrating insoles that can help prevent falls in the elderly. Collins had developed the technology in his lab, based on 15 years of

work demonstrating that a small amount of noise introduced into certain systems can enhance the detection of a signal; in this case, providing faint random vibrations to the feet—so faint they are undetectable—actually boosts the sensory system's ability to detect balance cues. He has found that elderly people exposed to these vibrations can maintain their balance as well as much younger adults.

Wyss points to Collins's project as an example of how the institute can be transformative; a project like this, he says, "needs more than just a professor." Collins explains that the technology, though promising, had fallen into a gap where many academic projects stall: funding agencies support basic scientific work, he says, whereas "companies and investors generally want to invest in products, not

projects." Moving beyond proof of principle requires a complete prototype that can be demonstrated to companies.

"The Wyss is incredibly well positioned to fill this gap," Collins says. He and a team there are working to transform the technology into a product, create a commercialization plan, and reach out to shoe and insole companies. Meanwhile, David Paydarfar, a Wyss associate faculty member based at the University of Massachusetts Medical School, is using related scientific techniques to develop a vibrating mat for newborns that could prevent sleep apnea, a potentially fatal problem in which breathing stops.

To turn ideas into commercial applications, the institute draws on professionals from various sources. Its administrative leadership has experience working in in-

dustry, and its staff includes an “advanced technology team” of more than two dozen technical experts drawn from both academia and industry who can guide the transformation of technologies into materials and devices. Although faculty members at the Wyss will continue to solicit

grants and write scholarly papers, the goal will be to generate intellectual property, royalties, and investment opportunities.

A key innovation facilitating the Institute’s work was the creation of a universal contract for all collaborations, streamlining the often onerous process of con-

necting people at multiple institutions, nonprofit and otherwise. To promote collaboration, the contract requires that work take place on site.

To further the applications it develops, the Wyss has actively courted partnerships with industry. In November 2010,

Learning about Teaching

In “**Tackling Teaching and Learning**” (March-April, page 42), about the Faculty of Arts and Sciences’ renewed focus on pedagogy and educational outcomes, we asked readers to share examples of teaching that had worked for them, and to suggest improvements that Harvard might consider. Here is an edited sampling of the responses; read the full conversation, and contribute to it, at <http://harvardmag.com/teaching-and-learning>.
~The Editors

In the late fifties, I was fortunate enough to enroll in Charlie Slack’s and Sarnoff Mednick’s experiential courses in psychological research and mental health. In the research course, we had a lab, human subjects, and equipment, and were expected to turn out a formal research paper a week. In the mental-health course, each student cared for a patient for an academic year. From there I went on to a research job at the Med School for which Harvard gave me a lot of academic credit. I learn best by doing things and tying book-learning to the enterprise at hand, and Harvard made that happen for me, getting my undying gratitude.

Jonathan Brown ’57

Most Harvard faculty in my day (GSAS, 1970s) were either desperate to publish so they could get on a tenure track at some other university, or else well past the time they did their best work (also often at another university). One group had no time to focus on teaching, most of the other group lost whatever interest they had long ago. The best teaching experiences were with “prime of life” faculty working with their students to develop their most creative ideas. This very small number of faculty were excellent teach-

ers, regardless of teaching technique, because they were so intellectually alive in the classroom. If the same thing is true today, Harvard needs more faculty who are actually doing their best work while they are at Harvard and with the time to pay attention to teaching.

Gregory Miller, A.M. ’76

Our learners no longer want to be told, they want to discover. Rather than lectures and sound bites, give them the tools they require to find answers on their own. The modern educator is more of a guide than an expert.

Steve Hearst ’88

Harvard can enhance its teaching-learning process by relating the subject matter being taught—whenever possible—to present-day situations. Indeed, doing so will make the subject much easier to understand, and more relevant and effective as it relates to today’s society.

A second way [to] enhance the educational process is by subdividing classes into groups of four or five students, with each group specializing in a critical area of the subject. After extensive research in a specific area, each group member can then present a 10- to 15-minute report to the entire class in an area [where] he or she has acquired exceptional knowledge.

A third way to enhance the learning process is for instructors to provide students with exams that require a great amount of critical thinking...rather than objective (or one-word) exams.

George Patsourakos

Looking back on my four-plus years as a Harvard graduate student, I see two courses that were outstanding in the amount of useful knowledge I learned. They were “Beginning Russian” (accelerated) and “Theory

of a Complex Variable.” Each was an extremely concentrated learning experience; the amount of material covered and the expectation of mastery were in each case much greater than those in other courses. Each was taught by a tenured professor who was expert in the material and thoroughly organized the presentation and homework. However, in both, the lecture was only a small part of the educational process. In Russian, the homework, explanations by the teaching fellow, and pronunciation drills by a native speaker were by far the most important content. In the math course, almost all learning resulted from the challenge of the homework; we students met together and jointly puzzled out the challenging assignments. I’m convinced that a gram of example—a well-taught course experienced—is worth a kilogram of pedagogy training.

Lyle McBride, Ph.D. ’64

During my senior year, I wrote a thesis on *The Tempest* and directed a production of the show on the Loeb mainstage. My thesis adviser (a Ph.D. candidate) spent hours talking with me about the play, about my struggles to bring the play to life, about how the production had turned out, about how much I hated the play at times, about how I missed it once the show was over, and about how what I had planned to say in my thesis had changed because my understanding of the play was altered by the process of staging it. I thought I already knew a lot about Shakespeare, but I learned much more through directing the show and talking about it during my senior tutorial than I could have imagined. I am now a law professor, and I try to offer my students that same kind of active learning experience that helped me so much as an undergraduate at Harvard.

Molly Shadel ’91



For coverage of faculty conversations about teaching in a global context and using University collections, see harvardmag.com/teaching-learning-conversations.

for example, it announced a multiyear partnership with Agilent Technologies; the company will support the development of tools and technologies in three platform areas: Biomaterials Evolution, Programmable Nanomaterials, and Biomimetic Microsystems.

"I think this is a terrific opportunity for Harvard," Wyss says. He believes that other universities are already seeking to replicate the institute's approach, both in bringing disciplines together and in emphasizing commercial applications of its work. For Ingber, the excitement clearly lies in having such resources and expertise in one place, in order to move projects forward quickly. He says that faculty members have been drawn to the Wyss because of the promise of accelerating their work, taking on riskier projects, and seeing them move more quickly beyond the laboratory into the real world.

~COURTNEY HUMPHRIES

The Public's "Hard Problems"

A YEAR AGO, prominent social scientists gathered at Harvard to highlight what they saw as the most pressing problems in their disciplines. Asked to choose problems that were either very urgent, very difficult, or both, these 12 eminent thinkers formulated a list of nearly three dozen "hard problems in the social sciences," then put the problems to the public for a vote (see "Hard Problems" in the Social Sciences," July-August 2010, page 60). The subsequent online forum also solicited suggestions of important problems that hadn't made the scholars' list, and 10 of the problems submitted by the public—including world peace, improving relations between Islam and the West, and defining humans' purpose—were also thrown into the voting mix.

The level of public interest and attention surprised even the organizers. The project's website attracted 7,000 visitors per month last April and May; a Facebook page drew 11,000 fans; and more than 500 people voted in the poll to decide which problems were *truly* the most urgent and most difficult.

As conscientious social scientists, the organizers subjected the poll results to

Yesterday's News

From the pages of the *Harvard Alumni Bulletin* and *Harvard Magazine*

1921 The Commencement audience witnesses for the first time a "considerable group" of women standing to be declared graduates of a relatively new department of the University, the School of Education.

1936 The United States Senate has approved a bill providing for a series of Harvard Tercentenary postage stamps as the University continues to prepare for its forthcoming anniversary.

1961 College diplomas are printed in English for the first time, rather than engraved in Latin, provoking protest from students and alumni. President Pusey compensates by conferring the degree in Latin for the first time since 1895.

1971 What is believed to be the first campus drug raid carried out by Cambridge police occurs after a potted marijuana plant is sighted on a dormitory windowsill.

1971 Susan Cochran '73, manager of the ski team, becomes the first Radcliffe student to win a Harvard H.

1986 Professor Walter J. Kaiser, marshal of Harvard's Phi Beta Kappa chapter, instructs his charges to enter Memorial Hall "boustrophedonically." Brandishing his silver-tipped baton, he adds, "I should tell you that *Life* magazine will be taking pictures of the procession. So do make a

special effort to look intelligent." (Classics professor emeritus Mason Hammond informs bemused nonclassicists that *boustrophedonic* is a Greek term meaning "as the oxen turn at the end of a plowed furrow.")

1991 Derek Bok leaves office and donates his 1969 red, semi-automatic, sun-roofed VW bug, with 45,718 miles on it, to the Phillips Brooks House Association. PBH ultimately decides to auction off the car.

1991 The new head of University Dining Services, Michael P. Berry, impresses undergraduates with such culinary initiatives as themed dinners, more vegetarian options, and environmental awareness: "Cereal now comes in bulk dispensers instead of wasteful 'snack packs.'" A grateful senior class honors him with a picture of themselves.

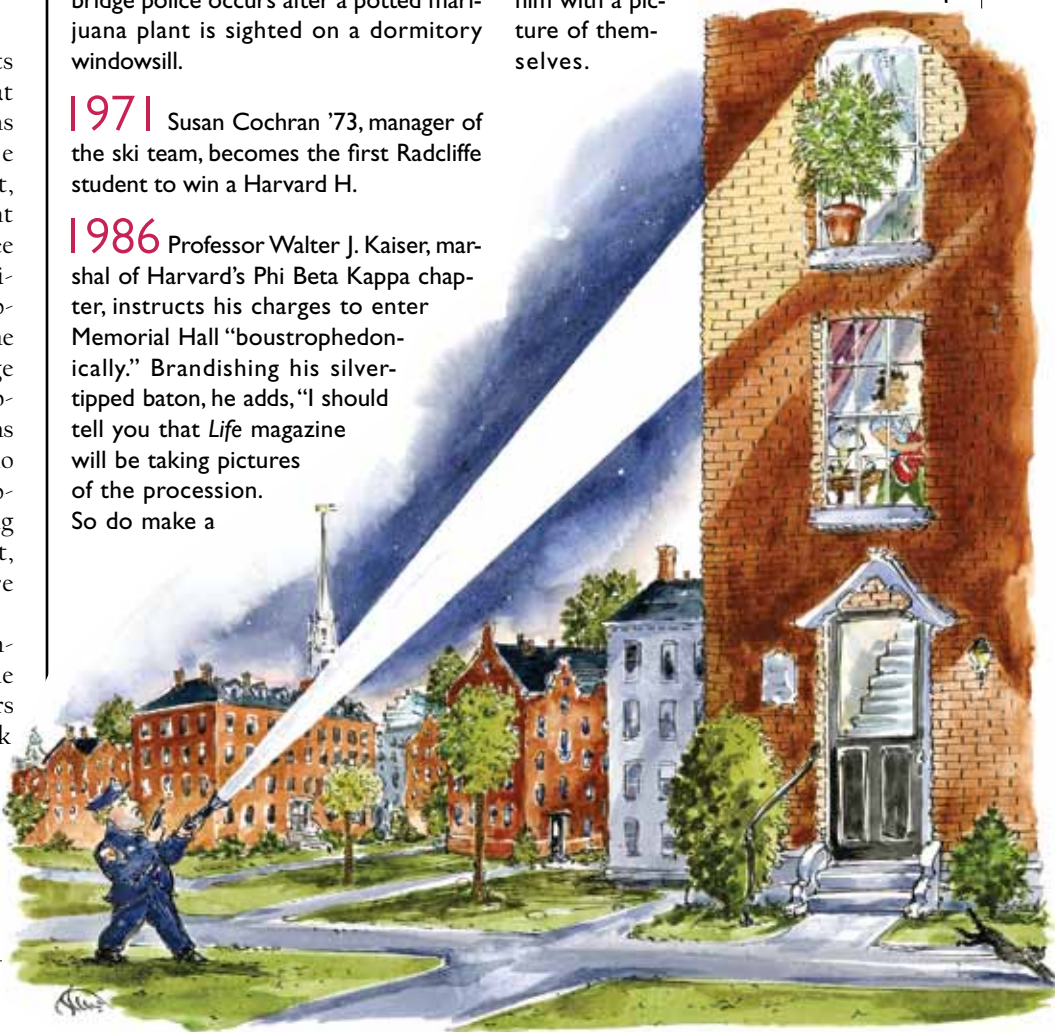


Illustration by Mark Steele

rigorous analysis, parsing the responses in numerous ways—and the problems submitted by the public scored well. “I thought it was fascinating to see the disconnect between what the academics thought were important problems and what the non-academics thought,” says Stephen M. Kosslyn, one of the organizers. (Formerly Lindsley professor of psychology and dean of social science within the Faculty of Arts and Sciences [FAS], he now directs the Center for Advanced Study in the Behavioral Sciences at Stanford.)

Once the poll had closed, John Muresianu ’74, Ph.D. ’82, then a fellow at the Berkman Center for Internet and Society, analyzed the results using both traditional measures (such as overall high score and how many voters gave a high score for each problem) and the less-orthodox “Zec score,” an algorithm he designed based on the assertion by symposium presenter Richard Zeckhauser, Ramsey professor of political economy, that in deciding which problems social scientists should address first, extreme difficulty should actually count *against* a problem. (Problems whose solutions seem very unlikely “might be fun to talk about” hypothetically, Zeckhauser says, but it would be foolish to funnel resources into work on them.) Thus, even though the public ranked world peace the most important problem, and the second most difficult, it dropped to fourth place in importance when Muresianu calculated the “Zec score” because of its difficulty. Sustainable development, ranked second in importance by the public, fell all the way out of the top 10 for the same reason. (See harvardmag.com/hard-problems to see how 10 problems ranked on different scales.)

Kosslyn thinks the disconnect between scholars and the public may be partly a matter of phrasing: the public sees the forest (world peace), while scholars examine individual trees, breaking the problem down into constituent parts (e.g., the distinct roles of religion, politics, or the availability of food and water in contributing to violence). One way “to bridge the gap” and foster a better understanding of what social scientists do, says Jennifer Shephard of the FAS social science dean’s office, who helped coordinate the original event, “is to have more conversations where the public is involved and scientists explain their research in a way that’s accessible.”

THE IDEA for the “hard problems” symposium and follow-up originally came from Nick Nash ’00. As an undergraduate chemistry and physics concentrator, he was inspired by “Hilbert’s problems”: a list of 23 hard problems in mathematics assembled by mathematician David Hilbert in 1900. Eleven decades later, 10 of those problems had been solved; four had been classified as unsolvable; and all but two of the rest had been partially solved. Nash—now a vice-president at General Atlantic, an investment firm based in Greenwich,

The public sees the forest (world peace), while scholars examine individual trees.

Connecticut, began to wonder whether a similar list of problems could be assembled for the social sciences, for possible solution during the coming century.

Nash secured funding for the project through the Indira Foundation; he, Kosslyn, and Shephard coordinated the April 2010 symposium and the online poll and discussion that followed. They drew attention to the discussion through press releases and

Facebook ads, targeting users in countries and regions that were underrepresented among poll respondents. The response, says Nash, was thrilling: “We’d post a problem and ask,

‘What do you think?’ We’d have a woman in India opine, followed by a man in Nigeria, and then a teenager in Brazil would respond. What a fascinating way to get the whole world humming and buzzing about ideas.”

A parallel but independent effort by the National Science Foundation may indicate that the time is indeed ripe for aligning academic efforts (and public funding for them) with public priorities. The foundation’s general call last August for “decadal-scale ideas” on directions for research in the social, behavioral, and economic sciences drew 252 white papers from scholars (the abstracts are now viewable online). The NSF sometimes finds itself “stuck in this year-by-year budget cycle,” explains assistant director Myron Gutmann. “I wanted to ask, ‘What are the big ideas we can be working on 10 years from now?’ so we really make a good investment in planning for them.” The agency will review the submissions and announce priorities in the summer.



Visit harvardmag.com/hard-problems to read about the original “Hard Problems” symposium and find links to websites to learn more.

Beyond Ramen Noodles

ON A MONDAY NIGHT in late March, dozens of graduate students stand around a brightly lit lounge where tables are covered with many different kinds of pies. The conversation is warm and animated; professor of public policy and management Jennifer Lerner, of the Harvard Kennedy School, chats with students from the Divinity School, Law School, and Graduate School of Arts and Sciences (GSAS). They avidly sample blueberry and chocolate-pudding pies, along with several types of quiches. No one seems stressed out. In fact, everyone looks...happy.

Lerner, faculty director of one of two apartment complexes in the Graduate Commons Program (GCP), observes, “The stereotype of the Harvard grad student is someone working until all hours, sitting alone in his or her apartment or lab, eating ramen noodles. This allows little op-

portunity for interdisciplinary or social exchange.” But the Grad Commons students—surrounded by lively company from around the University—are both well fed and social. “Student success is partly driven by well-being, balance, and social connection,” she adds, “and so we want to build and broaden well-being as an end in itself.” Eight decades after the College was transformed by the creation of residential Houses, with faculty and academic advisers as residents, something similar is taking root for Harvard’s large population of graduate and professional-school students.

In 2001, then-president Neil Rudenstine, the Harvard Corporation, and the deans of the graduate and professional schools formally acknowledged the need to expand the available graduate housing on Harvard’s campus. Allan Brandt, now dean of GSAS, recalls, “Some of our peer institutions had moved more aggressively in developing graduate housing, so we had

Commencement Speakers



Ellen Johnson Sirleaf

Liberian president Ellen Johnson Sirleaf, M.P.A. '71, will be the principal speaker during the afternoon exercises at Harvard's 360th Com-

mencement, on May 26. "Over the course of her nearly 40 years in public service, President Sirleaf has endured death threats, incarceration, and exile, all the while challenging the inequality, corruption, and violence that defined life in Liberia for so long," said Drew Faust (the *other* president who will speak on the occasion) in announcing the news. Sirleaf was elected president in 2005, becoming Africa's first female elected head of state. She delivered the Harvard



MARY ELLEN MATTHEWS

Amy Poehler

Kennedy School's graduation address in 2008. On a lighter note, the seniors

selected as their class day speaker the actress Amy Poehler, of *Saturday Night Live* and *Parks and Recreation* fame.

Overseer Leaders

Leila Fawaz, Ph.D. '79, a Tufts historian, will be president of the Board of Overseers for the 2011-2012 academic year. Attorney Robert N. Shapiro '72, J.D.

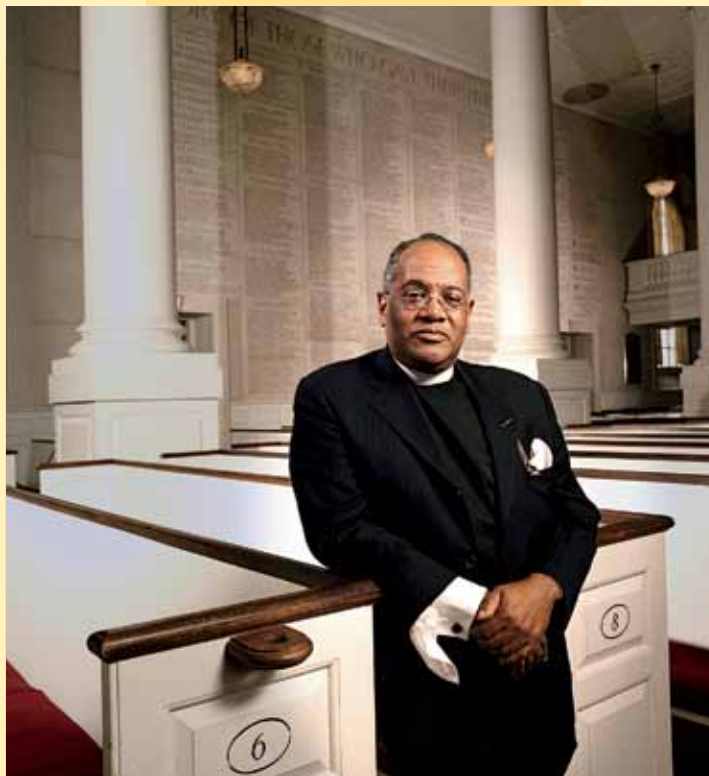


GEORGE ELMORE

Leila Fawaz

'78, will become the vice chair of the Overseers' executive committee. Fawaz was a member of the committee that identified William F. Lee as a new member

Brevia



THAT VOICE, STILLED. The Reverend Peter J. Gomes, Plummer professor of Christian morals and Pusey minister in the Memorial Church, who had suffered a heart attack and subsequent stroke in December, as previously reported, died on February 28. His death prompted an extraordinary outpouring of news coverage and of personal recollection, reflecting his status as "one of the great preachers of our generation" (in President Drew Faust's words); best-selling modern interpreter of the Bible; crosser of boundaries (as a black Baptist Republican who announced in 1991 that he was "a Christian who happens as well to be gay" and then promoted equal rights for gays); and, for many members of the Harvard community, the enduring public face of the University, a man who reveled in tradition and celebrated it with zest, especially on high occasions such as his Baccalaureate address to graduating seniors and his closing prayer—the text secreted within his cap for delivery—at the Commencement morning exercises each spring. (The Harvard memorial service, on April 6, was held as this issue went to press; coverage appears at harvardmag.com/gomes-memorial.)



of the Harvard Corporation last year. Shapiro, past president of the Harvard Law School As-



FAVOTOBOSTON

Robert N. Shapiro

sociation and of the Harvard Alumni Association, was an Overseer member of the Corporation's governance-review committee last year; he now serves on the search committee as the membership of the senior governing body is expanded (see "The Corporation's 360-Year Tune Up," January-February, page 43).

Summas Reset

The Faculty of Arts and Sciences on February 15 slightly modified the terms for awarding the honor summa cum laude. Beginning with the class of 2012, candidates must be designated to receive highest honors in their field of concentration and have earned a grade point average within the top 5 percent of the class (the criterion was 4 to 5 percent). A requirement that students also earn an A or A- in each of two courses in humanities, social sciences, and sciences was dropped, because interdisciplinary courses are no longer unambiguously identifiable in those terms.

Higher-Ed Update

University of Southern California alumnus David Dornsife and his wife, Dana Dornsife, have given the institution a \$200-million

unrestricted gift, which USC expects to use to bolster teaching, research, and fellowships in the humanities and social sciences, in particular. David Dornsife, a USC trustee, is chairman and majority owner of Herrick Corp., a steel-fabricat-

ing company....Yale, which became more dependent on spending from its endowment than Harvard before the 2008-2009 financial collapse, has announced that it will require an additional \$68 million in budget reductions to balance the fiscal year 2012 books. The university's spending from the endowment will decline slightly from the current year (Harvard has projected a 4 percent *increase* in spending from endowment income for fiscal 2012), and then is projected to remain essentially flat for several more years. In early April, Yale announced that it had exceeded the \$3.5-billion goal for its capital campaign, scheduled to conclude June 30; in a significant recent gift, Yale alumnus John Malone, a cable-television entrepreneur, donated \$50 million to endow 10 new engineering professorships....New York University announced plans to create NYU Shanghai, a full research university and liberal-arts college, in concert with East China Normal University; students are expected to enroll in September 2013, at a campus to be built in that city's Pudong district.

Nota Bene

CUBA CONCERT. The Harvard-Radcliffe Orchestra is celebrating Commencement in an unusual way, departing the

day after (May 27) for a tour of Cuba, featuring performances of Beethoven's Symphony No. 9. Some 85 musicians and music director Federico Cortese are expected to make the trip; for details, see www.hcs.harvard.edu/~hro.

MEMORIAL MINISTER. Wendel W. "Tad" Meyer, who served as associate minister at Memorial Church from 1997 to 1999 and rejoined its staff as associate minister for administration after the Reverend Peter J. Gomes was incapacitated in late 2010, has now been appointed acting Pusey minister in the church. He had retired from the full-time ministry in 2009, after serving most recently as rector of St. John's Episcopal Church in Beverly Farms, Massachusetts, for 10 years.

A FAUST FORUM. The National Endowment for the Humanities named President Drew Faust to present the fortieth Jefferson Lecture in the Humanities, the federal government's most prestigious honor for intellectual achievement in the field. She will speak May 2 at the Kennedy Center for the Performing Arts, in

Washington, D.C., drawing on her work for *This Republic of Suffering*, her book on the death toll of the Civil War (excerpted in this magazine's January-February 2008 issue). This year marks the 150th anniversary of the beginning of the war. Among other faculty members who have been Jefferson Lecturers recently are Adams University Professor emeritus Bernard Bailyn (1998), Fletcher University Professor Henry Louis Gates Jr. (2002), Porter University Professor Helen Vendler (2004), and Kenan professor of government Harvey Mansfield (2007).



Drew Faust

STEPHANIE MITCHELL/HARVARD NEWS OFFICE



Wendel W. "Tad" Meyer

ROSE LINGCOLN/HARVARD NEWS OFFICE

COMPUTATIONAL PIONEER. Coolidge professor of computer science and applied mathematics Leslie Valiant was named the 2010 winner of the A.M. Turing Award, conferred by the Association for Computing Machinery for fundamental contributions to computer science. The award, the premier professional recognition in the field, includes a \$250,000 prize. Valiant was cited for discoveries in artificial intelligence, natural-language processing, and computer vision.

MISCELLANY. Massachusetts governor Deval Patrick '78, J.D. '82, has nominated the Honorable Barbara A. Lenk, J.D. '79, a state appeals judge, to the Supreme Judicial Court (SJC), the Commonwealth's highest court. If confirmed, Lenk would become the first openly gay justice on the SJC; she and her partner married after a 2003 ruling by that court caused Massachusetts to become the first state to legalize same-sex marriage....Among *New Yorker* staffers nominated for National Magazine Awards are associate professor of surgery Atul Gawande (see "The Unlikely Writer," September-October 2009, page 30), for one of his medical articles, and Hendrik Hertzberg '65, (see "Hertzberg of the *New Yorker*," January-February 2003, page 36), for three of his Talk of the Town commentaries. Winners will be announced on May 9.



Barbara A. Lenk

COMMONWEALTH OF MASSACHUSETTS

HUMANITIES AND ARTS HONORANDS. This year's roster of National Humanities Medalists, who were honored by President Barack Obama, J.D. '91, at the White House in early March, included five Harvardians: **Daniel Aaron**, Ph.D. '43, Litt.D. '07, Thomas professor of English and American literature emeritus, a founder of the Library of America; historian **Bernard Bailyn**, Ph.D. '53, LL.D. '99, Adams University Professor emeritus and twice winner of the Pulitzer Prize, and two of his



Daniel Aaron



Bernard Bailyn



Stanley Nider Katz



Gordon S. Wood

COURTESY OF BROWN UNIVERSITY

former students, **Stanley Nider Katz** '55, Ph.D. '61, of Princeton, and **Gordon S. Wood**, Ph.D. '64, of Brown, another Pulitzer Prize winner; and bio-

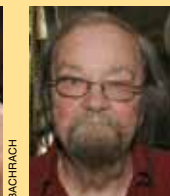
grapher **Arnold Rampersad**, Ph.D. '73. Recipients of the National Medal of Arts, conferred at the same time, included **Robert Brustein**, founder of the American Repertory Theater, and former Poet Laureate of the United States **Donald Hall** '51, JF '57.



Arnold Rampersad



Robert Brustein



Donald Hall

JIM COLE/ASSOCIATED PRESS

a real sense of urgency.” At the same time, both students and administrators wanted to develop not just residential spaces, but sustained communities of advanced students. “Most graduate students today are looking for what I’ve been calling a ‘socio-intellectual’ experience,” Brandt explains. “Their interests go beyond what they will learn and discover in their particular graduate programs—they want to learn from one another and become members of a dynamic and diverse community.”

The development of the Graduate Commons Program brought together research on graduate housing initiatives at MIT, Princeton, and Stanford with Harvard’s experience running both the undergraduate House system and the non-residential Dudley House for graduate students. At the same time, the GCP was seen as an opportunity to foster connections among students and faculty members from parts of the University that might not otherwise interact—drawing together students from the schools of law and medicine, divinity, design, business, and government, as well as public health and education. “Graduate students, perhaps more than other students, can become isolated in their specific academic program—in their laboratories or in their departments,” says Brandt. “But graduate students today want to learn from one another across a wide range of fields and disciplines.”

The president’s office provided funding for a three-year pilot program. Harvard Real Estate Services commissioned two Boston architecture firms to design buildings specifically for the GCP on Harvard-owned sites at 5 Cowperthwaite Street and 10 Akron Street. Rickie Golden, a first-year student in the Graduate School of Design, likes “all the sustainable aspects. There’s great light, plenty of windows; my apartment is spacious and beautiful. It is new and immaculate, and I like that there are a lot of common-room options and places to study and socialize—I love it.” The buildings opened sequentially, in the summers of 2007 and 2008, and the GCP began in the fall. It now houses 429 residents across both locations—mostly grad students, but also their family members, as well as some University staff members and researchers, including two faculty directors at each site. Lerner and her husband, Brian Gill, senior fellow at Mathematica Policy Research, di-

rect 5 Cowperthwaite; David Carrasco, Rudenstine professor for the study of Latin America in the faculties of divinity and arts and sciences, and senior Romance languages preceptor Maria Luisa Parra direct 10 Akron. The faculty members’ role is similar to that of the masters of the undergraduate Houses, hosting events like wine tastings in their apartments and inviting scholars to speak at lectures and dinners: recent guests have included Nicholas Christakis, a medical sociologist with appointments at both the Medical School and the Faculty of Arts and Sciences (see “Networked,” May-June 2010, page 44), and William Graham, dean of the Divinity School. “Students are more used to going to the classroom or office of their teachers,” notes Carrasco. “Here, the process is reversed in a relaxed, social environment.”

Golden recalls, “You hear about programs like this, and you wonder how many of the people around you actually are going to meet and connect with on a deeper than neighborly basis. But I really did make a few good friends....It just adds another dimension of warmth to being in graduate school.” Dustin Smith, a third-year divinity student, first heard about the GCP at an orientation session for admitted students, and entered at its debut in the fall of 2008. “The first friends

I made in the building I met at a free pizza event, and they’re still my friends today,” he reports. He is now a community adviser for the GCP, helping to plan programming and community-building events ranging from a series of Korean film nights to iftar meals during Ramadan. “It’s an avenue for connecting with people that you wouldn’t otherwise have, and I feel like it keeps a lot of people afloat... I’m very fortunate to have plugged into it because I think my experience would have been rough without it.”

GSAS administrative dean Margot Gill emphasizes the importance of such opinions in drawing the best possible graduate students: “Here are students not only telling us, but also saying student-to-student, that one of the reasons they accepted the offer at Harvard was because we have really taken the time to value and support a graduate community.” The GCP was originally funded for three years, but its budget has been stretched to cover four. Gill hopes that the pilot program’s success will not only extend the GCP itself into the future, but provide a model for future graduate housing sites: “This,” she says, “is a success architecturally, it is a success for the neighborhood”—and obviously for the resident students and faculty directors.

—SPENCER LENFIELD

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The Most Important Course?

by MADELEINE SCHWARTZ '12

THIS PAST SEMESTER, my junior spring, I went to my block-mates with a question that had been troubling me for some time. Was Harvard encouraging us to think about the meaning of our lives? One said no. She had expected more of such conversations in college. Another, who spends a good deal of time studying Tibetan Buddhism at the Divinity School, said many of his classes had been about exactly that. He was satisfied for the most part. A third friend asked *why* Harvard should encourage its students to think about their lives when so many end up leading empty existences without any meaning at all.

How should a person live? In my three years at Harvard, I feel I have rarely been asked the question. My courses tackle writers like Plato or Augustine, who spent their time trying to define the good life. But talking about the personal implications of a text in section would be gauche, and I can't imagine trying to bring those conversations to the busy Kirkland House dining hall. Late-night chats with room-mates, such a vaunted aspect of the "college experience," don't really happen when one roommate is shadowing an emergency-room shift at Brigham and Women's, and the other one is finishing up a problem set due the next day.

APPARENTLY, I am not the only one who feels

a little at sea. For the past 20 years, Gale professor of education Richard Light has interviewed Harvard College students on the verge of graduating. Around 2007, he told me, he started to notice a trend. Even though undergraduates were content with the academic education they were receiving, many felt unprepared to take on bigger questions. One student told Light that although his classes had equipped him for work in chemistry and physics, "Harvard forgot to offer the most important course—a course in how to think of living my life."

With the help of dean of freshmen

Thomas Dingman and Hobbs professor of education Howard Gardner, Light set up "Reflecting on Your Life," a voluntary discussion series for first-year students eager to explore those very ideas. In three group sessions of 90 minutes each, freshmen talk about the tenets by which they make their life decisions. Topics vary. One assignment has students write down what Light calls "core values" (which is more important: kindness or fame? kindness or intelligence?). Another asks them to contemplate the meaning of leadership and the purpose of their own educations. The

classes are led by faculty members or administrators and take place in the spring of each year, once the excitement of college has settled into a day-to-day routine.

The program has been quite popular, to the surprise of its creators. "We expected there to be 15 or 20 students interested in talking about this," Light told me. But in the past three years, the program has had an average of 150 students—10 percent of the freshman class.

I'VE BEEN SURPRISED at the relative dearth of such conversations here, especially when compared to the sorts of talks that I had in high school. I spent the second half of my junior year at the "Maine Coast Semester," a four-month program in Wiscasset run by the Chewonki Foundation, an environmental organization. The school is located on a large farm



where the students also work, in part-time shifts. Community discussions are central to the program, and so once a week, the entire school (40 students, plus faculty members and farmhands) comes together in the wood-paneled dining room and talks about how to run the place.

Our daily routines were centered around thoughtful discussion. During my time at the school, one group of students surveyed the carbon footprint of our activities, and presented reports on eating pineapples or taking long showers. When it snowed heavily late into April, the school came together and spent a good 20 minutes talking about whether it was better to clear the paths with salt, quick and effective but terrible for waterways, or to work together and scrape the ice off them. We left the meeting carrying shovels. More often, our conversations took the place of deeper talks: To what extent should one include others in decisionmaking? What is the value of physical labor?

The closest I've come to an organized search for meaning at Harvard is in my Moral Reasoning Core course, which I fulfilled this fall with a class on ancient philosophy. We read Plato and Aristotle, and talked about definitions of the philosophical life. My favorite encounter was with Diogenes the Cynic, a Greek philosopher who spent most of his adult life in a basin, naked and eating raw onions. He was so famous, even Alexander the Great came to pay his respects. Diogenes, who believed that men should disregard the trivialities of social customs, was unimpressed. When Alexander asked if he could do anything for him, Diogenes replied, "Move over. You're blocking the sun."

But no matter how striking the readings, there's a limit to how much you are expected to let them win you over. Conversations are subsumed in the substance of course requirements—papers, note-taking, sections where half the students are watching the clock and waiting for the end of Thursday. When reading the fourth-century *On the Pythagorean Life* for class, the most immediate question is not "What does this mean for me?" but rather "Can I write five pages on this before next week?" It's still schoolwork.

A FRIEND at Carleton College told me that her entire school was recently invited to discuss "How Rich Is Too Rich?"—a

question I wished had been brought up during the first few weeks of February, when it seemed like half the campus was putting on suits for consulting-firm or investment-bank interviews. My roommate was among them; she bought three different skirt suits to meet with firms. For the week before the event, conversations in our room focused on hemline length. When I asked her why, after two years of volunteer work at Harvard, she was now going in for consulting, she told me it would be great preparation for a life in public service. Did the others at her recruiting events feel that way? "I think mostly it seems like the thing to do after Harvard. And it pays."

In the first few months of the economic crisis, in my freshman year, Harvard organized conversations led by its president on the market meltdown, and forums about the economic processes that had led to a worldwide collapse. Even today, I am frequently invited to discussions at the Kennedy School about "leadership," or talks where experts compare schools of thought on the invisible hand. Despite all this, we rarely come together to discuss the moral side of what it means to go out into the world looking to make money.

It's too bad, because it's been my impression since the beginning of my time at Harvard that there is an expectation that each one of us leave this place ready to make an impact on the world outside. I wonder at the idea of creating potential leaders whose decisionmaking has never been challenged in any way more demanding than by the critical-thinking skills that a history class or a Core lecture provides.

I've heard the concern from peers that personal conversations about "big questions," when forced, will just make students uncomfortable and be of no use. When I asked Dean Dingman whether "Reflections" would ever be required for all freshmen, he told me that the idea had been quickly dismissed: "It would make it something that students took because they had to—another Expos program."

I understand the apprehension. Freshman week, our entryway came together for a conversation about race led by a member of the dean's office. The discussion was slow-going, mostly marked by cautious silence.

But while I admire the effort the administration has made in trying gently to prompt

students to think about their lives, such a meek approach is unlikely to ever really shake undergraduates out of the daily drive that Harvard encourages. By the time I was invited to participate in "Reflections" my freshman year, my inbox was so full of e-mails from the *Crimson*, where I had just become a staff writer, and messages from other publications I was comping that I don't think I even noticed that I had received it. I had no idea that the program existed until I learned, while researching this column, that two years earlier, Dean Dingman had asked me to think about the very same questions that were now preoccupying me.

If Harvard is to fulfill its promise that a liberal-arts education can form individuals, not just prepare them for careers, it needs to push its students in a way that Introductory Economics cannot.

In the past few years, the Business School has made ethics a greater part of the curriculum. At the last two Commencements, graduating students have taken an "M.B.A. Oath" to serve the "greater good," and the school recently appointed a professor of leadership as its dean.

It's too soon to know whether these reforms will have an actual impact on the way businesses are run, or whether the graduates will just pay lip service to the idea of ethical finance. What an enforced emphasis on ethics does do, however, is remind people that careers do not exist on a straight and narrow path, and that there is more than one way of leading one's life.

I hope that the College can follow up on this lead. The Office of Career Services recently hosted an "Etiquette Dinner" over J-Term at the Sheraton Commander in Cambridge. An etiquette expert explained how to eat soup at business dinners and when to take off one's jacket. According to the *Crimson*, the students who participated found the event very useful for upcoming job interviews. Perhaps next J-Term, we can come together as undergraduates for something a little more substantial. ▢

Berta Greenwald Ledecy Undergraduate Fellow
Madeleine Schwartz '12 is still chatting with her blockmates.



Were conversations about the meaning of life part of your Harvard experience? Do you think Harvard should do more to encourage such discussions? Visit harvardmag.com/extras to answer the question and see what other readers had to say.

Lefty from Cincy

Southpaw Brent Suter averages nearly a strikeout per inning.

AS A BOY growing up in the Queen City, Brent Suter '12 had an idol: the Cincinnati Reds' Ken Griffey Jr., the speedy, power-hitting center fielder who retired last year after 22 seasons with 630 home runs, and who is a lock for the Hall of Fame. Like Griffey, Suter graduated from Archbishop Moeller High School, a parochial school that is a statewide athletic powerhouse. "I liked Junior's [Griffey's] swing, his ability to make plays in the outfield," Suter says. "He seemed relaxed, just a really cool guy." Suter's Harvard uniform number is 24, the number Griffey wore when he played for the Seattle Mariners at the start of his career.

Today, however, Suter looks to other role models: Randy Johnson, Andy Pettite, and Cliff Lee—all elite left-handed pitchers. A six-foot, five-inch, 215-pound southpaw, Suter has had considerable success retiring collegiate batsmen. In its preseason forecast, College Baseball Insider website named him the Ivy pitcher whom hitters least want to face and ranked him among the league's top three

starters. Last year, Suter was one of only two starting pitchers named to the all-Ivy First Team, and in one sparkling 33-inning stretch, he went a league-best 4-0 with one save and a 3.55 earned run average (ERA), while striking out 33 batters. Left-handed hitters were almost helpless against him, recording only two hits in 24 at-bats for an .083 batting average. Understandably, he still cherishes a dream he's had since childhood: playing in the majors.

There's currently one Harvard-educated pitcher in the big leagues: right-handed reliever Frank Herrmann '06, who had a creditable 2010 rookie year with the Cleveland Indians, posting a 4.03 ERA across 40 appearances. A generation ago, southpaw Jeff Musselman '85 (see "The Dow of Professional Sports," September-October 2001, page 39) pitched five seasons for the

Blue Jays and Mets from 1986 to 1990. The Crimson has sent only five players to the majors since 1943, and only one Harvardian, infielder Eddie Grant, A.B. 1906, LL.B. 1909, played in a World Series, alongside Christy Mathewson and Jim Thorpe for the New York Giants in 1913 (see "Soldier, Scholar, Athlete," November-December 1993, page 83).

Suter throws a fastball, change-up, and curve. The lefty's heater typically zips in at 88 or 89 miles per hour and tops out in the 90 to 91 mph range. He's getting better velocity with age, as he grows stronger and improves in stamina; this allows him to maintain the pop on his fastball throughout a game. "I'm a late bloomer," he says, explaining that he arrived at Harvard as a 175-pound string bean, but has added about 40 pounds thanks to natural growth and weight work. His height provides

leverage and increases the whip of his throwing arm, and simply releasing the ball one or two feet nearer the plate is worth another one or two miles per hour. And he



Brent Suter at O'Donnell Field

A Pitcher's Grips

To throw the two-seam fastball, which has more spin and hence moves more, Brent Suter aligns his second and third fingers along the seams at the point where they are closest together. He grips the four-seam fastball, which goes faster but moves less, with the same fingers perpendicular to a seam where they are more widely spaced. The curve-ball grip puts the index and third fingers together alongside one seam, which imparts the heavy spin that curves the ball's path when the hurler "snaps" it off at the release. The change-up grip is similar to the two-seam fastball, but with pressure applied by the third and fourth fingers and the ball resting deeper in the hand, touching the palm.



works on mechanics, aiming to keep batters from seeing the ball until it is leaving his hand: that diminishes the hitter's reaction time, making a pitcher "sneaky fast."

Actually, Suter throws two kinds of fastball, the two-seam and four-seam, differentiated by his grip on the ball (see sidebar.) The four-seamer travels straighter and a couple of miles per hour faster: it's a good pitch to try when a batter has two strikes, because the extra gas can blow the ball by a hitter for a strikeout. And Suter is a strikeout pitcher: last year he fanned 47 in 49.2 innings pitched, while posting a 4.2 record with a 5.26 ERA. As a freshman he whiffed 53 in as many innings.

Nonetheless, the ability "to throw off-speed pitches for strikes is a big separator," Suter says. Any baseball hurler worth his salt can pound the strike zone with fastballs, but if that's his only pitch, hitters will begin to "sit on" (expect) the fastball and tee off on it. Hence the importance of off-speed pitches like Suter's curve and change-up, which move differently from the fastball and arrive at the plate at a different speed. His "out pitch" is his change-up: thrown with the same motion as the fastball, but with a grip that nestles the ball in the palm of the hand, the change-up may travel eight to 12 mph slower than the fastball, fool-

ing the batter into swinging ahead of the pitch.

Suter gets plenty of outs throwing a change on, say, an 0-1 count, making the batter top the ball for a groundout. When hitters put the ball in play, Suter gets about half his outs from groundouts and half from fly balls. "You strive for ground-ball outs," he says. "Especially with metal bats [which make balls carry farther than wooden ones], you want to keep the ball out of the air. And you always want to miss the barrel of the bat." ~CRAIG LAMBERT



Visit harvardmag.com/ extras to see a video of Brent Suter pitching.

Historic Hoops Season

On the regular season's final weekend, the Harvard men's basketball team overpowered perennial Ivy League top dogs Penn and Princeton to win the Crimson's first-ever Ivy championship. By pacifying the Quakers, 79-64, and taming the Tigers, 79-67, the Crimson men capped off the first 100 years of hoops at the College in the most satisfying manner: Harvard and Princeton shared the 2011 Ivy title with 12-2 records after the Tigers ended their season three days later with a victory at Penn.

Harvard had been the only college not to win a men's Ivy basketball title since the league began in 1956, and the quest for a championship had become a sort

of Holy Grail among Crimson hoopsters and their fans. (The Harvard women, in contrast, have captured 11 Ivy titles.) That's why the season-ending home game against Princeton on Saturday night, March 5, was literally the biggest basketball game in Harvard's history, and sold out weeks in advance. ESPN provided national coverage, and the *New York Times* touted the contest beforehand.

The game lived up to all its hype. In an electrifying first half that saw 18 lead changes and the score tied nine times, Harvard battled to a 37-36 lead by half-time. In the second half, the Crimson gradually took over the game as the pumped-up crowd made the small gym

thunder with cheers. At the final buzzer, hundreds of Harvard students charged out of the stands to mob their team.

A week later, in another thrilling contest, the same two teams met in the Yale gym for a one-game playoff to determine which of the Ivy co-champions would have the league's automatic entry into the NCAA postseason tournament. This one went down to the wire: the Crimson led by a point with only 2.8 seconds remaining, but the Tigers hit a buzzer-beating shot (videotape review required) to win, 63-62. Thus Harvard's postseason play was in the National Invitation Tournament (NIT) rather than the NCAA March Madness. Oklahoma State bested the Crimson, 71-54, in the NIT's first round. (Kentucky dispatched Princeton, 59-57, in the first round of the NAAs.)

The team's 23 victories are the most in the history of the program; the 23-7 overall mark (including postseason) topped last year's 21-8. The Crimson's record of 14-0 at Lavietes Pavilion set a new record for home wins. Forward Keith Wright '12 was elected Ivy League Player of the Year and named to the All-Ivy First Team, while the National Association of Basketball Coaches honored head coach Tommy Amaker as its All-District Coach of the Year for District 13. The triumphant 14-man squad will lose no seniors in May, and has only three juniors. In a column on Harvard's landmark season-ending weekend, the *Boston Globe's* Bob Ryan concluded, "Harvard is coming, and Harvard will not be stopped."



Standout players Kyle Casey (30) and Keith Wright (44) in action as Harvard, in its final home game, beat Princeton, 79-67 to clinch a share of the Ivy League championship

Echoes of the Central Valley

A Chicano writer mines the “humanizing effect of literature.”

YOUNG FICTION writers are often encouraged to “write what you know.” That often yields stories that seem overly autobiographical, yet juiced by primary experience. The work is especially moving when the writer is talented and courageous—and if his empathic sensitivities reverberate in the rest of us, as is the case with Manuel Muñoz ’94, author of *Zigzagger* (2003) and *The Faith Healer of Olive Avenue* (2007).

Both short-story collections focus on Mexican Americans in California’s Central Valley, where Muñoz was born and grew up in a family of farm workers. “It’s very poor; there’s a lot of violence and racial tension,” he says of his hometown, Dinuba, near Fresno. “It’s a forgotten place—or a place that’s never thought of to begin with.”

The books identify Muñoz as gay and Chicano, labels that probably helped draw attention to him as a writer, as well as an early audience—which in turn led to honors, including the prestigious Whiting Writers’ Award in 2008. Much of *Zigzagger*, written in his twenties, articulates the world of young gay Latinos surrounded by America’s agricultural bounty while leading somewhat barren lives. The book was acclaimed by critics and especially embraced by Chicano readers who “welcomed me—and challenged me,” reports Muñoz. “They said, ‘What else can you do with your material to make yourself a proponent of the content? What is

your role as a writer?’” In answer, *The Faith Healer of Olive Avenue* follows a wider cast of characters and families in a Central Valley town that changes over a generation; the lyrical, interconnecting stories are filled with heartbreaking struggles to define selves, aims, and the true nature of home.

Yet Muñoz, who worked hard to move away from a life in the fields, is wary of labels. His debut novel, *What You See in the Dark*, published in March, is neither essentially gay nor Chicano. It marks his

uneven talents. One character is based on Janet Leigh, whom Muñoz researched exhaustively, and the filming of *Psycho*. (That aspect of the book stems from a Harvard film class on Alfred Hitchcock taught by D.A. Miller.)

“Having three women form the core, two white women and a Mexican-American girl, was not what I had planned, nor what people might expect from me as a Chicano writer,” he concedes. To grow as a writer, however, meant delving into themes outside his own time and place, and writing about strangers. “All the books I have enjoyed have inspired empathy for the life of someone I might not have known otherwise,” he says. “The best art always breaks that pattern of what we think is our experience. That’s the great, humanizing effect of literature. Chicano writers are capable of all sorts of things, not just writing about immigration or poverty or working-class lives or geography. I want to start new discussions. Here we have a Chicano writer writing about Hitchcock—what do we do with that?”

That’s not to say that the Central Valley and Muñoz’s experiences there are not still hugely influential. A major theme in *What You See in the Dark*, he notes, is “the way people in a place they consider ‘nowhere’ think outside of themselves through dreaming and imagination and fantasy—like that moment you look at *People* or *US Weekly* and read about celebrities whose lives and stories seem more exciting than your own.” The

Manuel Muñoz



novel weaves the story of Leigh's character with those of a singer, of a tired waitress "who knows she will never leave town," and of the hovering residents thrilled by proximity to stardom—and starving for recognition of their own stories.

Place functions like a muse in Muñoz's life: "Dinuba is a reservoir of creativity for me," he says. Every vacation from his current post, as an assistant professor of creative writing at the University of Arizona, is spent back home with his family; he takes long walks, checking his memory, making notes of what's changed and how, gathering material for characters and snippets of story lines from neighbors and family members, all of whom still live there. "The place was so formative," he supposes, "because I was trying to escape it for so long. It took moving away to make me yearn for my town."

Growing up, Muñoz, who learned English in kindergarten, worked a warehouse job to earn money for clothes and school supplies. He learned of Harvard from a picture in the dictionary (he had looked up the spelling of "Massachusetts"), but it was not until freshman year of high school that he decided to go to college. (He earned only As thereafter, apart from two Bs in gym.) He reports that when he told a Harvard recruiter at a local college fair that he wanted to be a high-school teacher, the man refused to give him an application form, saying he should just attend state college. But Muñoz applied anyway and was accepted, with a scholarship.

He arrived at Harvard with \$80 in his pocket, having spent \$20 on cab fare from the airport. Shy by nature, he still felt lonely and alienated, as he often had in Dinuba, but this time it was because he was from a lower class, less savvy, and poorer than most of his classmates. (Being gay was another complication, because Muñoz struggled to come out of the closet and had not yet done so.) He completed the Undergraduate Teacher Education Program run by the Graduate School of Education, but he was drawn to English courses and then to creative writing, "which became a refuge" under then Briggs-Copeland lecturers Jill McCorkle and Susan Dodd. "There I learned that writing could be my life."

Muñoz's "writing was just beautiful; so much life on the page," recalls McCorkle, now a professor of creative writing at North Carolina State. "He is one of those

students about whom you ask, 'Does he really need to be here?' You want to say, 'Can you go home and just bring me some more of this beautiful stuff?'" She got the sense that Muñoz "didn't know how superior he was, coming into the class, in terms of what he was able to do on the page. He was so fully formed already; he only lacked confidence in himself to let go of the work and put it out there."

His mentors urged him to apply to Cornell for an M.F.A., which he earned in 1998. There, he found a "literary godmother" in Professor Helena Maria Viramontes—who, when Muñoz wavered over attending because it would upset his family, called his mother to reassure her, in Spanish, that her youngest child would be well taken care of in upstate New York.

"I give my siblings my books, but I never ask if they've read them," he says. When his family attended a public reading of *Faith Healer* that he gave for gay students at the California State University at Fresno, they sat in the back, "like they didn't belong," he reports. "But they got to see me give a presentation and answer questions, and the experience had an authority that I don't think they knew writing could command. It became crystal-clear to them what I was doing and what it means to me. I think they see now why it was necessary for me to be away from home in places like Cornell and New York City, where I had the opportunity to study and work, and how lucky I am to get to this point." The public reading also helped neutralize the fact that he is gay. "It removed the privacy of shame that can come along when you have a gay kid in the family," Muñoz says. "It's understood in my family that I am out, but we don't discuss it, which is a very typical Mexican Catholic response."

After Cornell, Muñoz worked at Houghton Mifflin in Boston before moving to another publishing job in New York City. There, he continued writing fiction and saw both his short-story collections published. He was not taken with the cosmopolitan literary scene; if anything, he says, he found other aspiring writers in his age group standoffish; when *Zigzagger* was to be published (by Northwestern University Press), they sounded unimpressed, or actually sorry for him, he says.

The Arizona job offer, in 2007, seemed an affirmation "that my books were seeping into academia, getting read on college cam-

puses in Latino- and queer-studies courses," he says. "A lot of Chicano writers bank on academics being our biggest champions, because it's hard for us to break past what those adjectives 'gay' and 'Chicano' mean to most people and reach a more mainstream audience." He also was excited about serving as a mentor to other writers, having had such good guides himself.

But Tucson reminds Muñoz of Fresno. "After living in New York City, it felt like I was going back into the closet," he reports. Some men he's met are fearful about coming out to too many friends; others are closeted gays who are married. "I feel like I'm back in the '80s here," he adds. "I mean, I have women checking me out because I'm single, don't have a wedding ring or any kids in tow. I never had any of that confusion in New York. It's like an out gay guy can't be living in Tucson."

The tumultuous immigration issue has also prompted him to question whether it's worth staying in such "a volatile state just for a job," and to consider his role as writer in confronting destructive narrative and myth-making in politics. He's been invited to deliver a lecture at Kansas State—the title is "Writing While Arizonan"—"a take on the 'Driving While Brown,'" he says, Arizona's version of "Driving While Black"; his talk promotes critical reading and writing as tools for social change in combatting political mythologies. "Plus, there's a lot to be said for maintaining my visibility as a Chicano professor," he adds. "The need for such role models in higher education is pressing."

In many ways, Arizona has many of the same social, political, and economic constraints Muñoz felt growing up in Dinuba. But they don't eat away at him as they once did. "In some ways it may sound strange, but I am grateful to be living here while these politics are going on," he notes. "Something about being here may be pushing me in a new direction."

"Being isolated doesn't mean being lonely," he tells friends. "If anything, this place has brought me much closer to art and art-making than I ever was in New York. I mean, I have an office where I go to work, instead of writing at a desk cramped in next to my bed," he says, laughing. "My tenure is dependent on my art: I am teaching writing. Being here is an affirmation of my decision to make art the center of my life."

—NELL PORTER BROWN

Comings and Goings

HARVARD CLUBS offer a variety of social and intellectual events around the country. For information on future programs, contact your local club directly; call the HAA at 617-495-3070; or visit www.haa.harvard.edu. Below is a partial list of spring happenings.

On May 3, the Harvard Club of Eastern New York hosts astronomy professor Alyssa Goodman, who lectures on "Seeing Science." On May 12, McKay professor of computer science Harry Lewis discusses "The Future of Liberal Education" at the Harvard Club of Minnesota. Lewis also elucidates "Life, Liberty, and Happiness After the Digital Explosion" for members of the Harvard Club of St. Louis on June 5.

On June 1, the Harvard Club of Princeton welcomes Robert Sackstein, an associate professor of dermatology and medicine, for a discussion of "What Everyone Should Know about Stem Cells."

HAA Reviews Classes

THE Harvard Alumni Association (HAA) is reorganizing the way it reaches out to

College alumni by focusing on generational class cohorts grouped according to related life-cycle experiences.

To aid that process, the HAA has conducted its first-ever comprehensive class-governance review, examining class structures, leadership development, reunions, other class activities, and other alumni needs; the results were to be presented at the annual spring meeting of HAA directors on April 15.

"This is not a 'gotcha' game of 'How much money do you raise?'" says Timothy P. McCarthy '93, HAA vice president for College affairs, a longtime class secretary, and a lecturer in the faculties of arts and sciences and of government. "It's an ambitious effort to characterize on a much deeper level than we ever have before the landscape of alumni activity at the class level...with an eye toward integrating and fortifying the relationship among classes, the alumni population, and the HAA as an organization."

The review, overseen by McCarthy and Robert P. Fox Jr. '86, among others, has involved surveys sent to their fel-

low class secretaries (which yielded an 80 percent return rate), and a gathering of class data that includes histories on reunion attendance figures, gift-giving, and information from class reports. Class leaders and secretaries, among others, will attend the class leadership conference in Cambridge in September.

The reorganization has also created four new and more clearly defined HAA alumni-outreach committees grouped into stage-of-life cohorts: "Building New Communities" (undergraduates through fifth reunion); "Strengthening Alumni Foundations" (sixth through twenty-fifth); "Broadening Alumni Engagement" (twenty-sixth through fortieth); and "Maintaining the Connection" (forty-first and beyond). Previously, the HAA committees were "Classes and Reunions," "Undergraduates," and "Recent Graduates," but "The 'one-size-fits-all' committee approach wasn't really working," adds McCarthy. "We need to do a better job at serving alumni at different stages of their lives."

Alumni Sing Out

The newly formed Jameson Singers, a Boston-area choral group of 52 members—47 of them alumni (39 of the College, 8 of the graduate schools)—were scheduled to make their debut on April 10 at the Payson Park Congregational Church in Belmont, Massachusetts. Singing music by Brahms, Monteverdi, and Samuel Barber, the group will be conducted by its founder, retired Harvard choral director Jameson Marvin.

"It's been amazing getting back into singing and not just using the muscles, but that piece of the brain," says Juliana Koo '92, the group's manager and a former member of the Collegium Musicum. "I sang a little after I first graduated, but then life takes over—and if you don't have it in your work life, music goes by the wayside."

That's a common experience, judging by the number of alumni who've joined the group to rekindle the passion for choral music they felt as undergraduates working with Marvin, whose tenure spanned more than 30 years. "I wanted to recreate the same high-quality musical experience we had at Harvard not only for myself, but for them," he says. "It can be very uplifting for the audience and for members to experience that."

Very few of the choir members are professional musicians;



Jameson Marvin

Marvin could think of only one. The others are mainly lawyers, doctors, or business consultants, like Koo, who seek a "great musical experience," she says. More singers are needed, she adds; the group is open to members of the community as well as Harvard affiliates. Weekly rehearsals are required—as are annual dues of \$100 (to cover the costs of rehearsal space, sheet music, and an accompanist). For more information, singers and music lovers can visit the group's website at www.jamesonsingers.org.



Visit harvardmag.com/extras to hear the Jameson Singers rehearse for a spring concert.

Vote Now

THIS SPRING, alumni will vote for five new Harvard Overseers and six new elected directors for the Harvard Alumni Association (HAA) board. Ballots, mailed by April 1, must be received back in Cambridge by noon on May 20 to be counted. The results will be announced at the HAA's annual meeting on the afternoon

of Commencement day, May 26. All Harvard-degree holders, except Corporation members and officers of instruction and government, may vote for Overseer candidates. The election for HAA directors is open to all degree-holders.

For Overseer (six-year term), the candidates are:

For Overseer



Flavia B. Almeida

Richard W. Fisher



Verna C. Gibbs

F. Barton Harvey



Carl J. Martignetti

Nicole M. Parent



David J. Vitale

Kenji Yoshino

For Director



Rohit Chopra

Tiziana C. Dearing



Katie Williams Fahs

Peter C. Krause



Charlene Li

Sonia Molina



James A. Star

Patric M. Verrone



George H. Yeadon

Flavia B. Almeida, M.B.A. '94, of São Paulo, Brazil. Partner, The Monitor Group.

Richard W. Fisher '71, of Dallas. President and CEO, Federal Reserve Bank of Dallas.

Verna C. Gibbs '75, of San Francisco. General surgeon and professor in clinical surgery, University of California, San Francisco.

F. Barton Harvey '71, M.B.A. '74, of Baltimore, former chair and CEO, Enterprise Community Partners.

Carl J. Martignetti '81, M.B.A. '85, of Chestnut Hill, Massachusetts. President, Martignetti Companies.

Nicole M. Parent '93, of Greenwich, Connecticut. Co-founder and managing partner, Vertical Research Partners, LLC.

David J. Vitale '68, of Chicago. Executive chairman, Urban Partnership Bank.

Kenji Yoshino '91, of New York City. Chief Justice Earl Warren professor of constitutional law, New York University School of Law.

For Elected Director (three-year term), the candidates are:

Rohit Chopra '04, of Washington, D.C. Policy adviser, Consumer Financial Protection Bureau.

Tiziana C. Dearing, M.P.P. '00, of Bedford, Massachusetts. CEO, Boston Rising.

Katie Williams Fahs '83, of Atlanta. Marketing consultant/community volunteer.

Peter C. Krause, J.D. '74, of New York City. Investment banker and real-estate investor.

Charlene Li '88, M.B.A. '93, of San Mateo, California. Founding partner, Altimeter Group; author.

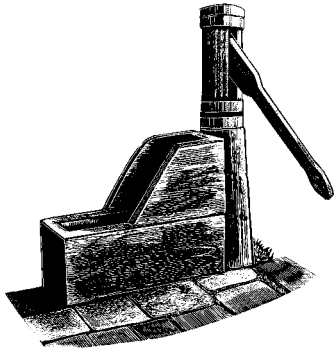
Sonia Molina, D.M.D. '89, M.P.H. '89, of Los Angeles. Endodontist.

James A. Star '83, of Chicago. President, Longview Asset Management.

Patric M. Verrone '81, of Pacific Palisades, California. Television writer, producer.

George H. Yeadon '75, of Pittsford, New York. Managing consultant, Kodak Solutions for Business.

Granny Talk



"Your wooden arm you hold outstretched to shake with passers-by."

EDWARD EVERETT entered Harvard at the age of 13 and took his degree 200 years ago at Commencement ceremonies held in those days in August. Even then he was known as a formidable orator. He was valedictorian of the class of 1811 and spoke on "Literary Evils." That was "an unmeaning phrase," he later wrote. "It was, I suspect, an inferior performance. Not much can be effected, even by a mature mind, in a set discourse of only 12 minutes in length...."

He went on to a life as an educator and a politician from Massachusetts and was president of Harvard from 1846 to 1849. He didn't much care for that job. Harvard lacked resources, and the students nicknamed him "Old Granny."

When the Civil War came, Everett attained the moment for which he is best remembered. Asked to deliver the principal address at the dedication of the Soldiers' National Cemetery in Gettysburg, Pennsylvania, he spoke for more than two hours. He was followed by President Abraham Lincoln, who delivered perhaps the

most famous speech in American history in a little more than two minutes.

Here is a less-known fact about Everett. Primus is grateful to Anne D. Neal '77, J.D. '80, for pointing it out. She is president of the American Council of Trustees and Alumni in Washington, D.C., and also a vice regent of the Mount Vernon Ladies' Association of the Union, the oldest preservation group in America. The organization was formed in 1853 to raise money to buy Mount Vernon from the Washington family. In 1858, Everett embarked on a campaign to raise funds for the cause. He traveled the country giving speeches about Washington's character and his role in the establishment of the Union (Everett was a staunch Unionist). He spoke 129 times to that end and turned over his speaker's fees of \$69,064 to the Ladies' Association, helping them toward the \$200,000 that Washington's heirs required for Mount Vernon, no piddling sum. When next you visit this historic site, tip your hat to Old Granny.



BEST FRIEND: Stressed Yale law students were able to reserve 30-minute sessions with therapy dog Monty (short for General Montgomery) in a space at the Yale Law School Library dedicated to the purpose during a three-day trial program launched March 28. Monty, a border terrier mix, belongs to Julian Aiken, an access services librarian. Numerous students signed up for

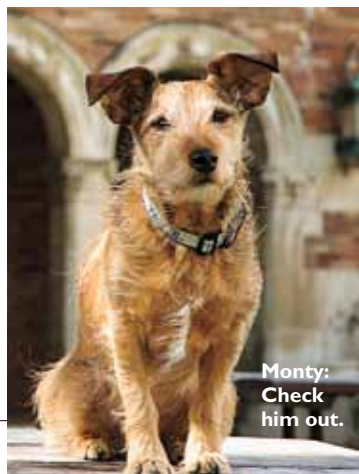
Monty's attention. His assessment of the program is not yet known. But pay attention, Harvard. Yale Law School is perennially at the top of *U.S. News's* rankings of the nation's law schools, perhaps just because of such caring individuals as Monty.



WORRIER JAMES: The summer 2009 number of the *Harvard Library Bulletin*—published in January 2011—contains several essays written on the occasion of an exhibition at Houghton Library marking the centennial of the death in 1910 of psychologist, philosopher, and Harvard professor William James, M.D. 1869, LL.D. 1903. One essay, "A Professor's Salary," explicates a typed, single-page document among the James papers that chronicles his salary across a 30-year span. The essay is by Drew Faust, president of Harvard and Lincoln professor of history.

Of the document she writes, "We do not know who compiled it, when, or for what purpose. It is typed, and James himself is not known to have typed anything." Perhaps it is the work of a biographer.

James's salary rose from an annual rate of \$600 in 1873 to a high of \$5,000 in 1899. Faust writes that "by the 1890s his salary was close to Harvard's professorial maximum. How did this compare to average salaries across the state and nation? In 1890, when James was paid \$3,500, the average national income was \$445; the state average was \$460, a ratio of nearly 8:1. The average Harvard University professor today makes about five times the national average." But, she notes, "Despite the consistent increases in his income, James worried incessantly about his financial security." ~PRIMUS V



Monty:
Check
him out.

Gilded Nut

A coconut with Bible stories

QUAFFERS TODAY may never have imagined such a thing as a goblet made from a coconut and gilt silver, but about four centuries ago cups such as the one shown here were well known to a species of European collector. These vessels were often displayed in a so-called cabinet of curiosities, or *Wunderkammer*, usually room-sized, containing a hodgepodge of remarkable items ranging from preserved animals, skeletons, minerals, alleged mermaids, and the tusks of narwhals (but said to come from unicorns), to wondrous man-made objects: ethnographic specimens from exotic locations, antiquities, clockwork automata, paintings, sculptures. Some 1,500 coconut goblets from the early modern period survive. Danielle Charlap '09 wrote an 87-page undergraduate history thesis about them, entitled "Chasing Wonder: Coconut Cups Collected in Europe, 1500-1700." She examined in particular this one, from the Harvard Art Museums/Busch-Reisinger Museum. Hans Peter Müller, a silversmith active in Breslau, Germany, fashioned it around 1600.

"Prior to the sixteenth century, Europeans had yet to round the Cape of Good Hope, making coconuts a real rarity, meriting their place among medieval church wonders working in the service of God," writes Charlap. As Westerners spread the coconut palm from southeastern Asia to western Africa, Brazil, and the Caribbean, the nuts would become a commodity with many uses, including as a source of copra and coir. Müller made this goblet at a time when the status of coconuts was changing from rare to commonplace, but a nut carved with scenes in relief and covered with richly wrought silver was deserving of a place in anyone's *Wunderkammer* as an

example of "the blurring, testing, and teasing of the line between nature and artifice." Charlap sees the *Wunderkammer* owner as part of a pan-European "elite club of Humanist collectors engaged in questions of nature and art." (She has moved on from coconuts and is now an assistant curator at the Museum of Jewish Heritage—A Living Memorial to the Holocaust, in New York City, where she is at work on an Emma Lazarus exhibition.)

Müller's goblet is part of the *Tangible Things* exhibition—on view through May 29 in galleries at the Historical Scientific Instruments Collection in the Science Center and at several other Harvard venues, and previously explored in this space (see March-April, page 68) and online (at harvardmagazine.com/2011/03/out-of-place). A curator of that exhibition is senior lecturer Ivan Gaskell, who guided Charlap in preparing her thesis. The exhibition brings together 200 intriguing things from disparate collections throughout

the University; one of its goals is to challenge viewers to consider the way in which a thing has been categorized traditionally and whether it might be thought of and arranged differently. Thus a number of objects are displayed not in their usual surroundings but, unexpectedly, elsewhere. A plain, wooden, beautifully curved Native American bow has left its shelf at the Peabody Museum of Archaeology and Ethnology to appear upright in a case at the Harvard Art Museums among sculptures and paintings. This goblet is temporarily in the Houghton Library, where it appears in a gallery among a small collection of Bibles—starting with Gutenberg's—famous for the beauty of their typography and design. The cup, too, tells a Bible story. Müller carved into the nut scenes from the life of Samson, showing him removing the gate of Gaza, combating the lion, and smiting Philistines with the jawbone of an ass.

—C.R.



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