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HARVARD MAGAZINE

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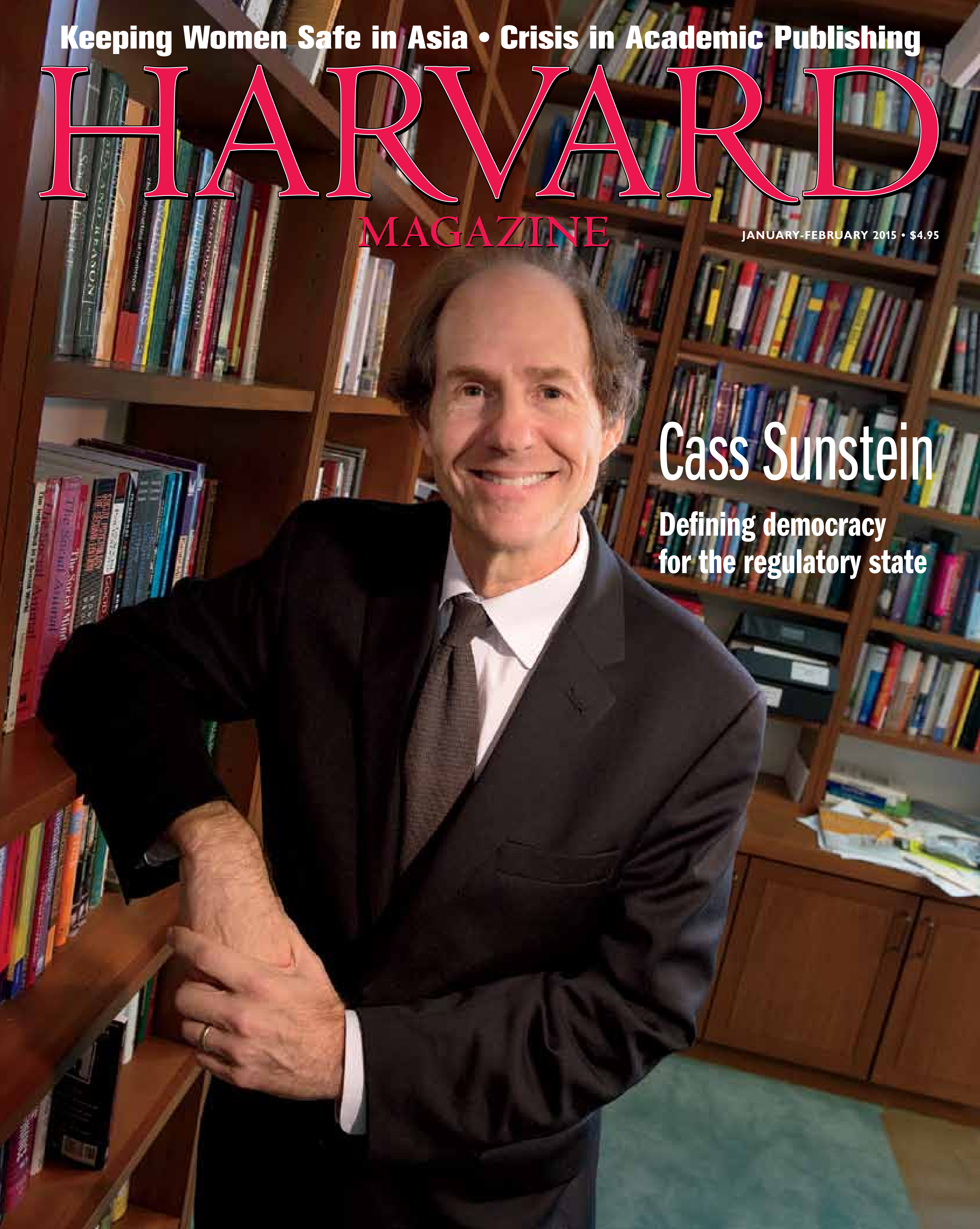

Cass Sunstein

Defining democracy for the regulatory state

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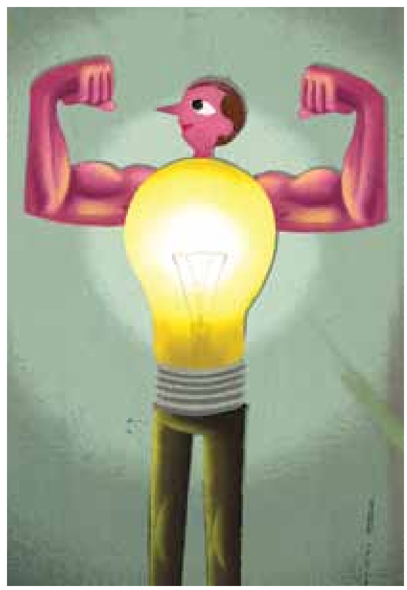

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On the cover: *Photograph by Jim Harrison*

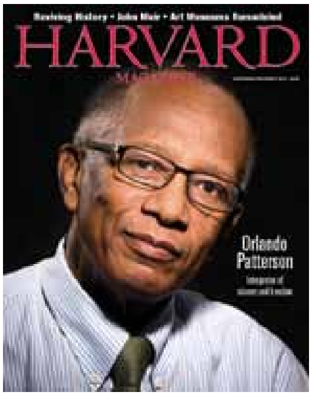
FROM TOP: DEAN KAUFMAN; STU ROSNER; PETE RYAN

Cambridge 02138

Silhouettes, missing football fans, the Sixties

ETHICS EDUCATION

As a frequent speaker on business ethics, I was eager to read "Making Organizations Moral," along with its subtitle "Ethics Elevated" (November-December 2014, page 11). But I was quickly disappointed as I read Professor Max Bazerman's comment that "My job is not about what ethics you follow, but how to bring you up to your own ethical standards."



Such subjective morality is what got Jeffrey Skilling [former CEO of Enron] and other Harvard Business School (HBS) alums in a lot of trouble. It's time HBS said there is right and wrong, that ethics pursues what is right, and that those who behave unethically should be punished. We can't afford the nation's flagship business school to continue to wander through a sea of moral relativism.

William Bowman, M.B.A. '78
Arlington, Mass.

Most Americans are not confused about the concepts of honesty and dishonesty. We expect honesty from our judiciary, news media, and police forces. We have no such confidence in businessmen, advertisers, and politicians. Why wouldn't it be a good idea to move people with *Harvard* in their résumés to the side of unquestioned honesty?

James G. King '52
Juneau

HISTORY REBOOTED...

Thank you for "The New Histories" (November-December 2014, page 52). It demonstrates the expanded scope and potential impact of *Harvard Magazine*. A larger audience than alumni, important as we may be, benefits. You delivered a thoughtful, informed, exciting overview updating readers on debates and developments in history and its new collaborators. We seem to be moving into a transdisciplinary realm of inquiry, and that's a good thing. I plan to use your essay in seminars and distribute it broadly among colleagues. Hope you don't mind.

Donald Warren
Professor Emeritus, Education History and Policy, and University Dean Emeritus, School of Education, Indiana University Bloomington

Your bang-up article understandably focuses on the Harvard historians doing exciting work in expanding the field of play beyond the nation-state and the written record. But it would have been graceful to acknowledge some of the historians who have pioneered this approach, even if they were stationed elsewhere. I am thinking of such historians as William H. McNeill (*The Rise of the West*, and with his son John R. McNeill, *The Human Web*), David Christian (*Maps of Time*; "*Big History*"), Philip Curtin (*The World and the West*), André G. Frank, and others.

Keith Roberts '65, LL.B. '68
Author of The Origins of Business, Money, and Markets
Bethesda, Md.

...AND SHADOW ART

In an issue that spotlights the emergence of global approaches to history ("The New Histories"), it is sad to find this worldly wisdom missing entirely from "Shadow Art" (Treasure, page 104). The craft of paper cutting (Jianzhi) originated in China. The

On Public Service

When I became president of Harvard I had the privilege of getting to know Boston Mayor Thomas Menino. We would meet for breakfast at Parkman House on Beacon Hill or at Elmwood here in Cambridge, and he would offer guidance drawn from his many years spent serving the public. When he wrote me a note of thanks after Harvard awarded him an honorary degree and signed it "Your friend, Dr. Menino," I smiled at his evident pleasure in his new title—and filled with pride that he called me his friend. He was a great leader and a great teacher, and I will forever be one of his grateful students.

In November, I attended Mayor Menino's funeral and listened as his colleagues, friends, and family described what he meant to them and to the countless people whose lives he touched. Mitchell Weiss '99, M.B.A. '04, who served as the Mayor's Chief of Staff, delivered a moving eulogy, describing the many ways in which people came to love a man who dedicated his career and much of his life to making the lives of others better. "They loved you," he recalled, "when you said things like 'I am Mayor of all the people. And government is for helping people.' And when you meant it. And when that made it okay for them to believe it was true and to make it so."

Public service challenges us to pose fundamental questions about who we are: What is your responsibility to others? What values guide your work? What kind of society do you want to see? Students across the University are eager to explore these questions as part of their education, examining the meaning and purpose of their lives as they determine where to direct their talents. Each year, for example, some 1,600 volunteers serve Greater Boston through the Phillips Brooks House Association. Since its founding in 1904, the Association has grown to include more than 80 programs led by undergraduates, including summer camps for local children, mentoring and tutoring programs, and the nation's first student-run homeless shelter.

In recent years, Harvard has created new opportunities for students to put theory into practice and to connect policy with on-the-ground issues. In 2011, I launched the Presidential Public Service Fellowship Program to support 10 students from across the University in a summer project or internship. I sit down with them in the fall to hear about their work and to learn more about what inspires them. Their areas of focus are diverse—advancing affordable housing and community development in Chicago, advocating for a leadership program for parents of public school children in San Francisco, increasing access to dental care throughout central and western Massachusetts, and working for a crowd-funding charity that connects donors to teachers and classrooms across the country. But they all share a deep satisfaction with their work, describing their experiences as "the most fulfilling," "the most meaningful," and "life-altering."

Of the Fellows who have graduated, half are currently working in the government, education, or non-profit sectors. For many students, however, choosing a path that is less well defined than those leading to careers in the private sector is too uncertain to be appealing. This fall, in an effort to ensure that students in Harvard College have a better understanding of the opportunities available to them, the Center for Public Interest Careers, the Institute of Politics, and the Office of Career Services organized the first-ever Public Service Recruiting Day. Twenty employers came to campus for a day of one-on-one interviews with nearly 100 seniors, giving them the opportunity to see how their interests and skills can translate into careers that they may not have seriously considered otherwise.

"Enter to grow in wisdom. Depart to serve better thy country and thy kind." These imperatives, penned by my predecessor Charles William Eliot and carved into Dexter Gate, continue to inspire students no matter their field or discipline. Like my friend Dr. Menino, they believe in the power of public service. Encouraging them to transform their lives by making a difference in the lives of others ought to be among our highest aspirations.

Sincerely,

Drew Faust

7 WARE STREET

Pay—*and* Performance?

For more than a decade, some members of the College class of 1969 have questioned the University's compensation for staff members of Harvard Management Company (HMC). It is a tempting target, locally and globally.

No doubt many elite-college graduates look down their noses at the University of Alabama, the *other* Crimson (Tide), whose football coach now makes $6.9 million per year. But how many outsiders know Harvard for its world's-largest university endowment, and its highest-paid portfolio manager, who received $7.9 million in calendar year 2012 (the most recent reported—and a fraction of the top pay a decade ago): 10 times President Drew Faust's salary, and about 40 times that of a tenured professor? How to reconcile that with, and within, a nonprofit institution?

Annualized Investment Returns

	1 year	5-year	10-year	Assets ($billion)
Yale	20.2%	13.5%	11.0%	$23.9
Princeton	19.6	14.0	10.5	21.0
Stanford	17.0	13.2	9.9	21.4
Harvard	15.4	11.6	8.9	36.4

On the larger scale, what does it mean for society if this is the "market" for investment talent? Among the outside private-equity, hedge-fund, and real-estate professionals who also invest assets for HMC, some no doubt make much *more* than the Harvard staffers in downtown Boston. Indeed, the eight- and nine-figure gifts headlining the current capital campaign often derive from the stupefying fortunes accrued by members of that profession. HMC itself has suffered an exodus of investment managers who set up their own hedge funds, often with a stake from Harvard, in pursuit of far greater personal rewards. (The family foundation of Jonathon S. Jacobson, M.B.A. '87, who decamped in 1998 to set up Highfields Capital Management LP, has assets recently reported to exceed a third of a billion dollars.)

Good questions, but not the *only* question. Beyond what Harvard *pays*, what has it *bought* for its money? Charles Skorina, a recruiter for money-management talent, also writes about the field. As he put it in late September, "[W]e ourselves have written critically about pay and performance at Harvard, but our emphasis has been mostly on the performance part." Skorina has calculated returns for several endowments. His data for the largest—Harvard's closest peers as research universities with huge portfolios and complex investment strategies—are shown.

Each school has different objectives and assets, to be sure. But consider the pertinent example of Yale: the second-largest endowment; a portfolio even more skewed toward illiquid, private investments (which have lagged behind public-securities returns during the recent bull market); and even more reliant on its endowment to fund operations than Harvard was when things fell apart in the fall of 2008. The Elis' 10-year return, a good measure of long-term performance, stands at 11.0 percent, versus 8.9 percent for HMC.

Compounding matters, HMC maintains that its mix of internal and external fund management *reduces* expenses (another hint at how much the principals of those private investment firms take home). As HMC board chair James F. Rothenberg—a member of the Harvard Corporation, co-chair of The Harvard Campaign, and former University treasurer—said in the September announcement of 2014 endowment results, "HMC's unique hybrid model has saved the University approximately $2 billion over the last decade as compared to the cost of management for a completely external model." Performance figures are reported after expenses, so Harvard should be enjoying a nine-figure annual cost advantage over its peers. That suggests its gross investment returns lag even further behind.

Absent an upending of money management, HMC professionals' pay packages seem unlikely to change. Their compensation is in fact *more* attuned to performance than much of the staggering fee and other income commanded at the financial-services pinnacle. But a sustained 2 percent underperformance relative to peers—three-quarters of a billion dollars in annual returns at the Harvard endowment's current size, and compounding over time—is too big to ignore.

An energetic conversation about compensation and equity within the University? Bring it on. But another highly relevant question for HMC's new president and CEO and its board, whatever their pay policy, concerns performance.

~John S. Rosenberg, *Editor*

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earliest extant work dates to A.D. 750; however, the practice may have developed much earlier there, possibly in association with the invention of paper, which historians customarily date to the Eastern Han Dynasty (A.D. 23-220). Although using cut paper for portraiture may indeed have been uniquely European, the Chinese had been deftly cutting paper into ornate decorative pieces for hundreds of years before the snipped *Silhouette* became popular. It might be interesting to explore how the technique made its way from China to Europe or whether it occurred to the Europeans independently.

Kate Levine, Ed.M. 2003
Portland, Ore.

CLIMATE-CHANGE COUNTERPOINT

Harvard is at war with carbon dioxide (CO_2): President Drew Faust has declared climate change driven by human-produced CO_2 "one of our most consequential challenges." This magazine pays homage to this proclamation by printing proposals to contain CO_2, most recently in a letter by Bevis Longstreth and Timothy E. Wirth urging divestment of fossil-fuel investments by the Corporation and an article by Jonathan Shaw on the benefits of a carbon tax (September-October 2014, page 10, and "Time to Tax Carbon," page 52).

I humbly submit that such measures are neither realistic nor necessary. CO_2 is a trace atmospheric gas responsible for keeping the planet green and helping to keep it temperate.

Many arguments against the carbon warming theory are available elsewhere, are too lengthy to present here, but actual measurements show the Global Average Temperature has remained statistically constant for nearly the past 18 years! This is in serious conflict with the warmists' gold standard, the model calculations from five reports of the UN International Panel on Climate Change, which give rise to such admonitions as produced by President Faust.

On the other hand I am gratified to read on page 104 of the November-December issue that professors McCormick and Huybers are carefully examining some five climate "crises" occurring between A.D. 536 and 1741, a period encompassing such large anomalies as the Medieval Warm Period (MWP) and the Little Ice Age (LIA). Strong evidence says that during the MWP the climate supported viniculture in Britain and in northern North America (Vinland to the Vikings). During the LIA, cold destroyed crops, produced famine and related disasters; the Thames froze so solidly that fairs were held on its surface. Both of these "crises," we should note, occurred naturally without the hand of man contributing and both were more disruptive than the climate we endure now.

William E. Keller '46, Ph.D. '49
(in physical chemistry)
Santa Fe

Climate scientist Michael McElroy, Butler professor of environmental studies, responds: Dr. Keller recognizes that CO_2 is responsible for keeping the planet green and temperate, but fails to appreciate that unless we act, we are heading for levels of atmospheric CO_2 not seen since dinosaurs roamed the planet 50 million years ago. Global average temperatures are higher now than at any time since modern recordkeeping began 150 years ago: 14 of the warmest years on record have occurred since

2000. It is true that there has been a pause in the rise of global temperatures over the past decade or so, but this is neither surprising nor unanticipated. Such a pause was also observed between 1950 and 1970, for example. The atmosphere and ocean function as an integrated system, with the ocean's heat content vastly greater than the atmosphere's, and global climate exhibits various natural fluctuations in response to this coupling. Despite the recent hiatus in surface temperature increases, there is compelling observational evidence that the planet as a whole has continued to absorb more energy from the sun than it releases back to space. Surface warming is therefore destined—inevitably—to resume, and will probably accelerate. To invoke the historical studies of Michael McCormick and Peter Huyber is disingenuous: they are exploring how *past* climate fluctuations have influenced historical developments. President Faust took her position after carefully considering the evidence and consulting widely with knowledgeable experts.

TOO FEW FANS!

Sitting at home in Illinois as I watch Harvard games on TV or on my computer, I see partially filled stadiums and wonder where the fans are. Are they so egocentric that they value individualism above team support?

Apparently they don't see the link between the world of organizations and their individualism. In business, for example, you not only have an individual role but also, usually, one supporting a team, a department, a division, and the organization itself. Without such support the organization must fail.

I confess that as an undergrad in the '40s I urged Adams House to install a TV set in the Common Room. Selfish, I know, but growing up watching the Monsters of the Midway and Northwestern, on Saturdays I opted for great Notre Dame games on TV in the comfort of the Common Room instead of Harvard's obsolete single-wing poor performances in an occasionally frigid stadium.

If local alumni and students are glued to their TVs, computers, and smart phones watching the games, I can't do anything about that, but that's not supporting the teams or, for that matter, the University.

Justin Fishbein '48
Highland Park, Ill.

Editor's note: The Stadium was *plenty* full for The Game (see page 36).

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.

HOW HARVARD USES GIFTS

I write to alert fellow Harvard alumni to a disheartening experience in negotiating with Harvard's office of gift planning to establish a testamentary bequest to fund scholarships for deserving Harvard undergraduates. The office of gift planning advises that the University will accept such a bequest only on condition that the donor consent in a side-letter to an annual "assessment," that is, a reallocation of income earned by the bequest to meet unspecified administrative and overhead expenses. The current "assessment," I am told, comes to 28 percent of income. The side-letter requested by the office imposes no limit on the extent of assessments once the bequest comes into being.

The foregoing prompted me to inquire of the gift-planning office whether I could make a testamentary gift to Harvard, to be expended outright in support of undergraduate scholarships, but not subject to the "assessment" process. I was advised that the University currently accepts such outright gifts without "assessments," but that the policy is subject to change at any time.

I appreciate that Harvard must use a portion of the income derived from its endowment to defray expenses associated with fund management, especially after the losses suffered in the recent economic recession. But a diversion of more than one-quarter of earned income from endowed funding (or from selected portions of it) seems excessive. The reallocation also raises a question of *cui bono*—which among the various Harvard instrumentalities and agencies benefit from the "assessment" program, and to what extent.

Leonard H. Becker '65
Washington, D.C.

University treasurer Paul J. Finnegan responds: Harvard thrives academically with the critical support of the University's administrative

framework and resource management. Important functions throughout the University and schools are necessary to provide high-quality services—such as student services, academic planning, facilities operations and maintenance, finance and human resources, and information technology, as well as other aspects of general administration. Costs for these vital functions are defrayed in part by using a portion of the endowment's annual distribution. This recovery policy—which varies from school to school and is commonly lower than the figure referenced in the letter—ensures that each endowed fund plays a role in sustaining Harvard so that it can admit and support the very best students, hire and retain a world-class faculty, and conduct cutting-edge research.

ART-MUSEUM ADMISSIONS

I WONDER IF anyone enjoying the hoopla and celebration surrounding the reopening of the Harvard Art Museums has dared to make this invidious comparison: the Yale art museums, i.e., their Art Gallery and their Center for British Art, are free at all times to the public. These are major museums and certainly worth a visit. The Harvard museums charge $15 for admission.

I wonder why this is so. Is Yale that much richer than Harvard? Or are they decidedly more generous? The Harvard community and the alumni might be favored with an explanation.

A. DAVID WUNSCH, PH.D. '69
Belmont, Mass.

The museums' response: Over the course of several decades, the Harvard Art Museums have provided and continue to provide free admission to approximately 60 percent of our visitors annually, including Harvard faculty, students, and staff (plus one guest); youth under 18; Cambridge residents; and Massachusetts residents (Saturdays from 10 A.M. to noon), among others. We rely on a mix of endowment revenue, donations, and grants, as well as earned income, to fund the robust research, exhibitions, and programs that are offered to the University community and the public.

ACKNOWLEDGING ARMENIA

I WAS SURPRISED to see the familiar black and white photograph on page 75 in the November-Dececember 2014 issue, and could not wait to read the caption [in Off the Shelf, illustrating a brief review of a book on the Middle East after the end of Ottoman rule]. But to my dismay, there wasn't a single mention that the woman in the photograph was an Armenian Genocide survivor, crying over one of the many victims of the brutal crimes perpetrated by the Turkish government. Armenians and genocide scholars throughout the world know this photograph all too well. The caption in the magazine reads: "The endless pain of the Middle East: woman and dead child near Aleppo, Syria."

This photograph is available online in the Library of Congress archives, titled: "Armenian woman kneeling beside dead child in field, within sight of help and safety at Aleppo." It is part of the collection titled Near East Relief, along with countless other Armenian Genocide photographs all taken from 1915-1916. These Armenians walked for hundreds of miles, forced from their ancestral homeland in Anatolia and driven into the deserts of Syria. The Turkish government offered no food, water, or shelter. Many Armenians were led to their destination point at the concentration camp of Der Zor, never to see the light of day again. Some Armenians, including my grandparents, survived thanks to international relief organizations stationed in Syria and Lebanon.

That is not just a photograph of a woman or a dead child, in some unknown place, from a long lost era. The death of that child, and the death of 1.5 million Armenians, is a sad reminder that many families never had a chance at life like mine did. The genocide is not some event that happened in the past, to be forgotten. Seeing this caption with that photograph is a sobering reminder that images from the Armenian Genocide are still not widely recognized today.

SYLVIE PAPAZIAN
Cambridge

THE SIXTIES

I'VE BEEN BROWSING for information on friends in the *Harvard and Radcliffe Class of 1969 Forty-fifth Anniversary Report* that came in the mail recently. It was striking to me how little mention anyone made of the tense political context of those years. My own entry in "The Report" just gives my contact information (and of course I'd like to hear from people), but in retrospect I wish I had written something like this:

The atrocity of the Vietnam War affected all of us in that class. I was a fringe follower of SDS, and was present at the non-violent occupation of University Hall. I was later placed on probation by the Harvard administration (without a hearing or any other kind of due process), because a dorm proctor identified me as having been present near the room where a demonstration was taking place protesting the presence of a recruiter from the Dow Chemical Corporation. Opponents of the war were aware that Dow was the manufacturer of napalm, although many of us learned only later that napalm had actually been invented by a Harvard chemistry professor.

My subsequent working life was affected by that war and that context: I went to law school out of a sense of obligation to do something with political significance, and that led to a career that was not a good fit in many ways. I had been an English major, and took many classes in art history and the visual arts. Absent the war and the University's behavior in connection with totally valid student protests, I would probably have pursued something in line with those interests.

There was an article in *Harvard Magazine* about Harvard/Radcliffe dropouts from the class of 1969 ("Dropouts," July-August 2010, page 32), and that article also failed to mention the political alienation and stress that colored the Vietnam War years. It's hard not to conclude that there is an unspoken consensus that all of that should be forgotten. I don't sign on.

CHRISTOPHER BELLO '69
Astoria, Ore.

Editor's note: The author was Craig Lambert, also a member of the class of 1969.

HM
Visit harvardmag.com/extras for additional letters.

BACK TO (SPELLING) CLASS

AN ASTUTE READER OF "Frenetic Fall" (November-December 2014, page 24) observed that we misspelled the name of Samuel Moulton, the Harvard Initiative for Learning and Teaching's research director. We plead guilty to two additional misspellings of names as well. In "A Slice of Russia" (page 16F), the name of Michael Popik, a docent at the Museum of Russian Icons, was rendered incorrectly in its second use. And in "Lest We Forget" (page 83), the first name of author Douglass M. Carver '59 lacked its second "s." To all, apologies. *~The Editors*

EGO'S CLOSEST ALTERS

Choosing Confidants

"I COULDA' BEEN a contender," erupts Marlon Brando, as the former boxer and dispirited dockworker Terry, in the iconic scene from *On the Waterfront.* "I coulda' been somebody. Instead of a bum, which is what I am—let's face it." Terry is unloading his anguish on his brother Charley, the key figure in his undoing, played by Rod Steiger. It makes for great drama: two siblings wrestling with regret, accusation, and a life-altering mistake that still haunts them both.

That's how it happens in the movies. In fact, such film scenes may have helped persuade us that we all act this way, sharing our feelings about the most important aspects of our lives with the few people we know best: family, lovers, close friends. Yet recent research on social networks by Mario Luis Small, Grafstein Family professor of sociology, suggests that in reality, our interactions often don't fit this model at all. "We believe that we only talk about important matters with people who are important to us," says Small. "I believe that is wrong."

Small built his reputation with studies of urban poverty like the 2004 book *Villa Victoria: The Transformation of Social Capital in a Boston Barrio,* which grew from his Harvard doctoral dissertation. He spent eight years at the University of Chicago before returning to Harvard in 2014. He's currently at work on a book that analyzes how people mobilize their relationship networks when seeking social support. Two recent papers he published in *Social Networks* shed light on the question.

"How do people decide whom to talk to when they are under stress and need support?" asks Small. "This could be acute stress, of the 'I need help now' variety, or a persisting problem like, 'I have been depressed for three weeks.' It doesn't imply a material request—just the need to talk and have someone listen. I'm probing human motivation and how people think about their networks."

Sociologists call the set of friends and family members people turn to when they want to talk out important matters the "core discussion network." Its size averages about three people, and for 20 percent of the population, this network, sadly, includes no one. For nearly 30 years, social-network researchers have argued that each person's closest, strongest ties comprise the core discussion network, but no one has empirically tested that assumption.

Small analyzed data from an online survey of 2,000 adults selected to represent the national U.S. population. Half the respondents were asked to identify their core discussion partners, but the other half were asked to "recall the last time they discussed a matter that was important to them. They were then asked to report on the topic they talked about and the person they talked to," writes Small. They were also asked to report whom they were close to. These data produced the finding that 45 percent of confidants were

Illustration by John Holcroft

people whom the respondents did not consider personally important; they were often *not* the family and close friends social scientists thought them to be. Instead, a confidant might well be a barber or beauty-salon employee, a bartender, a therapist (either physical or psychological), or a trainer at the gym; they are priests, rabbis, doctors, and financial advisers. People often selected confidants because they were knowledgeable on the subject (e.g., doctors, nutritionists, financial planners). At other times, the chosen confidants simply happened to be available at the time people felt the need to discuss a given topic.

"In fact, we often avoid using people who are close to us as confidants," Small explains, "exactly *because* they are important to us." For one thing, a troublesome issue might concern that potential listener directly: one classic case is an extramarital affair. Another obstacle can arise if the discussion would *worry* the confidant: "A graduate student running short of money might not talk about this with his parents, out of fear of worrying them," says Small. Third, people have more at stake in how important others see them. "If you are close to your sister, you don't want to talk with her about some borderline-unethical action you are considering," he explains. "You care a lot about her opinion of you." And fourth, people avoid confiding in others because, inevitably, word gets around to someone else: in Small's formulation, "Amy won't talk to Bob about this, because then it will get to Charles."

Core discussion networks, Small says, also depend to a significant degree on the organizations to which people belong. "You could imagine your life as a series of places you frequent, and spend time in regularly—schools, mosques, gyms," he says. "These are the contexts where people are actually interacting with others. As sociologists, we know a lot about social structure. It's time to start learning a lot about interaction." ~CRAIG LAMBERT

MARIO LUIS SMALL WEBSITE:
www.mariosmall.com

GROUNDING ABSTRACTION

Thinking Conceptually

WHAT MAKES LEARNING so difficult is that no mind—even a young one—is a blank slate.

Children under the age of five, for example, think that the wind and sun are alive, but that plants aren't. They confuse signs of movement with signs of life; they think that inanimate things are dead. They can't disentangle what it means to be alive from what it means to be real, to exist, or to be visible. When they talk about the body, they might say that the heart is for beating, and the lungs for holding air, but not that these organs connect.

Between the ages of six and 10, children construct a more advanced, vitalist theory of biology: they come to understand that the body must obtain energy from outside itself in order to function. This fundamental premise becomes linked to other concepts—that bodily functions sustain life, health, and growth, or that specialized body parts work together in a system. First, though, the kids must overwrite their original intuitions, a process that hugely taxes their mental resources.

When assistant professor of psychology Deborah Zaitchik of Harvard Medical School tested adults with Alzheimer's disease on these same scientific concepts, the results surprised her. Many of her study subjects at Massachusetts General Hospital were retired physicians, scientists, and professors, yet, "looked just like four-year-olds on a whole series of tasks," she says. The results from the two groups seemed to match perfectly. "Why should that be?"


Deborah Zaitchik and Susan Carey

JIM HARRISON

She was also startled to discover another population whose vitalist theory had degraded: healthy elderly adults, between the ages of 65 and 81. On sorting tasks, they often misjudged airplanes, watches, and bicycles as being "alive" simply because they moved. What, she wondered, makes biological concepts so difficult to grasp, and to hold onto? Which cognitive processes does such conceptual change depend on?

When she asked Susan Carey, Morss professor of psychology, to suggest developmental psychologists who might want to collaborate on this question, Carey thought about her own work with adults born with Williams syndrome, a condition that leads to severe mental retardation, and offered to join Zaitchik's project herself. Although adults with Williams syndrome have extensive factual knowledge and advanced language abilities, their understanding of biology remains stalled: one subject, for example, had an avid interest in the "funerary practices of other religions," but no biological understanding of death. As Carey asked herself how this gap could occur, it became clear that conceptual development involves more than "just acquiring new facts."

Zaitchik and Carey are now engaged in a multiyear, interdisciplinary research project that investigates the relationship between such conceptual change and "executive function" (EF), a suite of mental processes including inhibitory control (the ability to suppress distractions and inappropriate responses); set-shifting (the ability to switch between different modes of thinking depending on the nature of a problem or a goal); and working memory (the ability to actively hold information in mind while updating it). Adults with Alzheimer's or Williams syndrome, they explain, have less EF and thus have either lost, or never built, a more advanced theory of biology. As for the healthy elderly, Zaitchik and Carey suspect they haven't truly "lost" their biology knowledge; instead, their deteriorating EF undermines their ability to express that understanding. Their inhibition has become too weak to suppress the instinct that moving objects are alive.

In the case of young children, the literature linking stronger inhibitory control and working memory to higher math and reading scores had already suggested that these functions affect skill development. With their new finding that EF scores predicted scores on biology tests, Carey and Zaitchik showed that executive function also shapes conceptual development. Recently, one of their postdoctoral research fellows, Igor Bascandziev, ran trials in which he led young elementary school children in "training sessions" that modeled how body parts work together. Children with higher EF scores left with a stronger understanding of bodily systems and, more surprising, of vitalist concepts they hadn't been explicitly schooled in: the ideas of "alive" and "dead." As Zaitchik puts it, "They got the bigger bang for the buck." For those children, "Learning is more effective."

Understanding the cognitive functions that govern learning may, down the road, change pedagogy. "The business of education is conceptual change," says Carey. Yet the implications of their research reach beyond curriculum design. Children in higher-income households tend to have stronger EF, she points out, emphasizing that "executive function is not a fixed trait." Indeed, new research suggests the opposite. Last November, psychologists at New York University published a study showing that kindergarteners in a program focused on strengthening their executive function demonstrated large gains in math, reading, and vocabulary—and the effect was particularly large for children in low-income schools.

Zaitchik and Carey remain hopeful about the potential "downstream" impact of their work generations hence, but for now, they will focus on the big, underlying theoretical questions that excite psychologists and philosophers. Three years into their National Science Foundation grant, says Carey, they feel confident they are "barking up the right tree." They've established that executive function has a powerful relationship to conceptual change. In the next two years, they'll seek to answer the questions of how and why. ~SOPHIA NGUYEN

LABORATORY FOR DEVELOPMENTAL STUDIES:
https://software.rc.fas.harvard.edu/lds/research/carey/members

OUTSIZE INGENUITY

Company Size Matters

BECAUSE she has spent decades writing about how businesses manage innovation, Rebecca Henderson calls it a fitting coincidence that, before moving to Harvard in 2009, she spent many years as the Eastman Kodak professor of management at MIT's Sloan School. It was, after all, the monumental shift from film to digital photography that sent Kodak into bankruptcy.

"I work with firms that are worried that they are going to be Kodak," the McArthur University Professor explains. She has found that companies that innovate successfully are skilled at anticipating consumer needs, managing the research and development of new products to meet those needs, and constructing business models that include new offerings.

But recently she has focused on one of the most globally consequential shifts in history—from an economy based on fossil fuels to one based on alternative energy—and she is finding that some past lessons about innovation may need to be reconsidered.

Under most circumstances, Henderson has found, small start-up companies may be better equipped to launch and cope with "disruptive innovation"—changes that set off a sea change (see "Disruptive Genius," July-August 2014, page 38). A large company's assets can limit its ability to maneuver. "If you're Kodak, for example, some of the assets that kept you in business for so long include unbelievable manufacturing ability in film, so one of the constraints as you attempt to innovate is keeping your existing assets, which are a huge source of advantage, but not letting them trap you into models that don't make sense."

Among those existing assets in large, successful firms are employees with "skills and capabilities that support the pursuit of operational excellence"—but this is "often a quite different set of skills and approaches than one that generates innovation and experimentation," she says. Start-ups, on the other hand, often work without restrictive mental models that can stifle creativity. And, she adds, smaller firms in many industries see a greater return, dollar for dollar, on their research investments. A start-up's lack of cash can be a problem, but it can also force a company to be nimble: "It's a great advantage because you have to really hustle. If a project doesn't work, you take it down and start again." Big firms need to act like small, cre-

PHOTO: JULIETTE HALSEY/HARVARD UNIVERSITY

A COLLECTIVE ACT OF GIVING

78%
SENIOR CLASS GIFT PARTICIPATION

THEY CHATTED OVER MEALS, hosted study breaks, and even handed out candy in exchange for a conversation. Members of the Class of 2014 Senior Gift Committee found creative ways to encourage classmates to make their first gift to Harvard.

Their dedication paid off with 78 percent participation, a record number of leadership-level gifts, and an impressive $56,000 total.

Leading a team of over 150 volunteers offered co-chairs Arleen Chien, Preetha Hebbar, Terah Lyons, Kavya Shankar, and Joshua Zhang a chance to continue the pay-it-forward tradition of senior classes. Hebbar, a history and science concentrator who lived in Cabot House, explains, “As I went through Harvard, I realized that it was a transformative experience. I was inspired to become involved with Senior Gift because I wanted to hear other people’s stories.”

Through the intense seven-month process, the leaders became extremely close. “It was totally consuming, but we knew it was worth it,” says Lyons, who lived in Eliot House and concentrated in social studies.

Zhang, an economics concentrator who lived in Leverett House, sees giving as a great way to stay connected: “I told everyone that Senior Gift was just the beginning of a lifelong relationship with Harvard.”

THE HARVARD CAMPAIGN
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2. In-county as stated on Form 3541	0	0
3. Other classes mailed through the USPS	0	0
4. Free or nominal distribution outside the mail	268	0
E. Total free or nominal distribution	431	163
F. Total distribution	255,041	257,272
G. Copies not distributed	1,528	1,438
H. Total	256,569	258,710
Percent paid and/or requested circulation	99.8%	99.9%

I certify that the information above is true and complete.
Irina Kuksin, Publisher

ative ones to innovate significantly, she says, acknowledging that this is a difficult proposition for a large, tightly run company.

Yet Henderson—who also co-directs Harvard Business School's Business and Environment Initiative—says small companies *don't* necessarily have an advantage in alternative energy "because the capital requirements for energy are so great." Large, established companies have guaranteed revenue streams, and cheaper access to capital. Yet, as in other sectors, those companies are often deeply invested in their traditional businesses, with little incentive to move into carbon-free technologies.

Still, "There are a number of very large firms making aggressive and exciting moves in this space," Henderson reports, citing Walmart, which draws 25 percent of its energy from renewable sources, as well as Amazon and Google, which have made "massive investments in renewable power" to run their server farms. BP, she adds, has invested significantly in plant-based biofuels, and General Electric's Ecomagination initiative includes a large investment in wind power.

But making real progress in clean energy, Henderson points out, requires establishing a fair price for carbon: increasing fossil-fuel prices to cover the costs of their use beyond harvesting, refining, and transporting them. Coal, for example, is cheap only if you don't count its effects on human health and the climate. Higher, more realistic prices, she asserts, would motivate businesses to use alternatives such as nuclear, geothermal, solar, or wind power.

In her course "Reimagining Capitalism: Business and the Big Problems" (also the topic of a forthcoming book), she discusses the power of business to foster solutions to large-scale social problems such as climate change, access to clean water, and inequality in education. She sees both "enormous economic opportunity and significant risk" in tackling such problems. "One of the things I say to my students is that running a business in such a way that it both generates great returns and tackles the big problems is difficult, since it requires paying constant attention and balancing multiple goals. But I also suggest that, in many ways, it's much more satisfying."

Ultimately, though, she believes corporations will accept these challenges because it's smart business practice—it involves employees in the enterprise of innovation. "Firms that have goals that are pragmatic, but focused on really making a difference," Henderson says, "can generate a sense of purpose and commitment in the workforce, among their suppliers, and within the communities they work with, which can dramatically increase the creativity and productivity and engagement of the firm."

~ERIN O'DONNELL

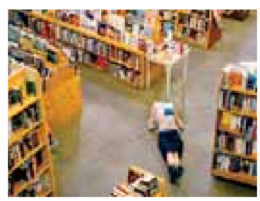
REBECCA HENDERSON WEB PAGE:
www.hbs.edu/faculty/Pages/profile.aspx?facId=12345

Illustration by Pete Ryan

Harvard²

Cambridge, Boston, and beyond

COURTESY OF THE GIBSON HOUSE MUSEUM



FROM LEFT: HARVARD FILM ARCHIVE; ARNOLD ARBORETUM; JOAN MARCUS/ART

Extracurriculars

Events on and off campus during January and February

THEATER

American Repertory Theater
www.americanrepertorytheater.org
Father Comes Home From the Wars (Parts 1, 2, & 3), by Pulitzer Prize-winning playwright Suzan-Lori Parks, is directed by Jo Bonney. Set during the Civil War, the drama explores the cost of freedom and the true nature of personal choice.
(January 23-March 1)

Left to right: Orson Welles in *Falstaff* (a.k.a. *Chimes at Midnight*), at the Harvard Film Archive; from *The Invented Landscape*, paintings by Nancy Sableski, at the Arnold Arboretum; a scene in *Father Comes Home From the Wars,* at the American Repertory Theater

FILM

www.hcl.harvard.edu/hfa
The ***Orson Welles Centennial*** celebrates the versatile and influential artist with screenings that range from popular classics—*Citizen Kane, The Lady from Shanghai,* and *Touch of Evil*—to *The Immortal Story* and the unfinished *It's All True.*
(January 16-February 9)

The Lost Films of Robert Flaherty series features the first film made in the Irish Gaelic language: the 1935 *Oidhche Sheanchais (A*

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Night of Storytelling). All known prints of the 11-minute work, in which Tomas O'Diorain spins tales of the sea around a fire at an Irish cottage, were thought to be lost until this one was found by Houghton Library staff in 2012. (January 30-February 15)

MUSIC

Sanders Theatre
www.boxoffice.harvard.edu
An evening of jazz with the **Christian McBride Trio** and the versatile young vocalist **Cécile McLorin Salvant.** (February 6)

The Harvard Krokodiloes and **The Harvard Lowkeys** join forces for an a cappella pop-music concert. (February 20)

Spotlight

RISD MUSEUM

Circus: Prints, Drawings, and Photographs illustrates the charms and thrills of this traveling entertainment during its heyday in Europe and America. The first modern circus appeared in London in 1768; another would debut in Newport, Rhode Island. Each offered equestrian feats. As the phenomenon grew, especially between 1850 and 1950, other animals, acrobats, clowns, and "freaks" were added. At RISD, James Tissot's *Ladies of the Chariots* (circa 1883-85, above), renders circus mythology, while *The Nightmare of the White Elephant* (1947), by Henri Matisse, captures the dynamism of the center ring.
RISD Museum
Providence, Rhode Island
Through February 22
http://risdmuseum.org/art_design/exhibitions/circus

Junior Parents Weekend Concert: A Night of Brahms features the Harvard Glee Club, Radcliffe Choral Society, Harvard-Radcliffe Collegium Musicum, and the Harvard-Radcliffe Orchestra. (February 28)

EXHIBITIONS & EVENTS

The Carpenter Center for the Visual Arts

http://ccva.fas.harvard.edu

Boston-based artist ***Luther Price*** cuts up and otherwise transforms a range of discarded film footage to create wholly new films or 35 mm slide shows. (January 26-February 1)

The Collection of Historical Scientific Instruments

Http://chsi.harvard.edu

Finding Our Way: An Exploration of Human Navigation. Early tools and techniques used by sea-going cultures include items from the Harvard Map Collection. (Opens February 14, with a related lecture on February 12 by Donner professor of science John Huth.)

The Peabody Museum of Archaeology & Ethnology

www.peabody.harvard.edu

Anthropologists Takeshi Inomata and Daniela Triadan lecture on **"Gordon Willey's Legacy: New Insights into the Origins of Maya Civilization."** An exhibit on ***The Legacy of Penobscot Canoes: A View from the River*** continues. (February 19)

Harvard Art Museums

www.harvardartmuseums.org

The newly renovated museums creatively highlight many ***World's Fairs.*** Works by Hishikawa Morohira, among other artists, appear in ***Japanese Genre Painting.***

Harvard Semitic Museum

www.semiticmuseum.fas.harvard.edu

From the Nile to the Euphrates: Creating the Harvard Semitic Museum celebrates its robust collection of Near Eastern artifacts and the vision of its founder, the late Hancock professor David Gordon Lyon.

Currier Art Museum

www.currier.org/exhibitions/still-life-1970s-photorealism

Still Life: 1970s Photorealism delves into the work of artists like John Baeder and Chuck Close, who finely render scenes and landscapes from everyday life.
(Opens January 24)

Portland Museum of Art

www.portlandmuseum.org

The Coast & the Sea: Marine and Maritime Art in America offers more than 60 paintings, dating from 1750 to 1904, and other artifacts that helped shape national cultural identity and foster independence. (Opens January 30)

Fuller Craft Museum

www.fullercraft.org

Legacy of Fire: Clay Dragon Studios Revisited. This retrospective exhibition showcases the range of works—old and new—by the many ceramic artists who were involved with the influential East Cambridge cooperative studio between 1976 and 1984. (Opens January 31)

LECTURES

The Radcliffe Institute for Advanced Study

www.radcliffe.harvard.edu

"The Thousands." Author and Knafel fellow ZZ Packer reads from her novel-in-progress, which chronicles several families of

Moroccan roast chicken with onions, tomatoes, and raisins in a warm, simple setting

STAFF PICK: Sweet and Spicy

At the rightly named Moroccan Hospitality, sisters Nouzha Ghalley and Amina Ghalley McTursh make almost everything from scratch. Traditional chicken bastilla ($5.99) is served as an appetizer, but the bundling of tastes—from cinnamon, crushed almonds, and eggs to a splash of rose water—is bold. The buttery phyllo-wrapped beef "cigars" ($3.99) hold flecks of onion, orange peel, and cilantro. Tenderly fried potato cakes ($3.99) are laced with garlic; use caution spooning on the creamy hot chili paste (*harissa*). For entrées, try the chicken *tfaya* ($13.50), roast poultry on the bone topped with a sweet and spicy mélange of caramelized onions and raisins; or a range of tagines (stews, slow-cooked in clay pots). The lamb stew has green olives and honey, while potatoes, carrots, peas, artichokes, and onions pack the vegetable version ($11.99), spiked with preserved lemon. Piles of feathery couscous with golden raisins come on the side. Last year the restaurant migrated from its original storefront in Malden to Somerville. The new environs are a healthy walk from Cambridge's Porter Square, and offer welcome refinements: orange- and crimson-colored walls, banquettes with soft pillows, white tablecloths, and candlelight.

Moroccan Hospitality
http://themoroccanhospitality.com

COURTESY OF MOROCCAN HOSPITALITY

blacks, whites, and Native Americans from the end of the Civil War through Reconstruction and the Southwestern "Indian Campaigns." (February 3)

A symposium on **"Women in Biotech"** examines the divide between the large number of women who pursue advanced degrees in related scientific fields and their representation in leadership positions in biotech firms. (February 9)

NATURE AND SCIENCE

The Arnold Arboretum
www.arboretum.harvard.edu
Enjoy a vigorous walk along tree-lined (and possibly snowy) paths, with free guided tours on January 11 and February 8. Indoors, starting on February 21, paintings by Nancy Sableski are on display in ***The Invented Landscape.***

Events listings are also found at www.harvardmagazine.com.


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Preserving Heirs and Airs

Boston's history glimpsed through one eccentric's home • by Nell Porter Brown

Clockwise, from top left: The Gibson House Museum's lavish entrance hall illustrates how an upper-class family lived in the early days of the Back Bay's development; the home's relatively simple façade; Rosamond Warren Gibson with her three children (Charles Jr. is in front)

The stone and brick townhouse at 137 Beacon Street, a block from the Public Garden, was one of the first grand manses that helped transform the polluted marshlands and mudflats of the Back Bay into Boston's most urbane, affluent neighborhood of the latter nineteenth century. Three generations of the prominent Gibson family lived there, the last of whom was Charles Hammond Gibson Jr. A patrician bon vivant, he ensured the house would be preserved "as is," in all its Victorian opulence, and become the Gibson House Museum after his death. The property opened to the public three years later, in 1957, and was designated a National Historic Landmark in 2001.

"It is the only residence in the Back Bay that retains its original architectural elements," says museum curator Wendy Swanton, noting to the three-story glass-windowed ventilation system, and ice and coal sheds in the rear courtyard. "It's the only place to see what these homes were like during that important time in Boston's history."

Yet the deeper story reveals one man's response to changing times and his own quest for importance, if not immortality.

An Anglo- and Francophile, Gibson wrote Petrarchan sonnets and droll travelogues. (The Woodberry Poetry Room at Harvard's Lamont Library holds recordings of an 80-year-old Gibson reading some of his poems in 1953; these could soon be available online.) Gibson was also known for his rose gardens, which drew hundreds of admirers to the family's summer home in Nahant, where the butler called him "sire," according to a 1950 *Boston Sunday Herald* article. It goes on to call him "a Proper Bostonian whose Victorian elegance puts modern manners to shame," and "a small man...with a nimble, if sometimes cantankerous physique... He strolls around with a sort of swagger stick with a silver tip out of deference to

Photographs courtesy of the Gibson House Museum

From left: Charles Gibson Jr.'s study exhibits his own books and social standing; portraits of Charles Gibson Sr. and Catherine Hammond Gibson who, as a widow, bought the land and had the grand townhouse built in 1859-60

the fact that gold would be too vulgar." An aesthete and self-proclaimed "individualist," Gibson enjoyed drama and cultivated his ties to Boston's elite as well as to England's upper classes. (He even spoke with an affected English accent.) In his study, his books *Among French Country Inns* and *The Wounded Eros* lie out amid tomes on ancient ruins and European masterworks. The walls are hung with depictions of coats of arms, along with the Gibson family crest, and a framed invitation, requesting Gibson's presence in 1906 at the White House wedding of Alice Roosevelt, which came from her father. Framed thank-you notes from Winston Churchill and Queen Elizabeth II, both recipients of his poetic tributes, are on display in his dressing room. "He wants us to know 'I'm well-connected,'" museum guide Katie Schinabeck says during a recent tour. "The more you learn, the more you see the complexity of his character, and that makes him human. I like him for that."

Amid the bids to impress, one senses a genuine love of all things genteel, especially as embodied by his mother. Rosamond Warren Gibson descended from a paternal line of doctors (e.g., John Warren, founder of Harvard Medical School); her mother was a Crowninshield, one of the most enterprising merchant families in early America.

She died in 1934. By then Gibson "was dedicated to keeping everything exactly as she had left it" at the house, says Schinabeck, "and to preserving, in his manner and dress, the lifestyle of his parents." In his later years,

In time, "almost everyone who lived in the Back Bay was somehow related, or was friends with your relatives."

Gibson was known to walk to dinner every night at the nearby Ritz Carlton Hotel, often dressed to the nines in a top hat and tuxedo under his big raccoon coat. Some neighbors dubbed him "Mr. Boston."

JUST INSIDE THE MUSEUM, dark walnut double doors shut out the sunny modern day. The first-floor rooms are framed in the same carved walnut woodwork; landscape paintings hang in gilded frames; the mahogany dining table is set with gold-rimmed Haviland Limoges china. Heading upstairs, Schinabeck points out the central heating system. The circular shaft rises from a central opening in the second-floor ceiling, providing a view of the sky and allowing warm air from the lower floors to flow into the upper stories through glass vents etched with stars.

Such cutting-edge amenities (along with indoor plumbing—a modern sewage system was part of the new neighborhood's infrastructure) were installed by Charles Gibson's grandmother, Catherine Hammond Gibson. She was a widow with one son, Charles Hammond Gibson Sr., who was in his twenties when she bought the lot in the burgeoning luxury development and built the house in 1859-60. "She hoped it would help her son attract a suitable wife," explains Swanton. Meanwhile, the Back Bay was expanding; gravel fill arrived day and night by the trainload from Needham, Massachusetts. The massive public-works project would continue for another four decades, eventually reclaiming 570 acres. Boston's wealthy families were drawn by the Parisian-styled grid of tree-lined streets and Commonwealth Avenue's gracious park. In time, "almost everyone who lived in the Back Bay was somehow related," says Swanton, "or was friends with your relatives." Catherine Gibson's nephew built an almost identical house next door. (Isabella Stewart Gardner's father built her a home on the next block.)

By 1871, Charles Sr. had married well—to Rosamond Warren. They moved in with his mother, and soon produced Charles Jr., Mary Ethel, and Rosamond. (When the sisters married in the 1910s, they lived in Back Bay homes of their own.)

After her mother-in-law died in 1888, Rosamond Gibson redecorated parts of the house. She put the "Japanese Leather Wallpaper" in the entrance hall, and redid the second-floor music room in the more modern, lighter and simpler Aesthetic style:

Cooking in the house ended in the mid 1930s; the kitchen, with its soapstone sink and 1884 cast-iron oven, manufactured by Smith & Anthony Stove Co., Boston, is especially well preserved.

Rosamond Gibson's bedroom, which was redecorated by her mother in 1871, features soft colors, family portraits, and a 15-piece bird's-eye maple bedroom set carved to look like bamboo.

white woodwork with rose- and gold-patterned wallpaper. Her own bedroom was redecorated by her mother, Anna Crowninshield, as a wedding gift.

As a young man, Charles Jr. traveled, socialized, and wrote. Some of his books were published by vanity presses, but his chronicle of castles and churches in France, *Two Gentlemen of Touraine*, which appeared under a pseudonym in 1899, became a standard text. *The Wounded Eros* contains passionate sonnets about love found and lost, but no mention of a woman. Some people have debated his sexual orientation. "He was a very eccentric lifelong bachelor, a poet and an author; we have no proof or documentation that he was gay or not," says Swanton. "In a way, I feel we should respect his privacy and let others draw their own conclusions as they wish."

After his father died, in 1916, Gibson moved back home to live with his mother. By then he was likely ending a two-year appointment as Boston's parks commissioner, Swanton says, and had designed a "convenience station" for Boston Common based on the Petit Trianon at Versailles. Once built, however, the pink-granite rotunda (most recently reopened as a restaurant) caused controversy; some on the city's Art Commission accused him of using the project to promote himself and his tastes. According to Swanton, Gibson had little formal training; he had attended MIT's School of Architecture, but never graduated, as he often led people to believe.

"He was aware of legacy," she adds, "and he worked very hard to create a persona, wanting everyone to believe he was ex-

From left: The music room, a family gathering spot, holds many treasures, such as the Japanese apothecary chest and a lithophane lamp from Germany; a circa 1916 portrait of the ever-dapper Charles Gibson Jr.

tremely well-educated and wealthy." His financial status, especially after the Depression hit, is not clear. Certainly public beautification projects were no longer a priority. By the early 1930s and 1940s, reports Suffolk University history professor Robert Allison, A.L.B '87, Ph.D. '92, the economy and changing city demographics had prompted many Beacon Hill and Back Bay families to move to the suburbs. If their homes had not already been chopped up into rooming houses and apartments, sold to institutions, or simply left vacant, he says, they would be within in a few decades. "Back Bay had been the real preserve of Brahmanism," he adds. "For someone like Charles Gibson, there are so many ways in which he was being marginalized." The 1950 *Herald* article reported that Gibson "deplores the foibles of the age, an age in which he sees the heights of aristocracy being leveled into plains where all men are considered alike. While he often gets cross about all this, he can laugh at it, too."

Perhaps because money was scarce, or he was grieving, or both, Gibson dismissed the servants after his mother died. Within a few years he was living in only a portion of the house; the other rooms were already roped off, awaiting display. Visitors were treated to "martinis and stale bread on the stairway," Swanton says, "because he didn't want people sitting on the furniture." He also wrote notes and tagged furniture, artwork, and personal items for future stewards, she adds, "obviously concerned that the world was leaving him behind." Gibson's personal sensitivities led him to preserve the home as a historic record, for what it revealed about the way of life he revered. In 1992, the Boston Landmarks Commission honored his foresight by designating the interior a rare and unique surviving example of an intact Back Bay row house. In the end, Gibson was important because he was right.

CURIOSITIES: A Delicate Power

Born in India and raised in Paris, Shantala Shivalingappa is among the world's best practitioners of Kuchipudi, a classical narrative dance from South India rarely performed in Boston. "It is so complete," she says of the form. "It has force and grace, strength and fluidity, rhythm and melody, speed and stillness." She adds, "What is difficult is bringing all this together in a good balance and doing justice to each." She performs this feat throughout *Akasha* (the Sanskrit word means "sky" or "space"), her five-part solo program. "Inconceivable by mind, imperceptible to senses, it pervades, as well as holds and contains, all that exists," she notes. It is a "dreamscape" that generates "the music and movement of the piece." On stage, Shivalingappa takes the audience on a transformative trip to meet Hindu gods, embodying the wild range of these primordial beings with a superhuman precision. Every movement, from the tilt of her toes to the dart of an eye, demands delicacy, even as she squats, jumps, and swivels as the fearsome Shiva, her favorite deity. Four musicians accompany Shivalingappa, and sometimes she sings. Yet her freeze-frame shapes resonate more deeply. The idea, she says, is to move viewers beyond mere understanding—to "touch their hearts and leave them with a flow." She hopes for "a privileged moment of sharing of that intense energy and emotion that are intrinsic to this style…to create something that takes you out of yourself, and lets you feel, for a moment, greater and lighter, and a sense of togetherness, of 'oneness.'"

Shantala Shivalingappa

COURTESY OF ICA

Institute of Contemporary Art, Boston
February 27-28
www.icaboston.org

A World of Food

The Cambridge Winter Farmers' Market opens for a fourth season.

COURTESY OF AMANDA ESCAMILLA

COURTESY OF AMANDA ESCAMILLA

From left: Amanda Escamilla of Tex Mex Eats and her fresh tamale; Apex Orchards's apples; cheeses from Narragansett Creamery; and produce grown by Silverbrook Farm

THE BEST "Frito pie" begins with only the finest local ingredients: a packet of corn chips. Chef Amanda Escamilla, of Tex Mex Eats, slits open the bag, ladles in some warm Texas chili, and tops that off with cheddar cheese and sweet onions. Grab a fork, she advises, and dig in. "Those big flavors make me feel cozy," says the South Texas native. "Growing up, Frito pies were all over the place, at the carnival and the baseball games. It's comfort food." She makes and sells these addictive collations, along with fresh tamales using homemade masa (dough) steamed in corn husk wrappers, at the Cambridge Winter Farmers' Market, which opens on January 3.

Forget dusty bins of turnips, carrots, and spuds: this market, like many others around the region, is fast moving beyond these New England staples and broadening its mission. "We favor new and small businesses with promise," reports market manager Kim Motylewski, "and we are expanding the range of food cultures and people represented."

This season, Tex Mex Eats and The Soup Guy are joined by Indonesian cook Nuri Auger, who serves entrées like the spicy beef *rending daging*, and the Jakarta-style street snacks *comro* and *misro:* fried balls of shredded cassava filled, respectively, with spicy fermented soybeans, and brown or palm sugar. These three vendors are among the two dozen who set up shop every Saturday, from 10 A.M. to 2 P.M., at the Cambridge Community Center (5 Callendar Street). "We still have root vegetables," Motylewski assures. "But we also have greens and herbs, apples, mushrooms, meat, fish, chicken, eggs, cheese, yogurt, bread and baked goods, pasta and sauces, jams, wine, and hard cider. And 'artsy-crafty' people who sell things like natural bath and body-care products, and handmade woolens."

It's a lively social scene. Around 600 people gather weekly to drink fresh-brewed tea and coffee, shop, have lunch, or just hang out to watch a live show. A stage features rotating performers, ranging from jazz, folk, and classical musicians to tap dancers and hula-hoopers. In a second room, the Riverside Gallery, local artwork is displayed and the market hosts free activities, including storytelling, clown acts, and natural-history programs. In early spring, the "Get Growing" festival helps

Photographs courtesy of Cambridge Winter Farmers' Market

Clockwise from left: "red gravy" tomato sauce and pasta from Valicenti Organico; the herb rubs and teas of Soluna Garden Farm; and market managers Amelia Joselow and Kim Motylewski

people learn how to plant their own edible gardens.

Some choose to jump-start the season at home with pre-seeded herb kits compiled by Amy Hirschfeld, G '99, owner of Soluna Garden Farm and its retail store in Winchester, Massachusetts. She and her business partner, Tatiana Brainerd, sell the one-acre farm's fresh-cut flowers and herbs at summer markets, but have extended their year-round sales with the kits, a variety of teas, and dried-spice blends and rubs used in Moroccan, Greek, and Indian cooking. (The blends use additional organic ingredients not grown on the farm.) The idea for the business, Hirschfeld says, came from her Harvard studies of the ancient spice routes of the Arabian peninsula—her "love of traveling and good food."

Winter markets appear to be on the rise. In Massachusetts, the move to stretch the locally grown and made food season has prompted the opening of about 40 new ones within the last four years alone, according to Martha Sweet, the director of programs and operations at the nonprofit Mass Farmers Markets, which runs popular summer markets in Cambridge, Boston, and Somerville. In addition, later this year the permanent year-round Boston Public Market is slated to open near the MBTA Haymarket station (https://bostonpublicmarket.org).

These off-season markets, held primarily indoors and on weekends, typically have to compete to attract local farmers. Meanwhile, the growers, increasingly, must assess whether it's worth their time and energy to participate—and if so, how. "A lot of them are not prepared to go to winter markets, but are starting to think more about growing year-round in greenhouses, or holding their vegetables or fall fruits" for post-summer markets, explains Sweet. "Many farmers also go on vacation in the winters."

She reports that in Massachusetts, the

number of summer markets has peaked at around 250 within the last five years. "If you think about it, in a state that has 351 cities and towns, 250 farmers' markets is a lot," she adds. In many cases, markets that used to count on 5,000 shoppers may now see only 2,000 because there are more options now, or because they have chosen instead to join a farm's Community Supported Agriculture food-share program. "We need to create more new shoppers," Sweet urges, and convert the casual ones into regular customers.

Winter markets are one solution: they get people used to buying and eating local fare all the time. Subsidizing the food costs would also help. "You can go to farmers' markets and see a lot of affluent people," says Motylewski. "But what about everyone else? Affordability is step one."

Last year the winter market joined local public-health officials, food-rescue organizers, and the two summer markets in Central Square and at Harvard's Science Center Plaza (the latter run by University Dining Services), to help draw more low-income customers and increase their buying power. Those markets now have digital technology to process the debit cards distributed by the federal Supplemental Nutrition Assistance Program (SNAP). And the market organizers raise private funds through a crowd-sourcing portal to match SNAP market purchases, up to $15.

"In all these different ways," Motylewski says, "people are coming together around different kinds of food." At the Cambridge market, even though many customers are new to Frito pie, they know not to ingest the bag. But the tamales, says Escamilla, occasionally require a lesson. "Up here people are going at the tamale corn husk wrapper with a knife and fork, or biting into it," she says, with a smile, "or they just suck the *masa* out of the corn husk like a Go-gurt we'd give our kids." At the market, she opens the husk, and hands over the meal. But for the frozen, take-home tamales, she can only hope the package's warning label is clear enough: "Don't Eat the Husk!" ~N.P.B.

Cambridge Winter Farmers' Market
Saturdays, January 3 through April 25, 10 A.M. - 2 P.M.
www.cambridgewinterfarmersmarket.com

ALL IN A DAY:

Images That Speak

Photographers Brandon Thibodeaux and Magdalena Solé reflect on Mississippi Delta life (above); Bryan David Griffith and Kerry Mansfield take a close look at books (below).

The Griffin Museum of Photography is tucked into a leafy corner by Judkins Pond, just a five-minute walk from the shops and restaurants in Winchester Center's historic district. The museum was founded in 1992 by pioneering color photojournalist Arthur Griffin (1903-2001), who specialized in documenting New England; it is housed in a replica of an old gristmill—but any fustiness ends there. The Griffin displays stunning and often provocative works by contemporary artists. Four new exhibits open on January 8: two reflect the landscape and residents of the Mississippi Delta; the others explore the life and death of books in America. In journeying through the northern Mississippi Delta to take his spare, allegorical black and white images, artist Brandon Thibodeaux says he found "strength against struggle, humility amidst pride, and a promise for deliverance in the lives I came to know." Just as stirring are Magdalena Solé's prints from the region—they pop with color and visceral immediacy. "I don't stage anything," she said in an interview for the Leica Camera blog. "I just like the surprise of life as it is and how it reveals itself." Meanwhile, Bryan David Griffith toured much of America to capture the souls of independent booksellers. They are "passionately committed to…keeping the flame of literature alive," he reports from the front: "Far from giving up, they are fighting back." Borrowed volumes are the subject of Kerry Mansfield's *Expired:* elegant silhouettes of frayed book bindings, worn-soft pages with crooked tears fixed by yellowed tape, and close-ups of library check-out cards filled with the scrawled names of children long since grown, or gone. "If you listen carefully," Mansfield explains in an introduction to the series, "you can hear the aching poetry calling from tattered pages that carry the burden of their years with dignity and grace."

Griffin Museum of Photography
Winchester, Massachusetts
January 8 through March 1
Opening reception, January 10
www.griffinmuseum.org

Photographs courtesy of the Griffin Museum of Photography

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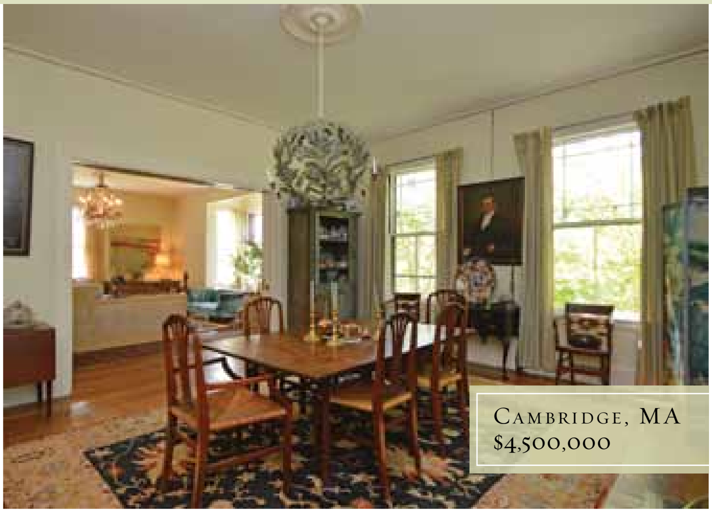

Building Community One Home at a Time

- Highly endorsed by clients and colleagues for exceptional integrity, commitment & performance
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Lighting Up Mount Auburn Street

As the Harvard Art Museums announced their long awaited reopening with a series of community celebrations—catered events, held beneath the cathedral heights of the glass ceiling designed by Renzo Piano—another Harvard art gallery, tucked next to Peet's Coffee & Tea in the Square, also opened its doors: the Ethelbert Cooper Gallery of African & African American Art (hutchinscenter.fas.harvard.edu/cooper-gallery).

Piano has called the roof of

Photograph by Dean Kaufman

Above, a Mercedes-shaped "fantasy coffin" by Samuel Kane Kwei reveals its blue fabric interior. Below, a visitor studies *Digital Man,* by Abu Bakarr Mansaray.

his building a "lantern" (see "Unleashing Harvard's Art Museums," November-December 2014, page 18). By coincidence, architect and W.E.B. Du Bois medalist David Adjaye used the same term to describe his vision of the new addition to Harvard's Hutchins Center for African and African American Research. But the Cooper Gallery shines very differently. Amid the dense red brick of its neighbors on Mount Auburn Street, its wood paneling seems to glow at night. Visitors get their first look into the building through slices of glass, between tall cedar slats. Adjaye built the gallery's façade to resemble a forest; its doors, also glass, form a clearing that welcomes people in.

"Wood and water are the critical materials of the Middle Passage story," the architect said at a panel discussion in late October. They are, he added, "totemic" of the history between Africa and America. When considering how best to add to what he called the "perfect urban set piece" of Harvard, Adjaye resolved to build a façade that expressed a civic spirit. He wanted something visibly distinct and slightly removed from its neighbors' commercial traffic—nothing that resembled a "lobby for an office building."

Hutchins Center founding director and Fletcher University Professor Henry Louis Gates Jr. told the audience the gallery's creation story, one that harkened back to the night he first showed donor Ethelbert Cooper the place that could bear his name, when they peered through the darkened windows in an icy December rain. Less than five years later, with the Cooper Gallery debuting with its first exhibit, *Luminós/C/ity.Ordinary Joy*, Gates asked, "I mean, who says that there aren't miracles, right?"

For gallery director Vera Ingrid Grant and her staff, the story has just begun: "We are still grappling with how the space can receive art," she says. "This will be a test year for us."

For *Luminós/C/ity.Ordinary Joy,* co-curators Adjaye, Grant, and Mariane Ibrahim-Lenhardt chose 98 works by 21 artists to explore life in urban Africa. Few of the works were put under glass, and the labeling was kept minimal, to foster freer encounters with the art. "People bring their own intelligence to visual culture," explains Grant. "Having screens and veils and filters on the art is something we wanted to dispense with. We have no acrylic barriers, so why have textual ones?"

The exhibit, which includes sculpture, video performance, painting, and paper architectural models, is designed to be experienced twice. After reaching the last work—an eight-foot wood-and-rope bicycle—visitors must double back on their initial path to exit, and encounter the pieces from new angles. As the curators arranged groups of artworks in each of the gallery's eight spaces, which they nicknamed "neighborhoods," they imagined the pieces speaking to each other; this floor plan ensures that no one artist gets the last word. A linear experience would seem like a lecture. This circular path creates an ongoing conversation, alive with echoes and unexpected contradictions—a playful cacophony.

Luminós/C/ity.Ordinary Joy will be on view until January 8. (A full exhibition catalog is available either at the gallery or online, as of January, from Harvard University Press.) In the spring, the Cooper Gallery will feature a traveling exhibit, *Drapetomanía.* Curated by Bliss professor of Latin American history and economics Alejandro de la Fuente, it pays tribute to the artists of a little-known movement in 1980s Cuba, whose work championed the centrality of Africa in Cuban culture.

~SOPHIA NGUYEN

Balanced Budget, Benefits Battle

Following two years of modest deficits, Harvard closed its books on fiscal year 2014, which ended last June 30, some $2.7 million in the black: operating revenue increased 4.8 percent to $4.409 billion and operating expenses rose 3.9 percent to $4.406 billion. In fiscal 2013, the University was $33.7 million in the red. This improvement, disclosed on November 7 in the annual financial report, is in fact understated because it includes a one-time expense of nearly $46 million related to accounting for pension obligations; excluding that charge, the operating surplus was about $49 million—a goodly gain.

The report contains interesting details concerning growth in tuition revenue and employee-benefit costs (discussed below).

I N   T H I S   I S S U E

Photographs by Marcus Halevi

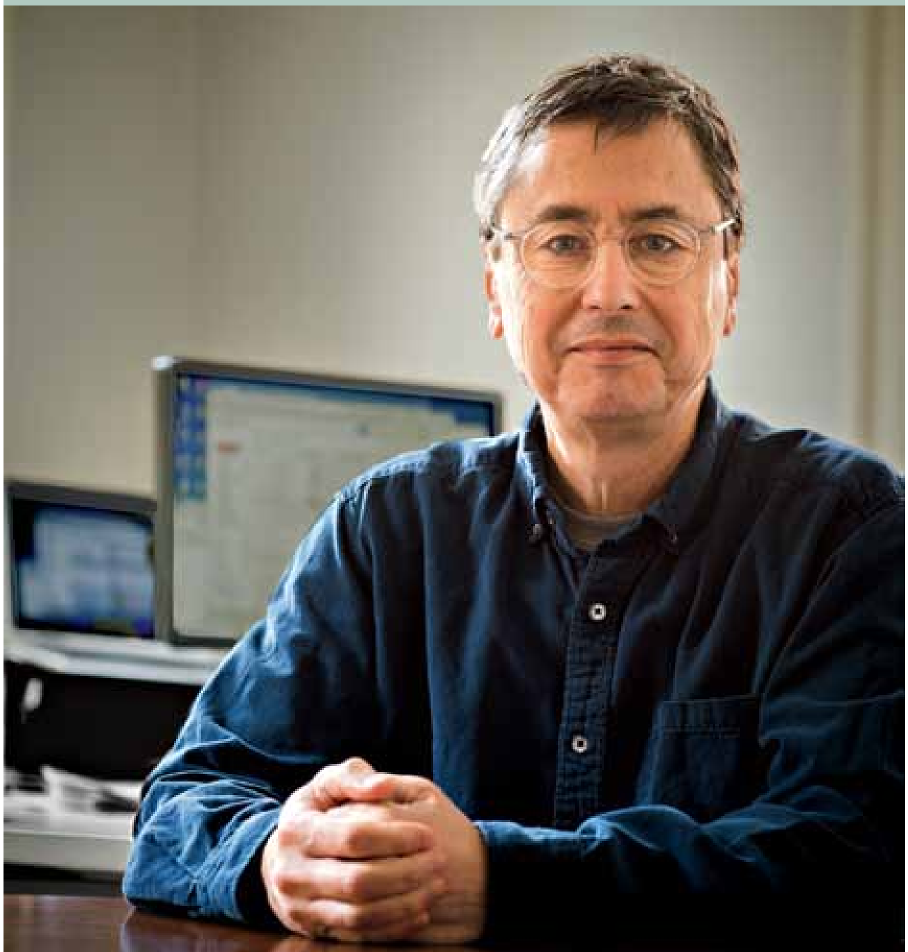
The broader picture was sketched by a new senior financial team of executive vice president Katie Lapp and University treasurer Paul J. Finnegan, who wrote in their overview letter that just as the prior deficit "was not a cause for undue alarm, so is this year's surplus not cause for excessive optimism." They foresaw "ongoing foundational financial pressures."

Revenue. *Gifts for current use*, spurred by the capital campaign as expected, increased $80.6 million (24 percent), to $419.2 million. Less expected was the second engine of growth: *tuition and other income derived from students* was up sharply, rising nearly $60 million (to $877.6 million)—6.6 percent. The report highlights continuing and executive education, up a robust 10.6 percent. Undergraduate revenue rose 4.9 percent, and graduate and professional degree programs yielded 5.1 percent more revenue. More interesting is the *net* figure, with tuition and fee revenue *after financial-aid awards* up 7.3 percent in the aggregate. Scholarship awards applied against tuition and term bills increased just 3.7 percent, meaning that more of nominal tuition remained in the University's accounts. Even as the Faculty of Arts and Sciences (FAS) and other schools seek endowment support for aid, if the growth of scholarships and fellowships levels out (after rising sharply for many years), deans' financial flexibility will increase considerably. The *endowment distribution*, the largest source of revenue, rose $40 million (2.7 percent), reflecting prior years' modest endowment returns.

Offsetting these gains in part was a decline in funding for *sponsored research*—down $13 million (about 2 percent) to $819.2 million; this category, long Harvard's second-largest source of revenue, after the endowment distribution, was eclipsed this year by tuition and related student income. As federal funding declines and foundation and corporate sponsorship rises (a fundamental fact for Harvard Medical School's capital campaign; see page 26), the University recovers less "indirect" support for buildings, libraries, and other overhead, posing worrisome problems of how to pay for the surrounding, expensive University infrastructure.

Expenses. *Salaries and wages* rose 6 percent. *Employee benefits*, including the nonrecurring pension charge, rose about 5 percent—but otherwise *decreased* about

HARVARD PORTRAIT



Peter Suber

Peter Suber's life bridges multiple places, passions, and positions. He has cycled across America, scooted around Sweden on a Vespa, and voyaged to Antarctica with a boatful of polar biologists who were conducting a penguin census. Now, he juggles a family life in Maine and a professional calling in Cambridge. At Harvard, he serves simultaneously as director of the Office for Scholarly Communication (an arm of the library system) and director of Harvard's Open Access Project (sponsored by the Berkman Center for Internet & Society). Both offices advance the cause of open access, a movement to provide scholarly work to the Internet-going public free of charge. Suber's interest in open access ignited when, in the early days of the Internet, he began republishing his own scholarly work in philosophy on his personal website. The reaction surprised and invigorated him: his experiment of freely sharing his work online gained more readers, and more engagement, than his official publications did. "What started as a geeky excuse to play with HTML," he says, "turned into the realization that the Web was a serious medium for scholarship." Ever since, he has worked to fix an academic-publishing environment he believes is broken: that doesn't reach the readership it should, or could, because it erects, maintains, and jealously polices barriers to scholarly information (see page 56). The journey has led to his recent full-time, double-duty appointment. In his office, a particularly important photograph hangs on the wall. One of his daughters took it for a photography-class assignment about "Objects of Desire." It depicts books. Some are closed, and some, much to Suber's delight, lie open.

Photograph by Stu Rosner

4.5 percent (as changes in retiree health coverage took effect, among other factors). Together, salaries/wages and employee benefits made up 49 percent of Harvard's fiscal 2014 expenses, and accounted for about two-thirds of the $167-million increase in expenses overall. The catch-all *"other"* expenses rose by nearly $44 million. Nowhere does it say so, but costs associated with the capital campaign (University and school launch events, extensive travel to alumni functions around the world, and collateral materials) certainly affect expenses, too.

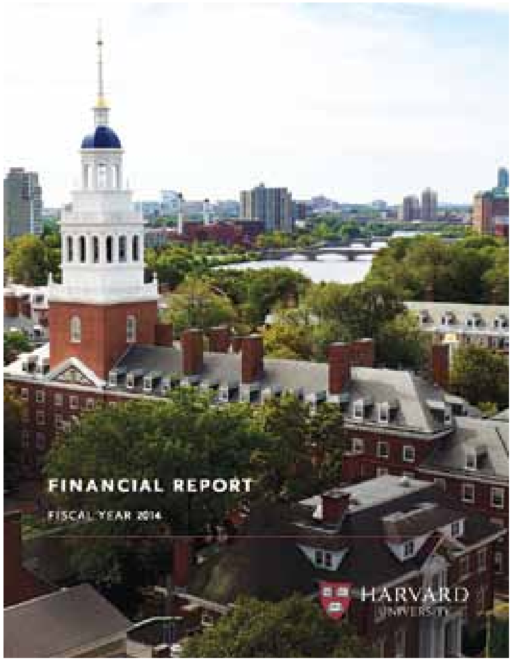
Capital spending. The University is helping to keep local construction workers fully employed. Capital spending was $465 million, up about 15 percent from fiscal 2013. Notable projects include the Harvard Art Museums (reopened in November); Harvard Business School's Tata Hall, for executive education; and the continuing undergraduate House renewal.

The report noted, intriguingly, that Harvard "engaged in no new debt issuance over the past fiscal year, and is currently limiting the use of new debt in order to allow for future flexibility in the financing of major initiatives." During fiscal 2014, *interest costs* declined, as Harvard benefited from prior restructuring of some debt obligations, and maintained borrowings at about $5.6 billion. Fundraisers would be loath to show their hand as they seek support for House renewal and the new School of Engineering and Applied Sciences complex planned for Allston (in the aggregate, hundreds of millions of dollars are being sought). But it is certainly conceivable that the University will tap the capital markets to complete such huge projects.

An evolving business model. Lapp and Finnegan put the year in the context of the capital campaign, and no wonder. Beyond the leap in current-use gifts, the report details $513 million in endowment gifts (up 130 percent from the prior year); and an increase of more than one-third of a billion dollars (to $1.59 billion) in pledges for future gifts.

More broadly, they pointed to the campaign's role in yielding "fundamental improvements in the University's finances and financial prospects." (Such gains are especially pressing for FAS and the medical school: both are incurring substantial deficits.) In addressing those "foundational financial pressures," they outlined an evolution in Harvard's business model. It would be better insulated from "continued volatility in capital markets"; less reliant on federal support, given the darkening prospects there; and better prepared to cope with "increasing pressure on grant aid expenditures"—given families' economic circumstances.

That suggests continued reliance on boosting philanthropic support, during



and between capital campaigns; "meaningful growth in continuing and executive education" (including finding ways to monetize investments in online education through HarvardX, the business school's HBX, at the Extension and medical schools, and elsewhere); and further "encouraging growth in corporate-sponsored research," of "particular importance" given the problems in the public sector.

The annual report and business model are covered further at **harvardmag.com/financial-15.**

While University leaders pursue such longer-range financial matters from an institutional perspective, Harvard's fiscal future hit home in a more personal way on campus. As reported ("Frenetic Fall," November-December 2014, page 24), faculty and nonunionized staff members learned in early September that their health-insurance coverage for 2015 would include coinsurance and deductible payments for certain medical services of as much as $4,500 per family (subject to partial reimbursement to lower-paid workers).

During the October 7 FAS faculty meeting, professor of history Mary Lewis questioned the new health-benefits design and its effect on employees or family members suffering from either chronic conditions or acute medical problems. "It's asking those most at risk to pay more," said Lewis, who then asked how the changes could be reversed. Provost Alan Garber, to whom the University Benefits Committee (UBC) reports, responded at length to defend the changes as economically necessary. (That exchange, and the subsequent developments described below, are reported in full at **harvardmag.com/facultyhealth-15.**)

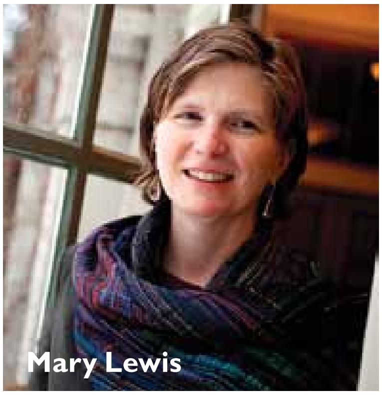
At the November 4 meeting, Lewis advanced this resolution for faculty debate: "That for 2015 the President and Fellows be asked to replace the currently proposed health care benefit plan with an appropriately adjusted version of the 2014 health benefit package, maintaining the 2014 plan design." Further arguments presented by Garber and two members of the UBC (both policy scholars from the medical school) were overwhelmed by a tide of passionate, and even angry, opposition by other professors—among them such influential speakers as Wells professor of political economy Jerry R. Green, a former provost who had opposed certain proposals to change benefits in 1994, and Enders University Professor Marc Kirschner, chair of the systems biology department at the medical school, who spoke with feeling about the financial plight of postdoctoral fellows in many Harvard laboratories, "whose take-home pay is less than about $3,000 per month."

Lewis perhaps articulated the underlying faculty sentiment when she said:

> Is Harvard a business that transfers costs to its employees, reducing its expenses by shifting the burden to people coping with serious illness? Or is Harvard a community where we equitably share the risks that we all face as human beings and where health care is a human right?
>
> If Harvard were just a business, it would not offer such generous financial aid to middle class students and their families. Indeed, Harvard always has been more than a busi-

ness. Let us keep it that way.

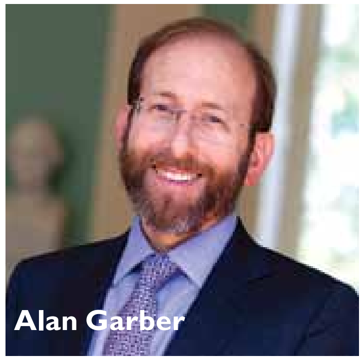
After extended debate, the faculty members present voted unanimously in support of Lewis's motion. There was no practical way for the resolution to make a difference: the faculty and non-unionized staff do not negotiate their benefits, and the annual employee benefit-plan enrollment period began the next day.


Mary Lewis

ROSE LINCOLN/HPAC

But the calculus had apparently changed, nonetheless. Data provided by a UBC member at the faculty meeting made it possible to calculate how much Harvard has been spending on health benefits. The annual financial report, released three days later, was accompanied by comments that made it possible to calculate such spending per capita, accounting roughly for continued growth in the University's workforce. That math revealed that spending on health benefits rose about 2.5 percent per capita in fiscal 2014: not nothing, but significantly less than aggregate figures, and those for prior periods, had indicated.

On November 13, President Faust took communication with faculty members on the benefits changes directly in hand. In a long message to FAS members, she reiterated that the 2015 plan would go into effect. But she also announced a supplementary fund to limit out-of-pocket costs (exclusive of premiums) to 3 percent of full-time-equivalent salary during the year. She directed the provost and UBC to reexamine plan designs for 2016, exploring the possibilities of relying less on coinsurance and deductibles and more on higher premiums or narrower medical-provider networks. She further charged the UBC with monitoring the consequences of the 2015 design, focusing on the cost of care and use of medical services. And she set in place greater outreach from the UBC to the community at large.


Alan Garber

ROSE LINCOLN/HPAC

Whether those actions result in different benefits packages for 2016—or longer-term changes such as much more aggressive promotion of wellness plans or other ideas—remains to be seen. In the interim, against the backdrop of demonstrably successful fundraising for The Harvard Campaign, the president's intervention and the commitment to more extensive communication might bridge the gap between abstract University financial reports and faculty and staff members' immediate pocketbook concerns. See **harvardmag.com/benefits-15** for a full report on the president's message and further benefits-related developments.

Yesterday's News

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

1915 Undergraduate clubs pledge not to elect freshmen, in an effort to ensure that first-years adjust to Harvard social life by forming friendships in the dormitories. The *Bulletin* notes: "At most American colleges the 'rushing' of freshmen by rival fraternities is an evil clearly recognized and deplored. Harvard has never suffered from precisely this affliction."

1925 The faculty, "whether out of consideration for the eyesight of the students or for the greater enlightenment of their minds," delay the start of exams on January 24 from 9 A.M. to 10 so students may view the total eclipse of the sun.

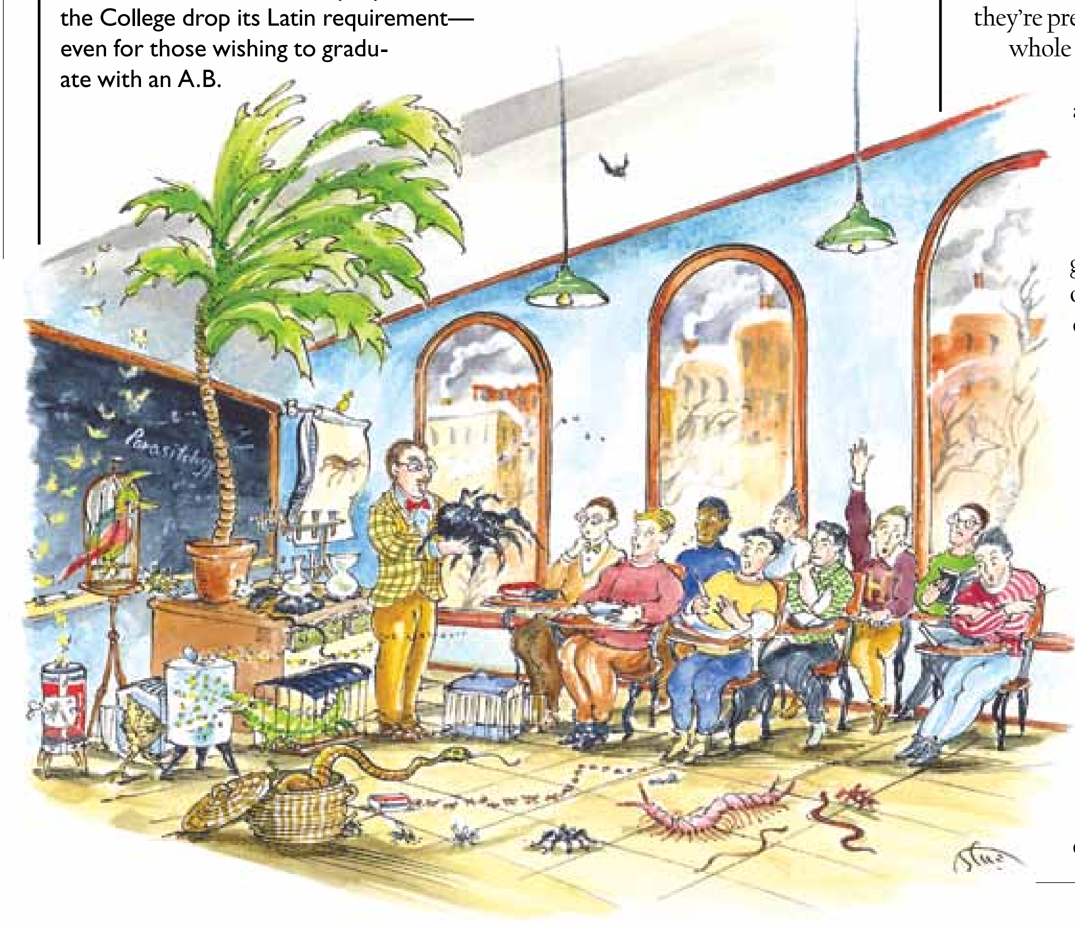
1930 The nearly finished indoor athletic building contains a swimming pool financed by donors Aquaticus Anonymous and Alumnus Aquaticus, both later revealed to be Arthur W. Stevens '97.

1935 President Conant proposes that the College drop its Latin requirement—even for those wishing to graduate with an A.B.

1945 The School of Public Health is running a special two-month course on parasitology, tropical medicine, sanitation, epidemiology, and related subjects for 60 naval medical officers who are scheduled for island rehabilitation duty in the Pacific.

1975 Radcliffe president Matina S. Horner joins the board of directors of Time Inc., saying she accepted the position only when she felt confident she was not being taken on merely as a token woman.

1985 After 67 years of loose affiliation with the College, all nine final clubs have chosen to return to completely independent status, rather than comply with official pressure to open their membership to women. The decision ends their access to Harvard's phone system, low-cost steam heat, and mailing lists.



Architecture as Liberal Art

Building an undergraduate design program

At the start of their undergraduate architecture lab this fall, Mark Mulligan and Michael Smith gave their students an assignment that seemed like something out of a high-school shop class: take two pieces of wood, and make a joint. But before the students sat down to plan their projects, Mulligan and Smith had lectured on subjects ranging from the physical properties of the material to the cultural legacy of Japanese wood joinery, revealing the depth that even such a modest project could contain. By the end of the week, students had moved to the woodshop in the basement of Gund Hall to build the plans they'd sketched, fulfilling for the first time the hands-on component promised in the course's title—HAA179x: "Construction Lab." Soon, the principles of design and history they had learned earlier met with a very different understanding of what's possible in a world with gravity and human error. "They draw and think up these things" that can be quite intricate, says Smith, a lecturer in architecture. "But then they're presented with the material, and the whole world changes."

These three streams—history and theory, design imagination, and the physical act of making—are the central components of the undergraduate track in architecture studies, a joint program from the Graduate School of Design (GSD) and the Faculty of Arts and Sciences' (FAS) department of history of art and architecture. It took years of planning on both sides—including "literally two years of meetings"—to get the program off the ground in the fall of 2012, explains Noyes professor of architectural theory K. Michael Hays, the GSD's associate dean for academic affairs. The first students in the track, housed within the art-history concentration, graduated last spring.

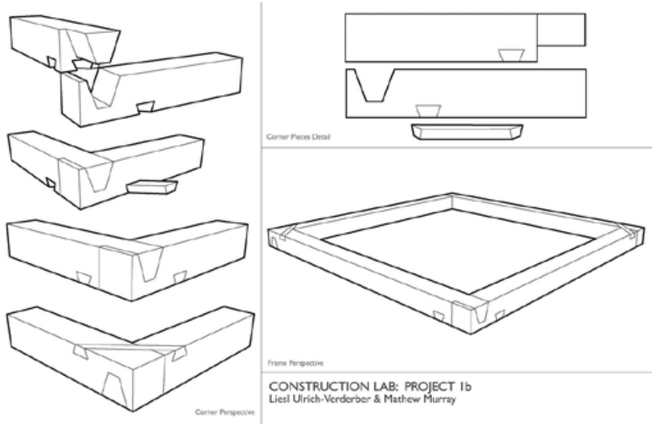
The GSD-FAS collaboration represents what Hays calls "a new band of knowledge"

Illustration by Mark Steele

for the College, offering undergraduates the first real chance to take advantage of the GSD's offerings. Yet those involved in the program's creation harbor an even bigger ambition—to make the case that design thinking, beginning with architecture in particular, is an invaluable form of liberal-arts inquiry. "The study of architecture, in a broad sense, is a study of culture itself, and in some ways is a mode of knowledge," says Hays, one of the GSD's leading boosters of the new track. To illustrate, he points to a student in one of the first classes, who switched from her original concentration in philosophy. "She told me, 'I came here knowing that I could think. I didn't know that I could make things, and I certainly didn't know I could think *by* making things.'"

In Mulligan and Smith's construction lab, the professors like to remind students of these possibilities for deeper thinking and engagement, even as they focus on the technical problems at hand. Mulligan, an associate professor in practice of architecture, explains that students need to remember that joints do more than just hold two pieces together. They can express a sense of rigidity and solidity on one hand, or lightness and even tenuousness on the other. "People don't think of technology courses as being focused on beauty or aesthetics," he says. "But that's actually where everything intersects."

These connections among design, aesthetics, and technology is a central component of the studio, a type of project-based course that traditionally lies at the core of architectural pedagogy. At Harvard, the new track asks undergraduates to complete a two-course sequence of design-oriented intensives. The courses are housed in a dedicated classroom on the top floor of Gund, refurbished with a grant from the Harvard Initiative for Learning and Teaching. With a 3-D printer and a series of highly connected monitors, projection surfaces, and motion sensors, the room serves as a lab for teaching, using the students as guinea pigs to discover how technology can enhance studio instruction. These are important questions, Hays argues, because "studio learning is not vocational learning, but is actually a way of producing knowledge that's different from, but equal to, textual knowledge and reading and writing."



LIESL ULRICH-VERDERBER (2)

A wood joint that Liesl Ulrich-Verderber '15 and Mathew Murray '16 designed during the first weeks of the construction lab.

New concentrators begin with "Transformations," a studio that focuses on "the development of a common language"—of surface, frame, volume, and composite—according to Zaneta Hong, a lecturer in landscape architecture who taught the course for the past two years. Like Mulligan and Smith, she begins the semester with the simplest of transformations: folding a piece of paper in half. From there, students learn technical skills like digital modeling and laser cutting, and incorporate new materials like Plexiglas™ during the semester. What they never get in this first studio is an assignment to design what most people think of as *architecture*—a structure to be inhabited, on a site, with a specific use or "program." Even the final project remains abstract, the only guideline being to "transform" paper, museum board, and Plexiglas™, within the constraints of a five-by-five-inch model. "The luxury to be able to focus solely on the design aspects is a good thing to do for a little while," says Angie Jo '16, who took Transformations last spring. "I never could have expected that you could get so much conversation, so much thought and creative iterations, out of such a small seed."

The second required studio, "Connections," introduces students to more real-world concepts of scale and interactions. Hong will teach the studio this spring; she plans to move students along through different levels of intervention: beginning with the artifact, moving on to the assembly and construction of an actual space, and finishing with a consideration of the urban and even global scale.

Though Connections will present students with the kinds of problems central to more traditional architecture studios, Hong says that both courses in the sequence are hard to compare to the core, graduate-level studio courses offered at the GSD—which meet for 12 hours each week, twice the time commitment of Connections—or in undergraduate professional programs approved by the National Architectural Accrediting Board. The latter tend to be intensive, five-year plans of study: Cornell's B.Arch. program includes 10 semesters of studio. Harvard's new track requires far fewer studio courses, even, than similar nonprofessional undergraduate programs (whose graduates, like Harvard's, must later earn master's degrees in order to practice as an architect). At the University of Virginia, where Hong used to teach, the "preprofessional" concentration within the four-year B.S. in architecture degree requires four "foundational studios" and an additional three "research studios." (Hays says he hopes to eventually offer a third studio, but it would remain an optional, senior-year "capstone" for interested students.) But the track's pair of studios are two elements in a general education that could hardly be considered intensively preprofessional. Rather, Hong says, they're meant to establish students' baseline interests in architecture, landscape architecture, or urban planning.

Students' interests have already created an appetite for more intensive design learning, creating both opportunities and tensions as the track keeps one foot firmly planted in the College's liberal-arts tradition. Beyond studios, students fill in their track requirements with other courses in both art history and the GSD. During the past two years, several new offerings have been created to accommodate them, including an architectural history and theory tutorial in FAS, and an undergraduate-only section within a standard GSD course ("Buildings, Texts, and Contexts I," taught by Hays and professor of architectural history Erika Naginski).

Mulligan and Smith's Construction Lab, first offered in the fall of 2013, extends a seven-week intensive boot camp for students entering the GSD's master's of architecture program. Mulligan recently served as faculty administrator of that program; he knows the kind of skills that entering graduate students have, and has translated that knowledge to the undergraduate level. The course feels intentionally unprogrammed: assignments ask students to think about concepts like equilibrium and inhabitable space in ways that are often more sculptural or technical than overtly architectural. "The best thing we can do," he explains, "is to try to prepare them, their way of learning and their way of being self-critical, without necessarily engaging directly in conventional architectural projects—like, design a shelter of some kind."

Students say their dual identities as art historians and potential budding architects have offered a unique and unexpected opportunity. Several have taken part in their department's annual sophomore-excursion course, which included a trip to Amsterdam last spring. Thomas professor of the history of art and architecture Joseph Koerner, the director of undergraduate studies within the department, says that having students with studio architecture experience has deepened conversations in more traditional classes. "The study of art is very much enhanced by seeing people around

JIHYUN RO

Katherine Ingersoll '15 and Samia Kayyali '15 work on the construction lab's final project in the GSD's wood shop.

Sustainability Steps

Last September, the presidents of Harvard and Stanford, Drew Faust and John L. Hennessy, wrote a joint op-ed in the *Huffington Post* that outlined "What Universities Can Do About Climate Change." Highlighting their institutions' "wealth of intellectual resources across fields" and overall convening power, they argued that universities must pursue "powerful long-term solutions." In the months following, several significant campus initiatives have begun to sketch the shape of those efforts at Harvard.

In October, the University unveiled an ambitious five-year sustainability plan, setting out commitments in five core areas: energy and emissions, campus operations, nature and ecosystems, health and well-being, and culture and learning. As Faust wrote in September, universities are large employers with significant physical plants, so they must "walk the walk" by "piloting and modeling effective operational practices." Harvard's new plan builds on existing commitments to reduce greenhouse-gas emissions 30 percent from a 2006 baseline by 2016 (including any additional emissions from new facilities). The new plan adds promises to reduce waste per capita 50 percent by 2020 and create action plans on issues like transportation and resilience in the face of challenges like sea-level rise and extreme weather events. (For a more detailed report, see **harvardmag.com/sustainability-14.**)

Beyond such local commitments, Faust and Hennessy noted the far more significant contributions to progress that university-based research will make. To that end, on November 7, the newly inaugurated Harvard Center for Green Buildings and Cities hosted its first annual challenge conference. Based at the Graduate School of Design, the center seeks design-based solutions that, as the center's founding director Ali Malkawi put it, will help "fundamentally shift the ways humans use energy in the long term." The conference, which featured presentations from architects, scientists, and politicians, was intended to help set the center's future research agenda. (For a complete report, see **harvardmag.com/greencities-14.**)

Even as these developments proceeded, campus debates continued to highlight the one area where Faust and her Stanford counterpart have differed in their responses to climate change: divestment of endowment holdings in fossil-fuel companies. In May, Stanford announced its divestment from coal-mining companies (though *not* from fossil-fuel companies overall). At Harvard, the fall saw continued back and forth between Faust and the Harvard Corporation and campus groups advocating for divestment. Harvard Faculty for Divestment, which first sent an open letter calling for divestment last April, had more than 200 colleagues signed on by November, more than double the initial number (see "Divestment Discussions," November-December 2014, page 35). On October 17, its leaders held a private discussion with Faust and William F. Lee, the Corporation's senior fellow; a week later, the group held its first public event, an open forum that featured presentations on the scientific and economic arguments for divestment. (For a detailed report, see **harvardmag.com/divestment-14.**)

Meanwhile, student activism has gained intensity. On November 18, seven students from the Law School and the College, acting as the Harvard Climate Justice Coalition, filed a lawsuit against the University in Suffolk County Superior Court. The 11-page complaint—which names the Corporation, Harvard Management Company, and then-Massachusetts attorney general Martha M. Coakley as defendants—claims that continued investment in fossil-fuel companies represents a "mismanagement of charitable funds" and a violation of Harvard's 1650 charter.

you participating in the kinds of constructive thinking and making that [exist] in the works" a course might tackle, he explains. Outside class, some have even found a home in a new building on campus that marries their interests in the study of art and the practice of architecture—the Harvard Art Museums, designed by Pritzker Prize-winner Renzo Piano. Four of the 18 student tour guides whom the museum hired this fall are affiliated with the architecture track; they say they like the challenge of learning to talk about the building's architecture to an audience that may not have thought seriously about design before. Angie Jo, who had considered art school before coming to Harvard, says she decided to become a student guide because learning to speak authoritatively about design, and make the case for its importance to a general audience, will be an important part of her future as an architect.

Jo hopes to apply to architecture school, and acknowledges that the track's interdisciplinary nature has provided fewer opportunities for projects to include in an application portfolio. But the upside of the concentration's lighter studio requirement is "vastly more time to contextualize it all." She has begun to focus her studies on the ethical and social aspects of design practice. The Harvard program, she says, "feels very much like architecture *studies* to me, rather than architecture or design."

MICHAEL SMITH

John Wang '16 and Angie Jo '16, at left, present a component of the cast arch they built in the construction lab to teaching assistant Alex Timmer and course head Mark Mulligan, far right.

The study of architecture, from Hays's perspective, has relevance to the wider student body in much the same way that the study of literature does. Perhaps the best case for his argument is the number of nonconcentrators who have enrolled in the architecture track's design courses. Enrollment was limited to concentrators when Transformations and the Construction Lab were first offered, but enrollment has essentially doubled since that restriction disappeared. This semester, Mulligan and Smith have students from East Asian studies, film, and applied math in their course. Gianina Yumul '16, a member of the architecture-studies track who came to Harvard intending to study astrophysics, says she appreciates the course's almost accidentally interdisciplinary nature. She speaks enthusiastically about working in groups with a student from applied math: "He has this other language that, when applied to architecture, produces something really beautiful and unexpected." His professors say they hope influence can also flow in reverse: that the spatial awareness of architecture will give this student new tools with which he can better understand math.

For Hays, that kind of cross-disciplinary connection is an exemplar of what his dream of linking the GSD and the College could spark. Though the program currently focuses on architecture, he hopes it will be expanded to a stand-alone concentration, still jointly administered with the art history department, that could encompass the different kinds of design that play significant roles in today's world, including graphic and industrial design and urban studies (already, FAS's 2013-4 annual report hints at the possible creation of an interdisciplinary secondary field in urban studies). Several GSD professors noted that, in their ideal world, the track would attract students beyond those headed for design school—just as literature concentrators don't all become professors, and engineering concentrators don't all become licensed engineers. Instead, the program's graduates could become policymakers with an informed understanding of the built environment, or engineers with a sense for the aesthetic choices inherent in all their decisions. As Hong puts it, "Design has no boundaries. It permeates through any kind of profession."

~STEPHANIE GARLOCK

The Campaign Computes

As IT PROCEEDED during the fall semester, The Harvard Campaign featured a penultimate school's launch (medicine); another galvanizing gift (computer sciences); and interesting evidence of the effects of smaller-scale philanthropy across the University, from undergraduate teacher-preparation training to a prospective College performing-arts program.

"The World Is Waiting"

HARVARD MEDICAL SCHOOL (HMS) unveiled its \$750-million campaign under that theme during a dinner in Boston on November 13. Dean Jeffrey Flier, the keynote speaker, recounted his own progress as a young researcher probing diabetes—his talk neatly encompassing school goals of educating leaders in science and medicine, discovering the causes of disease, and fostering change to improve human health.

In an earlier interview, Flier fleshed out those items on the wish list:

- *Education:* \$150 million to effect curriculum reform (an overhaul is to be introduced next year, with changes in pedagogy and accompanying physical renovations over time) and underwrite financial aid and fellowships.
- *Research:* \$500 million. "If you look at the budget of Harvard Medical School and what the people we employ do," the dean

said, "the largest number of them are doing research." But it "never fully pays for itself," and is now under sharp pressure, as federally sponsored research funds become scarcer. Hence the emphasis on securing the research enterprise through the campaign.

HARVARD MEDICAL SCHOOL

Jeffrey Flier

• *Innovation:* $50 million. Under this umbrella phrase deans are employing in the campaign to cover discretionary funds and annual giving, which can then be deployed to emerging priorities, Flier highlighted "facilitating and seeding translational research," like that conducted by the school's new program in therapeutic science (see "Systematic Drug Discovery," July-August 2013, page 54).

A final goal, *service*, encompasses enhancing health equity, improving health systems, health policy, and primary care—extending from work with partners in underserved areas (Rwanda, Haiti) to frontier research on diagnostic strategies and vaccines, should they be developed, for crises such as the Ebola outbreak in western Africa. (The $50-million goal has been met, spurring Filer on to seek additional resources.)

Half the total goal had been raised by the time of the launch event, according to campaign chair Joshua Boger, Ph.D. '79, founder and former CEO of Vertex Pharmaceuticals Inc. He noted that HMS has an unusual philanthropic challenge: its student body is one-tenth the size of the College's, and so—lacking a large alumni pool—it relies on external donors: foundations, corporations, and individuals engaged in supporting biomedical research. They are attracted to Longwood, he said, because HMS is a "nexus for research that extends all over the world."

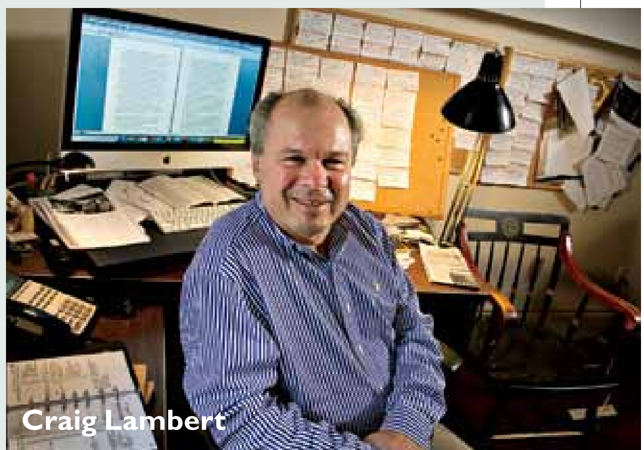
For further detail, see **harvardmag.com/hms-15.**

HMS's goal is the third-largest within the campaign, after the Faculty of Arts and Sciences' (FAS) $2.5-billion and Harvard Business School's $1-billion targets. With the medical campaign made public, some $5.7 billion of The Harvard Campaign's

And Having Written...

Deputy editor Craig Lambert tiptoed on to *Harvard Magazine*'s masthead formally in the November-December 1988 issue, the ninetieth-anniversary edition, as a "copy editor." (He had previously been listed among the contributing editors, having written about rowing, tennis, and Harvardians in Hollywood—all enduring passions.) By the following spring, he was among the associate editors, and he hasn't looked back, until now: effective December 1, he has retired. Lambert's feature on academic publishing, beginning on page 56, is his last as a full-time member of the staff. Fittingly, he also writes this time for Right Now, the section on engaging, thought-provoking research by the University's scholars: for many years, as editor, he assembled its lively contents.

Lambert liked telling stories through people. His profile subjects included Doug Kenney (of the *Harvard Lampoon*, and co-founder of the *National Lampoon*); playwright Christopher Durang and drama critic Frank Rich; writers as diverse as Mark Helprin and Hendrik Hertzberg; and scholars from applied physicist Eric Mazur (a pioneer in moving teaching beyond the lecture format) to sociologist Orlando Patterson. He covered emerging ideas (behavioral economics) and shed new light on old ones (the "beauty" in intellectual insights and discoveries). He directed and wrote much of the magazine's sports coverage, explaining how to compete at bicycle racing and how to set up a winning volleyball shot. And playing to a particular strength, he founded Montage, the magazine's expanded coverage of arts, performance, crafts, creativity, and design, in all spheres (and appears there in this issue, too). Lambert also developed and encouraged a number of the magazine's most productive freelance contributors.



Craig Lambert

His will be an active retirement: he is completing his second book, *Shadow Work: The Unpaid, Unseen Jobs That Jam Your Day* (forthcoming from Counterpoint Press this May). We celebrate his quarter-century-plus of service, congratulate him for his myriad contributions, and look forward to further work in these pages as his new schedule permits.

Beginning in August, two new colleagues joined the staff: Stephanie Garlock '13, a veteran of *The Harvard Crimson* who wrote for *The Atlantic's CityLab* in Washington, D.C., after graduation; and Sophia Nguyen, who graduated from Yale in May, after working with the strong writing faculty there and editing *The New Journal*. Both have contributed extensively already, covering schools' campaign launches, museum openings, scholarship on sustainability, and more. You will find excellent examples of their reporting and writing in Right Now, Montage, the profile of an undergraduate wrestler, and John Harvard's Journal in this issue—and their astute editing has improved virtually every other article, too. We look forward to their first full-length features, now under way. Their fresh perspective, energy, and craftsmanship will continue to strengthen our work on readers' behalf, in print and online, in this new year and beyond.

~The Editors

Stephanie Garlock

Sophia Nguyen

Photographs by Jim Harrison

nominal $6.5-billion goal has now been disclosed. That raises all sorts of development guessing games. Will Harvard Law School, which unveils its fund drive next spring, be content to announce a lower target than, say, Harvard Kennedy School's $500 million? If the Law School seeks as little as $400 million, can the central administration's aspirations (which include at least hundreds of millions of dollars to build the new Allston facility for most of the School of Engineering and Applied Sciences) actually be accommodated by the remaining $400 million nominally to be raised? Or is the $6.5-billion figure an artifice intended to top Stanford's last campaign total—and a sum the fundraisers hoped to exceed comfortably, to accommodate known needs (not to mention those farther down on decanal wish lists)? If the latter, the bet appears to have been a good one, given the torrid pace of fundraising. Gifts received and pledged are well beyond the $4.3 billion announced as of last June 30 (see "Capitalizing," November-December 2014, page 26), long since augmented by the $350-million endowment gift for public health and other benefactions. Whether or not the goal is formally raised, the arithmetic suggests additional aspirations.

"The Next Era of Computing"

Happily for the recording secretary, sprinting to keep up with such large numbers, there may soon be a homemade app for that. A gift from former Microsoft CEO Steve Ballmer '77, announced the same day as the HMS dinner, will underwrite a 50 percent expansion of SEAS's computer-science faculty, now with 24 ladder-track positions (tenured, associate, and assistant professors), plus associated lecturers and other teachers.

Discussing the gift (its size was not disclosed; endowing a new full professorship at SEAS costs $6 million), Ballmer talked about readying the faculty for "the next era of computing" in fields such as machine learning and computational theory, which he saw as propelling "the next wave of innovation and research." More broadly, he characterized computer science as "the operating system for innovation," with applications not only in information technology but in humanities and social-science research, medicine, and elsewhere.

David Parkes, Colony professor of computer science and SEAS's area dean for computer science, who joined Ballmer in the conversation, sketched the potential for both fundamental and applied advances in virtually every other field of inquiry. When a several-year process of recruiting and hiring is complete, and the enlarged computer-sciences cohort is rehoused across the Charles River, Ballmer said, Harvard should have ascended from the ranks of a "very good department" to top-tier status alongside such institutions as MIT, Stanford, and Carnegie Mellon. A comprehensive report on Ballmer's gift

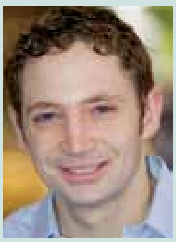
Honor Roll

Adam Kirsch

We recognize four outstanding contributors to *Harvard Magazine* for their work on readers' behalf in 2014, and happily confer on each a $1,000 honorarium.

Contributing editor Adam Kirsch '97—critic, essayist, poet—has long crafted beautifully written articles for the magazine. It is fitting to honor him again for "Extracting the Woodchuck" (January-February, page 44), a penetrating, fresh assessment of Robert Frost. We take genuine pleasure in awarding him the McCord Writing Prize, named for David T.W. McCord '21, A.M. '22, L.H.D. '56, in recognition of his legendary prose and verse composed for these pages and for the Harvard College Fund.

The talented Michael Zuckerman '10 (a writer, Lowell House resident tutor, and first-year Harvard Law student) took readers inside undergraduate life today in "The Lowell Speeches Project" (September-October, page 37), a model of warmth and clarity. He also reported in print in the same issue ("Citizen Scholars," page 24) and has written astutely online, on Teach for America and other topics. It is fitting to celebrate his contributions with the Smith-Weld Prize which honors thought-provoking writing about Harvard in memory of A. Calvert Smith '14, a former secretary to the Governing Boards and executive assistant to President James Bryant Conant, and of Philip S. Weld '36, a former president of the magazine.

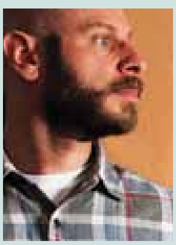


Michael Zuckerman

In a society divided by widening inequality—a fissure too easily overlooked from the comfortable confines of Harvard's campus—sociologist Matthew Desmond has opened eyes by examining the effects of eviction on the nation's poor. Photojournalist Michael Kienitz documented the phenomenon in the indelible images that appeared on the cover and accompanied "Disrupted Lives" (January-February, page 38), a feature on Desmond's work by contributing editor Elizabeth Gudrais '01. It was essential that the photographs treat their subjects with the dignity and respect that Desmond brings to his work; it was a privilege to publish this portfolio.

Michael Kienitz

How to illustrate an idea? That was the challenge art director Jennifer Carling put to Taylor Callery as she reviewed "Disruptive Genius" (July-August, page 38), a profile of Clayton Christensen by deputy editor Craig Lambert '69, Ph.D. '78 (see also page 27, this issue). Callery responded with a vivid cover, depicting the displacement of lumbering automobiles from Detroit by nimbler Japanese imports, and in the article itself, with imaginative renderings such as an animated herd of mini disk drives chucking a bigger, earlier model over a cliff: disruptive innovation personified.



Taylor Callery

We warmly thank all four.

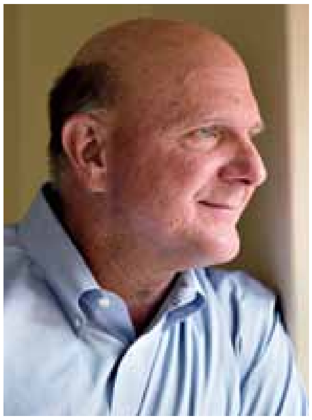
~The Editors

and its implications for Harvard appears at **harvardmag.com/ballmer-15**.

The computer-science and other campaign-fueled SEAS growth; expansive claims for computational and applied-scientific analytics in pursuit of research in virtually every other area; and expanding ambitions for what FAS dean Michael D. Smith has called an "emerging research innovation campus" in Allston come at a potential moment of anxiety among the experts in those other fields Parkes referred to.

As Smith's annual report for the 2013-2014 academic year discloses, the number of undergraduates concentrating in engineering and applied sciences (775) now exceeds those concentrating in arts and humanities (746)—a first for the College (see graph, page 30). Those SEAS concentrators, and burgeoning enrollment in the school's classes by students pursuing other major fields of study, are taught by 82 ladder faculty at the beginning of the current academic year (up from 77 in 2013-2014), while there are 196 arts and humanities professors. The student shift to engineering and applied sciences has been swift and profound; that demand for instruction, and perceived opportunities in research, underlie SEAS's campaign plan for significant faculty growth, much of which Ballmer has now supported.

By comparison, investment in other areas, welcomed by faculty members and students alike, is on a different scale (see below). In late November, the Association of American Universities (Harvard was a founding member, in 1900) joined academic groups from around the world to sign the Leiden Statement, the latest in a series prompted by the seemingly imperiled status of the humanities and other fields. Pledging support for the humanities and social sciences, the statement of purpose asserts, almost defensively, "Every challenge the world faces has a human dimension, and no solution can be achieved without enlisting the support and efforts of individuals, communities, and societies"—with nary a mention of apps or algorithms.



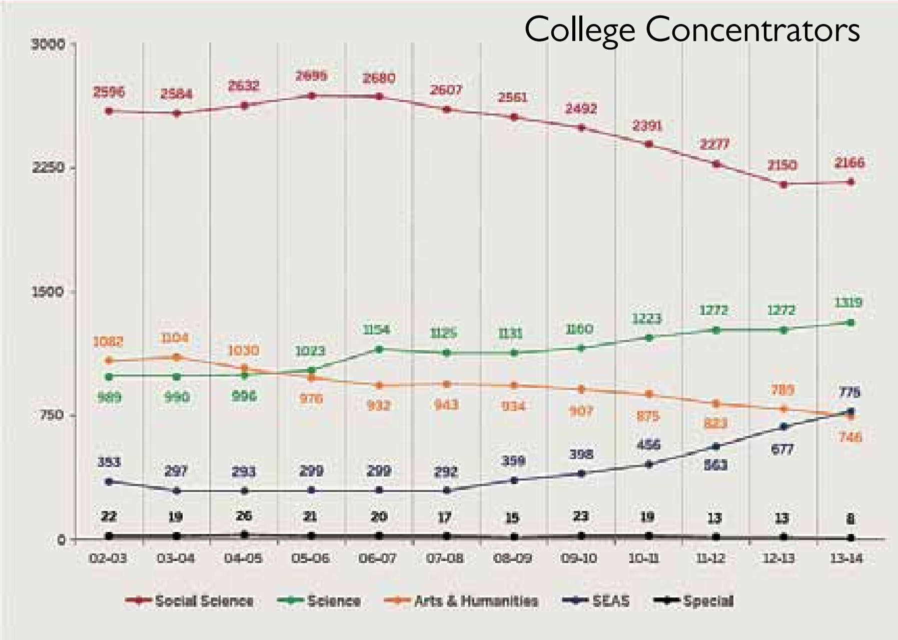
JULIETTE LYNCH/HARVARD UNIVERSITY

Steve Ballmer

A discussion of the changes in enrollment, faculty expansion, and related issues appears at **harvardmag.com/fas-15**.

Presidential Priorities

Harvard has long been known for operating with "every tub on its own bottom": a system that has empowered deans to steer their schools toward excellence in their fields, with control over endowments to match—but has also left successive presidents with relatively scanter resources. Under Neil L. Rudenstine, the University Campaign sought funds for central academic priorities, including several multischool interfaculty initiatives. The current Harvard Campaign, without spelling out such goals, has apparently bolstered President Drew



THE FACULTY OF ARTS AND SCIENCES

Inflection point: undergraduate engineering and applied sciences concentrators outnumber those in arts and humanities.

Faust's coffers. A gift unveiled at Radcliffe Day last May, for example, allotted $5 million for the arts, to be used at the president's discretion (see Brevia, September-October 2014, page 30).

Deploying the Massachusetts Hall balance sheet, Faust supported two initiatives in the days before the Ballmer announcement and HMS launch. The first, announced in late October, is $5 million in presidential seed funding for an undergraduate concentration in theater, dance, and media—an initiative envisioned in the Faust-commissioned task force on the arts, which reported in late 2008, after the financial crisis largely forced its recommendations to be shelved. The new FAS concentration (put in context by the Undergraduate columnist in this issue; see page 33) may start up in the coming academic year. More details will be forthcoming, but it appears that the program will operate *without* creating a formal department or augmenting the ranks of arts and humanities ladder faculty. For a full report, see **harvardmag.com/tdm-15**.

Two weeks later, the Harvard Graduate School of Education announced a $10-million anonymous lead gift toward the creation of a Harvard Teacher Fellows Program, a reconceived, expanded pathway for undergraduates to enter the teaching profession. That gift, additional financial support, and unspecified funds from Faust, summed to $14.5 million—sufficient progress toward the program's $20-million goal for education dean James Ryan to proceed, beginning with seniors in the College class of 2016. Capacity will eventually rise to 100 fellows annually. The program will provide extensive training before fellows enter a classroom—more than they might receive, for example, through Teach For America—and, more notably, mentoring and support during their first developmental years as teachers.

Talking about the venture, Faust said, "I've been excited about this for a really long time"—as it both accommodates student interests and joins larger efforts to offer more public-service opportunities to College graduates. Read a comprehensive report at **harvardmag.com/tfp-15**.

Taking Attendance

At the Faculty of Arts and Sciences (FAS) meeting on November 4, Harry R. Lewis, Gordon McKay professor of computer science, posed a question. He had learned from two colleagues, he said, that students in their spring lecture courses had been photographed without prior notification or consent of either professors or students, to gather data for a Harvard Initiative for Learning and Teaching (HILT) study on attendance. This "surveillance," he observed, appeared at odds with professors' usual control over their classrooms—and with the lessons purportedly learned, painfully, during the 2012-2013 academic year: the news that resident deans' e-mail accounts had been examined during an investigation of academic misconduct led to the drafting of new University policies on electronic privacy. He embraced the principle of "more peer feedback on our teaching," Lewis said, but colleagues and students did not wish to go about their academic work "never knowing for sure whether we are being or have been under scrutiny." He asked for assurance that all the subjects of "this nonconsensual study" be informed that they were photographed.

The study had come to light obliquely during a September conference, when Samuel Moulton, HILT's director of educational research and assessment, discussed attendance in 10 unidentified lecture courses. His exhibits showed that attendance declined from the beginning to the end of most weeks, and during the semester. The main reason for showing up or not, he reported, involved a student's reason for taking a course; pre-medical requirements were correlated with high attendance. Moulton added that attendance is a measure of student engagement: "People vote with their feet."


STEPHANIE MITCHELL/HPAC

Peter Bol

Lewis's remarks made clear what no one had noted at the time: the data were collected photographically. FAS does not routinely take attendance or assign seats.

Lewis's query brought to the microphone vice provost for advances in learning Peter K. Bol, who oversees HILT

Brevia

Students at the Summit

Three students have been awarded Rhodes Scholarships for study at Oxford University. **Ruth Fong** '15, a computer-science concentrator from Somerset, New Jersey, and Mather House, and **Benjamin Sprung-Keyser** '15, an economics concentrator from Los Angeles and Kirkland House, won American Rhodes honors. **Friederike "Fritzi" Reuter** '14, an economics concentrator and former Lowell House resident now working in Boston, won a German Rhodes. **Michael George** '14 ('15), a government concentrator from Los Baños, Laguna, The Philippines, and Quincy House, and senior **Anna Hagen,** an English concentrator from Brooklyn and Lowell House, have won Marshall Scholarships. He plans to study at the London School of Economics and at Oxford; she will study at Cambridge and the Royal Academy of Dramatic Art.

Crimson-Blue Collaboration

Computer Science 50, "Introduction to Computer Science," which attracted the largest College enrollment during the fall term (and which in its online version attracts tens of thousands of students), is adding a venue: Yale has approved offering a version, using broadcast lectures and on-campus teaching assistants in New Haven, and Harvard has agreed. McKay professor of the practice of computer science **David J. Malan,** the course's charismatic instructor, signaled the approval by posting a road-trip video from Cambridge to New Haven on the course home page. Fun aside, this is an interesting experiment in pedagogical collaboration—a rarity in higher education despite the emergence of online teaching, a highly acclaimed professor and course, and the intense demand for instruction in this field.

Less Common App?

Although most college applicants are familiar with the conveniences and inconveniences of the **Common Application** (which failed to function during long parts of the 2013 application season), a group of selective-admission private institutions, including Harvard, Yale, and Princeton, and elite public universities have solicited proposals for a substitute online application system. The solicitation, reported by *The Chronicle of Higher Education*, noted both the desire to have a system when "another application mode experiences difficulties or system failure," and interest in a new option for institutions seeking to tailor their processes for enrolling "the very best and most diverse freshman classes they can."

Admissions Suit

The Project on Fair Representation, which earlier solicited for plaintiffs to challenge admissions procedures at Harvard, the University of North Carolina, and the University of Wisconsin, followed through, filing suits against the first two institutions. It represents "highly qualified students recently denied admission," prospective applicants, and their parents, claiming in Harvard's case that the University discriminates against Asian-American applicants and confers racial preferences on white, African-American, and Hispanic applicants. The project is generally opposed to diversity practices upheld in the Supreme Court's ruling in *Regents of the University of California v. Bakke*, which was based in significant measure on Harvard's admissions procedures. Senior vice president and general counsel **Robert Iuliano** responded to the lawsuit in a statement, noting that "the College

STEPHANIE MITCHELL/HPAC

David T. Ellwood

ELIZA GRINNELL/SEAS COMMUNICATIONS

Cherry A. Murray

DEPARTING DEANS. David T. Ellwood, dean of the Harvard Kennedy School since mid 2004 (preceding Drew Faust's presidency), intends to step down at the end of this academic year. The longest-serving current dean is relinquishing his role with the school's $500-million capital campaign more than 70 percent funded, and after unveiling ambitious plans to expand and integrate its campus. Following a sabbatical year, Ellwood will return to teaching and research; he joined the faculty in 1980. Somewhat surprisingly, Cherry A. Murray, dean of the School of Engineering and Applied Sciences (SEAS) since mid 2009, announced in late October that she would relinquish the post at the end of 2014, to return to regular service on the faculty. She, too, left on a high note, as a campaign gift funded a 50 percent expansion of SEAS's computer-science faculty (see page 28). Gordon McKay professor of computer science Harry R. Lewis will serve as interim dean, beginning January 1. A search is under way for Murray's successor, who will deal with much more fundraising, and with relocating two-thirds of the SEAS faculty to new facilities in Allston later in the decade. For full reports, see harvardmag.com/ellwood-15, harvardmag.com/murray-15, and harvardmag.com/lewis-15.

ELIZA GRINNELL/SEAS COMMUNICATIONS

Harry R. Lewis

considers each applicant through an individualized, holistic review having the goal of creating a vibrant academic community that exposes students to a wide-range of differences: background, ideas, experiences, talents and aspirations. The University's admissions processes remain fully compliant with all legal requirements and are essential to the pedagogical objectives that underlie Harvard's educational mission."

On Other Campuses

Yale has opened the **Yale Center Beijing**, a university-wide teaching and research facility, somewhat like Harvard's center in Shanghai, and introduced a dual-degree program between its **School of Forestry and Environmental Studies** and **Tsinghua University**, also in Beijing.…**SOHO China Foundation**, which surprised Harvard with a $15-million fund for scholarships for low-income Chinese students (see Brevia, November-December 2014, page 33), has now given Yale $10 million for the same purpose.…**Engaged Cornell**, which aims to combine undergraduate classroom learning with hands-on experiences, has begun funding course development; it plans universal coverage by 2025.…Brown University has announced **BrownConnect**, to make internships, research opportunities, and associated funding available to all freshmen, sophomores, and juniors—particularly those from low-income families.

Financing Figures

John Morgridge and Tashia Morgridge have given $100 million to the **University of Wisconsin-Madison**, the largest gift in its history, to encourage donations for new and enhanced professorships.…Berkshire Hathaway executive Charles T. Munger, a major supporter of the University of Michigan, his alma mater, has given $65 million to the **Kavli Institute for Theoretical Physics** at the University of California, Santa Barbara.

Nota Bene

Biomedical innovators. The National Institutes of Health has recognized these researchers under its high risk-high reward program, which provides each honorand five years of research funding: **Ethan Garner**, assistant professor of molecular and cellular biology, New Innovator Award, for investigating the bacterial cell wall; **Chenghua Gu**, associate professor of neurobiology, Pioneer Award, for studying the blood-brain barrier; **Alison L. Hill**, postdoctoral fellow, Early Independence Award, for exploring computational tools to help find a cure for HIV/AIDS; and **Donna Spiegelman**, professor of epidemiologic methods, Pioneer Award, for pursuing effective public-health interventions.

In the academy. Harvard affiliates inducted into the American Academy of Arts and Sciences in October include: **Joanna Aizenberg**, Berylson professor of materials science; **Graham T. Allison Jr.**, Dillon professor of government; **Helen Hardacre**, Reischauer Institute professor of Japanese religions and society; **Amy Hempel**, senior lecturer on English; **Vicki C. Jackson**, Marshall professor of constitutional law; **Jill Lepore**, Kemper professor of American history; **Ann Marie Lipinski**, curator, Nieman Foundation for Journalism; **Alvin F. Poussaint**, professor of psychiatry; **Bernardo L. Sabatini**, Moorhead professor of neurobiology; and **Sarah E. Thomas**, vice president for the Harvard Library and Larsen librarian.

STEPHANIE MITCHELL/HPAC

Ann Marie Lipinski

Medicine men and women. Among the 70 new members of the Institute of Medicine elected in October are: **Elliot L. Chaikof**, Johnson and Johnson professor of surgery; **E. Antonio Chiocca**, Cushing professor of neurosurgery; **Todd R. Golub**, professor of pediatrics; **Bradley T. Hyman**, Penney professor of neurology; **Paula A. Johnson**, professor of medicine and of epidemiology; **Meredith Rosenthal**, professor of health economics and policy; **Margaret A. Shipp**, professor of medicine; and **Bruce M. Spiegelman**, Korsmeyer professor of cell biology and medicine.

JUSTIN IDE/HPAC

Bruce M. Spiegelman

Miscellany. Madero professor for the study of Mexico **Jorge I. Domínguez**, the vice provost for international affairs, will relinquish that post in June, concluding a decade of service, to return to full-time teaching and research.…*New Yorker* staff writer **Evan Osnos** '98 won the National Book Award in nonfiction for his first book, *Age of Ambition: Chasing Fortune, Truth, and Faith in the New China* (reviewed in the July-August 2014 issue).…Harvard's renovated Bright-Landry Hockey Center now features **Boynton Lounge**, a concourse-level, members-only hospitality room with a "variety of first-class amenities," including HDTVs and a fireplace, plus buffet and cash bar; season memberships cost $350.

PASSAGES FROM INDIA. Harvard University Press has introduced the Murty Classical Library of India (www.murtylibrary.com), presenting modern editions of important literary texts, spanning multiple languages (among them, Bangla, Hindi, Persian, Sanskrit, Tamil, and Urdu), with facing-page English translations. (See Brevia, July-August 2010, page 65, for more on the library's creation.) The general editor is Sheldon Pollock '71, Ph.D. '75, Raghunathan professor of South Asian studies at Columbia. The series, begun with publication of five initial volumes in January, complements the famous Loeb Greek and Latin texts; the I Tatti Renaissance Library; and the Dumbarton Oaks Medieval Library (launched in 2010).

and the HarvardX online-learning program. (Bol is Carswell professor of East Asian languages and civilizations, and a director of Harvard Magazine Inc.) He had heard anecdotally, he said, that students were increasingly prone to skip class, among other signs of diminished academic rigor (less work outside of class, less note-taking). "Such anecdotes raised questions about the effectiveness of lectures as a way of helping students learn," he said, "and suggested that there might be some value in exploring how new media and pedagogical techniques might be used by faculty to turn the lecture into something…more interactive and engaging…."

But, Bol continued, "we did not have any data to support the anecdotes. I thus looked for a way of getting data on attendance, because that seemed to be the only thing that could be measured in a straightforward way that did not rely on self-reporting." To avoid study bias and protect student identities, an experiment was designed to use photographic recording of lecture halls, from which full and empty seats could be counted. The Committee on the Use of Human Subjects in Research, he reported, determined that this was not "human-subjects research," and so could proceed without prior notice or consent protocols. He shared the data, once analyzed, with the course heads, and the underlying images were destroyed.

Bol said there would be more consultation before studies involving undergraduates proceed in the future, and President Drew Faust said the oversight committee on electronic-communications policy would also be consulted. The few faculty members who commented from the floor suggested they could answer questions about their teaching and attendance directly, if asked.

The following week, Bol used a blind e-mail list of registrants to notify students in the courses that were photographed. He advised that, "The researchers involved in this study do not know who was enrolled" and that no individuals were identified, and invited comment on any lingering concerns. *The Harvard Crimson*, meanwhile, in a bit of enterprising reporting, discovered that 29 courses had been photographed, not just the 10 about which Moulton spoke: 22 from the College and the Graduate School of Arts and Sciences, and 7 from the Extension School.

Analysis of data on the 19 other courses has not been completed, and may not be, and the underlying images have been destroyed for all 29 courses, according to HILT's director, Erin Driver-Linn, and Moulton. "[T]his research was never meant to bring scrutiny to individual courses, faculty, or students," they wrote, "nor was it ever meant to judge individual courses or faculty.…The goal has consistently been to understand lecture attendance in order to be able to ultimately improve student engagement and learning."

In mid November, HILT published findings on the 10 courses analyzed. Among them:

- On average, 60 percent of students attended any given lecture.
- There was *significant* variability among courses, with average attendance during the semester ranging from 38 percent to 94 percent.
- Overall, attendance declined during the semester, from 79 percent to 43 percent.

As explanatory factors, the report noted, "[C]ourses that measured and graded attendance had higher attendance than those that did not (87 percent vs. 49 percent, respectively)." Premed requirements also mattered, as noted above. Finally, "Other reasons for taking the courses (e.g., elective vs. General Education requirement) did not show significant effects, nor did time of day, day of week, published Q ratings [student course evaluations], or the availability of lecture videos."

For this sample, at least, HILT acquired data on lecture attendance—at considerable financial cost, and at least some cost in faculty and student good will. If the study prompts further discussion of the efficacy of lectures versus more engaged "flipped" courses (where students watch recorded videos before class, and then come together to work on problems and master more difficult concepts—an experiment both Lewis, some years ago, and Bol, more recently, have pursued), that might be a good thing. So might professors' voluntary agreement to invite peer review of and feedback on their pedagogy. Combined with HILT-funded teaching experiments and analytics, and HarvardX's technological wizardry, such interventions present plenty of opportunities for gains in instruction and learning.

For detailed reports, with the statements by Lewis, Bol, and HILT, see **harvardmag.com/monitoring-15** and **harvardmag.com/surveillance-15**.

THE UNDERGRADUATE

An Undergraduate Life in the Theater

by OLIVIA MUNK '16

The Google Calendar listing the conflicts for cast members looks terrifying. One has a class section from 6 to 7 p.m. on Mondays and Wednesdays, two others have a cappella rehearsals from 7 to 10 p.m. on Tuesdays and Thursdays, and a fourth is in another play that demands he attend six hours of rehearsal each day next week. I squint at the slivers of white space among the rainbow of "unavailable" blocks, the spaces in which I am justified in asking my stage manager to call the entire cast for rehearsal. I thought being a stage director would let me control my time better than when I was a performer at the mercy of someone else's rehearsal schedule. Instead, my time is now dictated by everyone else's. I want Google to engineer a magical eraser that I can use to blot out the chromatic conflicts…

Undergraduates perform in the fall 2013 production of Mark Twain's *Is He Dead?* in the Adams Pool Theater.

It was sophomore fall, and I was quickly realizing the complexities of my role as director of an undergraduate play. As a freshman, I had been involved in four productions, all acted, produced, and directed by students, and I was eager to take on the responsibility of a full-scale production myself. When application season for theater venues rolled around that spring, I teamed up with friends who had agreed to produce and design Mark Twain's play, *Is He Dead?* for the following fall. We talked about the production in the way I imagine people plan utopian communities: we would use minimal props, simple set pieces, and throw weekend cast parties galore.

At Harvard, staging a show requires production teams to find sources of funding *and* create set plans, costume designs, and lighting concepts before they can even apply for space. We decided to apply for the "Ex" (the Loeb Experimental Theater), a black-box performance space in the Loeb Drama Center. Though I knew it was highly coveted, given its versatility and proximity to technical resources, I dutifully compiled a 35-page application of statements, résumés, and design plans, and felt confident after my 30-minute interview. Ultimately, my show was rejected for the Ex, but we soon found a home, via a second application, at the Adams Pool Theater, an actual swimming pool converted into a theater in the late 1980s. During the summer, I gleefully returned to daydreaming about glowing *Crimson* reviews and meticulously detailed blocking notes.

The first week of each semester at Harvard is marked by the stress of choosing classes, but for students either casting or auditioning for shows, the real back-to-school pressure happens from 6 P.M. to midnight on the very same days. "Common Casting" is when the majority of productions on campus assign roles to performers. Because more than 40 shows can go up in any given semester—from the Ex, to dining halls, and even squash courts—there are often too few actors to go around, and some students end up being involved in more than three shows.

After more than 20 hours of auditions during the first six days of my sophomore fall, I finally had my cast, and was ready to begin rehearsals. Ready, that is, if I could ever find a time to schedule them. My idyllic visions never included staring at that Google calendar with four weeks left to rehearse a two-hour play requiring almost 100 props, 13 actors, 18 costumes, three wooden scenery flats, and $1,300 in grant money. I took a deep breath, and set about cramming as much rehearsal as possible into the brief time allotted.

I often found myself awake at 4 A.M. before a morning rehearsal, scribbling blocking notes into the blank margins of my script. I spent every spare moment e-mailing about paint colors and building supplies, and ran to the props room at lunchtime to pick out the perfect couch or set of glasses before another show claimed them. Homework was usually completed between the hours of midnight and 10 A.M., and the amount of coffee I consumed was directly proportional to my lack of sleep.

I once took the T through Boston for three hours in search of a self-inflating whoopee cushion for one particular bit in the show, only to finally find the elusive toy at a Walgreens in Allston, a 10-minute bus ride from my dorm.

Directing became a series of successes and failures, each one the product of inexperience and learning by trial and error. Despite their strain on my sleep and homework, I lived for the hours of rehearsal I'd painstakingly planned. Seeing something I had only imagined acted out under the harsh fluorescent lights in a rehearsal room filled me with a kind of glow nothing else could spark. Yet that was nothing compared to how proud I felt seeing my actors, now a new group of friends, take control of all we had worked on when an audience packed the house on opening night.

I love theater for the micro-communities each show creates, especially as opening night draws near. The worst technical difficulties or missed lines during a performance can become the "Do you remember?" moments that hold a cast together long after the set has been struck. When it comes to performing in front of an audience, terror necessitates a close cast bond—nail-biting director in the last row of the audience included.

Is He Dead? received a beaming review in the *Crimson*, and we did have exuber-

Photographs by Anna Zhong

ant cast parties, now immortalized by disposable camera photos in which the post-show relief of the subjects is evident by tired, sweaty smiles. The satisfaction I gained from this first foray into directing made me realize that I love the kind of theater Harvard offers outside the classroom, where students are given total autonomy over creative decisions. When plans of study were due just a few weeks later, I chose to separate my academic pursuits from extracurricular activities. Though many of my friends chose to pursue the secondary field in dramatic arts, I happily picked courses in English and psychology.

The recent announcement of a likely full-scale concentration in theater, dance, and media (see page 30) has left my friends and me with many questions about the future of our existing dramatic community. Would concentrators receive preference in the space-application process? Would it become possible to earn course credit for participating in shows—and if so, would this apply to all actors and production staff, or just to those with the biggest roles? Would the larger creative processes, such as choosing what shows to mount or what kinds of sets to build, remain in student hands, or would faculty members begin to exercise more control? Given the competitive nature of the real-world theater industry, the opportunity to exercise this kind of control at such a young age, in an environment that provides funding and support, is invaluable to the development of practical theatrical knowledge among undergraduates. Most important, what degree of independence would student-produced extracurricular shows retain?

My graduation, two semesters away, looms closer than the answer to these questions. I hope the coming changes to the Harvard theater community will further the abundance of talent and resources on campus, and not inhibit creative freedom. Being given the funding and the space to direct a favorite play at 19 years old is a dream I hope students are able to fulfill long after I've been released into the "real world." All I ask of administrators is that they let students guide these new opportunities in the way they've learned best in years past: through direction.

Berta Greenwald Ledecky Undergraduate Fellow Olivia Munk '16 has an opera going up in February.

The play that made "slant and go" part of Crimson lore: Having put a double move on Yale's Dale Harris, Andrew Fischer '16 capered into the end zone after catching the winning pass from Conner Hempel with 55 seconds left.

SPORTS

Just Perfect

A thrilling end to The Game caps a championship season.

Slate-gray skies and trepidation shrouded the home side of Harvard Stadium late in the afternoon of Saturday, November 22. In the big picture, the anxiety seemed unwarranted. The Crimson football team already had clinched a share of the 2014 Ivy title. It had not lost all season. Yet despite the 39-degree chill, Harvard supporters among the sellout crowd of 31,062 were perspiring through their coats of cashmere, raccoon, and down. Yale, which had entered the 131st renewal of this ancient rivalry one game behind the Crimson in the Ivy standings, had pluckily rallied from a 17-point, fourth-quarter deficit to forge a 24-24 tie with 3:55 left. Harvard's perfect season, the outright title, the prolongation of braggin' rights…all were about to vanish, to be replaced by a winter spent gloomily pondering where this collapse ranked among all-time Crimson catastrophes.

What ensued left us instead happily debating where the 2014 team stands among the all-time greats. In a drive that began at the Harvard 22, Crimson senior quarterback Conner Hempel used the skills of two juniors, running back Paul Stanton Jr. and wide receiver Andrew Fischer, to work the ball to the Yale 35. There, Hempel and Fischer decided to trot out a bit of deception: a pass pattern called "slant and go." Lining up on the right, Fischer (as he had been doing all game) took a jab step toward the sideline. Yale defensive back Dale Harris bit on the move—whereupon Fischer pivoted and headed downfield. Seeing that Fischer had a step on Harris, Hempel reared back and fired. Fischer caught the ball in stride and cantered over the goal line. Touchdown! The Crimson led 31-24 with 55 seconds left.

Now it was up to the Harvard defense. With the Bulldogs driving for a tie to force overtime, Zack Hodges '15, Harvard's all-Ivy defensive end, made a crucial sack of Yale quarterback Morgan Roberts at the Crimson 32. On the next play, Roberts tossed a pass intended for receiver Grant Wallace, but defensive back Scott Peters '16 (a onetime walk-on) lunged in front of Wallace and snagged the ball at the Harvard 15. Poor Eli's hopes he was dashing, into Blue obscurity! Game over. Perfect season in the books. Braggin' rights retained for another 365 days. Whew! "There were times when you just didn't feel that it would be our day," said Harvard coach Tim Murphy afterward. "Our kids just managed to find a way to will this into the win column."

With this nailbiting triumph the Crimson achieved a 10-0 overall record, the seventeenth perfect season in Harvard history and Murphy's third, joining the unblemished campaigns of 2001 and 2004. Victory in The Game allowed Harvard to finish 7-0 in the league, one game ahead of Dartmouth and two ahead of Yale, which fell to third place; Princeton, Brown, Penn, Cornell, and Columbia followed. In his 21 seasons in Cambridge, Murphy has beaten Yale 16 times. He has won or shared eight Ivy titles; this championship is Harvard's third in four years.

Even as the perfect season was unfolding, skepticism abounded. Preseason polling tabbed Harvard to finish second to Princeton. The autumn began with key players injured, among them seniors Hempel, leading 2013 receiver Ricky Zorn, and tight end Tyler Hamblin. There was also a question about how the defensive backfield would stand up against the better Ivy passers. Stuttering starts raised further doubts. In the opener, Harvard trailed Holy Cross at halftime (in an eventual 41-18 win) and repeated the pattern the following week against Brown (a 22-14 final). A 34-3 whipping of overmatched Georgetown was followed by a sluggish and scoreless first half against weakling Cornell. The 24-7 final score did not allay concerns, nor did the next Saturday's 24-14 win over Patriot League foe Lafayette.

Few perceived that the Crimson was molding a template for domination. The foundation was the three D's:

• Defense. Harvard was fiendishly difficult to score on. "Our identity was as a

Photographs by Robert Worley

defensive team," said Murphy. In 2014 the Crimson allowed 12.3 points a game, by far the lowest in the Ivies. (Dartmouth's D was next, at 21.0.) The front four was anchored by the Crimson's all-time sack leader, Hodges, whom every opposing offense had to double-team. That allowed linemates such as senior Obum Obukwelu more rein to collapse pass pockets. Moreover, the hard-hitting defensive backfield—senior captain Norman Hayes, plus juniors Sean Ahern, Chris Evans, and Peters—morphed from a presumed target of opportunity to a thorny thicket for passers. "For the secondary to transition so quickly gave us a huge lift," said Murphy.

The most consistent unit may have been the linebackers, who lived up to the requirements set forth by legendary Florida A&M coach Jake Gaither: agile, mobile, and hostile. It produced the team's four leading tacklers: juniors Jake Lindsey (63 tackles), Eric Medes (61), Matt Koran (60), and senior Connor Sheehan (56). The 'backers also had five of the Crimson's 10 interceptions.

• Depth. Fischer assumed Zorn's primary receiver role so brilliantly that at season's end, his teammates elected him most valuable player. As receiver, rusher, and returner, the little (five-foot-nine, 175-pound) man played big. Fischer led the Crimson with 55 receptions and, all told, accounted for a team-best 129.8 yards a game; that average was second in the Ivies only to the 154.5 of Yale's brilliant senior back Tyler Varga.

There were other heroes. When previously little-used senior running back Andrew Casten subbed for Stanton, the offense didn't miss a step. When quarterback Hempel was out, junior Scott Hosch engineered six wins. If any position demonstrated the Crimson's wealth of talent, it was tight end. The Crimson could line up five good ones: Hamblin, junior Ben Braunecker, sophomores Anthony Firkser and Ryan Halvorsen, and freshman Jack Stansell.

• Drive. You could make a persuasive case that the Harvard offensive line was, as an entry, the league's MVP. "It's one of the more special groups in Harvard football history," said Murphy. Keyed by 300-pound senior center Nick Easton, it flattened every defender in its path, gashed cavernous holes for running back Stanton (who often burst into the secondary untouched), kept Crimson passers upright (only 11 sacks all season), and wore down opposing defenses. The O-line was the main factor in the Crimson's dominance during the second halves of games, when it outscored foes 174-75.

The season's defining stretch came during a two-week road test. At Princeton, the Crimson leapt out to a 28-0 halftime lead and never let up en route to a 49-7 blowout. Harvard racked up a school-record 698 yards of total offense, and Hempel completed 25 of 31 passes for three touchdowns and 382 yards. The next week, in a showdown of Ivy unbeatens at wintry Hanover, the Louisianan Stanton proved an all-weather back, mushing through the slush for 180 yards and two touchdowns. With six minutes left, senior Andrew Flesher nailed a 33-yard field goal to seal a 23-12 win. Back at the Stadium the next week, a 45-0 blowout of Columbia was marked by a school-record three interception returns for touchdowns, two by Sheehan.

To this point, Yale, racking up nearly 43 points a game, had only one league loss, to Dartmouth. So if Harvard could win at Penn and the Elis could subdue Princeton at New Haven, that would set up a Game for the ages. Both missions were accomplished. Yale handled the Tigers 44-30, but in the Crimson's case, it was a near thing. Playing in retiring coach Al Bagnoli's final game at Franklin Field, the Quakers took a 24-17 lead into the final quarter. Then Flesher booted a 38-yard field goal, Hosch connected with Hamblin on a 28-yard touchdown strike, and Stanton (who gained 235 yards in 22 carries on the day) bolted 14 yards for his third touchdown, clinching a 34-24 triumph.

Game on! Such was its significance and frenzy that ESPN GameDay, the TV college-football preview show with the biggest buzz, voyaged to Cambridge and presented its telecast hard by the Murr Center. The action matched the buildup, and then some. Yale led at halftime 7-3. In the third period, with the offensive line, as usual, kicking into gear, Hempel rammed the ball down the Elis' throats. In a 58-yard drive, he mixed his own runs with those of Stanton and Casten, plus passes to Fischer and Hamblin. When Stanton took it in from the one, Harvard had the lead back, 10-7. Later came some typical Murphy big-game prestidigitation. From the Yale 40, Hempel handed to Stanton going left. Stanton handed to senior wide receiver Seitu Smith going right. Smith stopped and saw Fischer behind the Yale defense. Smith threw. Fischer gathered it in, ripped out of a tackler's grasp, and trotted over the goal line. "The last game of the season is the time to bring out the trick plays," Fischer said later. "All week, we had practiced them perfectly." Practice paid off: Harvard 17, Yale 7.

Back came the Elis. Starting at their 25, Yale marched to the Crimson 16. Then quarterback Roberts heaved a pass to the left intended for wide receiver Robert Clemons III. It hung up long enough for Sheehan to arrive at Clemons at the same time as the ball. Sheehan wrenched it from Clemons' mitts on the 10 and set sail the other way. Ninety yards later, it was Harvard 24, Yale 7.

At this point Harvard fans were feeling

As so often happened this season, an opposing quarterback—in this case, Yale's Morgan Roberts—had nowhere to run against marauding Crimson defenders such as linebackers Jake Lindsey '16 (number 51) and Eric Medes '16 (number 49), who were helped by defensive tackle Miles McCollum '17.

relaxed, with reason. But in the next 11:22 of play, spearheaded by the crashing, slashing, dashing Varga, the Elis rallied to knot it up. It induces shudders to contemplate what the Yale offense could have done had it had more than 55 seconds to work with following the winning Hempel-to-Fischer touchdown.

Instead, we can contemplate where this 2014 Harvard team stands in the annals of the unvanquished. The 2001 team had a defense bulwarked by Dante Balestracci '04, a four-time All-Ivy linebacker, while its attack featured hallowed quarterback Neil Rose '03, whose backup (!) was a freshman named Ryan Fitzpatrick '05. They threw to Carl Morris '03, the closest thing the Ivies have seen to Calvin (Megatron) Johnson. The unbeatens of 2004 boasted two future pros, Fitzpatrick and running back Clifton Dawson '07, plus crackerjack receiver-returner Brian Edwards '05. That team topped 30 points in nine of its 10 games. "The 2004 team had the most firepower," said Murphy. "It was tremendously well balanced—a complete football team."

Where the 2014 team might have an edge is in depth, resilience, and gumption. Players went out of the lineup and others came in with little apparent dropoff. Through adversity, "there never was any 'Woe is me,'" said Murphy proudly. In this regard, the 2014 Crimson team harks back—way back, long before the Murphy era—to the overwhelmingly efficient machines of a century ago molded by Percy D. Haughton, A.B. 1899.

It's a debate—a perfect one—to warm our winter.

TIDBITS: Harvard's record in The Game now stands at 58 wins, 65 losses, and eight ties; since the Ivy League was formalized in 1956, the Crimson leads, 34-24-1. Harvard has beaten Yale in eight straight Games, tying the Elis' 1880-89 teams (no games in 1885 or 1888) for the longest streak in the series, and in 13 out of the last 14....The visit by GameDay was the program's second to an Ivy venue, the first having occurred in 2002 at Franklin Field when the Crimson played Penn. For his weekly prediction segment, co-host Lee Corso donned a bulldog mask to signify his pick of Yale. Corso thus almost certainly forfeited any chance of being awarded an honorary degree at Commencement.

Streaks alive! Harvard now has gone 14 years with at least seven victories, an Ivy record....The Crimson has won 14 consecutive games, with the last loss being a 51-48 defeat in three overtimes to Princeton on October 26, 2013....Harvard has won 10 straight on the road since a 30-21 loss at Penn on November 10, 2012....The Crimson has not been shut out in an Ivy record 168 games, dating from a 24-0 loss to Columbia on September 19, 1998. Harvard surpassed the previous mark of 162, held by Brown, when Flesher booted a 24-yard field goal in the first quarter against Lafayette this fall....The Crimson has blanked Columbia three straight seasons and has not allowed a point to the Lions in 189 minutes, 31 seconds of play.

Mr. Accuracy: Hempel finished his career as the Crimson's all-time leader in completion percentage, with a mark of 66.5 percent (234 completions in 352 attempts). Next best: Rose (.624, 455 of 729).

Sibling act: Seitu Smith and Semar Smith '18 became the first Crimson brothers to score in the same game when each reached the end zone against Columbia. Seitu tallied in the second quarter on a 37-yard pass from Hosch. In the next quarter, Semar matched his big brother, tallying on a three-yard rushing play.

Wreaths of Ivy: Murphy was named the league's Coach of the Year, an award initiated this season. His record at Harvard is 147-62, and he has 104 Ivy victories, placing him third all-time behind Yale's Carmen Cozza (135 from 1965-96) and Bagnoli (111)....Nine Crimson players were named to the All-Ivy first team: on offense, Hamblin, Stanton, Easton, and junior tackle Cole Toner; on

SHUNELLA LUMAS

Assuming ground control on the Dartmouth game's opening drive, running back Paul Stanton Jr. '16 rumbled behind center Nick Easton '15 (number 57) to a pair of touchdowns and a game total of 180 yards.

defense, Ahern, Hayes, Hodges, Obukwelu, and Sheehan. Hayes, Hodges, and Stanton were unanimous selections….For the second year in a row, Hodges was a recipient of the Bushnell Cup as Ivy League Defensive Player of the Year (sharing 2014's award with Princeton linebacker Mike Zeuli). He also led the league in quarterback sacks for a second season, with 8.5, pushing his career total to 27.0, the most in school history…. Nine other Crimson players received either second team or honorable mention nods. The 18 All-Ivy tabs were the third most in Crimson history (20 in 2007 and 19 in 2009).

Oh, captain, our captain: Matt Koran, of Joliet, Illinois, and Mather House, will captain the 2015 Crimson team. In the season just past, besides his previously noted 60 tackles, he was credited with one forced fumble, and had a 34-yard interception return for a touchdown against Columbia.

~DICK FRIEDMAN

Dick Friedman '73 spent two decades as an editor and writer at Sports Illustrated.

Escape Artist

Wrestler Todd Preston wins—from the bottom up.

The three periods of a collegiate wrestling match—three minutes, followed by two more of two minutes each—can tick by quickly. "But [comparing it to] a seven-minute sprint doesn't do it justice. You're not just using your legs; you're using your arms, you're using your head," says Todd Preston '16, who wrestles for Harvard at 141 pounds. Meanwhile, an opponent is putting pressure on your head and shoulders, and trying to bring you down to the mat. "You're battling a lot of adversity in a wrestling match," Preston explains, "and you have to be mentally strong."

In the final match of the Eastern Intercollegiate Wrestling Association (EIWA) championships last spring, it took that kind of mental strength for Preston to push past those seven minutes of regulation combat. First, he forced the match into overtime in the final seconds of the third period with a takedown of Luke Vaith, a nationally ranked senior from Hofstra. Then, with barely five seconds left in the second round of sudden-death overtime (first to score points wins), Preston made a buzzer-beating move. As Vaith reached under for his leg, Preston spun out behind and around him, scoring the points that instantly ended the match. That two-point victory earned him the EIWA title and an award as the tourney's Most Outstanding Wrestler. "It's just what our coaches always told us when we were little kids," he reflects. "You can't stop wrestling until the whistle's blown."

Coaches have always called him a "scrappy" wrestler. "I'm always moving everywhere," Preston explains. "Someone described it like this to me: I'm like a little kid trying to play with an older brother, and I'm slapping him across the face, running in circles." A more technical way to describe Preston's wrestling style might be what he calls "flow." "I get a shot, he

Hoop Hopes

During the past four years, the Harvard men's basketball team has been a model of consistency: four straight Ivy League championships, three consecutive trips to the National Collegiate Athletic Association tournament, and opening-round victories in the last two of those appearances.

But this year's squad has been harder to figure out. After entering the season ranked twenty-fifth in the Associated Press national poll (the first time an Ivy League team has received such pre-season recognition since 1974), Harvard began its campaign by besting MIT (a Division III opponent) 73-52, but then tumbled to Holy Cross, 58-57. The margin of defeat was narrow, but the squad's 24 turnovers and stagnation on offense were disturbing.

STEVE BANINEAU

Senior Wesley Saunders, easing in for a layup in the early-season loss to Holy Cross, led Harvard in scoring through the first six games, averaging 20.2 points per game.

Four days later, when the Crimson retook the hardwood against Florida Atlantic, the squad again looked unfamiliar—but for a different reason. Head coach Tommy Amaker had benched all five starters to send a message that he expected every player to live up to the team's internal "standards." The move paid dividends. After Amaker reinserted his regular line-up several minutes into the game, Harvard unleashed a 34-9 run, en route to a 71-49 victory. The blowout began a three-game winning streak that culminated with a two-point win over the University of Massachusetts, Harvard's toughest opponent to date.

Will the team live up to its pre-season billing? The reaction to the squad's early hiccup underscores the difficulty of what Amaker is trying to accomplish. He believes that his team can compete with the best in the country—but as the Crimson grows more successful, the margin for error narrows, and the target on its back grows bigger. If this year's team is to sustain or exceed the consistency of past squads, it will need to be different: it will need to be better. A year-end road trip to Virginia and Arizona, and the beginning of league play in mid January, should quickly bring those prospects into focus.

~DAVID L. TANNENWALD

Harvard Hardwood

Follow the men's and women's teams all season long: sign up for *Harvard Magazine*'s basketball e-mail to receive game dispatches and analyses by David L. Tannenwald '08. harvardmagazine.com/email blocks, and I'm immediately going to the other side" and attacking again, even before regaining full balance, he explains. "It's just constantly moving, and constantly threatening and attacking."

Relentless offense enables a wrestler to score points in each of wrestling's three positions. Wrestlers begin the first period of a match standing apart in the "neutral position," from which each tries to take the other down to the mat. In the next two periods, wrestlers take turns choosing among the three positions—neutral again, or top or bottom. (The wrestler who crouches below the other is in the "bottom" position.)

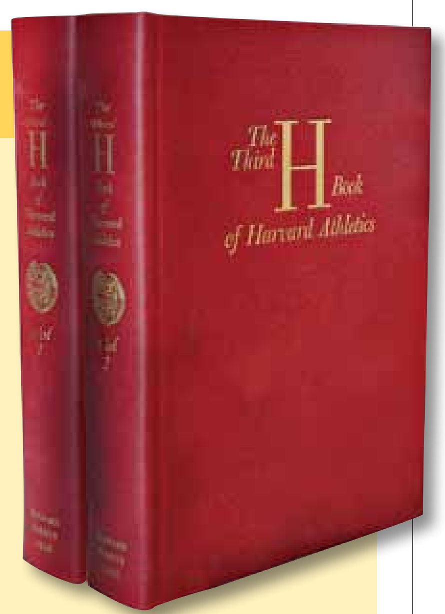
Preston always chooses bottom, knowing he has the strength, and the technique, to escape. He wins one point for the escape—returning to the neutral position—and a second if he can manage to place his opponent below him, scoring a "reversal." To escape, Preston focuses on preventing his opponent from putting too much pressure on his head and shoulders, and on getting his weight back over his hips. This makes him less vulnerable to flipping and better able to use his leg muscles to pivot and stand. Preston calls bottom a "mental game," because it often takes several attempts, and getting knocked back down to his knees several times, before escaping. "It's almost a metaphor for life," he says, but adds, "I'm very confident that I can get out. It's like a guaranteed point."

Preston began developing his aggressive style at the age of five, as his father, Robert, who had wrestled through high school, introduced both of his sons—Todd and Robbie, eight years older—to the sport. Growing up in Hampton, New Jersey, Todd wrestled with youth clubs and then at Blair Academy, where he earned three national prep-school titles. As captain, he led Blair to a first-place national ranking his senior year. After a call from Harvard coach Jay Weiss, he followed his brother to Cambridge (where Robbie '07 reached the NCAA tournament three times, at 125 and 133 pounds).

Despite these early successes, it took a tough freshman year for Preston to bring together his mental and physical game. In tournaments, teams can enter only one competitor in each weight class, and Harvard already had a superstar at 141 pounds—then-senior Steven Keith '13. As Preston faced the choice between losing crucial mat time and facing much bigger competition at 149 pounds, a bout of appendicitis in late October interrupted his season. He returned to the mat in January and wrestled "up" at 149, getting the feel of collegiate wrestling but taking real drubbings. "Even though I might get my butt kicked wrestling big guys," Preston says, "I was getting better conditioning, I was getting stronger, I was getting better technique."

Those challenges taught him to push away anxieties and focus on the task at hand, setting him up for success sophomore year. "He's one of the most talented

Read *All* About It



The earliest history of Crimson athletics appeared in *The Harvard Book,* a compendium published in 1875. Rowing and baseball were then the only established intercollegiate sports; football and track were still in their infancy.

Almost 50 years later, in 1923, the Harvard Varsity Club brought out *The H Book of Harvard Athletics: 1852-1922*. Its 624 pages were devoted to just five intercollegiate sports: rowing, baseball, football, track, and ice hockey. A *Second H Book* followed in 1964. It covered 15 major and six minor sports, and ran to 960 pages.

Now comes *The Third H Book of Harvard Athletics: 1963-2012*, published by the Varsity Club in November. Its two volumes chronicle an eventful era that saw the rise of women's teams and the addition of fencing, golf, sailing, skiing, volleyball, and water polo as major sports. Those developments upped the number of varsity squads to 41—the most of any college in the country—and spurred a multimillion-dollar expansion of the University's physical plant.

HB3's 1,368 pages hold some 410,500 words of text, double the wordage of the 1964 book, and nearly 1,000 illustrations. An introduction by John Powers '70, a veteran *Boston Globe* reporter, surveys the transformative changes in the athletics landscape since the 1960s, and tracks Harvard's ascent to the top of the Ivy League heap in many of the two dozen sports in which varsity teams now compete. The book also features the first inclusive history of the 104-year-old Varsity Club, prepared by Craig Lambert '69, Ph.D. '78, a former editor at this magazine. A final section lists the 11,400 athletes who won major Hs (for extended participation in a major varsity sport) from 1963 to 2013.

From initial prospectus to final press run, *HB3* was nine years in the making. Most of the chapters were produced by the book's two principal writers: John Veneziano, Harvard's sports information director from 1989 to 2002, and Powers. The general editor was John T. Bethell '54, who edited *Harvard Magazine* for 28 years and wrote its football columns for four decades. Daniel J. McCarron, former associate University publisher and University printer, served as art director and production manager.

The project was overseen by Robert A. Glatz '88, the Varsity Club's executive director, and a five-person committee chaired by William E. Markus '60. Planning ahead, Glatz estimates that the runup to a *fourth* edition might begin by 2034. But he adds, "I hope I'm retired by then."

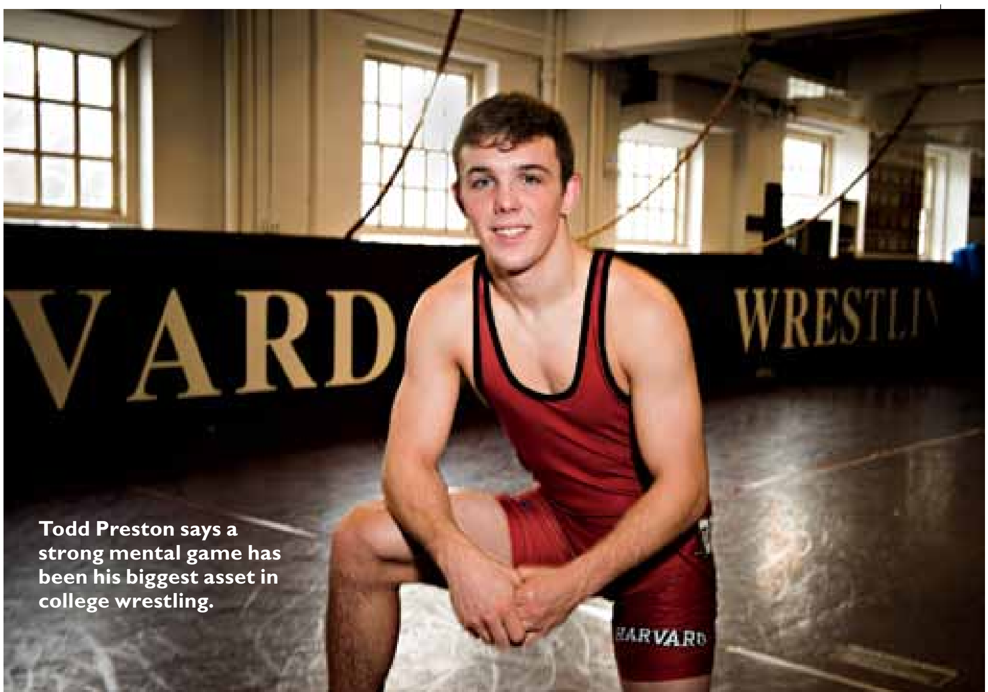
Priced at $75 ($65 for active members of the Varsity Club), The Third H Book *may be ordered online from the Club website (www.harvardvarsityclub.org). Its two volumes are also available in boxed sets that include the first and second* H Books.

wrestlers I've ever coached," Weiss says. "[But] that's only part of our game. There are too many guys I've seen work so hard and just not have the mental game. Last year, he put it together."

One big area Preston worked on last year, and continues to attack this year in practice, is learning to score more points when wrestling "from the top." (The opponent, after all, may choose that bottom position Preston prefers.) In the NCAA quarterfinals last spring, he learned how it feels to wrestle an opponent who excels in the top position. After losing to Logan Stieber, the Ohio State wrestler who went on to win the national title, "I thought I needed surgery on my shoulder," Preston says. "But everything was legal. This sounds so messed up, but I would love to put my opponent in that much pain and be able to score."

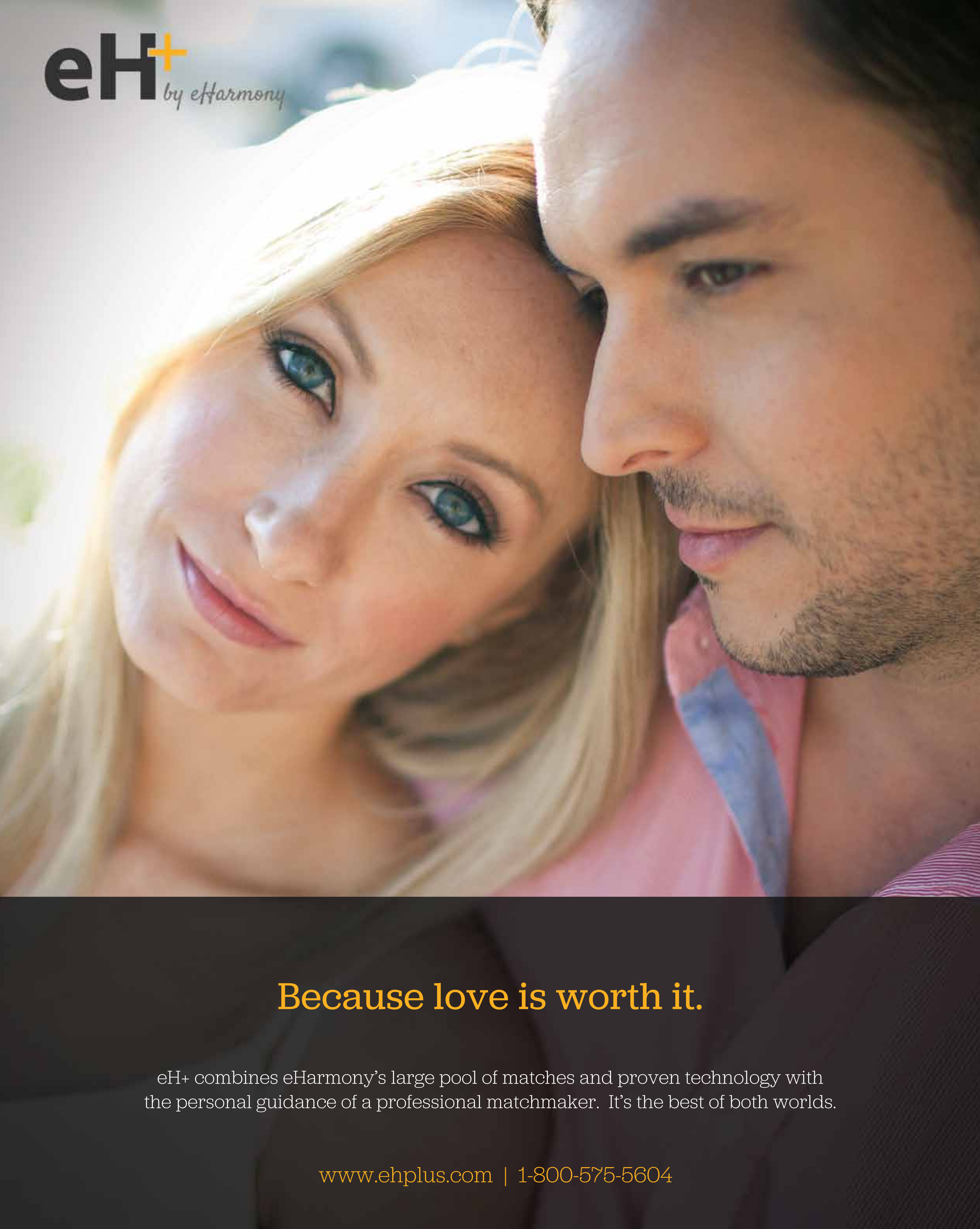
This season, he returns as one of two team captains on a relatively young Crimson squad, ready to make good on the promise he saw in his performance last year. Because he lost by a single point in the NCAA tournament's Round of 12, he fell just short of earning All-American status, awarded only to the top eight finishers. This year, Preston is balancing his signature mental style—focusing on the moment, not the season—with his longer-term goals. "I was one point away," he says, "but that just fuels the fire for this year."

~STEPHANIE GARLOCK



STU ROSNER

Todd Preston says a strong mental game has been his biggest asset in college wrestling.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The Legal Olympian

Cass Sunstein and the modern regulatory state

by Lincoln Caplan

Cass Sunstein '75, J.D. '78, has been regarded as one of the country's most influential and adventurous legal scholars for a generation. His scholarly articles have been cited more often than those of any of his peers ever since he was a young professor. At 60, now Walmsley University Professor at Harvard Law School, he publishes significant books as often as many productive academics publish scholarly articles—three of them last year. In each, Sunstein comes across as a brainy and cheerful technocrat, practiced at thinking about the consequences of rules, regulations, and policies, with attention to the linkages between particular means and ends. Drawing on insights from cognitive psychology as well as behavioral economics, he is especially focused on mastering how people make significant choices that promote or undercut their own well-being and that of society, so government and other institutions can reinforce the good and correct for the bad in shaping policy.

The first book, *Valuing Life: Humanizing the Regulatory State,* answers a question about him posed by Eric Posner, a professor of law, a friend of Sunstein's, and a former colleague at the University of Chicago: "What happens when the world's leading academic expert on regulation is plunked into the real world of government?"

In "the cockpit of the regulatory state," as Sunstein describes the White House Office of Information and Regulatory Affairs, which he led from 2009 to 2012, he oversaw the process of approving regulations for everything from food and financial services to healthcare and national security. As the law requires, he was also responsible for ensuring that a regulation's benefits generally exceed its costs. By doing so, his office helped the Obama administration achieve net benefits of about $150 billion in its first term—more than double what the Bush and Clinton administrations achieved in theirs. He especially tried to humanize cost-benefit analysis, by focusing on the human consequences of regulations—including what can't be quantified.

The second book, *Why Nudge? The Politics of Libertarian Paternalism*, is about the type of policy or rule that Sunstein is especially eager to see government and other institutions use regularly: nudging in one direction, with little or no cost to those who decline nudges and go their own way. Little he did in the White House involved nudges, but his job gave him the chance to see many areas of American life where they could make a large difference.

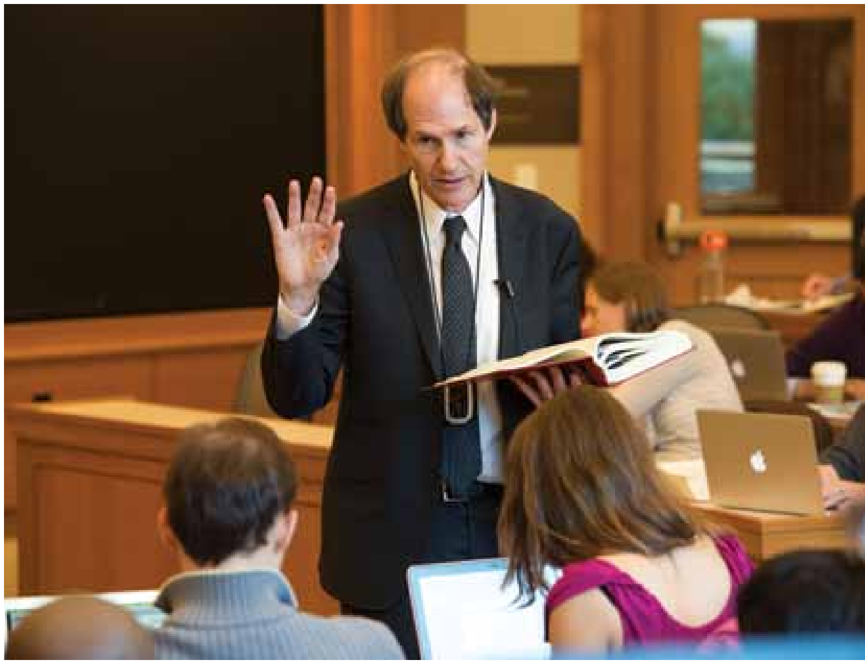
He developed the concept with Richard Thaler, a professor of behavioral science and economics at the University of Chicago. Sunstein defines nudges as "simple, low-cost, freedom-preserving approaches, drawing directly from behavioral economics, that promise to save money, to improve people's health, and to lengthen their lives"—small pushes in the right direction, like a restaurant disclosing the calorie count of each dish so patrons are more likely to order healthy food, or a company setting up its 401(k) plan so employees are automatically enrolled in the savings program and must choose to opt out.

In recent decades, behavioral economists have shown that, out of impulse, impatience, or ignorance, people often make choices that are not the best or even good for them: we are not the rational self-interest maximizers that conventional economists have long assumed [see "The Marketplace of Perceptions," March-April 2006, page 50]. In response, "choice architecture" (a term Sunstein and Thaler coined) refers to the design of environments in which people make choices—a school cafeteria, say—and to the reality that there's no such thing as a neutral design. Whether the cafeteria puts apples or Fritos at the front of the line, the placement will affect which snack is more popular. In Sunstein's view, the cafeteria ought to put apples first. Nobody is forced to take one: the nudge is "freedom-preserving" because a student can choose *not* to grab an apple.

The third book, *Conspiracy Theories and Other Dangerous Ideas*, was published to take advantage of his intellectual celebrity. In the run-up to the 2008 presidential election, *The New York Times* reported that Sunstein was one of the few friends Barack Obama made when both were teaching at the University of Chicago Law School in the 1990s: the friendship elevated Sunstein's profile when Obama became president. His status as a policy luminary was confirmed by his marriage to Samantha Power, J.D. '99, who is as close to being a real celebrity as a policy wonk can be. (*"A Problem from Hell,"* her Pulitzer Prize-winning 2002 bestseller, is a vivid polemic about U.S. government inaction in the face of genocides [see "An End to Evasion," September-October 2002, page 26]. Obama, still in the Senate, hired her first as a foreign-policy aide and then as an adviser during the 2008 presidential campaign, where she and Sunstein met. She is now the U.S. permanent representative to the United Nations and a cabinet member. Sunstein introduced her at his confirmation hearing before the Senate as "my remarkable wife, brave Samantha Power….")

The dust jacket of *Conspiracy Theories* quotes denunciations of Sunstein so extreme it's hard to imagine what he could have said or done as a government official to trigger such vitriol. Glenn Beck, the conservative commentator, repeatedly called him "the most dangerous man in America"—"Sunstein wants to control you," he declared, mistaking nudges for edicts of the nanny state: "He's helping the government control you."

Before he joined the government, Sunstein explains in this book, his job as an academic was to "say something novel or illuminating," because today's "wild academic speculation" could become tomorrow's solution. *Conspiracy Theories* presents some of those speculations, using the alarums from Glenn Beck and others to draw a wider audience. The title essay, written in the wake of 9/11, is about the proliferation of conspiracy theories then ("49 percent of New York City residents believed that officials of the U.S. government 'knew in advance that attacks were



Professor Sunstein in his Harvard milieu, teaching administrative law

planned on or around September 11, 2001, and that they consciously failed to act'") and why the theories spread. His purpose is "to shed light on the formation of political beliefs in general and on why some of those beliefs go wrong."

Believers in conspiracy theories, Sunstein emphasizes, are often ill informed: they believe what they hear—and they hear only from people with extreme views. The scholar Russell Hardin named this problem "a crippled epistemology," the kind of two-word moniker that Sunstein favors. People who move in and out of such groups make the problem worse. Those who leave tend to be skeptics: when they go, so does their moderating influence. Those who join and stay tend to become fanatics. When a theory attracts fanatics who act on their views, like terrorists, one possible governmental response could be what Sunstein calls "cognitive infiltration": i.e., challenging the theory's counterfactual foundations. Some civil libertarians ignored the "cognitive," read "infiltration" literally, and went crazy denouncing the idea.

The dangerous ideas that most concern him are errors in thinking akin to *crippled epistemology* that lead to foolish or damaging behavior. They include *misfearing*, "when people are afraid of trivial risks and neglectful of serious ones," so public funding is misal-

Photographs by Jim Harrison

located to combat the former instead of the latter, and *the availability heuristic*, a mental shortcut in thinking about risk that is influenced by heavily publicized events (floods, forest fires) so people worry about the wrong perils.

These concerns of Sunstein's are weighty. They also seem narrow, leaving out of the picture the scope of the social purposes that they are designed to serve.

The second essay in *Conspiracy Theories*, "The Second Bill of Rights," puts these current preoccupations in crucial perspective. A distillation of a book he published a decade ago subtitled *FDR's Unfinished Revolution and Why We Need It More Than Ever*, it reveals Sunstein in a very different mood: strongly patriotic and adamantly visionary. He writes about "the only time a State of the Union address was also a fireside chat," in January 1944, when President Franklin Delano Roosevelt, only 15 months before his death, spoke to the nation by radio from the White House. To Sunstein, the address "has a strong claim to being the greatest speech of the twentieth century."

The overarching concern of Sunstein's legal scholarship is reforming the workings of government and society to promote "the central goals of the constitutional system—freedom and welfare."

FDR used it to propose a Second Bill of Rights, to redress what he described as the Constitution's inadequacies. He recommended rights to "a useful and remunerative job"; for "every businessman, large and small, to trade in an atmosphere of freedom from unfair competition and domination by monopolies"; to "a decent home"; to "adequate medical care"; to "adequate protection from the economic fears of old age, sickness, accident, and unemployment"; and to "a good education." They "spell security," the president said: "For unless there is security here at home, there cannot be lasting peace in the world."

Roosevelt could make his proposal, Sunstein explains, because in that era "*no one really opposes government intervention*." (The italics are his.) The address came only a few years after the end of the Great Depression, when it was all but universally accepted that "markets and wealth depend on government"—to prevent monopolies, promote economic growth, and preserve the system of free enterprise, but also to create "a floor below which human lives are not supposed to fall."

To Roosevelt, the Second Bill of Rights was like the Declaration of Independence: "a statement of the fundamental aspirations of the United States," in Sunstein's words. The president argued not for a change in the Constitution, but for incorporating the rights he championed in "the nation's deepest commitments."

Sunstein's enduring admiration for the proposed Second Bill of Rights helps bring into focus the overarching concern of his career as a legal scholar: to understand and explain how "the modern regulatory state" has changed America's "constitutional democracy," and how to reform the workings of government and society to promote "the central goals of the constitutional system—freedom and welfare."

He has pursued these aims as a preeminent scholar in constitutional law, administrative law, and environmental law, and in related fields. He has also written about animal rights, gay rights, gun rights, the death penalty, feminist theory, labor law, securities regulation, and an almanac of other topics. The span from his microscopic focus on nudges to his panoramic interest in the constitutional system, with nudges carrying out the moral purposes of the Republic, helps explain why his standing in the legal world of ideas is, more or less, Olympian.

Penetrating the Impenetrable

Sunstein is tall and big-boned, with a large head, a prominent nose and chin, and a tonsure of longish brown hair. His public uniform is a dark suit, a white shirt, and a dark tie—old-fashioned, unstylish, and earnest, which he appears to be, yet isn't. His eyes seem to brood when his face is at rest, but they amp way up when something charms him: it gives him the look of a troublemaker. That's more likely to happen when he is tie-less. He is a major time-optimizer, so his default mode in e-mail is buoyant and brief, as in, "True!" His hands pivot the way a puppeteer's do—in his case, to set ideas in motion.

In conversation and in his writing, Sunstein occasionally provides glimpses into his inner life. It seems to be animated by relish for work as much as play (with the two often indistinguishable), by an impatience to get on with it, and by an outsized competitive streak: about the last, his wife said cheekily to a writer for *Vogue* after a whiffle-ball game, "You can say Cass is psychotic, if you so choose." One way he masks that is by using irony in all its guises, whatever he is engaged in. This has been so for a long time. During high school, according to *The Harvard Crimson*, Sunstein told a friend, "Too much play and too little work makes Cass a dull boy."

As a Harvard senior concentrating in English, he chose to write his thesis about *How It Is*, an obscure novel by Samuel Beckett. The novel is short, punctuation-free, and bewildering. It begins: "how it was I quote before Pim with Pim after Pim how it is three parts I say it as I hear it" and, to the uninitiated reader, never gets any clearer. Sunstein said recently, "I liked Beckett because he seemed both hilariously funny and interested in the deep questions, like, What's the meaning of life? Especially for an adolescent, that would be hard to resist." From a distance of 40 years, that isn't a bad summary of his old interest, but it is the recollection of someone who took a very different path from the one he was on then.

Both Sunstein and Yo-Yo Ma "continue to experiment, and they bring back to the core of their work insights gained from other fields. Each behaves as though he is nowhere near the pinnacle of his career."

His thesis leaves a very different impression. It's the well-written and well-researched work of someone who seriously considered going to graduate school in English and had the ability to do significant scholarship about literature, but decided not to because he worried that the life of a humanities scholar would be too passive.

His thesis adviser, Robert Kiely, now Loker professor of English emeritus, taught courses about the postmodern novel, among other subjects. He said recently that *How It Is* "was not a book that I liked or even understood," but Sunstein was "a 20-year-old English major who was determined to write his thesis on Samuel Beckett's most impenetrable book." He was "persistent, engaging, and already very smart and good at argument."

Kiely "realized pretty quickly that it was the sheer difficulty of *How It Is* that challenged Cass. He was not one to take on easy problems!" In the end, Kiely continued, "He very nearly succeeded in making this depressing book into a subject bordering on pleasure." Sunstein graduated *magna cum laude*.

Kiely had such a high opinion of him that he reversed the custom of students expressing gratitude to teachers and acknowledged the debt he felt to Sunstein. In a book about the modern novel, he wrote that Sunstein (and another former student) represented "that combination of literary intelligence, moral commitment, and curiosity that have been a delight and refreshment to me as a teacher."

Squash was Sunstein's other obsession during his last year of college. He was a cerebral, gentlemanly, and very competitive player on a varsity team that was among the best in the country. He graduated in three years to move on to law school, so he had a year of eligibility left when he got there and kept playing for the varsity. The only match he lost that season (one of two he lost playing varsity squash) was against a superb Princeton player. But Harvard won the team match and, as a result, the national championship.

Sunstein's law-school squash-playing solves a minor but longstanding mystery. He was on the winning team in the school's 1977 Ames Moot Court Competition and again graduated *magna cum laude* (in the top 10 percent of his class), but didn't make the *Harvard Law Review*. At the time, the primary way to make the review was being one of the top 20 students at the end of the first year. (A smaller number of students were picked in a writing competition, which Sunstein didn't enter.) From the squash team's perspective, according to David Fish, then assistant varsity squash coach, now head coach of men's tennis, "It was truly remarkable that he was able to play on the varsity in his first year of HLS." Each commitment was almost pre-emptively demanding.

A couple of years after leaving the law school, it dawned on Sunstein that he might want to become a law professor, but he wasn't sure his credentials were good enough. ("Even if you were on the *Law Review*," he brought up recently, "the chance that you'd actually get to teach didn't seem to be high.") But he was a beneficiary of "choice architecture": he had a clerkship with Supreme Court Justice Thurgood Marshall—and top law schools interviewed any clerks who were interested in teaching at the Court, rather than at the big annual gathering of the Association of American Law Schools known as the "meat market." That was helpful even to a modest outlier, as Sunstein was.


COURTESY OF CASS SUNSTEIN

At the time, the University of Chicago was eager to balance its top-heavy law faculty with some junior members and to take some risks in its hiring. The school's then-new dean, Gerhard Casper (later president of Stanford) recently said that Sunstein "impressed me with his subtlety and his wide range of intellectual interests, especially in public law, which was even then his great love." He got the job and taught at Chicago for 27 years until moving to Harvard in 2008.

Sunstein has made a law-review credential seem less essential for would-be legal scholars. He has made squash seem indispensable for him—and has written about that. Last fall, he got the chance to play in a professional tournament in Washington, D.C. In a column he wrote about this caper for *Bloomberg View*, he struck a genial, self-deprecating tone about his loss of the match, by 3 games to 1, to a 20-year-old Pakistani pro named Mubarak Mohsin:

> It is said that sheer randomness would enable a monkey, spending enough time on a keyboard, to at some point write the works of Shakespeare. In the first game, sheer randomness (undoubtedly accompanied by some bemusement on Mohsin's part) enabled this particular monkey to

grab an improbable win. But Mohsin had me running the whole time, and my legs really didn't enjoy that. As Shakespeare would say, "When sorrows come, they come not single spies,/But in battalions."

No Cant, No Pretentiousness—and a Focus on Law's Impact

The squash column was one of Sunstein's regular opinion pieces for Bloomberg—in his words, "low-cost" pieces that take little time to write and reach a wide audience. He recently wrote an op-ed in a different mood for *The Chicago Tribune* called "A Treasure-Trove Beyond Words." Describing the Seminary Co-op Bookstore in Hyde Park, near the University of Chicago, he wrote: "More than any place I have ever been, it settles and quiets the mind."

The piece contains a batch of clues about Sunstein's passions. The books he mentions finding on the store's Front Table, for "the newest and the best books," are by authors he reveres: "On one day there was John Rawls' *Political Liberalism* (just out!), and on another there was Amartya Sen's *Development As Freedom*, and on another, A.S. Byatt's *Possession*"—his favorite novel, a tour de force of plot twists that, Beckett-like, calls into question the concept of the "self." More importantly, in describing the "gentleness of the store—its humility, its civility, its seriousness, its importance without self-importance, its absence of self-display, even its calm air"—he underscores his love of books, as an author keen to write some that are "full of life-altering surprises."

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Regulatory overseer Sunstein and President Obama confer, 2011. Sunstein and his wife, UN ambassador Samantha Power, arrive at the White House for a state dinner for French president François Hollande, February 2014.

Sunstein has been a writer since he was old enough to realize it. A close friend told *The Harvard Crimson* that in high school, Sunstein "had this weird thing where he'd be hunched over the typewriter kind of like Glenn Gould over the piano." In college, he wrote for *The Harvard Lampoon*. Novelist Kurt Andersen '76, host of the public radio program *Studio 360* and a fellow *Lampoon* member, described him as "a dry and funny writer," with "a kind of rigor in his work not true of everybody then or now."

Sunstein's models are writers with original ideas who aren't household names. At the top of his list is Albert O. Hirschman, LL.D. '02, a German immigrant to the United States who was an economist and, in Sunstein's words, "an anti-utopian reformer" who ended up at the Institute for Advanced Study, in Princeton, New Jersey. He wrote four idiosyncratic books. The most important, *The Rhetoric of Reaction*, is about standard objections to proposals for reform and why the objections are usually wrong. Hirschman, Sunstein wrote in *The New York Review of Books*, was "delighted by paradoxes, unintended consequences (especially good ones), the telling detail, inventories of actual practices (rather than big theories), surprises, and improvisation."

Wayne Booth, an eminent scholar of rhetoric and longtime member of the Chicago faculty who died in 2005, is another Sunstein model. "One of Booth's ideas," he said, "is that writers have 'implied authors' that are not necessarily consistent with their real personality" yet define the kind of company a reader will find in a book. He went on, "The writer of, let's say, Wayne Booth's *The Company We Keep*—I really like that person. He has a kind of wit and civility and decency and absence of sanctimony, a kind of appealing earnestness."

In helping him refine his own implied author, other "tremendous influences" are: Sen, LL.D. '00, the Nobel laureate in economics and Lamont University Professor, for "his combination of rigor and moral commitment" ("the great Sen!" Sunstein calls him); Richard Posner, LL.B. '62, the highly respected federal judge, hyper-prolific author, and outstanding legal scholar, "as one of the five or three best practitioners of pragmatism in the past 50 years" who writes with "no cant, no pretentiousness, and an acute interest in the human consequences of law"; and his coauthor, Richard Thaler, the pathbreaking behavioral economist: "If you look at his academic articles and his very few books, he tends not to hit singles and doubles, he likes to hit home runs, and that's just not my style. I have itchier fingers than you can have if you're only looking for home runs."

Those fingers have made Sunstein the most prolific legal scholar of his generation as well as one of the most influential: 28 books to date plus 15 books coauthored with others, around 500 scholarly articles, and hundreds of other journalistic articles for *The New York Review of Books*, *The New York Times*, *The New Republic*, *The American Prospect*, *Bloomberg View*, and many other outlets. *Wiser: Getting Beyond Groupthink to Make Groups Smarter* was just published, coauthored with Reid Hastie, a Chicago professor of behavioral science. Later this year, *Constitutional Personae* will be published. To the common categories of politics and methods of interpretation for typing judges, he adds the personae of Heroes, Soldiers, Burkeans, and Mutes. Both conservatives and liberals can be any of them. The role they choose depends on how they think a case should come out (Sunstein writes: "The right Persona depends on the plot of the play.").

Sharon Jacobs, J.D. '09, is a professor at the University of Colorado Law School who, like Sunstein, writes in the fields of administrative and environmental law. She took a law-school seminar co-taught by Sunstein and views him as a master from the angle of a junior scholar. She is also a conservatory-trained musician. She compares him to his contemporary, the great cellist Yo-Yo Ma

'76, D.Mus. '91 [see "Yo-Yo Ma's Journeys," March-April 2000, page 42]. While continuing to concentrate on playing classical music, his first love and most important repertoire, Ma has ventured into tango, country, jazz, Central Asian ethnic music, and other far-flung forms. Both of them, Jacobs said, "continue to experiment, and they bring back to the core of their work insights gained from other fields. Each behaves as though he is nowhere near the pinnacle of his career."

Taking on John Stuart Mill

Sunstein's account of his time in government is largely upbeat. He left some others with a less favorable impression. Bruce Ackerman '63, a Yale professor and a longtime admirer and friend of Sunstein's, said recently, "He has become a liberal technocrat, concerned about the interests of consumers rather than citizens. I'm all for liberal technocrats—we need liberal technocrats—but I would like to see him take up the cause of citizens again."

The sharpest criticism has come from Lisa Heinzerling, a professor of law at Georgetown University, who worked for the Environmental Protection Agency during the Obama administration's first two years and represented the agency in its dealings with the Office of Information and Regulatory Affairs. Last year, she basically accused Sunstein's office of flouting the law, set out in federal statutes and executive orders, that specifies what the office can and cannot do in its assessment of regulations proposed by agencies. She also excoriated the office for operating on its own unreliable timetable, with "no meaningful deadlines" in "an utterly opaque" process.

Heinzerling's description squares with news and other accounts, in particular a report for the Administrative Conference of the United States, an independent federal agency with the mission of improving regulation. The report documented that reviews by Sunstein's office of proposed federal rules "took longer in 2011 and 2012 because of concerns about the agencies issuing costly or controversial rules prior to the November 2012 election."

From 1994 to 2011, reviews of agency rules took an average of 50 days. In 2012, the average increased to 79 days and in the first half of 2013, to 140 days. The big reason for the delays, the conference report said, was "concerns by some in the Executive Office of the President (EOP) about the issuance of potentially costly or otherwise controversial rules during an election year." There was a list of other reasons as well, but the report chose not to recommend "a strict time limit on the length" of reviews by the regulatory affairs office.

Sunstein has a policy against answering any questions about his time in government, so he declined to be interviewed for the conference report or to comment on it. That is what he described as "one of the many products of my years in Washington," about which he can be prickly and self-protective to avoid repeating some "pretty ugly" experiences. About Heinzerling's criticisms, he said, "She thinks it's objectionable that the Executive Office of the President has a lot of deliberation about what to do with rules, and the content of the deliberation is not itself public. And I think that's okay, like if there's deliberation about a war or about a budget—internal discussions don't go public, and that's okay."

The main impression Sunstein gives about conflicts like these is that he would much rather avoid them. He doesn't like confrontation. He doesn't like being attacked and, though he sometimes does it, he doesn't like attacking. He would rather think about how to improve the design of government, and to test a proposal for reform against challenges to it on the basis of fundamental values, than rehash how well he did as an administrator of the current design.

His current preoccupation is the ethics of choice architecture, because—as interest in behavioral economics and nudges has grown in Europe especially—critics he takes seriously have raised questions he is eager to answer. In a PowerPoint presentation he gave in Berlin in December, one slide read:

Third Problem? Dignity

- Problem of humiliation or disrespect
- Is a GPS humiliating? Is a warning? A reminder?
- Default rules vs. active choosing
- Choice-requiring paternalism
- But true: learning can be important
- And risk of error on part of choice architect

This is the slide of a man in the middle of solving an intricate puzzle—as he wrote recently in a primer on nudges, to "make life simpler, safer, or easier for people to navigate." He has a sense of urgency about the project ("The lives we save may be our own") and a sense of mission ("Real transformations require a degree of consensus"). What matters now is how to locate the nudge idea in the thinking of the worldly philosophers, such as John Stuart Mill and the chief principle he articulated in *On Liberty*.

"In his great and inspiring essay," Sunstein writes in *Why Nudge?* "Mill insisted that as a rule, government may not legitimately coerce people if its goal is to protect them from themselves"—usually called the harm principle. Sunstein shows that some of Mill's most important justifications for the principle are wrong. One is that "individuals are in the best position to know what's good for them." Since Mill's time, Sunstein writes, "we have learned a great deal that he did not know and could not know, especially about human error," which is "in grave tension" with that principle.

The nudge idea is about simplifying and improving the market as well as government—in the United States and other societies. But his aims with nudging are the same as his longtime aims for American governance: to preserve individual freedom and strengthen the welfare of society.

What Matters in Law—and Governance

For the moment, Sunstein isn't concerned about explaining where this project fits in his life's work, but he went a long way toward doing that in his first book, published 25 years ago. *After the Rights Revolution: Reconceiving the Regulatory State* laid out the project he has worked on steadily for the past generation. He was 35 when the book came out and already held a distinguished chair in jurisprudence at Chicago.

Understanding "the rise of social and economic regulation," he said, was his way of understanding contemporary "American law and government." He wrote, "Modern regulation has profoundly affected constitutional democracy, by renovating the original commitments to checks and balances, federalism, and individual rights." A decade and a half later, at Harvard and a number of other law schools, legal education changed dramatically to reflect this insight by putting courses about regulation at the center of the curriculum.

Between the New Deal, starting in the early 1930s, and when

Sunstein became a law professor, in the early ’80s, he wrote, Congress created regulatory programs that covered relations between employers and employees, the safety of the workplace, the reliability of consumer products, the fairness of the market, the quality of the air, water, and other elements of the environment, the survival of endangered species, freedom from racial and other kinds of discrimination, and many other aspects of national life. In the decade before the New Deal, Congress passed 15 regulatory statutes. In the 1930s, that total tripled to 45. In the 1970s, it almost tripled again, to 120.

Sunstein saw this transformation as a product of “the liberal republicanism of American constitutional thought,” which views the political process “as a deliberative effort to promote the common good.” In the conception of republicanism designed by James Madison and reflected in the Constitution, he wrote, “the system of checks and balances provided a serious obstacle to national regulation.” As a result, “the vast majority of regulatory functions were undertaken by the common law courts” in the states, in lawsuits about contract, property, and tort (wrongful acts) disputes, public as well as private.

New Deal regulation rested on the conviction that the common-law system “reflected anachronistic, inefficient, and unjust principles of laissez-faire” and was inadequate “because it was economically disastrous, insulated established property rights from democratic control, failed to protect the disadvantaged, and disabled the states and the national government from revitalizing or stabilizing the economy.”

To address the crisis of the Great Depression, the New Deal transformed the system of checks and balances by increasing the power of the president, reducing the clout of the federal judiciary, and increasing the size of the national bureaucracy so that its power rivaled that of Congress. The New Deal transformed the system of federalism by transferring power from the states to the federal government. It redefined individual rights, from “rights to be free from government intrusion” to “government protection against the multiple hazards of industrialized society.” The result was “a dramatic change in the fabric of the national government….”

The administrative agencies of FDR’s era “often combined the traditionally separated powers of legislation, adjudication, and execution” and “often were given broad policymaking authority by Congress.” Some agencies, like the Works Progress Administration and the Civilian Conservation Corps, provided employment. Some helped stabilize the economy by creating risk pools that reduced the exposure of any individual or farmer, for example, or provided safety nets for the vulnerable, like the Federal Deposit Insurance Corporation and the Social Security Administration. Some regulated critical parts of the economy, like the National Labor Relations Act and the Securities and Exchange Act.

In the 1960s and ’70s, the president and Congress built on this foundation, enacting regulations to combat discrimination, protect the environment, and accomplish many other goals. In the 20 or so years from 1958 to 1979, for example, Sunstein listed 27 new federal statutes addressing environmental problems alone, including landmark laws like the Clean Air Act, the National Environmental Policy Act, and the Clean Water Act. He listed 11 addressing only occupational safety, such as the Black Lung Benefit Act. In general, the goals of these regulations were to reduce inequality and manage major risks for individuals and society.

Sunstein wrote *After the Rights Revolution* to bring regulation into the heart of conversation about what matters in law. But he also wanted to explain how “modern political science and public law” had generally failed in their dealings with modern regulations, treating the many different kinds as “an undifferentiated mass” or “as a crazy-quilt of unprincipled ad hoc repudiations” of the laissez-faire approach that prevailed before the New Deal. Regulation had become such a huge part of the federal government that not reckoning properly with regulation meant not dealing squarely with the nature of modern constitutional governance.

He argued that the justices of the Supreme Court should resolve questions before them as *narrowly* as possible, leaving “fundamental issues undecided,” to energize American democracy by making it more deliberative.

In the decade after that path-making book, Sunstein filled out his view of that governance. A central part of his argument is that debate about the Constitution’s meaning should expand to legislative, regulatory, and other democratic bodies, because “court-centeredness is a continuing problem for constitutional thought in the United States. It has helped to weaken the sense of responsibility of other officials and indeed ordinary citizens….”

He argued that the justices of the Supreme Court should resolve questions before them as *narrowly* as possible, to encourage elected officials to deliberate on divisive issues and test their answers before the voters. He called this approach “judicial minimalism” and wrote that, with this philosophy of leaving “fundamental issues undecided” in cases dealing with questions “on which the nation is currently in moral flux”—like the right to die and discrimination based on sex and sexual orientation—the Court would promote this country’s “highest aspirations without pre-empting democratic processes.” It would energize American democracy by making it more deliberative.

“Democracy’s constitution is not tradition’s constitution,” he wrote. “A central purpose of a constitution, and of a deliberative democracy, is to subject longstanding practices to critical scrutiny.”

As he does.

Lincoln Caplan ’72, J.D. ’76, writes frequently about the law. He is a visiting lecturer in law at Yale Law School. He was editor of Legal Affairs *magazine, wrote about the Supreme Court for* The New York Times *editorial page, and is the author of five books.*

Keeping Women Safe

Addressing the root causes of violence against women in South Asia

by Rohini Pande

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Rallying against rape: a candlelight protest in Mumbai, December 2013

In December 2012, thousands of protesters flooded the streets of cities across India, demanding a safer environment for women. A 23-year-old female student had died from injuries sustained 13 days earlier, when six men raped and savagely beat her on a Delhi bus. The case gained international attention, and since then South Asian media have reported dozens more horrifying instances of violence against women, several involving tourists: a Danish woman was gang-raped in Delhi after asking for directions back to her hotel, and an American was raped while hitchhiking in the Himalayas.

These cases may reveal an increase in violence—or perhaps they reflect increased reporting by women to police, or heightened media attention. But they have certainly made a big impact on policy discourse in India. In his first Independence Day speech, India's current prime minister, Narendra Modi, chided the entire country, saying, "Today when we hear about these rapes, our heads hang in shame." And since December 2012, numerous policies have been proposed (and several enacted) to stop this "war on women." But how many of these short-term protective measures will fail, or even create perverse incentives *opposite* to those intended—possibly leaving women *less* safe in the long run?

As an economist, I want to understand, in context, the social, legal, and financial forces that lead individuals, families, and society to undervalue women and unleash violence against them. Contemporary economic scholarship embraces such subjects, employs new tools to evaluate behavior, and draws on fieldwork for firsthand knowledge of subjects. I draw on all of those elements in my own work, and in colleagues', to understand the ways in which girls and women are harmed: actively, through abuse; or passively, by passing them over and devoting resources to boys. And then I want to apply that understanding to determining which policies can weaken these destructive forces or re-channel them in women's favor.

Examining differences between South Asia and other parts of the world, or among villages and communities in South Asia, can help illuminate why girls and women receive fewer resources and are often harmed. We can look at trends over time, analyze large sets of data, and in some cases collaborate with governments and non-governmental organizations to conduct rigorous evaluations that directly explore how changes in policies and programs affect women's well-being. And we can combine this evidence with insights from economic theory to predict behavioral responses to policies and, therefore, their likely impact: unintended damage, deterrence, or—in some cases—enduring improvements in women's security. We quickly learn that *safe* and *protected* are hardly the same thing, particularly in the long run.

How Not to Deter Rape

The protests following the horrific Delhi bus case, for instance, led to new anti-rape laws in 2013 that criminalized a range of sexual assaults and allowed for the death penalty. In 2014, perhaps scrambling to temper a too-harsh law, Indian courts declared that forced marital sex is *not* rape. This is an example of how a policy intended to protect women may have made them *less* safe.

A basic economics insight is that policies that seek to deter crime will succeed only when the *expected* cost of committing the crime increases. But perpetrators of sexual violence are often known to the victim. If a woman or those close to her believe that a member of her social circle—or even her family—might be put to death, she may face tremendous pressure not to report the rape, and refrain from doing so. If this reaction is widespread, then the law may have the perverse consequence of *reducing* the expected cost of the crime.

Consider also that if many members of India's largely male police force believe that women incite rape by how they dress, for example, they may be unwilling to implement the law. Vulnerable women who make it to the police station may be taunted rather than helped. Again, bad news for women.

In addition, in the wake of the Delhi bus case, several of the city's colleges and working-women's hostels tightened their curfews for female students, citing the "atmosphere in the city." But restricting women's ability to move about the community is likely to have an unintended effect. There is strength in numbers, and for those few women who *are* out at odd hours, curfews increase the risk. Perhaps Breakthrough, the international women's rights organization, had the right idea when it organized mass "Board the Bus" demonstrations to increase visibility: the key to women's safety is not protecting them *indoors*, but increasing and even advertising their *public* presence.

These observations are supported by economic theory, but they remain conjecture until they are tested. So what is the evidence on the forces driving mistreatment of women, and how does that knowledge support or contradict society's responses?

Work and Bargaining Power

First, the home remains the most dangerous place for Indian women. Many recent high-profile rape cases in India relate to unmarried women returning late at night from work or entertainment, or teenage girls who go out of the house alone. That makes it appear that a young woman's decision to continue her studies or to work, rather than marry, is also a decision to risk a much higher incidence of violence. But that is not the case. The first and third leading causes of unnatural deaths for Indian women in 2013 were suicide and fire. A significant fraction of those are likely linked to domestic violence, especially because dowry deaths (revenge perpetrated on young brides for unfulfilled financial promises) often take the form of forced suicide or burning.

We also know that women who marry later face less violence in the home than those who marry early. A study on the age of marriage in Bangladesh showed that later-married girls received more schooling and more preventive healthcare. Other research demonstrated that the arrival of garment-sector jobs increased girls' education and caused women to delay marriage and enter the labor force. Thus, even though, in the short term, unmarried working women may expose themselves to attack, the longer-term perspective must shape policy. A society where daughters and sons are valued equally, and where women face less violence, is a society where women enter the labor force, marry later, and enjoy more *bargaining power* over household budgets, family decisions, and so on within the home once they do marry.

In countries with wide gender gaps, increasing women's bargaining power—through employment and decent wages—should be a goal of public policy. (A study in the United States suggests that increasing women's wages relative to men's decreases domestic violence. Notably, this effect held true for working and nonworking women alike; a greater *expected* wage seems to increase female bargaining power, and with it, women's safety.) Governments have some control over opening the labor market to women, and creating channels for women to gain positions of authority. Clearing the way for women to enter the workplace would thus increase their safety.

Job opportunities can have myriad positive effects in South Asian women's lives. Researchers studying villages targeted by recruiters for a new woman-friendly industry found that young women in villages visited by a recruiter were less likely to get married, showed delayed fertility, and were more likely to report wanting to work. One of my doctoral students found that women employed in a textile mill who worked longer into their lives delayed marriage without any detrimental effect on eventual spousal quality, and reported desiring fewer children. These effects spilled over, too: marriage age increased for their younger sisters—thereby likely empowering them, too.

Recently, women's groups and trade unions opposed a move to change India's factory law to allow women to work the night shift; they were concerned that there were insufficient protections to prevent attacks. But research indicates that this concern, though understandable, is misguided. Call-center work has created huge benefits for South Asian women, many of whom work at night. Keeping women "protected" from night factory work means holding them back.

The Social Context

Comparing South Asia to the rest of the world reveals a glaring demographic fact: India has 919 women for every 1,000 men, and in Pakistan and Bangladesh, the deficit of women is almost as severe. By contrast, the global sex ratio is nearly equal. A preference for sons, particularly eldest sons, has led families to abort female fetuses and reallocate resources from girls, decreasing their survival rate.

Digging deeper, I have investigated a statistical mystery: why India has higher rates of malnutrition and stunting than sub-Saharan Africa, despite its lower infant and maternal mortality and,

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Vyasa Devi, foreground, mourning at the wake for her daughter, Meera, who died—by murder or suicide—in a marriage filled with physical abuse and demands for more dowry payments. Himachal Pradesh, December 2006.

generally, a higher level of economic development. I found that parents hoping for sons invest heavily in the first pregnancy, banking on a male heir, but subsequent children receive fewer resources in India than in Africa, driving the high rate of malnutrition.

A simplistic view of supply and demand may suggest that a shortage of girls will increase their social and economic value. But rather than granting more power to the fewer marriageable women, societies slanted in males' favor respond by acquiring more brides, to expand the marriage market. A study in India showed that a low female-to-male ratio leads to lowering the age of brides, decreasing their educational attainment and participation in the workforce, and increasing the age gap between them and their husbands—all factors correlated with higher domestic violence.

Communities are starting to show the strain caused by such gender imbalance. In the Jind district in northern India, where there are only 871 women per 1,000 men, bachelors have formed a union to pressure political leaders to supply them with brides. It is also possible that more frequent honor killings in Pakistan and India are linked to an effort to keep women from marrying outside their caste or social group—an effort to ensure that men in the community have enough brides.

Can we devise policies and laws to begin to even the sex ratio? Might explicit cash incentives do the trick? A program in Haryana state in northern India sought to even out the sex ratio *and* lower fertility at the same time by giving families cash payouts: the largest amount for having only one girl, smaller sums for having two girls or one boy. The payments *did* reduce the number of children—but through a larger reduction in the number of girls. Families who were encouraged to have one child more often opted for the boy, at least given this incentive structure.

As South Asian governments seek to improve living conditions by encouraging families of smaller size, parents may respond by sacrificing daughters. A resulting dearth of women puts those who remain at greater risk of violence, through channels such as lowered marriage age and increased trafficking of girls. Making a meaningful difference in women's lives again requires a shift from short-term fixes to addressing underlying causes.

A foundational idea in development economics is interlinkage: building a factory avails little if the roads leading to it are unusable and the natural resources that feed it are unmined. Successful development is evenhanded, informed, and comprehensive. The same applies to enabling safe, empowered women. Improving women's education and health, increasing their participation in the labor force, and lowering the number of children they have: these effects tend to snowball and can lead to a slow decrease in violence against women.

My own research has suggested a promising starting point along this path. In 1993, India passed a law mandating that one-third of seats on village councils (*gram panchayats*) be reserved for women. In many Indian states, the choice of councils to which the rule applied was, in effect, random, creating a "natural experiment." Moreover, the law rotated implementation of the reservation rule over election cycles: a village reserving seats for women in one election would *not* be required to do so in the next.

My coauthors and I found that women's entry into these races and electability were persistently higher in villages that had *previously* been "reserved." To understand the reasons, we surveyed villagers in depth. Men living in non-quota villages judged male leaders to be significantly more effective than female leaders, but this gap disappeared in villages that *had* been subjected to the quota provisions. Exposure to flesh-and-blood female leaders had radically altered male villagers' perceptions of women's effectiveness.

Separately, we showed that women leaders, newly raised to power through quotas, act as role models for parents and teenagers alike. In our survey of adolescents and their parents in 495 villages, we found that the gender gap in career aspirations closed by 25 percent for parents and 32 percent for adolescents in communities that had a female leader for two election cycles. Moreover, the gender gap in adolescent educational attainment was completely erased in these villages, and girls spent less time on household chores.

Another study revealed that women in states that implemented these quotas earlier on were more likely to start businesses. Finally, research by associate professor of business administration Lakshmi Iyer and others has demonstrated that the increase in female representation led to a 44 percent rise in the documented number of crimes against women—not from an increase in violence, but from more complete reporting (including a 23 percent rise in the number of rape cases filed). Exposing citizens to women in positions of power apparently conveys many benefits, including enhancements in women's long-run safety. Strikingly, there is little evidence of backlash from men.

In *The Global Gender Gap Report 2014*, recently published by the World Economic Forum, India ranked 114th out of 142 nations surveyed, in terms of gender equality. That is down 13 places from last year, and far below other fast-growing countries such as China and

Brazil. It did, however, rank fifteenth on the political empowerment index, which incorporates ratios of women in parliament and at the ministerial level, and whether a country has had a female head of state. How can India translate its success with female political participation into the advancement of women in other domains?

From Economic Analysis to Effective Policy

In June 2014, Anandiben Patel, chief minister of the western Indian state of Gujarat, announced that her government would enforce a 33 percent quota for women in the ranks of the state police. This seems just the sort of policy that this article advocates—but it is important to note that the law was already on the books. The problem is implementation.

This example, among others, illustrates that creating a safer society for women requires identifying the relevant policy actors and then providing them with incentives and information that align their interests and those of women. It is maddeningly common for governments to enact laws that sound good and appease the public, but are impossible to implement. Academic studies also often ignore or overlook implementation—or simply relegate action to the footnotes. Implementation challenges should be the *subjects* of research and of careful monitoring and assessment that can determine when some policy goes awry.

Smart, effective responses to violence against women in South Asia (and elsewhere) depend on clear understanding of the social norms and the preferences of the involved parties. In designing responses, we must similarly be cognizant of the shifts in power our policies bring about—and address the consequences. Altering conventions such as inheritance laws, for example, creates winners and losers and threatens power; this may at the very least stir domestic conflict or even provoke a backlash (think of those village honor killings or the ever-younger brides discussed above). While such findings do not justify shying away from policies that enable gender equity, they cannot be ignored. As South Asian countries transfer power and wealth to women, they have the opportunity to test incentives and safety nets—to devise policies to ameliorate any perverse effects resulting from the shift in power. Again, short-run damage control can serve an essential long-run purpose: in the case of property rights, parents will see reason to invest more in their daughters, and these daughters will be better educated and empowered to take advantage of further economic opportunities.

In the meantime, we can take immediate steps in response to the rash of highly visible attacks on women:

• A recent United Nations report listed laws that encourage son preference and disempower women through inheritance restrictions; these should be repealed as deftly as possible, to minimize any backlash from those who lose privilege and power.

• The practice of reserving positions for women should spread across representative bodies in the region—and at higher echelons than the *gram panchayat*. India's recent introduction of gender quotas for corporate boards is encouraging. To capitalize on it, companies should be incentivized to hire women at *every* level, on day shifts and night shifts. Unlike more sensitive reforms involving domestic life, the evidence suggests that such quota-based shifts in power can be effected with little risk of backlash.

• Policies should also incentivize women to form social networks and use them to enable women to overcome traditional barriers to their mobility. My colleagues and I recently examined the gender gap in microbusinesses. We offered business counseling and financial training to women; some were invited alone and others were instructed to bring a friend. The women who trained with friends were more likely take out loans, reported increased business activity and higher household income, and were less likely to report their occupation as housewife. This finding complements other studies that show that women enter the public sphere more successfully if they have a network to draw upon, and that the network itself can have stabilizing effects on their lives.

• Finally, local leaders should be encouraged to change antiquated social norms. A council that oversees 42 villages in northern India recently made a public decision to allow inter-caste marriage—a controversial step that reversed centuries of tradition. It was a simple act, made as a direct effort to discourage honor killings that result from lack of brides. If other councils made similar announcements, it might cause marriage markets to open, son preference to weaken, and violence against women to decrease.

Graphic stories of violence will always grab the headlines, and the public demands quick answers and has a short memory. It is up to governments to make steady, evidence-based, interlinked efforts to build a society with greater equity for women, and greater rewards for all.

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Women police officers, Gujarat Police Academy, June 2014; the chief minister announced a 33 percent reservation for women in the state police force.

VITA

Edward Everett Hale

Brief life of a science-minded writer and reformer: 1822-1909

by JEFFREY MIFFLIN

HARVARD WITNESSED a wave of enthusiasm for photography in the spring of 1839, inspired by the restlessly inquiring mind of senior Edward Everett Hale. That January, in France and England, Louis Daguerre and William Henry Fox Talbot had announced their independently discovered means of preserving the images visible in a camera obscura. Daguerre withheld important details until granted a government pension, but Talbot, eager to bolster his claim to have invented photography, described his materials and methods fully. Instructions soon crossed the Atlantic in his privately printed pamphlet and in scientific journals, prompting undergraduates to "photogenise" with scraps of smooth-surfaced writing paper brushed with nitrate of silver. The "photogenic drawing" Ned Hale successfully produced that spring, now lost, is considered the first photograph made in America.

Hale matriculated at 13. Encouraged early to make things, he had built model train engines, set up a printing press (his father owned and edited the influential *Boston Daily Advertiser*), and tried simple experiments in chemistry and botany. Bursting with energy, he deplored the paucity of lessons based on observation and hands-on experimentation at Harvard. His lively memoir, *A New England Boyhood*, tells of dispelling boredom by reading novels and joining scientific clubs; he and friends founded both the "Octagon Club" for astronomical observations and a Natural History Society. (The College made them pay for the construction of exhibit cases.)

He and his friend Samuel Longfellow commenced playing with Talbot's process as soon as the details were available. Their first successful picture dates from March 1839 or soon thereafter. In the 1890s, Hale recalled that he "took from my window in Massachusetts Hall a picture of the college library—Harvard Hall—opposite me…[with] a little camera made for…draughtsmen, with a common lens of an inch and a quarter. We were delighted, because, in a window of the building which 'sat for us,' a bust of Apollo 'came out'…distinctly…all the lights and shades being marked…."

Those negative images exposed in Harvard Yard are more properly "photogenic drawings" than Talbotypes, the more advanced technology that soon evolved from them. (The earliest extant photograph of Harvard, taken in 1844 by freshman Josiah Parsons Cooke, is a Talbotype of Gore Hall, the impressive new College library.) By 1840, when Talbot discovered how to convert negatives to positive images, Hale, while studying theology, had enrolled in the first Boston-area course on the daguerreotype technique. His 1840 journals are packed with references to bulbs, shutters, and various photographic experiments, including the usefulness of "photogeny" for printing maps; he claimed that a self-portrait he took that year on the steps of South Congregational Church in Boston was "the first likeness of a human being…taken in Massachusetts." That venue seems to foreshadow his future role as the church's Unitarian minister (1856-1899); the congregation he led for 43 years strongly supported his activism.

Hale was a wide-ranging social reformer, shaped perhaps by the political discussions overheard at home as he grew up. A lifelong aversion to rote learning prompted his repeated criticism of the formal education of his day; he encouraged his friends to let their sons learn "by overhearing, by looking on, by trying experiments, and by example." His own writings for children, such as *How to Do It* (1895), encouraged young minds to be optimistic about what they could accomplish, and to cultivate "vital power" in readiness for facing life's problems. He supported Irish famine relief by finding opportunities for refugees; co-founded the New England Emigrant Aid Society to encourage antislavery supporters to settle in Kansas; and advocated for fairness to Native Americans and educational opportunities for freed slaves. A story he published in 1870 inspired the creation of altruistic "Lend a Hand" clubs and the Lend a Hand Society. Without losing sight of the nation's shortcomings, he possessed a patriotic sensibility memorably expressed in his 1863 story, "The Man Without a Country," wherein a court-martialed traitor is sentenced to never again set foot in his native land or hear its name spoken—a fate, the narrative implies, far worse than death.

Hale also reserved creative energy for lighter literary activities, often showcasing his interest in scientific developments and fascination with inventions. His most engaging works, including "The Brick Moon" (an 1869 serial for *Atlantic Monthly*), are full of clever devices and scientific adventure and anticipate modern science fiction. That fictional "moon" was a huge, man-made satellite where accelerated evolution transpired. Message 17 from its orbiting colonists (transmitted by visual Morse code read through high-powered telescopes) stated, "Write to Darwin that he is all right. We began with lichens and have come as far as palms and hemlocks."

A bronze statue of Hale, erected by public subscription in 1913, still stands at the edge of the Boston Public Garden. The granite base proclaims, "Man of Letters, Preacher of the Gospel, Prophet of Peace, Patriot"—traits that endeared him deeply to friends and those affected by his writings and humanitarian endeavors. The sculpture presents an elderly man poised to enter a planned landscape replete with exotic plants and an even greater variety of people. It is easy to imagine that he gazes with benevolence as well as curiosity at the tourists who pause to snap his picture.

Jeffrey Mifflin, A.B.E. '80, is the archivist of Massachusetts General Hospital. His articles on historical topics have appeared in a variety of books and journals.

A cabinet card portrait , circa 1870, and the statue of Hale, by Bela Lyon Pratt, that stands in the Boston Public Garden

HUP HALE, E.E. 1A, HARVARD UNIVERSITY ARCHIVES

The "Wild West" of Academic Publishing

The troubled present and promising future of scholarly communication

by CRAIG LAMBERT

Last summer, Harvard University Press (HUP) asked a book designer to create a T-shirt for its softball squad's intramural season. The front of the shirt bore the expression $r > g$, signifying that the rate of return on capital (r) is greater than the rate of growth in income (g)—the central thesis of *Capital in the Twenty-First Century* by French economist Thomas Piketty, which HUP's Belknap Press had published in April. *Capital* had leapt to the top of *The New York Times* bestseller list for hardcover nonfiction and stayed on the list for 22 weeks. It continues to sell robustly worldwide in 30 languages, and in English alone there are nearly 500,000 copies in print—the fastest-selling book in the press's nearly 102-year history.

The success of *Capital* is astonishingly unlikely. Acquired by London-based HUP editor Ian Malcolm, the book made French bestseller lists in 2013, but there were only about 40,000 to 50,000 copies in print there. "We knew it was an important subject and an important book, and he had data no one else had," says William Sisler, HUP's director. "But it was 700 pages by a French economist, so we had relatively modest expectations of it doing especially well in the United States." Still, the press made *Capital* its lead book for spring 2014, and commissioned a translation by Art Goldhammer, an associate of Harvard's Center for European Studies.

Capital's watershed moment came when Paul Krugman—Nobel laureate in economics and op-ed columnist for *The New York Times*—analyzed it for *The New York Review of Books* and began his March 23, 2014, *Times* column by declaring it "the most important economics book of the year—and maybe of the decade." Print and television coverage of Piketty and his book spread rapidly. "It captured the zeitgeist," says Sisler, referencing broad public interest in inequality, "one percenters," and the Occupy Wall Street movement. At one point, HUP had to print in England and India, as well as domestically, to keep pace with demand.

Capital is a smash hit even by trade-book standards. But the book would have looked and felt different had it come from a trade publisher. "An academic press will keep the 90 pages of charts and graphs, and the 100 pages of endnotes," says Lisa LaPoint, HUP's senior publicist, who organized *Capital*'s spectacularly successful publicity campaign. "It's great to have a book like this. But we all know that for every Piketty that sells half a million copies, we have tons of other books that deserve the same in-depth analysis."

The Presses, Squeezed

And there's the rub: *Capital* is an outlier. Holding the odd bestseller aside, the digital disruption of the print world that is transforming commercial publishing also affects publishers of scholarly books and journals—and is changing structures for teaching, research, and hiring and promoting professors. Time-honored traditions appear vulnerable to overhaul or even extinction. Sarah Thomas, vice president for the Harvard Library and Larsen librarian for the Faculty of Arts and Sciences, says, "We are still in the Wild West of sorting out how we will communicate our academic developments effectively."

Consider the situation of academic presses. "It is very difficult to predict when an academic book will hit the jackpot," says Robert Darnton, Pforzheimer University Professor and University Librarian. Darnton draws on plenty of experience: he has been on the boards of Princeton University Press and Oxford University Press, and is currently on HUP's board of directors. "It used to be, when I was at Princeton in the early to mid 1980s, we would estimate that university libraries would buy 800 copies of a new book—you could count on that. Now that number is down to about 300, and in certain niches, like colonial Latin American history, maybe half that. Usually, very few copies sell beyond the library market. When you are selling 300 books, you can't cover costs." The consequence, according to Sisler, is that, "From an economic perspective, most books fail. Most do not break even. You need the occasional monster success to keep you going."

In North America, there are 105 university- and college-based

William Sisler

members of the Association of American University Presses; only nine have annual sales of more than $6 million. Most have revenues of under $1.5 million, based on reports from 70 of the member presses. "Those smaller presses couldn't possibly stay alive without help from their university, or the state governments," Sisler says. "But as long as the institutions are willing to support them, just as they support the football team, they will continue. I keep thinking that these presses can't survive, but very few have shut down. They fill an important niche in their area of the country." (In 2012, when the University of Missouri decided to withdraw its $400,000 of support and shut down its press, there was such an outcry that the university reversed its decision and brought back the press in a reinvented form.)

Electronic publishing can definitely reduce costs and extend market reach: HUP is expanding its electronic offerings, most recently with such major projects as the digital version of the Loeb Classical Library (see "Loeb Classical Library 1.0," September-October 2014, page 22) and the Emily Dickinson Archive, published in 2013 in collaboration with Houghton Library and the Harvard Libraries.

But 90 percent of HUP's revenue still comes from selling physical books. "It's not going to be all digital, all the time," Sisler says. "Physical books are here to stay, and for a good reason." Darnton even suggests that, "Far from being enemies, the online and printed versions of a book are allies." Readers who own a digital edition, he says, may also buy the printed book "to annotate it and put it on a shelf beside related books." And many simply prefer the experience of reading pages rather than screens.

"The bottom line for us, and for most, is quality," Sisler explains. "You can make a lot of money, maybe, by ignoring this. But if you are publishing junk, you are not doing your job." Each scholarly book assumes its place in a larger quest for knowledge. "Most books," he adds, "are pieces of a mosaic you'll never see finished."

Hence, the reshaping of academic publishing matters—not just for the book publishers, but for the progress of scholarship. The current reduction in library purchases of specialized titles, for example, is squeezing monographs out of the market, and in this way affecting the academic job market. A monograph has

Photographs by Stu Rosner

Stuart Shieber

typically been a young scholar's first book, often developed from a doctoral dissertation. Although uncommon in academia prior to the 1920s, monographs served as a staple of tenure reviews in American universities in the second half of the twentieth century, especially in the humanities. Academic presses now publish many fewer of them, and their disappearance creates a dilemma for junior scholars already worried about the scarcity of jobs: if there is no monograph, what evidence do you adduce to support your case for tenure?

"The monograph has been at risk for a long time," Sisler notes. "Journals, in science in particular, have eaten up library budgets that were formerly spent on humanities and social-science monographs. As the number of units in print goes down, the price per book goes up, and you sell fewer; it becomes a vicious cycle.

"Universities determine who is to be promoted and tenured, and how," he continues. "Can you publish three articles instead of a book? Why crank up this expensive mechanism to sell 250 copies of a book that no one except libraries will buy, and which no one checks out of the library for 30 years? Deciding somebody's tenure review is not why we publish these things. Our mission is to advance knowledge and scholarship."

Sisler spins a hypothetical story that illustrates the tensions and paradoxes between publishing and academic appointments. "You've written a dissertation on James Joyce, and I'm an acquiring editor," he says. "But there have been three recent books on Joyce and there is no room in the market for another, so I pass. Yet, all that your tenure committee hears is, 'They rejected your book on Joyce.' This could happen at several publishers; maybe your dissertation adviser steered you into an area that is over-published. Whose fault is that? Maybe a more sophisticated adviser would have guided you toward a better choice of subject. This is a very real thing, and it has a lot to do with getting a job." The tenuring process will likely need to adapt to these contractions in monograph publishing, and quite likely move to embrace digital media.

Exorbitant Journals, and Free Ones

Why are university libraries now buying less than half as many academic books as they did in the 1980s? One big reason is the runaway cost of academic journals: their subscription prices have risen at triple the rate of inflation for the past three decades, says Stuart Shieber, Welch professor of computer science and faculty director of the Office for Scholarly Communication (OSC), created within the Harvard Library in 2008. Annual costs of $4,000 per title are not unusual, and subscriptions for some scientific periodicals are many times that—even though most now appear solely online, sparing their publishers the costs of printing and distribution. The rates charged institutions—at these prices, usually the only buyers—are generally much higher than those charged individual subscribers, a nearly extinct species.

Even Harvard has curtailed subscriptions. (In 2014, the most expensive journals Harvard libraries subscribed to were the monthly *Journal of Comparative Neurology,* at $28,787, published by John Wiley, and the weekly *Science,* at $26,675, published by the American Association for the Advancement of Science.) "The American Chemical Society and many professional societies publish journals sold by publishers, who make a great deal of money," says Sarah Thomas. "A small disciplinary society might have a budget of $6 million, with $3 million coming from journal sales. Whether the publisher is Elsevier or Wiley [two major journal publishers known for high subscription rates], the economic model of many professional societies is to use sales income from journals to subsidize other valuable activities. You cannot just say, 'That publisher in the Netherlands [Elsevier] is wearing the black hat.' Faculty have a choice as to where they publish."

Yet, "We have to try to limit the predatory activities of big publishers like Elsevier and Wiley," Darnton asserts. "It is a crazy situation of monopolistic abuse, and is costing libraries huge amounts of money." (In early November, a consortium of Dutch universities and Elsevier broke off negotiations; the universities may cancel their subscriptions to Elsevier journals, which were slated for 7 percent annual price increases for the next two years.)

That price pressure from commercial journal publishers highlights the core conundrum of academic publishing: the conflict between the scholarly ideal of universal, open sharing of information, and the economic model of business: to make money by selling things. Selling goods at a market price requires proprietary control of what is sold, and charging a high price confines access to scholarly knowledge to those who can pay. Given the problem this poses for scholarship, Darnton declares, "Commercial interests have taken over the communication of knowledge, and we academics have to fight back."

Open Access (OA) is a major weapon in that fight. Peter Suber, who in 2013 succeeded Shieber, who was founding director of the OSC, literally "wrote the book" on open access. Suber arrived at Harvard in 2009 as a fellow at the Berkman Center for Internet & Society, and has led its Harvard Open Access Project since 2011 (see Harvard Portrait, page TK). His 2012 book *Open Access* (MIT) offers a comprehensive guide to the global movement to let scholarly findings (and other documents and media) circulate freely to anyone connected to the Web. "Open Access (OA) literature is digital, online, free of charge, and free of most copyright and licensing restrictions," he writes. It is also a way to combat the costs of many scholarly journals.

"The prices are scandalous and are harming scholarship," Suber asserts. "Until recently, the assumption has been that an article that appears in a scholarly journal is reaching everyone who needs it....In fact, the article is only available to those lucky enough to work at an institution rich enough to afford a subscription—a subset, in fact a small one, of those who need to read it. Now, with open access, we can close those access gaps. Some authors have pledged to publish only in OA journals. Non-OA publishers might say, 'What about us?' I say, 'That's your problem.' Our goal isn't to put publishers out of business. Our goal as research institutions is to make scholarship accessible to everyone."

The first scholarly journals appeared in 1665, and since then, they have not paid authors, peer reviewers, or editors. "All the key players have been giving away their work for 350 years," says Suber. "Scholars write journal articles for impact, not for money. They are freed to do this because they have salaries from their institutions." Yet the physical aspects of print technology, still cutting-edge in the seventeenth century, today limit scholars' ability to circulate their ideas and findings. Now, Suber says, "the Internet allows them to give it away to the whole world."

Some peer-reviewed research may involve a microscopically small topic that interests only a handful of people worldwide. "There is no market value in that," Suber notes. "If academics had to focus on what might *sell,* rather than what might be *true,* they would find themselves writing more on popular subjects and less on their research specializations. Tenure protects you from being fired for voicing unpopular ideas. Open access protects you from the *market.* You can write what you think is true, even on a very small topic or on something, like evolution, that angers people."

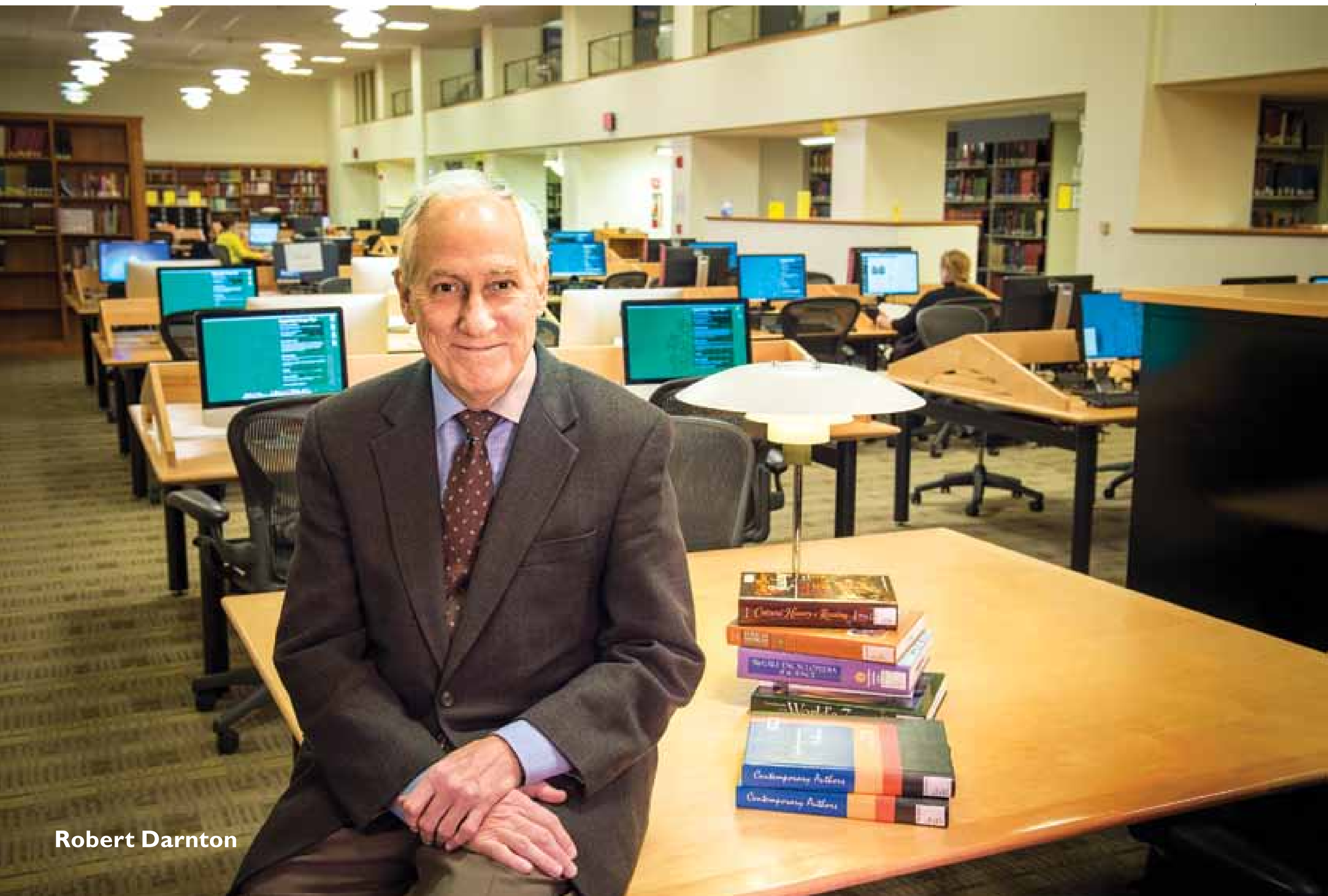
In 2008, Harvard created its own OA repository to ensure access to the findings of the University's faculty: Digital Access to Scholarship at Harvard (DASH), a service of the OSC (see "Open Access," May-June 2008, page 61). "We created a repository where all professors are required to deposit their scholarly articles," says Darnton. "They are accessible to anyone, and it's a huge success all over the world." Indeed, more than 100 universities worldwide now have OA policies, at least 60 of them based on or inspired by Harvard's (which apply only to articles, not books, and so pose no threat to academic presses like the HUP).

Each of Harvard's faculties individually adopted an open-access policy of requiring every professor to deposit an accepted author manuscript of any scholarly article. In 2008, the Faculty of Arts and Sciences (FAS) was the first to adopt an OA policy, after lengthy debate in which some professors insisted, in effect, "You can't tell us what to do with our work," according to Darnton. Nonetheless, the ultimate vote for approval was unanimous. The FAS resolution allows anyone to opt out, although, he says, a "moral mandate" for solidarity with one's colleagues discourages that.

Some prestigious journals with large circulations like *Science* and *Cell* refuse to publish articles that have been deposited in an OA repository. Naturally, Harvard has no wish to stop its faculty members' work from appearing in such important outlets, so the Harvard OA policies allow faculty to waive the license they grant to Harvard for any particular article.

The DASH program enabled a pilot study on one question raised by open access. "Right now, the only people who can read most scholarly articles are those within the umbrella of library subscriptions," says Shieber. "They are going to be scholars, faculty, researchers, and so on. Is there a demand for these articles *outside* of that group? Some people say 'No'—it's a kind of refrain you hear from publishers, who say that everyone who wants and needs to read these articles has access to them.

"Well, that's a testable hypothesis," he continues. "There are 20,000 articles in DASH, most of which are freely distributed. Those 20,000 articles—and almost all of them have been pub-



Robert Darnton

lished in journals—have been downloaded more than *4 million times.* This shows a huge latent demand for these articles that is not being met by journal subscriptions. If these were published in open-access journals, you wouldn't have to satisfy that demand in this way, via DASH."

The Economics of Free Scholarship

Consider for a moment the business model of traditional subscription journals. Scholars contribute their articles to the journals for free; they receive no royalties or other revenue. Scholars also act as peer reviewers and provide other editorial services to the journals on a pro bono basis. In general, authors pay nothing to submit or publish articles in subscription journals. Both commercial and nonprofit publishers participate in the journal market. Most commercial publishers tend to be more aggressive than their nonprofit counterparts in maximizing revenue, though there is variation among both types of publishers.

As noted above, nearly all journals now appear online. Aside from medical journals and a few high-profile publications with wide circulation like *Science* and *Nature,* advertising is not a big revenue source for academic journals in general. Even those that take in significant ad revenue make most of their money from subscriptions. A research university subscription to the *New England Journal of Medicine* for 2015, for example, is $5,040, up more than 6 percent from 2014 prices.

In contrast, OA journals are free for readers, so their contents aren't restricted to those who can pay the subscription price. That kind of unfettered access to information "is a basic tenet of scholarship," Shieber asserts. But simply giving a product away online is not a viable business model: "How well are newspapers doing these days?" he asks. "Not very."

Yet the scholarly journals of the world are doing fine: they remain a multibillion-dollar industry. "Their publishers are doing what they are supposed to do," he explains. "The big ones are large, publicly traded companies with a fiduciary responsibility to maximize profits. They happen to be operating in a market that is dysfunctional in a way that publishers can take advantage of, to the detriment of the social good—and that's a problem. Access to journal articles takes place in a monopolistic market.

"Economically, markets are supposed to generate efficiency in the allocation of goods," he continues. "I'm a big fan of markets—I'm a capitalist at heart." But "If you want to read something in *Cell,* for example, you have to pay Elsevier, which owns *Cell*—and if you don't like their price, you're out of luck." *(please turn to page 83)*

Montage

Art, books, diverse creations

Clockwise from top left: a seven-drawer desk (detail) and an attorney's desk from the back and front

Wood into Art

Anthony Giachetti's furniture is both functional and timeless.

by KATHERINE NICHOLS

A MUSIC STAND of East Indian rosewood, with maple laminated veneers curved as delicately as a clef, stands rooted in a solid base so that it leans toward the musician with assurance. It expresses the remarkable integration of art and utility in the one-of-a-kind pieces by furniture designer/maker Anthony Giachetti, A.M. '69. Each work has a distinct function—but their enduring aesthetic appeal is even more prominent. "Timelessness is something that I think about constantly in the design process," he says.

Attorney Charles Edson '56, J.D. '59, and his wife can attest to this, having purchased a fluted sideboard Giachetti made for a show in 1982—one of three of his pieces that they own. "I thought it was smashing looking, and asked him if he could expand on the idea," Sue Edson recalls. They commissioned a seven-foot-long French walnut desk with fluted, curved verticals. "I like Tony's work just as much today as when we purchased it," she says, "and I can't say that about the work of many artists that we have around the house."

All of Giachetti's pieces are privately held, save a tiger maple bench with ebony inlay whose "concave sides and central arch testify to Giachetti's mastery of

Photographs courtesy of Anthony Giachetti lamination," according to literature from the Yale University Art Gallery, where it remains on display 25 years after its acquisition. To achieve its type of dramatic curve, he slices wood to a one-eighth-inch thickness with a band saw, then sands, bends, and glues at least seven plies—one at a time, in order, to match the grain—to a carefully formed particleboard. Calculating different concentric lines requires the creator "to put on that engineering hat," he says. Yet even the meticulous placement of materials remains an organic art. "Never is a match perfect, because the wood changes in grain and color as you cut sequentially from sap to heartwood," he explains. This allows the furniture to "tell the tale of the tree."

Giachetti, who divides his time between East Boothbay, Maine, and Chapel Hill, North Carolina, hand-selects wood from importers in New York City; favorites include curly maple, Swiss pearwood, curly mahogany, rosewood, walnut, cherry, quartered oak, French walnut, and English brown oak. Beauty attracts him first. The wood, when finished with oil, must "have a look and feel that enhances the grain pattern and is as smooth as silk," he says. But he also chooses materials that have "the strength necessary for quality-built furniture to last many lifetimes." The decision to use a particular variety depends on the purpose of a piece or a client's preferences.

The Shaker tradition, featuring exposed joinery and elegant lines, informed Giachetti's early work. Over time the more complex English Arts and Crafts style sparked his imagination, forcing his skills to follow suit. "If you are doing one-of-a-kind work," he says, "it's important to strike a balance between developing and refining a design over a number of pieces, and then knowing when you should move on."

Details indicative of Giachetti's style include 16 fluted and inlaid curly mahogany door verticals in barrel-stave construction on a cabinet inspired by the designs of twentieth-century Italian architect Paolo Portoghesi. Occasionally, whimsical touches grace the refinement, as with doors on a French- and black-walnut butterfly cabinet that open toward the center, like wings. A jewelry chest, raised on slender legs, contains 29 miniature drawers of different sizes, evoking a sophisticated puzzle. Each intricate piece may take eight or nine weeks of intense work to complete.

When Giachetti started, he sold a walnut table for less than $500. By the early 1990s, when he was working exclusively through private commissions and juried shows, one of his desks sold through the American Crafts Council for $10,000, and another was appraised at $30,000.

Yet his first clients paid noth-

O P E N B O O K

Rough Road for Capitalism

The financial crisis and ensuing Great Recession surprised most economists and policymakers, writes David M. Kotz '65, professor of economics at the University of Massachusetts, Amherst (and Distinguished Professor at the Shanghai University of Finance and Economics). Depression-like collapses were thought to be "no longer possible in contemporary capitalism." But he reinterprets these economic difficulties in *The Rise and Fall of Neoliberal Capitalism* (Harvard, $39.95). From the introduction:

In 2008 a severe financial and broad economic crisis broke out in the United States. It rapidly spread to much of the global financial and economic system.… While the acute stage of financial collapse and economic free-fall at the start of the crisis has passed, it has been followed by a period of stagnation and economic instability.…

This crisis issued from the particular form of capitalism in the United States in recent decades, often called free-market, or neoliberal, capitalism. Neoliberal capitalism arose around 1980, first in the United States and the United Kingdom, replacing the quite different "regulated capitalism" that had preceded it. It soon spread to many, although not all, other countries, and came to dominate the global-level economic institutions of this era.

…In brief, in neoliberal capitalism market relations and market forces operate relatively freely and play the predominant role in the economy. By regulated capitalism we mean a form of capitalism in which such non-market institutions as states, corporate bureaucracies, and trade unions play a major role in regulating economic activity, restricting market relations and market forces to a lesser role in the economy.…

[T]he crisis that began in 2008 is not just a financial crisis, or a particularly severe recession—or a combination of the two. It is a structural crisis of the neoliberal form of capitalism.… [T]he crisis, unlike an ordinary business cycle recession, cannot be resolved within the current structural form.…Even a bold Keynesian policy of fiscal expansion through big increases in public spending, while capable of stimulating faster economic growth and creating more jobs for a time, would not in itself resolve the underlying structural problem that is blocking a resumption of a normal trajectory of profit-making and economic expansion over the long run. Rather, major structural change in the economy and other related aspects of society represents the only route to resolving the current crisis, a view that finds support from the history of the resolution of past structural crises in the United States such as that of the 1930s.

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Details of a music stand (far left) and of a fluted cabinet

ing at all: Giachetti began by building furniture for his own home in the late 1960s and early 1970. He was pursuing a Harvard Ph.D. in economics and met his future wife, Nikki Schumann '70, an artist who sharpened her silk-screening prowess on the iconic "red fist" posters for the student strikes of 1969. Though he'd never picked up a tool, Giachetti decided—for reasons he still can't quite explain—to furnish their apartment with his own handiwork. So he purchased textbooks, set up shop in a friend's basement, and started teaching himself the art of furniture making "instead of writing my dissertation."

Six months later, the completion of a cherry-wood dining table cued the shift from hobby to lifelong vocation. "I was making something tangible," he recalls. "It just seemed much more immediate and gratifying."

Divertimentos and Democracy

A Far Cry plays con spirito*—and without a baton.*

by SOPHIA NGUYEN

MOUNTED on the wall of the *botánica* next door, where the devout can buy incense and saints' images, painted statues of angels stare into the rented storefront in Jamaica Plain where A Far Cry rehearses. Having someone to watch over them could help the members of the young chamber orchestra make their way in the classical music world, and its crowded Boston scene—especially since these 17 violinists, violists, cellists, and double bassists play without a conductor's guiding hand. But the grace of this leaderless (and, as they admit, "highly opinionated") crew is no divine gift; it's a deep trust, cultivated over time.

Founded in 2007, A Far Cry has recorded six albums. They tour the country and abroad, in addition to giving regular concerts at home—at the New England Conservatory (NEC), at St. John's Church in Jamaica Plain, and at the Isabella Stewart Gardner Museum, where they have been Chamber Orchestra in Residence since 2010. This season's first concert at NEC's Jordan Hall, *Return to the Idyll*, opened with a suite by contemporary British composer Thomas Adés. Across its seven movements, A Far Cry filled the space with unsettled and percussive *pizzicato*, then made the voices of their instruments rise and intertwine sinuously—all without a baton to cue them in or dictate tempo. "Watching them is like watching a player piano," one audience member remarked. Their performances can have the same hypnotic effect as the sight of ivory keys moved by an invisible hand. The musicians observe one another closely, registering each other's breaths and gestures. Violinist Jae Young Cosmos Lee, one of the group's cofounders, describes this attunement to fellow players as akin to "wearing them on the outside of your skin."

Three Harvard alumni play in A Far

A Far Cry (below) formed at the New England Conservatory, in Boston. Its members, shown in concert at Jordan Hall, generally perform without a conductor.

YOON S. BYUN

COURTESY OF FAR CRY

Cry: violist Sarah Darling '02 and violinists Miki-Sophia Cloud '04 and Alex Fortes '07. All three played in the self-conducting, still-kicking Brattle Street Chamber Players (BSCP) as undergraduates. Fortes remembers the ensemble fondly, but also recalls how its rehearsals could devolve into "very little playing and a lot of talking." Darling's experience with the challenges of the BSCP and groups like it colored her first reaction to the "Criers" when, as an NEC master's student, she heard they had formed: "I smiled to myself and thought, 'Oh, haha, we'll see how that goes—you guys don't know what you're in for.'" Then she attended one of their concerts, and discovered a group "so gorgeously in sync with each other and the music—everyone dreaming about Beethoven in just the same way."

No group of this size and kind could come so far without some rules. In earlier years, rehearsals sometimes became free-for-alls, getting feisty and then derailed, as members quarreled over how to play a particular work. These days, A Far Cry runs like the high-functioning parliament of a small country. Each work has a new set of principals—one leader from each instrumental section—who lead the group's practice. Only a principal may stop a run-through. Then, the floor opens to any two musicians who wish to comment on an issue small enough to be quickly addressed—a few bars, a particular phrase. Because of this system, a rehearsal for a single concert can shift styles from hour to hour. One set of principals may tape up a diagram of a Mozart divertimento, to help the group visualize its shape. Another team, leading a Stravinsky concerto, may narrate a scene to evoke a desired mood, instructing everyone to imagine "Romeo first setting his eyes on Juliet—'I see you, I want to dance around you, feel you out.'" On rare occasions, the Criers appoint a "spanker," a member empowered to unilaterally cut off a discussion, or just to yell. They follow equally civil procedures to determine the year's concertmaster, programming, and distribution of principal parts.

This fall, A Far Cry launched their own recording label, Crier Records, with their first concept album. Miki-Sophia Cloud conceived of *Dreams and Prayers* as an exploration of mysticism, and of music's role in humanity's relationship to the divine. It spans three religious traditions: a sequence from medieval Christian abbess Hildegard von Bingen's *The Origin of Fire*, played by the violins in monody; a commission from Turkish composer Mehmet Ali Sanlıkol, inspired by Sufism; and a new arrangement of Jewish composer Osvaldo Golijov's *The Dreams and Prayers of Isaac the Blind*. It also includes one of Cloud's favorite pieces, Beethoven's String Quartet No. 15, "Heiliger Dankgesang," written after the composer had recovered from a long illness. In the liner notes, she writes about how, before each concert, she freed the audience of their obligation to clap politely. They could sit in silence to absorb the last notes of a piece as it faded—or, as some did during the livelier works, get up, clap, and whoop.

The Criers' eighth season will include their first live-streamed concert, and—in a decision debated at length—the first time they will ever be conducted, as they collaborate with composer Matthew Aucoin '12 on an opera at the American Repertory Theater. Darling and Lee say that A Far Cry feels more like a "thirties group" than a "twenties group," but also that aging has made the orchestra more, not less, experimental. When skirmishes break out in rehearsal, they're easier to control. "The worst thing you can do," explains Lee, "is take two striking views and average them."

The wild urgency of their youth, when any season could be their last, has ebbed away. A Far Cry can look toward a longer future together than they'd dared to hope for. As Darling says: "Your repertoire of sounds increases, the longer you stand on the earth."

A Love Affair with Haiti

Amy Wilentz on her "touchstone and central obsession"

by CRAIG LAMBERT

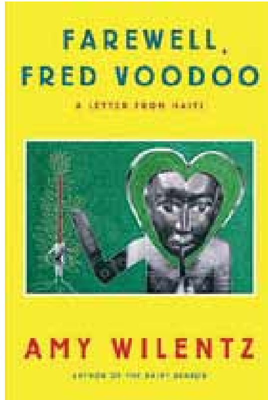
IT WAS PROBABLY Graham Greene's *The Comedians* that sealed the fate of Amy Wilentz '76. Set in midcentury Haiti, the 1966 novel paints a scorching portrait of the dictatorial regime of François "Papa Doc" Duvalier and his secret police, the *Tonton Macoutes*, who ruled there for decades. Greene's novel brought that unsettling world vividly alive for Wilentz, who was living on the Upper West Side of Manhattan in the mid 1980s. She had noticed Haitian refugees showing up in her neighborhood, and overheard snatches of their conversations. (Though very comfortable in French, she was just beginning to feel her way into Haitian Creole.) She also grew interested in reading Haitian newspapers and stories on Haiti in *The New York Times* and *Time*, where she worked as a writer.


COURTESY OF AMY WILENTZ

In early 1986, Wilentz [WILL-entz] sensed that the regime of Papa Doc's son, Jean-Claude Duvalier—"Baby Doc"—was about to fall, and resolved to go to Haiti. Otherwise, she says, "I was going to miss the dictatorship." She secured an assignment from *The Village Voice* and flew to Port-au-Prince just before Baby Doc was overthrown and left for France on February 7 on a U.S. Air Force plane.

Wilentz's incoming flight began a love affair with Haiti that has lasted ever since, including 30 or 40 trips to the island nation—she has lost count. For two years in the late 1980s, she was a full-time resident, and today she is one of the most knowledgeable Americans on Haiti; she has published many journalistic reports, essays, and two books on the subject (amywilentz.com).

Her first book, *The Rainy Season: Haiti Since Duvalier* (1989), renders a nuanced portrait of the chaos under the series of juntas that seized power after Baby Doc's fall. "Walking down the Grande Rue, I saw black smoke from near the market…," she writes of one episode. "I noticed that everyone in the street was looking at it, stopped dead in their tracks. Then there were shots, and everyone started running. The market women packed up their stalls in a rush, and shoppers jumped into their cars. I got into my car and put my press signs up, but a



friend I had run into said, 'No, take the press signs off, it's the Army, they shoot at the press.'…[S]ome market people had seen two city garbage trucks leaving town, unusual on a Saturday, when most government workers were not on the job, and then they noticed feet and arms sticking out of the backs of the trucks. Corpses—and the people presumed the government was

Off the Shelf

Recent books with Harvard connections

What Does a Black Hole Look Like? by Charles D. Bailyn, Ph.D. '87, JF '90 (Princeton, $34). The Giamatti professor of astronomy and physics at Yale (and inaugural dean of faculty at Yale-NUS College in Singapore) steers a middle course in explaining the science of observing black holes: some undergraduate physics helps, but you need not be an advanced theorist to follow along.

Why Government Fails So Often, by Peter H. Schuck, J.D. '65, A.M. '72 (Princeton, $27.95). Summing up why Americans hold a "dismal view of the federal government's performance," the Yale Law professor emeritus considers problems of incentives, information, powerful markets, and the limits of the law. No bomb-thrower (the subtitle is "And How It Can Do Better"), he points to successes (the GI Bill, Voting Rights Act, and Earned Income Tax Credit) and meliorative reforms. To put things in (dismal) perspective, consult **Thieves of State: Why Corruption Threatens Global Security**, by Sarah Chayes '84, G '91 (W.W. Norton, $26.95). The former National Public Radio correspondent examines the criminalized state apparatus in Afghanistan, Egypt, and Nigeria, and the extreme responses it provokes.

The Vegetarian Flavor Bible, by Karen Page, M.B.A. '89 (Little, Brown, $40). A 554-page tome complete with vegetarian timeline (1847, the first Vegetarian Society is formed in England) and an *A* (açai) to *Z* (zucchini blossoms) directory of flavor affinities, dishes, etc. With yummier photos than the average reference book.

Bridging the Gender Gap, by Lynn Roseberry, LL.M. '92, and Johan Roos (Oxford, $44.95). Combining legal, academic, and business experiences, the authors address persistent gender imbalances in positions of leadership as issues of governance. They colorfully address common misconceptions about gender, even searching cultural sources as diverse as the nursery rhyme about "Slugs and snails/ And puppy-dogs' tails."

Frontiers of Possession: Spain and Portugal in Europe and the Americas, by Tamar Herzog, Gutman professor of Latin American affairs and Radcliffe Alumnae professor (Harvard, $35). A global history of Spain and Portugal, interacting on both sides of the Atlantic, as established nations and newly colonial powers, by one of the University's recently arrived Latin Americanists.

Currency Politics: The Political Economy of Exchange Rate Policy, by Jeffry A. Frieden, Stanfield professor of international peace (Princeton, $39.95). Arriving, serendipitously, amid a strong dollar and weak yuan and euro, this book addresses "the most important price in any economy." Frieden explicates the factors favoring exchange-rate fixity or (on the part of various trading interests) self-serving manipulation, and policymakers' "trilemma" of managing openness, autonomy, and stability.

Marrying Out: Jewish Men, Intermarriage, and Fatherhood, by Keren R. McGinity, A.L.M. '97 (Indiana University Press, $28 paper). In a companion to an earlier volume on American Jewish women and intermarriage, the author probes attitudes and behaviors through oral histories, examining assumptions about the gendered transmission of faith, heritage, and ethnicity. Spicily illustrated with telling photos (Mel Brooks and Anne Bancroft, Eddie Fisher and Elizabeth Taylor's wedding kiss) and other examples from popular culture.

A Tale of Two Plantations, by Richard S. Dunn '50 (Harvard, $39.95). The author, long emeritus from the University of Pennsylvania, spent 40 years tracing 1,103 slaves from the Mesopotamia sugar plantation in Jamaica and 973 slaves from the Mount Airy plantation in tidewater Virginia, using their owners' "property" records and family trees. The painstaking result explicates both their lives and the differing economies of Jamaica (where high mortality led to constant slave importing and buying) and Virginia (where high natural growth rates led to slave sales and the dispersal of families)—a topic of interest to this magazine's November-December cover subject, sociologist Orlando Patterson, a native of Jamaica and scholar of slavery. The associated website (www.twoplantations.com) enables readers to explore these family histories in detail.

Disconnected: Youth, New Media, and the Ethics Gap, by Carrie James, lecturer on education (MIT, $24.95). The author, a sociologist and research director at Project Zero, explores the "digital dilemmas" of privacy, appropriation, and offensive speech carting away those killed by the Army in the previous day's demonstration, a very bloody one." *The Rainy Season* gives special attention to the unrest among Haiti's peasants and urban poor, and to Father Jean-Bertrand Aristide, the radical priest who voiced their anger and and, in later years, was thrice elected president (and twice deposed).

A generation later, *Farewell, Fred Voodoo: A Letter from Haiti* (2013) describes the aftermath of a different cataclysm, the 7.0-level earthquake that rocked the island in 2010. Inevitably, the book illuminates the author's soul as well as Haiti's; although it is "*not* an autobiography," she says, it won the 2014 National Book Critics Circle Award for autobiography. "Like Joan Didion and V.S. Naipaul, she has an ability not only to provide a visceral, physical feel for a place," wrote Michiko Kakutani in a *New York Times* review, "but also to communicate an existential sense of what it's like to be there as a journalist with a very specific and sometimes highly subjective relationship to her subject."

in the flattened online world where so many young people spend so much time. Amid the Web's attenuated sense of responsibility and seeming blindness to larger ethical relationships, one would like to feel encouraged by the "bright spot" she identifies in conclusion: the possibility of "conscientious connectivity."

Only the Longest Threads, by Tasneem Zehra Husain (Paul Dry Books, $16.95 paper). A former Harvard postdoctoral fellow, now a theoretical physicist, crafts accounts—from the standpoint of fictional witnesses—that explain fundamental breakthroughs in her field: relativity, quantum mechanics, string theory, and so on. Inventive in style and form.

HUP KO KUN-HUA (4), HARVARD UNIVERSITY ARCHIVES

America's (and Harvard's) first Chinese-language teacher, Ge Kunhua, circa 1880

Chinese and Americans: A Shared History, by Xu Guoqi, Ph.D. '99, RI '09 (Harvard, $39.95). The author, now professor of history at the University of Hong Kong, writes "not about cultural difference and confrontations…the clash of civilizations, America's decline, or the collapse of China," but about the *cultural* traffic as individuals from one country immersed themselves in the other—including a useful account of how of Ge Kunhua became America's first Chinese-language teacher, at Harvard, in 1879 (see Vita, March-April 2008, page 44).

The Marquis: Lafayette Reconsidered, by Laura Auricchio '90 (Knopf, $30). An admirably well-written, fresh look behind the encrusted myths at the French orphan who crossed the ocean to fight in the American Revolution under George Washington—and in so doing found an identity and acclaim always denied him in his native France, during its bloody revolution and after.

Patients with Passports: Medical Tourism, Law, and Ethics, by I. Glenn Cohen, professor of law (Oxford, $98.50; $39.95 paper). A definitive examination of exceptionally thorny issues on the horizon, or already here. Can your employer ship you overseas for a cheaper hip replacement? If such a procedure goes wrong, whom do you sue? And can citizens evade domestic laws by finding a jurisdiction for an abortion, or for assisted suicide? The author directs the center for health law policy, biotechnology, and bioethics—a growth field, if ever there were one.

That subject would include Aristide. In *Fred Voodoo,* Wilentz recalls him vividly from the late 1980s: "His sermons were fiery, explosive, eloquent things that heaped irony, invective, and metaphor in stunning blows upon the reputations and personalities of the ruling junta and the thugs, soldiers, and gangsters who continued to wield power in the months and years after Duvalier fled. Aristide's personal courage was also astounding....[H]e would give his regular sermon at Sunday mass even on days when he knew the regime was sending its killers out into the church. I sat in the hot, overflowing church for so many of those sermons, squeezed between proper church ladies in their Sunday satins and taffetas, or between men in thin suits, their backs rigid with attention." Wilentz got to know Aristide well, but he cooled considerably after she criticized him in print years later.

She did, however, sustain her relationship with the titular "Fred Voodoo," an archaic term the British media coined for the Haitian "man in the street," embracing both the wisdom and folly of his views. "Fred" in some ways embodies the nation that became "my touchstone and my central obsession," says Wilentz. Her status in Haiti is a rare one: she is both outsider and insider, an intimate, sympathetic observer who remains acutely aware of how the outside world views Haiti, how it distorts the country's nature and barges into its life in self-serving ways. This includes her colleagues in the media. "The objectification of the Haitians' victimization—that's one aspect of the Fred Voodoo syndrome," she writes of the earthquake's aftermath. "How beautiful the Haitians look in their misery: they always do. You can count on them."

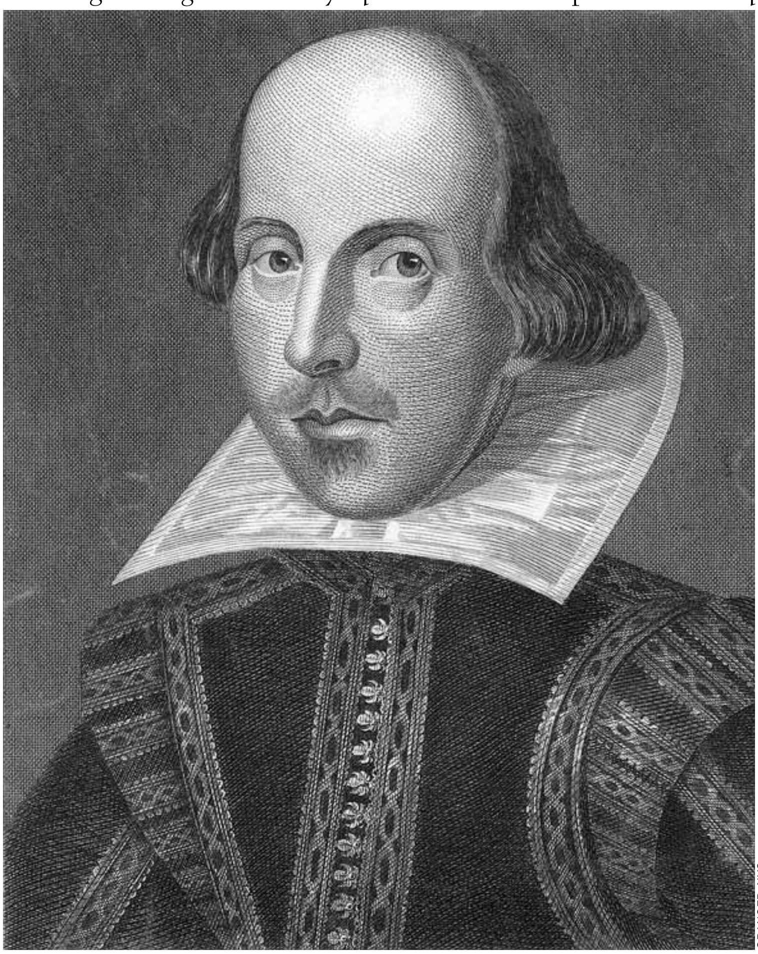
Let the Sonnets Be Unbroken

Neil Rudenstine guides readers through Shakespeare's lyric masterpiece.

by SPENCER LENFIELD

THE SUBTITLE of former Harvard president Neil L. Rudenstine's new book, *Ideas of Order,* announces that it is "A Close Reading of Shakespeare's Sonnets." But it is not really a "close reading" in the usual sense—and that is the heart of its strengths. Rudenstine instead interprets the sonnets as a sequence, paying special attention to how the poet develops his increasingly pessimistic concerns about the honesty and durability of romantic love in these 154 lyric poems.

"Close reading" was the favored term of the New Critics in the 1930s to describe and denote the method of interpretation they advocated to replace the philological criticism and belletrism then dominating the study of literature. They wanted to study poetry not just as an instance of language, but as art. However, they insisted that literary study should be more like a science than like mere book-reviewing, with a rigorous consideration of a poem as a self-enclosed object possessing its own internal coherence. At its best, close reading is the literary equivalent of microscope work in a biology lab: scrutinizing every element of a poem, no matter how minute, and its impact on the poem's range of meaning. The technique, which has long outlasted the doctrine that gave it rise, has forcefully shaped the way poetry is taught in the English-speaking world in both high schools and colleges. Entire class sessions are often spent on a handful of short lyric poems. It is somewhat unusual to find a syllabus assigning an entire volume of poetry by a single poet that is taught as a continuous whole rather than as a set of discrete texts.



Shakespeare, as rendered in an eighteenth-century engraving

GRANGER, NYC

This tendency to focus on close reading has also affected and perhaps distorted how we read lyric cycles, including the Elizabethan sonnet sequences, Shakespeare's in particular. One symptom is that none of the major anthologies used for survey courses reproduces the sonnet cycles of Spenser, Sidney, and Shakespeare in full. Instead, they are presented through a kind of "greatest hits" approach that further pushes students toward understanding them not as continuities, but as collections. Within this approach lies a vestigial New Critical assumption that the proper unit of decipherment is not the sequence, but the sonnet, and that one can treat a given sonnet as an aesthetic whole, independent of the sequence of which it is a part.

Ideas of Order, a charmingly nonconfrontational book, never goes so far as to call that approach a misreading. But Rudenstine (who trained as a scholar of Renaissance poetry at Harvard, taught undergraduates throughout his presidency, and still teaches a freshman seminar on twentieth-century poetry at Princeton) obviously sees the absence of a book that teaches the reader how to consider the sonnets as a sequence—to see the joints and beams in the thematic and dramatic architecture of the work—as a mistake. Some academic work has addressed this problem (most notably Brents Stirling's 1968 book, *Shakespeare Sonnet Order*), but there is little writing that presents these ideas to the general public. *Ideas of Order* aims to fill this gap: omitting footnotes and critical crossfire, it is clearly meant for a nonacademic audience. It also addresses the unfortunate state of affairs that Rudenstine describes at the book's outset: despite their lofty reputation, the sonnets "are scarcely read, except for the few that are regularly anthologized."

Rudenstine's book consists of an interpretive essay, followed by a complete, unannotated text of the sonnets. In the essay, he sketches a loose "road map" for the sonnets that charts the progression of the poet through a succession of emotional stages and romantic situations, and traces a kind of "plot" through the cycle. Even casual Shakespeareans know that the majority of the sonnets are addressed to an attractive young man, urging him to have children, before they turn to a "dark lady" late in the sequence. But Rudenstine points out that many discernible episodes intervene. At sonnet 21, insecurities creep in. In 33-36, the young man betrays the poet; qualified pardon ensues, followed by separation, and then another, more severe betrayal, followed by plaintive condemnation. A horrible, long separation seems to fall between 96 and 97; after an uneasy reconciliation, the poet himself is unfaithful to the young man beginning at 109. Finally, both the young man and the poet fall under the sway of the dark lady. Rudenstine is far from dogmatic about this schema, noting that it is only one possible way to carve up the sequence, and that it does not account for the scattering of sonnets that seem to stick out at loose ends. But his modesty belies how convincing—and useful—his divisions are.

> Neil L. Rudenstine, *Ideas of Order: A Close Reading of Shakespeare's Sonnets* (Farrar, Straus and Giroux, $26)

At the same time, he keeps his eye and ear trained firmly on the individual poems, though his interpretation principally takes the form of summary reflection upon *what* the poems are doing, rather than technical analysis of *how* they do it. At its best, this method produces elegantly articulated insights, as when he notes that in the

Chapter & Verse

Correspondence on not-so-famous lost words

Diana Westgate seeks the complete words of a sonnet written to someone old who remained interested in the aspirations of younger people. She thinks it includes the phrases "grim desire to possess" and "younger hearts grow dim."

Niels Proctor writes, "In the 1982 puzzle book *The Secret,* by Byron Preiss, the verse that is thought to apply to Boston includes these words: 'Near those/Who pass the coliseum/With metal walls.' Some people have suggested that 'coliseum with metal walls' was once used to describe the Harvard stadium. Does anyone happen to know the source of the phrase?"

Diana Avery Amsden hopes, in the spirit of giving credit where credit is due, that some reader can identify the wit(s) who first declared, "A fortune-hunter is a man without any dollars who is trying to find a rich woman without any sense" and "Marriage is like a game of cards. You need only two hearts and a diamond to start, but after a while, you wish you had a club and a spade."

"elephants coming two by two" (July-August 1988). John Reading recognized this phrase as a garbled excerpt from the chapter heading to Rudyard Kipling's short story "My Lord the Elephant," collected in *Many Inventions* (1893). "Each as big as a launch in tow" refers to the "long-black-40-pounder-guns" dragged by the elephants.

"All science, all religion" (November-December 2014). Colleen Bryant used ProQuest to track down this assertion by Norman Thomas in his article "Civil Liberty: A Look Back and Ahead," published in the *Sunday New York Times Book Review* of November 28, 1954.

"Lazy people" (November-December 2014). Peter Baylor offered Algernon's comment "It's awfully hard work doing nothing," from Oscar Wilde's *The Importance of Being Earnest,* as a possible variant of the idea. An anonymous correspondent wrote, "This reminds me of a similar usage here in the Mid-South Appalachians: Carrying too many things at one time is referred to as a 'lazy man's load,' a phrase directed in a joking way toward someone thus attempting to avoid additional trips from point A to point B." And as we went to press, George Bason sent more information on his own query, after further research: "I somehow came across a version saying 'Lazy folks take the most pains,' which was attributed to one John Wesley Monette, who lived from 1798 to 1851 and whose papers are in the University of Michigan's William L. Clements Library Manuscripts Division—but again no luck; and finally I found that Benjamin Franklin wrote in the *Pennsylvania Gazette* of February 18, 1734 or 1735, that 'tho' it be true to a Proverb, That Lazy Folks take the most Pains'—but he failed to provide any source for that 'Proverb.'"

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

"rival poet" sequence (76-86), "In view of the poet's desire to avoid all forms of overt flattery and artifice, his only stylistic alternatives are to repeat, in a variety of ways, what he has already said…or else to lapse into silence." It can, however, occasionally incline toward vagueness: of sonnet 40 he writes, with little further detail, "Repetitions and variations combine with a form of logic to suggest that the complexity of the poet's emotions depend upon the sonnet's linguistic intricacy in order to find the means to express themselves."

But at only slightly more than 150 pages, his essay can hardly close-read every sonnet, or even a choice few. Rudenstine sticks to drawing out the evidence he needs for whatever larger point he is making—a strategy more likely to provide a helpful compass to a confused reader than would compulsively unstitching every single seam in the poem's syntax. This deliberately thin, fast book seems intended to complement rather than duplicate the labors of Porter University Professor Helen Vendler's thorough and imposing 1997 study, *The Art of Shakespeare's Sonnets*, which averages three pages per sonnet and *does* aim to provide detailed commentary for each poem.

Ideas of Order would be a worthwhile endeavor even if it only facilitated the understanding of readers new to the sonnets. But it does more than that, though its author soft-pedals his book's interpretive climax. By approaching these poems as a portrait of an evolving mind, Rudenstine arrives at a reading of the sequence as a work that winds through mounting emotional pain to a bleak and sober terminus.

Anyone who has read the sonnets in full, even in a cursory manner, is aware that they are rarely the expressions of unqualified and worshipful praise that the popular imagination often takes them to be. They voice stubborn insecurity; jealousy that putrefies into hatred; anxiety about love in the shadow of death; and, most troubling, a crisis of confidence in the ability of language to communicate either sincerely or enduringly. *Ideas of Order* argues that, far from being overcome, these concerns acquire validity and intensity as the work advances. By the end, "Time has become a more powerful adversary, and in the last celebratory poems to the friend, beauty ceases to play any part. Indeed, even the 'eternizing' capacity of poetry itself is no longer mentioned." The poet emerges broken of his commitment to honesty and beauty, and well versed in suspicion and duplicity.

This view of the sonnets should give us pause. It implies that the most famous poems—"Shall I compare," "When in the sessions," "That time of year," "Let me not to the marriage"—have by the end of the sequence been repudiated by the poet as expressions of a less mature optimism. That makes them no less potent distillations of powerful emotions, of course. But it should make us doubt whether any one sonnet—particularly any early sonnet—should be taken as Shakespeare's last word on love, truth, beauty, or poetry. As in so many of the plays, the fatalistic and doubt-wracked conclusion of the sonnets tears apart the repertoire of concepts that advanced us to the ending in the first place.

For those who have the time, the best manner of proceeding is probably to read the sonnets once in full; then to read Rudenstine's essay, referring to the poems as needed; and finally to read the sonnets once more straight through, with the benefit of his structural insights in mind. Readers seeking more should consult Vendler's commentary or poet Don Paterson's chatty *Reading Shakespeare's Sonnets*. But *Ideas of Order* is an ideal introductory companion to the sonnets—more detailed than the Arden or Norton introductions and footnotes, but less overwhelming than the line-by-line commentaries. And it also has more than a few sharp observations and arguments for any veteran of the sonnets to consider.

Spencer Lenfield '12, a former Ledecky Undergraduate Fellow at this magazine, is a Rhodes Scholar studying classics and philosophy at Oxford.

ALUMNI

Talent Behind the Wheel

A Harvard summa aims for NASCAR.

by STEVE POTTER

In 2008, amateur racer Patrick Staropoli '12 was blasting down the straightaway at Florida's New Smyrna Speedway, strapped into a stock car. Even on the tight track, he was traveling close to 100 miles per hour. A cacophonous roar filled the cockpit and the car shook from pure velocity, yet Staropoli stared down an approaching turn that required balancing the 1.5-ton car on the knife-edge of traction.

Near the end of the corner, just as all seemed fine, the car's steering wheel popped off and fell in his lap. "I glanced up," he recalls, "and an instant later I hit the wall."

Staropoli limped away from the wreckage with minor bruises. His main concern was the mechanical damage: "It destroyed the whole front half of the car." The third-generation racer later learned that the steering wheel had been improperly installed when he and his crew worked on the car only a few minutes before the crash. Undeterred—even by the fact that a crash at the legendary Hialeah Speedway seven years earlier had nearly killed his father—Staropoli and some friends repaired the car in time for him to run a few more races that summer before heading north for his freshman year at Harvard.

A grinning Staropoli celebrates after winning the NAPA Auto Parts 150 in Irwindale, California, last year.

The South Florida native is the first in his family to attend college. During four years in Cambridge, he developed an interest in neurobiology and ultimately graduated summa cum laude, was elected to Phi Beta Kappa, and went straight to medical school at the University of Miami. In the spring of 2013, he was contemplating a career in ophthalmology, which would enable him to race as an amateur in his spare time. While studying for final exams, he got a call that changed everything.

On his smartphone screen was Michael Waltrip, a two-time winner of NASCAR's Daytona 500 and owner of a team in the Sprint Cup (NASCAR's highest level of racing, akin to organized baseball's major leagues). Staropoli, he announced, was one of nine finalists, chosen from 700 entrants, to compete in the Peak Stock Car Dream Challenge. "It was the single moment I'd been praying for my entire life," Staropoli says. It was a one-time opportunity to showcase his driving in front of NASCAR teams, sponsors, and fans, who would also see a video production of the event.

To enter the contest, Staropoli had submitted his racing résumé and the required self-produced video. But he was aware that the Dream Challenge was as much a public-relations exercise for its sponsor (Peak makes antifreeze and other auto products) as a serious attempt to identify the next Jimmie Johnson or Dale Earnhardt Jr. An exceptional performance would win him the opportunity to compete in a single professional race. It was a very long shot. A four-car NASCAR team can employ 200 people and require an $80 million budget—a stark contrast to other sports where equipment and participation fees are relatively low, and talent alone is often sufficient to attract attention from the professional leagues.

Racing runs deep in Staropoli's family. Both his father and grandfather competed on weekends in cars they built and maintained themselves. Staropoli's first trip to the track was at six weeks: he mostly slept, nestled in his mother's arms, while his father, Nick Staropoli Jr., raced. Following a four-month recuperation from that 2001 accident at Hialeah, the elder Staropoli, who owns an auto repair shop, returned for three more races, winning one before hanging up his helmet.

(Club) House Renewal

The construction in the parking lot behind the Harvard Club of Boston (HCB)—facing the Mass Pike, rather than Commonwealth Avenue—is a harbinger of improvements to come. Ordinary though it may seem, the current work underpins a new back entry that will eliminate the maze of ramps and intersecting corridors that now confound members and guests proceeding to functions in Harvard Hall and elsewhere upstairs. The entry, in turn, is part of a larger transformation that will renew the club's basic systems (the sole elevator is of World War II vintage), rationalize traffic patterns (so that guests do not collide with servers rolling carts of food), and update facilities for twenty-first-century use.

General manager Steven P. Cummings, who came to the club in late 2012 and must now juggle operations during major rebuilding, said that, at a minimum, the goal was to address the overall flow of club members and staff "so they meet in the service experience," rather than colliding as they vie for the elevator. The new rear entry is only one element of an interior overhaul that will effect more substantial changes: constructing a new elevator for guests (dedicating the existing one, updated, to service use); separating kitchens to serve the Boston Room and, for plating and serving, Harvard Hall; and reconfiguring much of the first floor, where people enter from Commonwealth.

The Boston Room will become an updated restaurant (with the adjoining Back Bay Room emerging as a wine-themed dining space), preceded by a cocktail lounge supplanting the current front desk, lobby terrace, and office space. The current cocktail lounge, on the left of the lobby, will become pre-function space for Harvard Hall, and accommodate small private lunches and dinners. The front service desk will be relocated to that side of the lobby as well—the better to welcome guests. All will be served with new heating, ventilating, and other systems, brought up to code, and refinished historic interiors. This work, expected to be done from February through next fall, is funded in part from the $8-million proceeds of the sale of the upper floors of the annex (above the Boston Room), which are being converted to private condominiums. Assuming all goes as expected, Cummings said, the master plan envisions future work: a new tavern and cyber café in the current athletic space, with an open kitchen and seating for 100 casual-dining patrons; the existing grill reprogrammed into a business center/library, childcare facility, and central reception area for users of athletic facilities and the squash courts. The 25 guest rooms (down from 42, after the annex conversion) will gradually be redone as well.

Maintaining calm in the face of the impending construction, Cummings said the first phase of the work, this year, is "a little jolt to keep the existing members and bring in new ones"—now including MIT affiliates, given that campus's location just across the Charles River. Thus, the project is both a physical updating and an attempt to make the HCB "more family-centric." As a *club*, he emphasized, it has an obligation to know its customers and "a unique opportunity to provide a very high level of service," in quarters to match.

COURTESY OF THE HARVARD CLUB OF BOSTON

Plan for the new rear entry—a key to rationalizing the club's interior spaces and use

At 13, Staropoli told his parents he wanted to join in the family hobby. "They said they'd let me race go-karts and help me do it, but only if I kept my grades up," he says, noting that the work ethic and abilities to organize his time and develop strategies, mastered through racing, have also served him well in his academic career. He kept his end of the bargain, eventually becoming president of his class three years in a row and valedictorian. Starting in 2003, he and his parents drove back and forth across the state from their home near Fort Lauderdale to a go-kart center in Fort Myers. "We bought a used chassis from one of our friends and a used engine from another, carried it on an old landscaping trailer that we towed behind a 17-year-old GMC Sierra," he reports. "It was about as bare-bones as it could be."

With a family less dedicated to the sport, his very first go-kart race might also have been his last. In the opening laps, the 13-year-old passed several other karts and nearly passed another. But not quite. "We touched tires and my kart just flipped instantly," he recalls. "I was sliding along on my helmet and the kart's air cleaner. My mom was up in the stands and her knees literally buckled and she passed out." The race was halted and track workers pulled the upside-down kart off the rookie. "I wasn't hurt," he adds. "They got me going again, but I had to restart last."

He finished third and an amateur career was born. The following year he progressed to racing an aging, slightly modified Camaro in Hialeah Speedway's entry-level stock-car class, where his debut was more auspicious: he started last and finished second.

During the next eight seasons, while in high school and college, Staropoli won more than his share of races. The family devoted thousands of hours to his racing; instead of going on vacations, they all trooped to the track. But the escalating cost was at times a strain. Go-kart races cost about $100 each to enter; to compete with a "hobby-stock" Camaro runs $200. The price jumps to $2,000 per contest for the more specialized "late model" cars (the highest class in local stock-car competition), which Staropoli drove starting his senior year in high school. Prize money was plowed back into the car.

At Harvard, he raced during school breaks. But initial plans to become an engineer, and eventually work on the technical side in Formula 1 or NASCAR, gave way to a burgeoning fascination with how neurons work in the brain. "There's the action potential of a *single* neuron," he explains, "but that evolves into these big complex thoughts about how we look at the world." He was also drawn to the field's broad applications and by sophomore year was working in a Harvard Medical School lab run by neuroscientist Robert Stickgold. For his senior project, which examined whether learning occurs during sleep, Staropoli recruited 50 subjects to spend nights hooked up to monitors in the sleep lab.

The interest in medicine became personal when he was diagnosed with celiac disease in 2010. He took time away from his studies and racing to counsel young people with the disorder, wrote a column for the National Foundation for Celiac Awareness about how to manage a gluten-free diet in college, and conducted and presented a research project on "The Social Perception of Celiac Disease" during his senior year.

He describes college as "a long process, just grinding it out and making slow progress, while driving a race car is the opposite—learn quickly and then do it. But now, chasing a career as a professional racing driver, I see how much more there is to racing than just driving the car

Crimson on Capitol Hill: 114th

The Republican resurgence of 2014 affected the University's alumni contingent in the new Congress. Three new senators (one risen from the House) and three new representatives—including one woman—raised the Harvard GOP total to 12, a net gain of four. The Democrats lost two senators and a representative to retirement and two more House members to defeat, but gained four new representatives—including one woman—for a new total of 33, a net loss of one.

Besides the 45 degree-program graduates or matriculants, the 114th Congress includes other members with Harvard affiliations, among them senators Lamar Alexander, Republican of Tennessee, a former fellow of the Kennedy School's Institute of Politics, and Elizabeth Warren, Democrat of Massachusetts, a former Radcliffe Institute fellow and Law School faculty member.

In the list below, asterisks mark newcomers since the election of 2012:

Senate Republicans: *Tom Cotton '99, J.D. '02 (Ark.); Michael D. Crapo, J.D. '77 (Id.); Rafael Edward "Ted" Cruz, J.D. '95 (Tex.); *Ben Sasse '94 (Neb.); *Daniel S. Sullivan '87 (Alas.); Pat Toomey '84 (Pa.); David Vitter '83 (La.)

Senate Democrats: Richard Blumenthal '67 (Conn.); Al Franken '73 (Minn.); Timothy M. Kaine, J.D. '83 (Va.); John F. (Jack) Reed, M.P.P. '73, J.D. '82 (R.I.); Charles E. Schumer '71, J.D. '74 (N.Y.); Mark R. Warner, J.D. '80 (Va.)

House Republicans: *Curtis Clawson, M.B.A. '90 (Fla.); Ron DeSantis, J.D. '05 (Fla.); *Bruce Poliquin '76 (Me.); Michael R. Pompeo, J.D. '94 (Kans.); *Elise Stefanik '06 (N.Y.)

House Democrats: *Brendan Boyle, M.P.P. '05 (Pa.); Joaquin Castro, J.D. '00 (Tex.); *Katherine Clark, M.P.A. '97 (Mass); Gerry Connolly, M.P.A. '79 (Va.); James H. Cooper, J.D. '80 (Tenn.); Elizabeth Esty '80 (Conn.); Bill Foster, Ph.D. '83 (Ill.); *Ruben Gallego '02/'04 (Ariz.); John Garamendi, M.B.A. '70 (Calif.); Alan M. Grayson '78, M.P.P.-J.D. '83, G '87 (Fla.); Brian Higgins, M.P.A. '96 (N.Y.); Jim Himes '88 (Conn.); Joseph P. Kennedy III, J.D. '09 (Mass); Ron Kind '85 (Wisc.); James R. Langevin, M.P.A. '94 (R.I.); Sander M. Levin, LL.B. '57 (Mich.); Stephen F. Lynch, M.P.A. '99 (Mass.); *Seth Moulton '01, M.B.A.-M.P.A. '11 (Mass.); Raul Ruiz, M.D.-M.P.P. '01, M.P.H. '07 (Calif); John P. Sarbanes, J.D. '88 (Md.); Adam B. Schiff, J.D. '85 (Calif.); Robert C. Scott '69 (Va.); Terri Sewell, J.D. '92 (Ala.); Bradley J. Sherman, J.D. '79 (Calif.); Mark Takano '83 (Calif.); Christopher Van Hollen Jr., M.P.P. '85 (Md.); Juan C. Vargas, J.D. '91 (Calif.)

GARRY ELLER

Gearing up at the Charlotte Motor Speedway during the Peak Stock Car Dream Challenge in 2013

and how similar it is to the process of going through Harvard."

In the summer of 2013, after finishing his first year of medical school, Staropoli joined the other eight Dream Challenge finalists at Charlotte Motor Speedway, the sprawling motorsports facility that serves as the heart of North Carolina's stock-car racing industry. There they were put through a rigorous three-day program that included tests of their driving ability (including car-control skill on a skid pad), execution of pit stops, and timed laps on a short oval track, a road course, and the 1.5-mile high-banked superspeedway. And because successful drivers—as the public representatives of their commercial sponsors—must be articulate and personable, their appeal outside the cockpit was evaluated through simulations of a press conference and a TV commercial, judged by Danica Patrick. Here, Staropoli's ready smile, good looks, and media-savvy nature probably helped out.

Of the driving-skill tests, only the short oval was familiar to Staropoli, but he turned in his most impressive performance on the road course. His lap times were so fast, the event organizers sent out a NASCAR regular, Clint Bowyer, who struggled to match his speed. The worst pressure came with the towering 1.5-mile oval, a track configuration none of the candidates had experienced. The approach of rain clouds also meant the time allotted for that exercise was sharply compressed. "It was crazy," Staropoli reports. "They put new tires on the cars and we each had three laps to set the fastest time we could. It was cool, but I don't remember ever being that on edge or alert in a race car."

At the end of the evaluation, the aspirants were assembled in a garage around a canvas-covered racing car to await their fate, as cameras recorded the event for Peak's promotional purposes. The cover was yanked off, Staropoli reports, "and there was my name."

"Patrick's energy and enthusiasm are really exciting," Waltrip says of Staropoli, now an intern in the marketing department at Michael Waltrip Racing in North Carolina. "And it turned out he had the necessary talent behind the wheel."

Winning the Peak challenge gave Staropoli the chance to compete in a NASCAR regional junior series, the West Coast-based K&N. His car was prepared by a top team, Bill McAnally Racing, but Staropoli doubted their hopes were very high: "I think they figured I'd qualify near the back, run off the pace, and get black flagged"—removed from the race by officials for traveling too slowly. Instead, he ran among the leaders, finishing fifth and beating Waltrip, who had come out of retirement to compete.

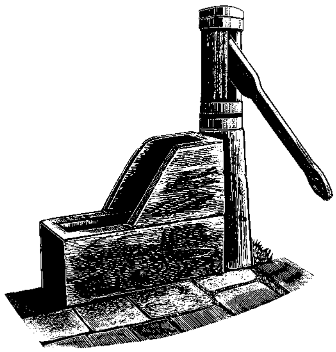
After that showing, Peak entered Staropoli in another K&N race that fall, and then five more high-profile competitions with the McAnally team last summer. He finished in the top 10 six times and won one race by passing the two top drivers on the circuit. "He's the total package," says McAnally, who has spent three decades in the sport and developed some of its current stars. "Compared with the people he's racing against, Patrick doesn't have a lot of races. But I'm impressed with how good he is at communicating what he needs from the car to go faster. He's very smart and great in traffic. He's aggressive, but not so much that he tears up the car. There's no doubt in my mind Patrick can make it to the pinnacle of this sport."

To run all these races, Staropoli was granted a year off from medical school. That period officially ended on October 31, but Staropoli is working with the school on a possible extension. For now, besides learning more about the business side of the sport, he's been networking with race teams that compete in the two national-level series just below the Sprint Cup: NASCAR's Camping World Truck and Nationwide Series. He's also secured one smaller sponsor and is in contact with three major ones, looking for upwards of the $1.5 million required to put him in a car this year. If he gets the chance to compete professionally, he will take it. "It's a life-altering decision," he says, "but in my mind it comes down to what would you regret more 10 years from now? Medicine is an amazing, constantly evolving field that I would miss but ultimately be able to return to. Racing is now or never."

And if it's never, will he still do it for fun? "Yes, absolutely," he says, smiling. "Going racing with my friends and family is what we've always done."

Steve Potter '69, a frequent contributor to Harvard Magazine *and a former race driver, was a longtime motor sports columnist for* The New York Times.

So Long for a Time



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

As college Harvardians are aware, every five years each class produces a reunion report in which members of the class may tell what they've been up to and what's on their minds, for the presumed benefit of their classmates, the passing sociologist, and the nosy. Christopher S. Johnson '64, A.M. '65, a contributing editor of this magazine, has read each of his class's reports across the decades cover to cover, and has kindly passed highlights along to Primus, who is inquisitive but skips over the occasional sad part. Now it's time to put the *Harvard and Radcliffe Class of 1964 Fiftieth Anniversary Report* on the shelf, all 1,077 pages of it, for the class of '65 is approaching. We'll see this mob again in five years. But before we go:

Keith Cushman, Professor Emeritus of English at the University of North Carolina, Greensboro, preserves a bit of the Sixties in what Johnson calls "the amber of memory." "On a beautiful spring afternoon in 1964, my Wellesley girlfriend and I were self-consciously sunning ourselves on a blanket beside the Charles along with a dozen or so other couples. Two motorcycles roared up. Joan Baez was on the back of one of them, Bob Dylan on the back of the other. Baez and Dylan dismounted, and—while all of us acted as if nothing extraordinary were happening—Joan Baez picked up her guitar and sang 'I Want to Hold Your Hand.' Then she handed the guitar to Bob Dylan, who, seated cross-legged on the ground and hunched over, sang 'Mr. Tambourine Man.' Then they climbed back onto the motorcycles and roared off. I remember this as if it happened yesterday. Such, such were the joys."

Louis French Reichardt, who has a home in New York City and does scientific research at the Simons Foundation and the University of California, San Francisco, reports that he and his wife, Katherine, Ed.M. '75, did this exercise: "In preparation for our fortieth wedding anniversary, we spent a year walking every street in San Francisco, totaling approximately 1,900 miles in distance and seven Mount Everests in elevation gain. There is no better way to get to know a city and its people than walking its streets....The experience was one of the richest of our lives."

OVERSNAP/ISTOCK

See you. A much-admired pair of legs and shoes disappear into a window above the shops on Haight Street, San Francisco. The Reichardts have seen it all.

Gordon Peacock Harper, M.D. '69, of Chestnut Hill, Massachusetts, writes that he has had experience abroad, especially in the developing world, on behalf of an international child mental-health organization. "Humbling, gratifying, and challenging. Even more humbling is to appreciate, as the details of molecular and cellular physiology emerge, through what an unimaginably chancy chain of genetic accident, differential survival, and selection the life that we take for granted has arisen. On the precarious top of which our collective cultures are perched. I feel like Keats's imagined Cortez and his men, seeing something vast and amazing, '...staring....and looking at each other with a wild surmise—silent upon a peak.'"

"I owe my second husband, and the love of my life, to Harvard," writes Cynthia Johnson MacKay, an eye surgeon from Brooklyn. "After 39 years of marriage, when I was 60, my first husband, Malcolm MacKay, left me for a younger, thinner, blonder woman. I read Warren Joseph Keegan's [personals] ad in *Harvard Magazine* and called him up. We have been together 10 years, married for six, and it gets better every day. Warren is a graduate of Harvard Business School (M.B.A. '61, D.B.A. '67). He is downstairs as I write this, pounding out his thirty-first book, the eighth edition of one of his textbooks, *Global Marketing Management*....

"There was a dark side for a woman student at Harvard in the 1960s. The men were celebrated; the women, tolerated. I never felt I had a place there. I did not have one woman teacher during the four years I was there. There was not one portrait of a woman on those dark mahogany walls, where ranks of accomplished men looked down with confident, self-satisfied expressions. I left Harvard with less self-confidence than when I arrived. Hooray for Drew Gilpin Faust, and good riddance to the old days." ~PRIMUS V

Excerpts reprinted from the reunion report appear courtesy of the Harvard Alumni Association.

THE "WILD WEST" OF ACADEMIC PUBLISHING

(continued from page 60)

A second source of market dysfunction arises from within academia. Scholars naturally want their work disseminated in the most prestigious journals. They also want their research available to the widest possible audience. But the most prestigious journals are not available to those without the financial means to access them, and the scholar-authors currently have little incentive to publish their work in universally available, low-cost OA alternatives (and might even have to pay to appear there—see below).

How to overcome these problems in the market for publishing scholarly ideas?

Subscription journals charge their fees on the *reader's* side; the vast majority of them charge nothing on the *writer's* side. Only a few "glamour" subscription periodicals like *Nature* and *Science*—maybe a dozen of the 25,000 scholarly journals—take in revenue on the writer's side.

The long-run budgetary solution for OA sources, Shieber believes, is for them to charge fees on the *writer's* side of the transaction, instead of the reader's side. Quite a few OA journals already exist, and some have published for many years. Many, though not the majority, create a revenue stream by charging writers a fee—known as an "article processing charge" (APC)—to cover the costs of what the publisher is doing. Other than that, the process of article submission, peer review, acceptance, and publication parallels that of subscription journals. (The APC is a one-time fee for writers, unrelated to reader downloads from the journal.) Currently, APCs average about $1,000 per article. Shieber suggests that the right way to cover APCs is "for the funders of the research to pay the fee on behalf of their author," though this practice has not yet been widely established. In any case, he says, "collecting that cost on the author's side enables readers to get access to it at no cost."

With this model, he adds, "Those two problems of the subscription market…go away on the author's side. The buyers are authors, buying the production services of the journal, as well as its imprimatur and the prestige of being published there, which is of great importance to scholars. But you can buy those services from *any* journal—it's not a monopoly. Some publications are more prestigious, have better production services, better peer review, or can get your paper out faster. Some charge higher APCs, some less. Authors will trade off and make decisions on quality and price. And publishers will compete with each other in an efficient competitive market that keeps costs down and quality up. This is exactly what we see in open-access journals."

(One concern about the APC model is that scholars could "buy their way in" to good journals by writing checks—but this argument ignores the filtering process of peer review and editorial oversight of material accepted for publication. That suspicion also suggests that higher APCs should correlate with lower standards for scholarly content—but a few years ago, Shieber ran a study that found the opposite. He calculated an extremely high positive correlation between the quality of a journal and its APC—logical, because scholars are likely willing to pay more to publish in a prestigious journal.)

Open-access journals have existed since the 1990s, and Shieber says that in contrast to the hyperinflationary rates charged by subscription journals, "we are seeing *reductions* in prices for OA outlets." That can take the form of lower APCs, or new arrangements like that of *PeerJ*, a journal that charges a one-time "membership fee" of $100. Overall, the publisher's revenue (overwhelmingly from annual subscription fees) per article in a subscription journal averages $5,000, which makes even the highest APCs (in the $3,000 range) look like a bargain; OA journals typically charge APCs of about $1,000 per article, as in the example above. The international, peer-reviewed OA journal *PLoS ONE* publishes primary research in any scientific discipline—tens of thousands of articles per year—and is so successful that it alone is publishing about 3 percent of all papers in the life sciences; its APC is $1,350 and it costs nothing to read. It attracts that high volume, Shieber says, by providing excellent publishing services to its authors at reasonable cost.

An Experimental, Hybrid Future

"PUBLISHING IS EVOLVING very rapidly," says the Harvard Library's Sarah Thomas. "We're having a kind of shift away from formal publications that are relatively static. In the old days, a published book would be bound between covers and sit on the shelf for centuries, maybe with some marginalia added. Now publishing has become dynamic: not individual authors, but multiple authors acting to create across geographical regions and across time. Think about scientific publication. For centuries, the journal article has been the form in which scientists communicated. Now, it's more likely to be an idea put out online by multiple labs, and it may change from day to day. You get alerts; there will be new information added; you'll get corrections." And academic careers may assume new forms. A few years ago, art historian Shearer West, now head of the humanities division at the University of Oxford, observed that in the future, scholars will publish one great book, and one great digital project.

"Experimentation is what we need now," says Jeffrey Schnapp, professor of Romance languages and literatures and an affiliated professor to the Design School's department of architecture. Schnapp is founder and faculty director of metaLAB (see "The Humanities, Digitized," May-June 2012, pages 43 and 74), a research and teaching unit that explores "networked culture" in the arts and humanities. In mid 2014, it launched an experimental, design-driven book series with Harvard University Press entitled "metaLABprojects." Among the first set of books is *The Library Beyond the Book*, by Schnapp and Matthew Battles, a research fellow at the Berkman Center: an essay on the past, present, and future of libraries that exists as a print book, a digital book, and a deck of cards that captures its "provocations." A related documentary on the Harvard Library's book depository is on the way.

"The reality is that we are printing more books today than ever before in the history of civilization—and digital books are in *addition* to that," Schnapp says. "Books are thriving now in different ways than they were 30 years ago. We need to think about how to revitalize our communications, rather than defend models that belong to the past. Print culture has undergone *many* such crises over its history. It's time for rethinking and for growing. The scholarly book was overdue for redesign."

Craig A. Lambert '69, Ph.D. '78, has just retired as deputy editor of this magazine (see page 27).

Buffed Up and Orderly

A new exhibition of birds of the world

THE GREAT MAMMAL HALL has been emblematic of the Harvard Museum of Natural History for decades. Traditionalists will be glad to know that the gorilla tirelessly pounding on his chest, the placid okapi, and the room-long whale skeleton are still in place, and birds still fill cases on the balconies that run all around the hall. But the birds are no longer solely the "Birds of North America," as has been the case for ages. Like the University that houses them, they have become more cosmopolitan and are now "Birds of the World."

"I'm staggered by their diversity," said Maude Baldwin, a doctoral student and teaching fellow in organismic and evolutionary biology, whose particular interest is hummingbirds. She and Jennifer Berglund, an exhibit developer and writer, spent many months preparing this permanent exhibition, which opened last fall. First, they refurbished the elderly display cabinets themselves. To populate the cases, they drew on the vast collection of the Museum of Comparative Zoology—350,000 bird specimens—vacuuming the dust of years from feathers, brightening eyes to restore their shine, and revealing the color and iridescence of plumage through proper lighting. Then they made everything fit—and make sense.

Above, left, are hornbills, mostly tropical birds who bear a large bill topped by a unique hollow structure, called a casque. The hornbill at right in the group is *Buceros rhinoceros*, the Malaysian state bird; the others are from Africa.

Above, center, are a roseate spoonbill and two ibises. One might encounter the spatula-equipped wader in the southeastern United States or South America east of the Andes. The scarlet ibis is from northern South America. A white ibis is in the corner. A copper ibis, of course, may ordinarily be found on the dome of the Harvard Lampoon building.

The single bird shown below at left is a fiery-breasted bush-shrike, from equatorial Africa. It is colorful even in its present circumstances.

Below, the flightless southern cassowary in back can grow 75 inches tall. In front are another Australian resident, an emu, and a brown kiwi, a New Zealander.

Visit harvardmag.com/extras to view additional images from the exhibit.

Baldwin and Berglund arranged their avian citizens to reflect not just biogeography but also current scientific understanding of the relationships among birds—their phylogeny. The result, Baldwin believes, is "both beautiful and correct."

~C.R.

ALL PHOTOGRAPHS BY JIM HARRISON