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MAGAZINE

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On the cover: Photograph by Asahi Shimbun/
Getty Images

Cambridge 02138

Seamus Heaney, final clubs, scientists and sex

HARVARD AND SLAVERY

WHILE THE new stone tablet on Wadsworth House acknowledging four slaves by name who worked there in the eighteenth century is on first glance praiseworthy as a first step (Brevia, "Spotlight on Slavery," July-August, page 29), it is on second glance woefully inadequate. To highlight just four eighteenth-century slaves by first name, without also acknowledging the fact that other unknown slaves must have been employed in Wadsworth House in the eighteenth and early nineteenth centuries as well, seems a shameful omission. Did the research inspired by the Harvard and Slavery Project not find evidence of the College employing other slaves, at Wadsworth House and elsewhere on campus? By its silence, the tablet suggests that just these four slaves were Harvard's only involvement in our national shame of slavery.

Assuming that there is actually evidence

of other slaves working at Harvard, this stone tablet would have been an excellent place to state that fact, as a more authentic and less superficial acknowledgment of Harvard's past. This first step seems more a stumble...

JAMES S. BERKMAN '77, J.D. '82
Boston

Editor's note: The underlying news article, for which a link is provided in the Brevia summary, makes clear that President Drew Faust, in announcing the tablet (it "is the beginning of an effort to remember them and our shared history"), pointed to future steps. A committee of faculty historians will advise on other campus sites to be recognized "as significant symbols of Harvard's connection to slavery," and the Radcliffe Institute will convene a conference on universities and slavery. It is not possible to publish such extensive (please turn to page 5)

Kit Reed

When Christopher ("Kit") Reed retired as executive editor in 2007, concluding 39 years of service to this magazine's readers, we observed, "Had he not written with such humor and grace, and with such wry appreciation for the University's traditions and foibles, his colleagues would have resented bitterly his calm confidence at the keyboard, no matter how pressing the deadlines." Fortunately, he was not really gone after that leave-taking: he continued crafting *Treasure* into early 2015, with a final column last spring, and he manned *The College Pump* through this past May-June.

Outside the office, Kit was an extraordinary plantsman (colleagues cherish specimens from his garden), and although ill, he took an immediate shine to the July-August article on botanizing expeditions by the Arnold Arboretum—a place he loved and had written about beautifully. His death, on July 21, reminds us of the high standards he set and maintained so well for so long, and of the dear friend we have lost.

~THE EDITORS



At work, April 1977

about beautifully. His death, on July 21, reminds us of the high standards he set and maintained so well for so long, and of the dear friend we have lost.

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Thought, Feeling, and Purpose

A DECADE after the Harvard Divinity School's founding in 1816, William Ellery Channing spoke at the dedication of Divinity Hall. "We want more than knowledge," he said. "We want force of thought, feeling, and purpose . . . We want powerful ministers, men fitted to act on men . . . to make themselves *felt* in society." This aspiration—to combine education and action in pursuit of Veritas—has broadened over three centuries from "the serious, impartial, and unbiased investigation of Christian truth" advocated by early supporters to the robust academic and professional study of all five major faiths and their place in the world. Today, men and women with dozens of religious affiliations—or none at all—contribute to a community dedicated to courtesy, openness, and respect. The Harvard Divinity School is a pinnacle of pluralism in a complex global landscape.

In recent years, this community has opened more fully to students from across the University. Courses such as *Border Crossings: Immigration in America*, which included a spring break visit to Arizona last year, create opportunities for students to see the interplay of religion and other disciplines firsthand—one aspect of a revitalized undergraduate concentration in the comparative study of religion. At the same time, graduate students preparing for advanced research in religion and theological studies have a new option available to them—a joint PhD program offered by the Divinity School and the Graduate School of Arts and Sciences. From these and other courses of study emerge remarkable alumni who are ministering to members of their communities, including agnostics and atheists; applying their knowledge in fields ranging from business to law to medicine to public policy; and making important contributions to arts and culture, including award-winning novels and celebrated collections of poetry.

The broad interests of Divinity School faculty are manifest in programs and centers

committed to answering some of the most important questions of our time. How does the increasing diversity of religions in America influence our shared public life? What role does religion play in shaping the roles of women and men in public and in private? How do world religions and their interrelationships affect global conflicts? The Center for the Study of World Religions advances the exploration of classical traditions and contemporary trends, and the Religious Literacy Project provides educational resources intended to deepen public understanding of religion—and its HarvardX course, *World Religions Through Their Scriptures*, has attracted some 100,000 online learners from more than 180 countries to modules on Christianity, Buddhism, Islam, Hinduism, and Judaism.

Under the leadership of Dean David Hempton, the Harvard Divinity School is also emerging as a powerful convener of experts from across the University. A new Professorship of Religion, Business Ethics, and the Economic Order—a cross-School venture with Harvard Business School—will advance scholarship related to business development and economic prosperity, and the recently established Religions and the Practice of Peace Initiative brings together scholars and practitioners to discuss how humanity might solve shared problems, build a more just world, and create sustainable peace. Knowledge is neither sought nor applied in a vacuum. Halting climate change, understanding and addressing inequality, extending and enhancing human life: these aspirations are matters of business, design, education, engineering, law, medicine—the list goes on. Deciding how we pursue them



is important; understanding why we pursue them is indispensable. The Divinity School helps to reveal the motives and values that guide so much of what human beings choose to attempt and hope to achieve.

For two hundred years, the Harvard Divinity School has changed as the world has changed, expanding its inquiry and influence, and deepening our understanding of what it can—and ought—to contribute to some of the greatest challenges of our time. It is a place of consideration and contemplation of those aspects of life that have given meaning to the lives of so many people throughout space and time. Together, we celebrate a bicentennial with renewed faith in the Divinity School's mission to illuminate, engage, and serve a world perhaps more in need of its expertise than ever before in its history.

Sincerely,

Uwe Faust

Elephant and Mouse

FOR ALL its prowess—fortress endowment, spectacular capital campaign, formidable faculties—Harvard has been acting like an elephant afraid of a mouse.

It has been timid about communicating the \$6.5-billion Harvard Campaign's success, lest Harvard-bashers (and they are legion) sound off. But surely no one doubts that a fundraising drive that secured \$6 billion in gifts and pledges 42 months before its formal end is going to end up billions beyond its goal.

Although one cannot argue with the campaign's staggering proceeds, the effort has been surprisingly reticent about its academic aims. Is Harvard, like peer institutions, interested in funding neuroscience research, or big data? Presumably so, and prospective donors have likely been briefed, but the community at large remains in the dark. Of course, no one wants to set a goal and fall short, and the denizens of fields less blessed with new resources may feel neglected relative to more fortunate colleagues. But these are tactical decisions: over time, everyone will be able to see the huge investments in engineering, applied sciences, and allied disciplines as the University grows in Allston.

Prioritizing tactical concerns may impose strategic opportunity costs. For a University too often known only for its endowment heft, deemphasizing the connection between record fundraising and its academic aims risks worsening the public-relations problem. Harvard's ability to rally supporters to underwrite its mission—a strength—becomes a story about the rich becoming richer. Within what is supposed to be One University, why not put its engineering expertise on display (for example, elegant research in 3-D printing and its promise for fabrication of synthetic organs) so classicists and historians can share in the excitement of their science colleagues' discoveries? Better to help them understand the opportunities, and why Harvard focuses investments there, than to keep them in the dark. The plans formulated by and with the MIT and Princeton communities, and broadly communicated there (yes, as a prelude to fundraising), are instructive.

Better for Harvard if its constituents grasped both where the University seeks to grow, and the challenges the Corporation and administration perceive. Much of the campaign is about shoring up the balance sheet to create flexibility for future

presidents and deans. It seeks to do so by endowing financial aid (expensively extended in the prior decade); paying for deferred maintenance (House renewal) and needed new buildings; endowing existing professorships; and amassing unrestricted cash, in order to pursue new opportunities (for instance, online courses).

After Harvard's existential financial shocks in 2008-2009 and the unplanned long interval between capital campaigns, a wary focus on the budget is understandable. It will matter all the more if the Corporation's fiduciary view of the future is borne out: that tuition growth (after financial aid) will be constrained; that federal support for scientific research will grow weakly, at best; and that sustained double-digit returns on endowment investments are unlikely—if the University's finances, in other words, are squeezed on all fronts.

Professors and staff members who are made aware of these concerns might be more receptive when deans explain the tradeoffs they must make (see for example, "House Renewal Gains and Challenges," page 17). Members of the Faculty of Arts and Sciences have heard about the \$400-million unrestricted endowment for engineering and applied sciences (and that it is the largest gift to Harvard), but they have heard little about what FAS's \$2.5-billion campaign aims to do; the timing of pledges versus the receipt of cash; and the intersection of these benefactions with recurring deficits. They ought to know more; and future faculty recruits might more readily agree to come if they could understand the place better.

What misunderstandings prevail beyond campus? Do kindly disposed alumni, who can be useful ambassadors, understand the uses to which \$37.6 billion, \$6.5 billion, and \$400 million are to be put? Does the less affectionate public at large, which has other concerns? And what of the politicians who represent them—and have their own pressing priorities and excruciating resource constraints?

It may seem churlish to raise such questions. Anyone who cares about higher education and research celebrates universities' ability to attract the means to fulfill their essential role. But in an anxious age, the wider public (and even the home team) might be more understanding if they were told more of substance. It's too significant an opportunity, and perhaps too large a cost, to treat as an afterthought. ~JOHN S. ROSENBERG, *Editor*

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(continued from page 2)

online accounts in their entirety in print—hence, the link to the original, full report.

SEAMUS HEANEY IN ARKANSAS

SEAMUS HEANEY, brilliant scholar, was never far from his Irish love of the ridiculous (“With Seamus Heaney in Elysium,” July-August, page 60). Several years ago, my husband (M.B.A. ’61) and I were on a Harvard trip to Ireland. One night in Dublin, Seamus was the star attraction at dinner. Afterward, he was working the crowd and came up to a woman from Boston and me. He asked her where she was from, and when she told him, he said, “Ah, I know it well.”

He then asked me the same question, and when I said “Arkansas,” he threw his arms in the air and, with a big smile, said, “Ah, Arkansas! I love Arkansas. I had three firsts in one day in Arkansas.”

I asked him what his three firsts were and, still smiling broadly, he said he saw a dead armadillo on the side of the road. That would naturally make you smile, since the armadillo rolls over and dies with all four legs sticking straight up in the air. (Some-

Notes to Readers

With this issue, the magazine has moved to a new printer, so your issue is now mailed from Pennsylvania, not Minnesota. We hope the transition passes unnoticed—but if your copy arrives on a slightly new schedule, please bear with us.

Lydialyle Gibson joined the masthead last autumn as a writer and editor. One of the features she wrote for the University of Chicago’s magazine, her prior perch, has justly been recognized as the best alumni-magazine article of 2015—the highest accolade in our field. Her first feature for *Harvard Magazine* readers begins on page 50 of this issue. Whether you have noticed her byline on many previous pieces or not, you will quickly discover her many delightful strengths as a reporter and writer. Enjoy. ~THE EDITOR

times a local wit will put a beer can in his front paws!)

Seamus joyfully told of his second first: he saw “Rice paddies flooded.”

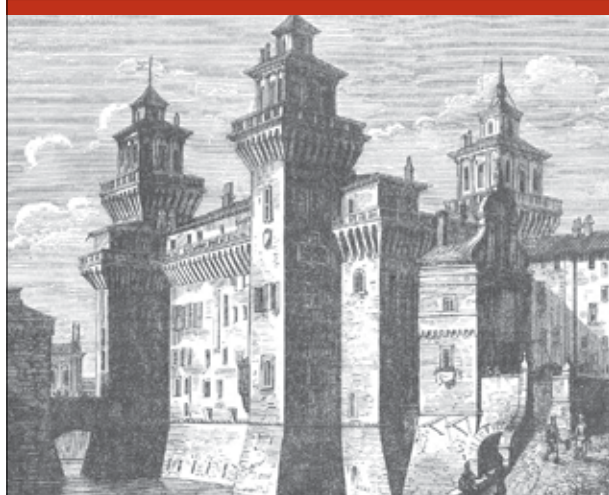
Then his demeanor changed entirely and his face became one of horror, as he gave the third first: “For the first time in my life, I was in a dry county.”

NANCY McDONOUGH
Little Rock

FINAL CLUB SANCTIONS

IN HER Baccalaureate address this year, President Drew Faust exhorted students

to tell “your own story” (see harvard-mag.com/bac-16): “[T]elling your own story means discovering who you are, and not what others think you should be.” Regrettably, recent statements and actions by Harvard administrators fly in the face of these inspirational words [see News Briefs, “Social Club Sanctions,” July-August, page 27]. These administrators express an intent to compromise the prospects of young women and men who choose to spend a portion of their personal time in companionship with friends in a same-gender setting. They intend to do so by denying these students



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opportunity for leadership positions at Harvard and important postgraduate scholarships. The message: conform your story to what these administrators think that it should be, or else put your college career—and future beyond Harvard—at peril.

Friendships are central to telling your own story. You must be free to choose and associate with companions without intimidation or sanctions. Freedom of association is enshrined in the Constitution. It is extolled from Alexis de Tocqueville to Harvard's own Professor Robert D. Putnam as a fundamental

building block of America. Blacklisting a person based on association might be expected from McCarthyites, but not a great institution such as Harvard. Students' and graduates' stories shouldn't be that their lives are marred by Harvard harassment. And, I might add, witch hunts are out of style.

JOHN A. HODGES '62
Washington, D.C.

SCIENTIFIC SENSE ON SEX

I FIND IT remarkable that biologists are still wondering about the value of sex ("Why

Sex Succeeds" July-August, page 11), when physicist Sir Fred Hoyle mathematically proved the value of sex decades

ago. This proof, which was finally published in 1999 in the small book *The Mathematics of Evolution*, shows that while asexual reproduction is capable of maintaining biological information, it is incapable of significantly improving a species because beneficial mutations cannot be decoupled from the much more numerous deleterious mutations. Sexual reproduction does allow for improvements because the beneficial mutations are decoupled from the deleterious mutations and can be selected for independently. The cited research explicitly demonstrates these issues.

I can suggest a couple of reasons biologists may have been reluctant to embrace Hoyle's proof. The first is that the mathematics Hoyle used, while familiar to physicists, is beyond what most biologists are required to study. The second is that Hoyle's proof demonstrates that with asexual reproduction, natural selection is incapable of producing the macro evolution required by biology's paradigm. Biologists are subject to confirmation bias, which makes them reluctant to accept evidence that undermines Darwinism, which in this case is the fact that Darwinism has no mechanism for developing the complexity required for sexual reproduction. Hoyle believed that biologists' refusal to acknowledge the limitations of the Darwinian paradigm has kept them from searching for the true mechanism driving evolution.

THOMAS PHILLIPS, Ph.D. '86
Chapel Hill, N.C.

PLANT PROSPECTING

IT IS ALWAYS a particular pleasure to be brought up to date on the doings at the Arnold Arboretum, such as their program to find a suitable evergreen viburnum ("The Plant Prospectors," July-August, page 37). I wish them success in their efforts with *V. davidii*, but in the meantime I find the evergreen (at least nine years out of 10) *V. rhytidophyllum* (leatherleaf viburnum) does the job quite nicely. At 15 to 20 feet, it certainly has a presence. Heads of nice enough off-white flowers, born in May, compel attention with a bracing, even astringent, aroma. Black fruits follow, though there is a red-berried form (please turn to page 78)



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THE HARVARD CAMPAIGN
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LETTERS

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that is rather more attractive. Culture is straightforward.

JAMES L. JONES '54
Lexington, Mass.

ENDOWMENT ANXIETIES

SORRY TO BE so late in commenting. I have just gotten around to reading President Faust's editorial "Vigorous Immortality" (November-December 2015, page 3) and I am concerned about her projections for the calculations of Harvard's financing in the future. Current spending from the endowment is 5 percent per year. She assumes a 3 percent

inflation rate and projects an 8 percent average investment return for the endowment. Everything looks rosy in perpetuity.

Stop the press. In a bad fiscal year, 2009, the fund lost 30 percent of its value and Harvard had to borrow \$2.5 billion. The annual report from Stephen Blyth, Ph.D. '92, president and CEO of Harvard Management Company, reveals some of the complexities. The value of the endowment has finally inched above the 2009 nadir. Since 2008, the "Real Return over Higher Education Price Index" (his figure 5) has hovered around 5 percent, the current spending level noted by Faust. What is not indicated in Blyth's report is the extent to which outside contributions each year add to the endowment. It is clear that endowment provides a considerable fraction of Harvard's expenditures (my recollection is 38 percent). These funds make possible need-blind admission and the wherewithal to attract and maintain a world-class faculty.

It remains to be seen if alumni 25 to 50 years from now will continue to contribute as generously as they have in the past to make up the deficit. What is to be done? Recently I visited Stanford. My understand-

ing is that business arrangements with entrepreneurially successful former students there are contributing significantly. Is Harvard encouraging similar funds?

STEPHEN J. SELIGMAN '52
Briarcliff Manor, N.Y.

THE CLASSICS, CONTINUED

RE: The editor's comment (July-August, page 74): "We doubt that that many readers know Greek!" Don't underestimate your audience. I'm sure any self-respecting Harvard graduate who majored in classics—that is, a true major in both classical languages—knows Greek. There are hundreds out there.

JOHN LUBIN, A.M. '89
Lexington, Mass.

Editor's note: Some of our best friends were classics majors. Surely, hundreds—but we circulate a quarter-million copies bimonthly.

AMPLIFICATION

"THE OUTSIDERS' INSIDER" (July-August, page 46) quoted Black List co-founder Dino Sijamic. Recently, he changed his name legally to Dino Simone.

SPEAK UP, PLEASE

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Born to Rest

DANIEL LIEBERMAN HAS SPENT much of his professional career exploring how natural selection shaped humans into one of the best endurance athletes on the planet. Now he is investigating how evolution simultaneously honed a propensity to laziness. “It is natural and normal to be physically lazy,” he writes in a recent paper, “Is Exercise Really Medicine? An Evolutionary Perspective.” Lieberman reconciles the apparent juxtaposition of evolutionary forces, showing how competing mandates to run

or to rest affect human behavior, physiology, and health. He explains the deep origins of the obesity epidemic—40 percent of women, 35 percent of men, and 17 percent of children in the United States are obese—and by pinpointing the causes, points to a solution. In an interview, Lieberman even suggests how Harvard could make changes to support student well-being.

He has shown that human evolution has been a story of adaptations that enhance running ability: shorter toes and heel bones, and the ability to cool off through sweating,

for example. He’s drawn attention to human prowess in persistence hunting, rarely practiced today, in which small bands of hunters chase animals until they collapse of heat exhaustion.

But Lieberman, Lerner professor of biological sciences, says that humans have also been selected to exercise only as much as they *must* to survive. The ancestors of modern humans lived as hunter-gatherers. In this subsistence lifestyle, food was often scarce, so resting was key to conserving energy for survival and reproduction. In other words, humans were born to run—but as little as possible.

“No hunter-gatherer goes out for a jog, just for the sake of it, I can tell you from personal experience,” says Lieberman. “They go out to forage, they go out to work, but anything else would be unwise, not to mention maladaptive” in calorie-restricted environments.

This tension between activity and rest, he says, plays out in human physiological and anatomical systems that “evolved to require stimuli from physical activity to adjust capacity to demand.” Muscles become bigger and more powerful with use, for example. With disuse, they atrophy. Bone deposition and repair mechanisms likewise require the presence of mechanical stimulation, such as running. The absence of such stimuli can even-



tually lead to a risk of osteoporosis. “In the circulatory system,” Lieberman continues, “vigorous activity stimulates expansion of peripheral circulation,” improves the heart’s ability to pump blood, “and increases arterial elasticity.” Without exercise, arteries stiffen, the heart pumps less blood, and metabolism slows.

All of this “downregulation” of biological systems evolved to conserve energy whenever possible. Muscles use about 25 percent of daily calories, so they are costly to maintain. Muscle *wasting* thus evolved as one among a range of adaptive mechanisms that lowered energy consumption whenever physical activity was not required. But at no prior point

in human history was it feasible to lead an existence devoid of activity; exercise was literally part of the environment. The result is that mechanisms for reducing energy expenditure in the absence of physical activity now manifest as diseases. Heart disease, diabetes, osteoporosis, and other maladies of modern life are the consequence of adap-

THE PEN MADE MIGHTIER

Printing in Free Space

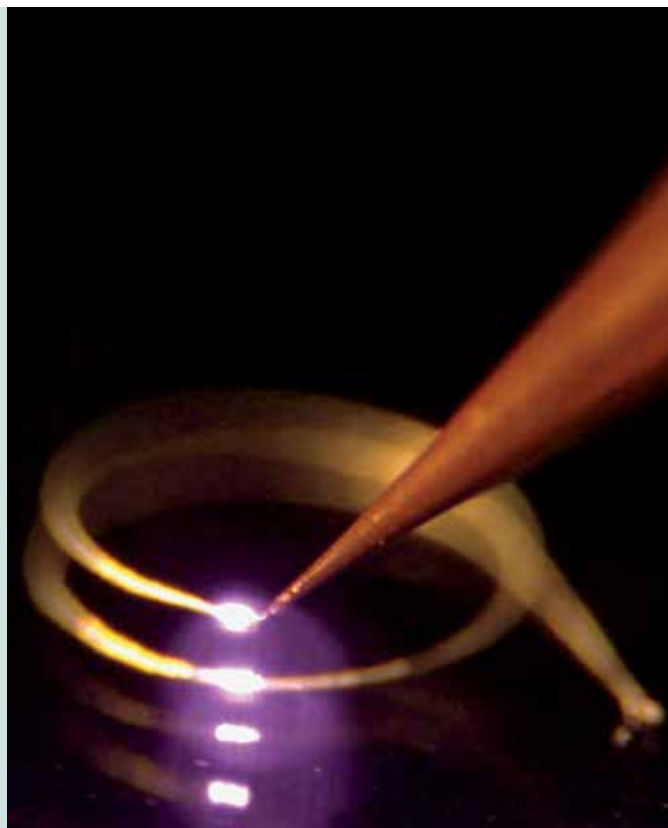
In action, what looks like a sharp glowing pen squeezes out a coil of silver, starting from a base and curling upward into the air. It’s actually a nozzle attached to a 3-D printer, and the coil of silver, made of an ink composed of nanoparticles, is thinner than a strand of hair. A few twisting motions, and the microscopic wire emerges from the nozzle to form sharp angles, a spherical antenna, a butterfly with open wings.

These complex shapes, and their ability to hold up as free-standing structures, represent a big step forward in 3-D metal printing, which in the past has produced curvilinear structures by printing them flat on a supportive base (also called a substrate) and later heating them to solidify the material. That two-step process limited the structures’ complexity. Now a technique pioneered by Harvard researchers at the Wyss Institute for Biologically Inspired Engineering and the Paulson School of Engineering and Applied Sciences opens new possibilities: printed metal will be able to assume more—and more complicated—shapes, for applications ranging from 3-D antennas to electrical interconnects.

The breakthrough innovation is a laser positioned right beside the 3-D printer nozzle, says Mark Skylar-Scott, a Wyss Institute postdoctoral fellow in materials science and electrical engineering and lead author of a May 31 *Proceedings of the National Academy of Sciences* paper on the research. As the ink—actually silver nanoparticles suspended in a polymer solution—flows out of the nozzle, the metallic wire has the consistency of toothpaste: not liquid, but also not rigid enough to form freely supported, complex 3-D structures.

The laser heats the ink as it emerges from the nozzle, annealing it; the nanoparticles fuse together and the polymer decomposes so that the printed filament becomes a solid yet flexible metal wire able to support its own weight as the printhead, moving in x, y, and z axes, forms it into a number of shapes, including helical springs and those curved butterfly wings.

During the fusing process, the metal achieves an electrical conductivity that nearly matches that of bulk silver. And the laser’s precision and the ability to adjust its temperature “on the fly,” Skylar-Scott says, enables researchers to vary the level of



A 3-D printer “draws” a coiled antenna in the air. What allows the printer to work this way is a laser that hardens the silver nanoparticles as soon as they emerge from the nozzle.

conductivity within a single structure and to heat only the wire, without risking damage to the substrate, which could be made of plastic, rubber, or flexible materials.

Working as he does in the research lab of Wyss professor of biologically inspired engineering Jennifer Lewis, who is his coauthor on the paper, Skylar-Scott sees many potential uses for these complex metal structures: in biomedical devices, wearable and flexible electronics, sensors, displays, small antennae, electromagnetic devices, a coil in a speaker, a transformer to amplify signals. But first, he says, someone will have to further refine the technique. “Right now there are a lot of knobs to tweak,” he says, including the position of the laser, its pulse frequency and direction, and the print speed. “With a bit more work,” adds Lewis, “these parameters can be optimized and automated.”

—LYDIALYLE GIBSON

JENNIFER LEWIS WEBSITE:

<http://lewisgroup.seas.harvard.edu>

tations that evolved as a means of trimming energy demand, and modern medicine is stuck with treating the symptoms. There is thus “no silver bullet,” says Lieberman, that will cure them all. And exercise itself stands against two million years of human evolution screaming, “Don’t do it!” That is why getting people to exercise is often so difficult.

Lieberman returns to the hunter-gatherer model in dissecting the motivations for activity, which he describes in terms of carrots and sticks. For a Kalahari bushman, who travels five to 10 miles a day over the course of four to six hours, the reward is food. But humans also “evolved with a very large stick: if you *didn’t* exercise, you had nothing to eat.” Exercise was mandatory. For many humans today, he points out, there are very few incentives and no penalties.

One way to fix that as a society, he reasons, is “to figure out ways to make activity more fun for more people, and the way to make it fun is to make it social.” Lieberman encourages investment in community sports, ranging from soccer teams to fun runs. He decries the fact that “we spend less than 5 percent of our national healthcare budget on prevention” when “more than 70 percent of all diseases are preventable.”

But are carrots enough? Within the University, Lieberman has an idea inspired by evolution, and best described as *compelling*, that “might start a firestorm.” Given its long history of research demonstrating massive reductions in rates of morbidity and mortality among alumni who exercise, he says, Harvard “needs to reopen a discussion about...a physical-education requirement.” Surveys of undergraduates by Harvard University Health Services (HUHS) have

shown that very few students who are not athletes on a team get sufficient exercise, and that a quarter are sedentary. Furthermore, says HUHS director Paul Barreira, the same surveys show that students’ own sense of health and well-being tracks the amount of exercise they report getting. Those with the most depression and anxiety also get the least exercise. The happiest students get the most.

The Faculty of Arts and Sciences voted Harvard’s physical-education requirement “out of existence in the 1970s,” says Barreira. Any new requirement would have to respect students’ differing backgrounds, and those who have disabilities, Lieberman says. But “if ever there was a coercive environment it is a university,” he continues. “Faculty spend hours dreaming up new ways to compel students. We have all kinds of requirements in language, writing, math, and various mandatory courses within departments because we think they are beneficial for our students. Given the correlation between the mind and the body, how is a physical-education requirement any different?”

The most common critique Lieberman hears for this idea is that students don’t have the time to exercise. “But study after study shows that there is actually no trade-off in time because people who get more physical activity have better concentration, their memories are better, they focus better,” he adds. “So the time spent exercising is not time lost, but returned in spades. And not only in the short term, but also in the long term. Shouldn’t we care about the long-term mental and physical health of our students? Just giving people information is not enough. As a University—as a commu-

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harvardmag.com/editrna-16

Are Hospital Pay-for-Performance Programs Failing?

Economic incentives aren’t working to improve healthcare, research increasingly finds.

harvardmag.com/hospitalcosts-16

nity—we need to ask ourselves whether or not we should help each other do what most of us want to do already: be more physically active.”

—JONATHAN SHAW

DANIEL LIEBERMAN WEBSITE:

<https://www.fas.harvard.edu/~skeleton/danlhome.html>

BRIDGING BACKGROUNDS

Aiding the “Doubly Disadvantaged”

SEEMINGLY IN UNISON, elite colleges like Harvard have in the last decade opened their doors to more students from poor families than ever before. Eighteen percent of today’s Harvard undergraduates receive federal Pell Grants (commonly used as a proxy for low-income status), up from 10 percent in 2004. Such progressive admission policies, aside from their

obvious social benefits, have diversified the college experience at schools like Harvard (whose student bodies remain overwhelmingly wealthy). They’ve also forced colleges to learn, sometimes uncomfortably, that creating a more economically diverse student body can’t just be a matter of recruiting more economically disadvantaged students. It also must mean accommodating them.

Scholars in education and sociology have observed generally that low-income college students often feel culturally alienated from their better-off peers, fear approaching professors, and lack the experience to navigate elite social networks. Sociologist Anthony Jack, Ph.D. ’16, a Junior Fellow with a pending appointment at the Graduate School of Education, has begun to complicate this story.



Anthony Jack is interested in diversity among low-income students.

Jack emerged as a young leader in the study of inequality in the last year, with his work on the diversity *among* students from poor families. His theory splits low-income students into two classes: the “privileged poor”—those who attended private, well-resourced high schools—and the “doubly disadvantaged,” who went to public high schools. Poor undergraduates at selective schools come disproportionately from the first group, thanks to what Jack calls “an institutionalized pipeline through private education that begins at the very beginning of high school.” Think schools like Exeter and St. Paul’s.

Until recently, he argues, scholars have ignored this pipeline. (Jack, who counts himself among the privileged poor, went to Gulliver Preparatory School in Miami on a scholarship before attending Amherst College.) Students from this group are socialized among wealthier peers and better prepared for college-level work, he says; they become close with their teachers and learn to seek help from authority figures. For his recent paper in *Sociology of Education*, asking how privileged poor and doubly disadvantaged students differ in their strategies for engaging with professors, he interviewed 89 black and Latino students at an elite university in the Northeast; 20 were classed as privileged poor, 42 as doubly disadvantaged, and 27 from the middle and upper classes. (Rather than ask students directly about

family income, he determined low-income status based on a combination of their financial-aid awards, whether their parents had gone to college, and whether their families received public aid. Students whose parents had graduated from college were automatically considered middle class, though this assumption is debatable.)

Poor students who attended private schools patterned with middle-class students: both groups reported feeling at ease about reaching out to professors, advisers,

“I was surprised by how meritocratic the doubly disadvantaged were, even though they were least likely to benefit from it.”

and other authority figures, behaviors they said they brought with them from high school. “Since my high school had mandatory tutorial hours for teachers,” one student said, “I was like, ‘If I need help here, I’ll just go to office hours.’” Help-seeking, Jack suggests, “is a mechanism through which students gain access to institutional resources.” The privileged poor feel entitled to professors’ time in a way that poor students from public high schools don’t. The latter weren’t merely uncomfortable interacting with professors one-on-one; many also believed the way to succeed was simply to work hard, without trying to curry favor with their superiors. “I was surprised,” Jack says, “by how

meritocratic the doubly disadvantaged were, even though they were least likely to benefit from it. They would say, ‘I’ll succeed if I keep my head down and do good work, not networking.’”

The immediate implications of his research are obvious, Jack argues. Colleges need to become much better at accounting for the backgrounds of disadvantaged students. Harvard, for example, might create a summer “bridge” program, as other schools have done, to help less-prepared students transition to the norms of college life. A broader and more difficult cultural shift must also occur: professors must understand what is involved in working with students who may have been discouraged from approaching teachers, or who don’t know that challenging accepted ideas is part of the academic process.

More broadly, though, Jack sees the story of privileged poor and doubly disadvantaged students as a story about the breakdown of public education. Poor children shouldn’t need to gain arbitrary access to a prep school, and exit the public system, to get a suitable education; educational resources ought to be democratized. That the privileged poor students in his study patterned so closely with their better-off fellows may indicate something encouraging about children’s resilience: disadvantaged students can perform like their wealthy peers, given the right education and socialization.

“I’m still coming to terms with what it means to make recommendations for policy,” Jack says, commenting on the limitations of his work. His preliminary paper relied on qualitative interviews with just a few dozen students of color at one college. What about the experiences of poor white students, he asks, or those of other races or native countries? And there’s still the problem of how to figure out who counts as low-income. All these questions, he says excitedly, will guide future work.

—MARINA BOLOTNIKOVA

TONY JACK WEBSITE:
scholar.harvard.edu/anthonyjack

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I2B Extracurriculars
Events on and off campus through October



I2F A trip to the bog
Harvesting New England's iconic berries



I2L Science, art, and nature converge
The Bruce Museum



I2P Sparking interest
Heartfelt artifacts at the Boston Fire Museum



I2R Ethnic Markets
Asian, Armenian, Indian, African....and more

I2J Innovation—Colonial Style
The Saugus Iron Works reveals roots of American industrialization

PHOTOGRAPH BY THE NATIONAL PARK SERVICE



Extracurriculars

Events on and off campus during September and October

SEASONAL

Jack-O-Lantern Spectacular

www.rwpzoo.org

The nighttime festival at Roger Williams Park Zoo in Providence features 5,000 illuminated

pumpkins. Carved by artists using the “American Treasures” theme, these gourds depict events, places, and cultural icons that have appeared on commemorative U.S. postage stamps. (October 6-November 6)

From left: Downy woodpeckers could appear during fall bird walks at the Arnold Arboretum; a 1931 scene at the Boston Light on display at the Hull Lifesaving Museum; the A.R.T. commemorates Ireland’s Easter Rising centennial through *The Plough and Stars*

Autumn Hills Orchard

www.autumnhillsorchard.com

Forget noisy hayrides and fall-foliage gewgaws and head instead to this real, 84-acre hilltop farm to wander trails, pick apples, and picnic on the ridge with views of Mount Wachusett and Mount Monadnock. (Through October)

NATURE AND SCIENCE

The Arnold Arboretum

www.arboretum.harvard.edu

Fall programs include: a discussion with jour-

FROM LEFT: COURTESY OF THE ARNOLD ARBORETUM; COURTESY OF THE HULL LIFESAVING MUSEUM; COURTESY OF ART

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nalist Judith D. Schwartz, author of the new *Water in Plain Sight: Hope for a Thirsty World* (September 19); guided explorations, like the fall bird walks (September 24 and October 8); and "Wild By Design," a lecture by Margie Ruddick, M.L.A. '88.

FILM

Harvard Film Archive

www.hcl.harvard.edu/hfa

Oliver Stone is scheduled to be on hand for a preview of his new film *Snowden*, part of a series on the politically minded director that also includes screenings of *JFK* and *Nixon*. (September 9-12)

Pam Grier! The 1970s star of blaxploitation and prison films, like *Foxy Brown*, will appear at Harvard to accept the Hutchins Center's W.E.B. Du Bois Medal, and to discuss her influential roles as strong-willed black women. (September 23-October 8)

MUSIC

Blodgett Chamber Music Series

www.boxoffice.harvard.edu

Harvard's music department offers an eve-

Spotlight

Paddling on the water at night is among this season's purest aesthetic pleasures. The sounds of birds, frogs, and crickets are magnified (because there is less to see) and shorelines, rocks, and trees morph into strange silhouettes. Perspectives on familiar landscapes, even within an urban environment, are thus gently refreshed during Charles River Canoe and Kayak's guided Moonlight Canoe Tours, which leave from a boat ramp on Moody Street in Waltham. (Advance reservations are required.)

The rides, lasting from dusk through dark, are "relaxing group paddles suitable for folks" of all abilities. The pace also offers the best chance of spotting herons and river otters, along with other creatures that appear as the sunlight fades. A trip leader talks about regional history and efforts to keep the waterway clean and hospitable to wildlife. Light fare and soft



CHARLES RIVER CANOE AND KAYAK

drinks are served; paddlers should bring warm clothing in case it gets chilly.

Established in 1973, the boating organization still adheres to its original mission, helping Greater Boston's residents get outside and on the water at affordable prices. Its rented boats are available at four locations through Columbus Day; the newest, a launch at Newton's Nahanton Park, offers access to one of the longest untamed stretches of flatwater on the 80-mile river.

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www.paddleboston.com

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STAFF PICK: Cranberry Harvest Celebration

Long before cranberries were corralled and canned to zest up roasted turkeys, Native Americans used the indigenous North American fruit for food, medicine, and dyes. European settlers followed suit, yet it was not until 1816 that wild cranberries were cultivated with an eye toward commercial use by Captain Henry Hall, of Dennis, Massachusetts. Today, the fruit is the state's top agricultural food product. Some 13,500 acres of bogs in the southeast region and on Cape Cod produced about 2.2 million barrels of berries in 2015—roughly 22 percent of the world's supply.

The kid-friendly Cranberry Harvest Celebration (October 8-9) honors this edible symbol of regional pride, and the pains taken to grow and harvest it locally. The finicky vines like careful shielding from extreme temperatures, acidic peat soil, and plenty of fresh water (at just the right moments), along with a homey mix of clay, sand, and gravel—conditions that originally developed naturally in “bogs” produced by glaciers 10,000 years ago. Once ripe, about 10 percent of the local berries are plucked mechanically from dry vines; the rest are “wet-harvested” from flooded



Visitors to the Wareham, Massachusetts, cranberry bog watch workers wade into a “red sea” of berries (some of which will likely end up on a family dining table some November).

bogs. Festival-goers gather at scenic Tihonet Pond, then walk or ride a hay wagon to the bogs of the A.D. Makepeace Company to watch machines whisk the water to loosen berries, which then float to the surface, creating massive pools of bobbing red balls.

There are also paddleboat and pony rides back by the pond, along with plenty of craft-making booths, live music, cooking demonstrations, and food vendors. ~N.P.B.

Cranberry Harvest Celebration
Wareham, Massachusetts
October 8-9
www.cranberryharvest.org

ANDREW W. GRIFFITH/AD. MAKEPEACE COMPANY

ning with the Grammy Award-winning **Parker Quartet**. John Knowles Paine Concert Hall. (September 30)

Montage Concert

www.boxoffice.harvard.edu

The **Harvard Wind Ensemble**, **Monday Jazz Band**, and **Harvard University Band** gather for a lively performance at Sanders Theatre. (October 14)

Bands of the Beanpot

www.boxoffice.harvard.edu

The **Harvard Wind Ensemble** joins those of neighboring institutions for the annual friendly jamboree. Boston University. (October 16)



BRAD GODA

LECTURES

Mahindra Humanities Center

www.mahindrahumanities.fas.harvard.edu
The Hauser Forum for the Arts hosts Anna Deavere Smith, University Professor at NYU's Tisch School for the Arts and creator and star of **Notes from the Field: Doing Time in Education**, playing through September 17 at the A.R.T. (October 5)

THEATER

American Repertory Theater

www.americanrepertorytheater.org
Sean O'Casey's play, **The Plough and Stars**, first performed in Dublin in 1926, reflects idealism and ordinariness among residents of a Dublin tenement amid independence tumult and the Easter Rising of 1916. (September 29-October 9)

EXHIBITIONS & EVENTS

Harvard Museum of Natural History

www.hmn.harvard.edu
Films focus on conservation efforts across the globe: **Saving Eden** (September 22) is followed by a discussion with Pellegrino University Professor emeritus E.O. Wilson;

From Strata (2016), by Jacqueline Rush Lee, at the Fuller Craft Museum's exhibit on sculptures made of “altered books”

and **Sharing the Rough** (October 13), about the mining, use, and beauty of colored gemstones, includes a talk by its director Orin Mazzani. A lecture by Carl Jones, chief scientist of the Durrell Wildlife Conservation Trust and author of *Lessons from the Dodo: Saving Species and Rebuilding Ecosystems in Mauritius*, sheds light on his various endeavors. (October 20).

Carpenter Center for the Visual Arts

www.ccva.fas.harvard.edu

Visiting Faculty 2016-17 highlights works by Lucas Blalock, Jennifer Bornstein, Paul Bush, Dru Donovan, Guy Maddin, and Kianja Strobert. (Through October 1)

Embodied Absence: Chilean Art of the 1970s Now reflects images and reactions related to the coup d'état and its aftermath. (Through October 27)

Peabody Museum of Archaeology & Ethnology

www.peabody.harvard.edu

The museum kicks off its 150th anniversary celebration with an exhibit on **Nasca Ceramics: Ancient Art from Peru's South Coast**. The vibrant, intricate objects provide insight into a culture that flourished 2,000 years ago. (Opens October 1)



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HARVARD SQUARED

Harvard Art Museums

www.harvardartmuseums.org

Vision and Justice explores art, justice, and African-American culture through works by Gordon Parks, Kara Walker, and Bruce Davidson, among others.

Tangled Up in Words. Conceptual artist Mel Bochner talks about his move beyond abstract expressionism. (October 19)

Hull Lifesaving Museum

www.lifesavingmuseum.org

Shining Beacon, Island Home: Boston Light, 1716-2016 celebrates the local icon



through photographs, remembrances, and artifacts. (Through September 30)

The Clark Art Institute

www.clarkart.edu

Splendor, Myth, and Vision: Nudes from the Prado offers 28 masterworks by the likes of Diego Velázquez, Peter Paul Rubens, and Jan Brueghel the Elder. (Through October 10)

The Museum of Russian Icons

www.museumofrussianicons.org

In Company with Angels: Seven Rediscovered Tiffany Windows. The 1902 stained-glass panels were saved from a Swedenborgian church in Cincinnati that was razed in 1964 to make room for a highway. (Through October 16)

The Institute of Contemporary Art

www.ica.org

Nalini Malani: In Search of Vanished Blood. A multimedia installation (from

Venus with an Organist and Cupid (c.1550-1555), by Titian (Tiziano Vecelli), at The Clark Art Institute

2012) by the Mumbai-based artist and women's-rights activist. (Through October 16)

Fuller Craft Museum

www.fullercraft.org

Metamorphosis: The Art of Altered Books. Ingenious sculptures composed of existing tomes, encyclopedias, paperbacks, and other bound texts.

RISD Museum

www.risdmuseum.org

Elaborate, handmade regalia from West Africa are on display in **Whirling Return of the Ancestors: Egungun Masquerade Ensembles of the Yoruba.**

Events listings are also available at www.harvardmagazine.edu.



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Innovation—Colonial Style

The Saugus Iron Works reveals roots of American industrialization

by NELL PORTER BROWN



The historic site, a 10-minute drive off Interstate 95, features a tidal basin (left), along with a giant waterwheel and bellows (above), open space for walks and picnics, and blacksmithing demonstrations (right).

LONG BEFORE Home Depot, Target, and pizza places arrived on Route 1, the land was submerged under a 230-acre waterway that powered the Saugus Iron Works. That testament to early American ingenuity and hard labor opened in 1647, and throughout the next two decades produced pots and kettles, fire backs, salt pans, and all sorts of hardware—for ships, farms, and the military—that was crucial to the Massachusetts Bay Colony's early survival and success, and even to the future industrialization of the entire region.

Today, a meticulous recreation of the original buildings and ironworks, based

on an archaeological dig begun in the late 1940s, sits along a bucolic stretch of the Saugus River. Visitors can roam the nine-acre national historic site and explore the blast furnace, which has two leather-and-wood bellows, each the size of an SUV, powered by a 16-foot waterwheel. There's also a forge with three hearths, where cast iron was refined and shaped, along with a rolling and slitting mill that produced iron bars used by local blacksmiths. "The industries we know New England for, fishing, timbering, shipbuilding," supervisory park ranger Curtis White said, "were all possible because of the ability to make iron."

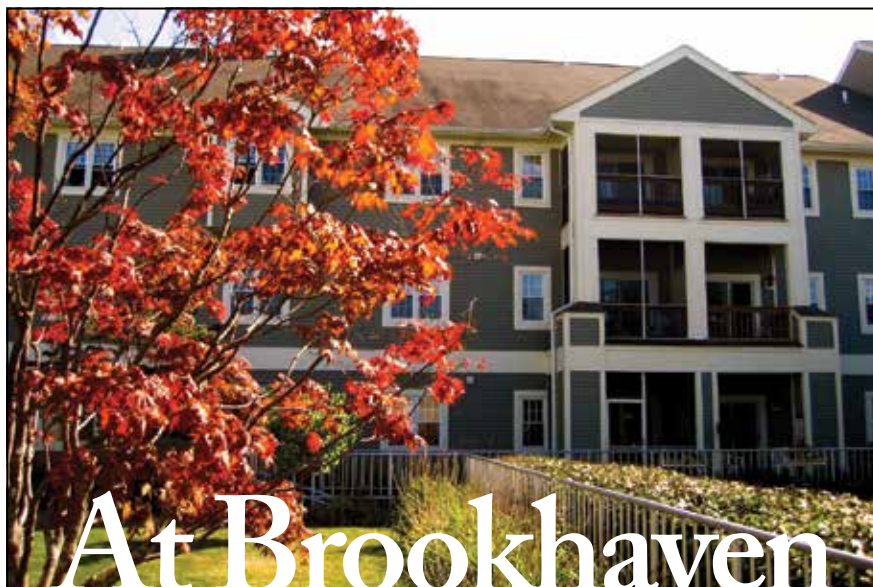
A museum explains the ironworks' history, displays artifacts, and highlights the 1948-1953 excavation by a private group that ran the site as a museum until it became a national park in 1968.

At its peak, the ironworks utilized at least 600 acres, including dammed sections of the Saugus River, which runs 13 miles from Lake Quannapowitt in Wakefield, Massachusetts, out to Broad Bay and Lynn, not far from Nahant. Critical was a large holding pond above the works, from which water was funneled by gravity to propel as many as 10 waterwheels working simultaneously.



"This was a massive undertaking," ranger Paul Kenworthy noted during a recent tour. About 100 people worked there; most were non-Puritans and lived in nearby Hammersmith village, which was developed by the ironworks' owners, making it perhaps the first "factory town" in the country. Skilled ironworkers recruited from England eventually started families in the community; by 1651, they'd been joined by about 35 indentured servants: Scottish soldiers defeated and captured during the Battle of Dunbar in the English Civil War, who were sent to the new colony to work as wood-cutters, colliers, and general laborers.

Iron-making was, and still is, a dangerous, dirty, and grueling process. The first step was to gather tons of raw materials



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ALL IN A DAY: The Bruce Museum

Science and art collide in photographs by Harold “Doc” Edgerton, on display this fall in an exhibit at the Bruce Museum in Greenwich, Connecticut. In the 1930s, Edgerton, an MIT professor of electrical engineering, developed technology that used strobe lights to capture images of moving objects, like the blades of a fan and a bullet striking an apple. The Bruce exhibition, “Science in Motion” (through October 16), features images taken by Edgerton and two artists: Eadweard Muybridge, who used stop-motion photography to create a sort of early “motion picture” for Leland Stanford (founder of Stanford University) in the 1870s, and Berenice Abbott, a photography editor for *Science Illustrated*.



Clockwise from above: the Bruce Museum in Greenwich, shops on Greenwich Avenue, and photographs by Eadweard Muybridge (below) and Harold Edgerton



The Bruce opened in 1912, in what was once the mansion of merchant Robert Bruce, with a unique mission: to serve as an all-in-one natural-history, historical, and art museum. Its permanent collection consists primarily of natural-history dioramas, but its galleries have recently featured paintings and drawings by the likes of Edgar Degas and Mary Cassatt. Also on display this fall are exquisite pen-and-ink illustrations in “Flora and Fauna: Drawings by Francesca Anderson” (through October 30), and a kid-friendly, interactive exhibit on electricity developed by the Franklin Institute in Philadelphia (through November 6).

The museum is a five-minute walk from the Greenwich Metro-North station and the town center, where shops range from local boutiques to Brooks Brothers and Hermès. Grab lunch at Meli Melo, a crêperie and juice bar, or stop at the Elm Street Oyster House for some of its celebrated seafood.

Or, if the weather permits, enjoy a picnic just down the street from the Bruce Museum at Roger Sherman Baldwin Park, which has views of Greenwich Harbor and the Long Island Sound. The park also hosts special events throughout the year, from the Greenwich Wine and Food Festival, featuring celebrity chefs and gourmet meals (September 23-24), to the Puttin’ on the Dog fundraiser for Adopt-A-Dog (September 18), which includes canine competitions like “best tail wagger,” along with music and food for the human attendees.

—AIDAN LANGSTON

Bruce Museum
www.brucemuseum.org



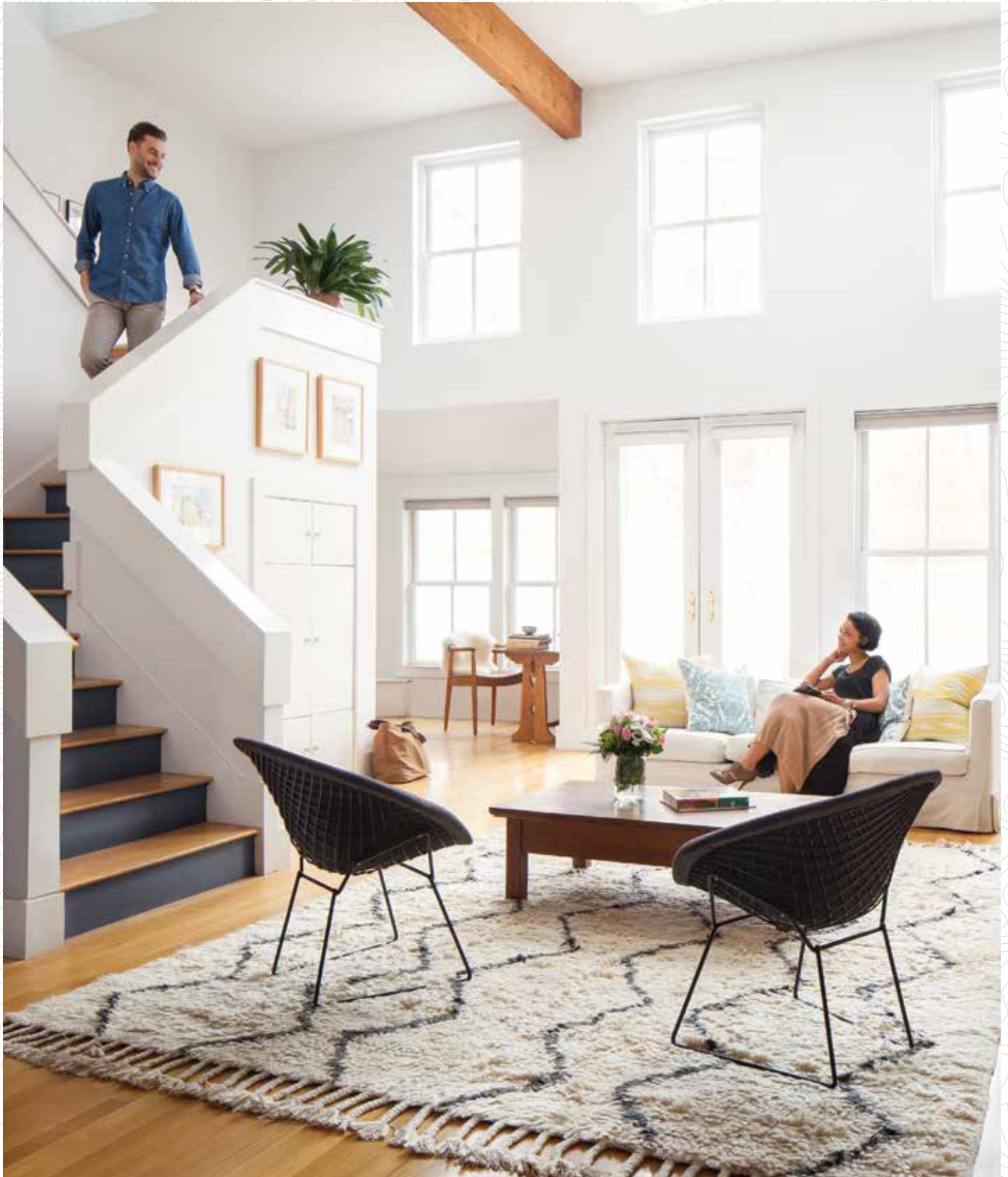
from around the region—charcoal, bog iron, and gabbro (igneous rock used as flux, a material that separates impurities from the ore)—and transport them to the works by horse-drawn carts and boats. Then, Kenworthy explained, the furnace would run “24 hours a day, seven days a week, for 30 or 40 weeks, at 3,000 degrees Fahrenheit, from the spring through the fall, until the stone lining of the furnace would just crumble from being burned. Then they’d build it all back up again and start over in the spring.”

The charcoal came from virgin timber that was slow-burned by colliers for up to two weeks before it was ready. The bog-iron ore was hand-dug from marshes and pond-bottoms in Saugus, Lynn, and the South Shore towns of Weymouth and Hingham. The gabbro, a local improvement over the limestone used in England, came from the Nahant coastline. Once the furnace, oxygenated by the huge bellows, was hot enough, all three materials were dumped into the “charge hole”—the opening at the top of a stack over the furnace.

“Everything melted together, and then separated into layers at the bottom of the furnace,” according to White. The impurities, or slag, once coalesced by the gabbro, floated on top of the molten iron and were tapped off. The slag was thrown into a pile still visible to visitors, even though it’s overgrown with grass. The molten iron was tapped and cast into molds to make usable objects and “pigs,” ingots of a high-carbon, intermediate form of iron.

At the forge, the pigs were further refined into wrought iron, and turned into “merchant bars” that were cut at the mill and shipped to blacksmiths to shape and use as needed. Credible figures of the Saugus works’ volume do not exist, White said, although a 1640s document notes that it was a ton of iron a day, and a 1653 document reports 250 tons a year. “But it’s very possible that those books were cooked,” he added, “and a lot of the payments and products were made under the table.”

At the site, visitors take stairs to and from the charge hole to the pear-shaped furnace that housed the primary fire; the site was built into a hillside not only to facilitate the use of water power but also to accommodate the height of the stack and better insulate the fiery process re-



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quired to melt the raw materials. The park rangers do not fire the blast furnace, but frequent blacksmithing demonstrations show how the fires and iron-making process worked, and what was produced.

For those interested in other seventeenth-century sites, the nearby Boardman House, built in 1692, owned by Historic New England, is remarkably intact and open only on September 3 and October 1, before it closes for the season. But the Saugus Iron Works site is also simply

a beautiful place to see. The river basin is a refuge for birds—great blue herons, egrets, and barn swallows—while picnic tables and benches are scattered around, shaded by old trees, for visitors. There's even enough open space for Frisbee, White acknowledged—if not played anywhere near the buildings, especially The Iron Works House. (Built from timber felled in 1687 and 1688, the structure was at some point owned by Massachusetts Bay Colony military and government leader Samuel Apple-

The idyllic scene (above) belies the dirty, dangerous work of iron-making, which began with pouring raw materials into the “charge hole” (left).

ton Jr., who also owned the ironworks site through 1690. But the house was later altered, even before it was bought by preservationist Wallace Nutting, class of 1887 (see “Iron Works House,” opposite).

Saugus was actually not the colonists' first ironworks. A precursor in Braintree was led by John Winthrop the Younger, the



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Iron Works House

Open for guided tours, The Iron Works House is the only original seventeenth-century building at the Saugus Iron Works National Historic Site. Many of its underlying structural elements have survived, ranger Paul Kenworthy says, and visitors can see rooms furnished with period reproductions, artwork, and household items. But they also learn there's no proof that the Colonial-era home looked like what's there now.

Subsequent owners made architectural changes, and then in 1916 pioneering Colonial Revival preservationist Wallace Nutting, A.B. 1887, "restored" it. He built an addition, a front porch, and the gables; he also installed diamond-paned windows and enlarged the hearths—all of which might have existed in the 1680s,

but which also simply appealed to him. Descended from the earliest English settlers, Nutting opened a separate Colonial reproduction furniture-making business and photography studio on the property, Kenworthy adds, using the house as a showroom where he took pictures of women in period

costumes doing traditional tasks among his furniture. (He did the same at his own historic home, the publicly accessible Wentworth-Gardner house, in Portsmouth, New Hampshire.)

Nutting was a Congregational minister until ill health, probably neurasthenia, forced him to retire at 43. That led to bicycling through the countryside—and his new career as a chronicler and promoter of New England's historic buildings, their interiors, and the region's lush scenery. (His creations are now collectors' items.) Serendipitously, it was William Sumner Appleton, A.B. 1892, a descendant of Samuel Appleton and founder of what is now known as Historic New England, who encouraged Nutting to buy the house, and who, nearly 30 years later, was instrumental in both keeping it in Saugus (new owners wanted to move it to Michigan), and in forming a non-profit organization to acquire the property and spearhead the process of preserving the ironworks site as a national artifact.



The severe-looking, 10-gabled Iron Works House, and (at left) its second-floor "parlor chamber," used for entertaining guests



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CURIOSITIES: Boston Fire Museum

In 1891, firefighters at the Congress Street station house typically worked nine days straight, then got a day off to “go home and get a change of clothes and more food,” says William Warnock, director of the Boston Fire Museum now occupying the historic building. Horses were also on hand, he adds, to pull hose wagons and a coal-fired, steam-powered pumper akin to the shiny Manchester, New Hampshire-made Amoskeag model from 1882 that’s on display.

The eclectic, one-room museum has hundreds of artifacts—including a hand-operated, hand-drawn Ephraim Thayer pumper from 1792—that date to the Colonial-era bucket brigades, and help convey “a sense of history and the dangers of fire, and how firefighting has evolved,” notes Warnock, the deputy fire chief in Hampstead, New Hampshire, and a member of the all-volunteer Boston Sparks Association that runs the place. Visitors are free to climb the 1926 American LeFrance fire engine, used when firefighters entered smoke and flames protected by little more than rubber coats and boots, and a leather helmet. The old station house is also packed with helmets, badges, medals, uniforms, hoses, buckets, speaking trumpets, and hydrants. There are memorabilia from some of Boston’s worst conflagrations, and vestiges of the world’s first alarm telegraph system, which debuted

in Boston in

Boston Fire Museum
www.bostonfiremuseum.com
Saturdays, 10 A.M.-5 P.M.



Figureheads, like this 1970s reproduction, often adorned fire stations in the 1800s; two American LeFrance trucks (from 1926 and 1966); and the historic Fort Point station, surrounded by what were once manufacturing warehouses

1852, along with heartfelt tributes to those who have died in the line of duty, most recently Lieutenant Edward J. Walsh Jr. and firefighter Michael R. Kennedy, who were trapped in a Back Bay apartment fire in 2014.

Boston was the first town in the 13 colonies to organize a paid fire department—in 1678, well before the landmark 1760 blaze that destroyed nearly 350 structures around Beacon Hill. “As the buildings got taller, and the fires bigger,” Warnock notes, “they started to introduce career firefighters, in fire wards.” Steam-powered apparatus appeared in the 1850s. Even so, the “Great Fire of 1872” burned for 12 hours, destroyed 776 buildings, and led to the deaths of at least 30 people in what’s now the financial district. Starker still in recent memory—Warnock has talked with firefighters who responded—was the Coconut Grove disaster of 1942. The fire was doused “within an hour,” he recounts, in front of a glass case commemorating the event, “but the smoke and flames only took minutes to kill 492 people.” ~N.P.B.

son of the first governor of the Massachusetts Bay Colony. He had studied metallurgy and, having found ore deposits around Boston, sailed to England in 1641 and persuaded English merchants and ironmongers to form the Company of Undertakers of the Iron Works in New England. When the Braintree works failed, however, the investors replaced Winthrop with Richard Leader, an engineer who chose the site in Saugus (then called Lynn) instead, because of its superior access to water: the river and the tidal basin, which was used by boats moving goods in and out of docks at the works.

But by the early 1650s, Leader had left and the Saugus works began to falter financially, finally closing in 1668. The ensuing centuries saw other industries on the site: woolen mills and blacksmiths, and then farms, Kenworthy reported. The 1916 restoration of the Iron Works House, thanks partly to community preservationists, and the U.S. steel industry’s interest in discovering and promoting its roots, converged in the 1940s, and a private group ran a site excavation. After three years, the remains of the blast furnace, a waterwheel, a 500-pound hammer head, and other artifacts were found. (Harvard paleobotanist Elso Sterrenberg Barghoorn, Fisher professor of natural history and curator of the University’s plant fossils, treated and conserved most of the wooden objects uncovered.) The site opened as a privately owned museum in 1954.

White said the ironworks was founded “to strengthen the Massachusetts Bay Colony”—and it did. The products literally held the houses, machinery, and equipment of the settlers together. Moreover, its uneven productivity (which led to two declared bankruptcies, in around 1653 and again in 1666), forced its workers to move elsewhere, thereby spreading the “iron-making and blacksmithing technology all over the Northeast, which helped to define the industrial north by the time of the Civil War. The park,” he concluded, “is really about commemorating the ironworks as a national legacy.”





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by NELL PORTER BROWN



SEVAN BAKERY (www.sevanboston.com), named for Armenia's largest lake, sits at the epicenter of Watertown's Armenian community. The family-owned business carries imported fare—halva, pomegranate syrup, fava beans, Turkish delight—and serves its own homemade sweet and savory treats. Try the baklava, or tahini bread laced with cinnamon, or *kaznadibi* (Turkish caramelized milk pudding). Or the buttery *börek* (phyllo-dough pastries, best filled with spinach and feta cheese), spiced *soujuk* (sausage) rolls, and *lahmejune* (crêpe-thin, crispy flat bread topped with ground lamb or parsley and garlic).

Murat and Nuran Chavushian, who were boys in 1984 when their parents took over the business, are now behind the counters almost every day. They gab, often in Armenian, with friends and steady customers, and answer questions from newbies—"What's *rojik*?" "Walnuts on a string



Sevan's Murat and Nuran Chavushian hold up a batch of feta. The store also sells dried fruits, and nuts by the scoopful.

that's dipped and coated in grape molasses, like a candle." "*Bastegh*?" "Squished grapes that are smashed and dried. It's like a homemade fruit roll-up."

The family is Armenian "by way of Turkey," Murat reports, and still has "loads of" relatives in the region. Sevan reflects that diaspora, with products from Turkey, Greece, Lebanon, Macedonia, Bosnia, and Serbia, among other places. Bins of pistachios, walnuts, and dried fruits (the apricots are especially good) line the aisles.



Tropical Foods offers hard-to-find products and produce for African, Latin American, and Caribbean cuisines.

There are stacks of Middle Eastern

bread, and a corner for seeds and seasonings (try the isot pepper for a sweet, smoky heat). There's also an olive bar and a popular deli stocked with house-made falafels, grape leaves, kibbeh, babaganoush, hummus, tabouli, stuffed eggplants, lentil pilaf, and thick *jajek* (a dip made of labne, cucumbers, mint, and garlic).

A salad of chopped artichoke hearts "with olive oil, some cumin, fresh lemon, corn, black beans, parsley, red onion" was introduced this summer, Murat points out. When they're hungry for inspiration, Nuran adds, he often calls "a cousin over there in Turkey, and I ask him, 'Hey, you got anything new we can cook here?'" The answer is always yes.

From Sevan, it's worth a 10-minute walk across the Belmont town line to Sophia's Greek Pantry (www.sophiasgreekpantry.com) for a tub of her phenomenal home-made yogurt (the secret is in the straining) and a slab of *galaktobouriko*, a gently sweet mélange of baked phyllo and custard.

Indian desserts, like the colorful *kaju phool*, which contains pulverized cashew nuts and looks like a palm-sized sliced watermelon wrapped in edible silver paint, fill a refrigerator at India Market (781-899-6018) on Waltham's Moody Street. Spices alone take up an aisle; one

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HARVARD SQUARED

bag contains a hundred cinnamon sticks. The fresh produce may include foot-long string beans and *karela*, *mooli*, and *dosaki* (bitter melon, white radish, and a round, yellow cucumber); the frozen-food section has prepared dinners, roti and naan, fruits (like *jamun*—Indian blackberries—and dragonfruit), and whole fish.

Tropical Foods (www.tropicalfoods.net), near Boston's Dudley Square, opened an expanded general grocery store last year but still offers ingredients and/or products found in Africa, Central and South America, and the Caribbean. Those include *bacalao* (dried salted cod), hominy grits and samp (crushed corn kernels), ginger beer, and *yautia* (the root vegetable is cooked like potatoes; the leaves are used to make the Jamaican specialty callaloo). On a recent walk through the market, eight different languages were heard.

For eastern European delicacies, head to the Bazaar Gourmet markets (www.bazaar-boston.com) in Allston or Brookline. At each, there are deli and bakery sections—offering a wide array of fish and sausages (fresh, fried, smoked, and boiled) and pickles, jams, breads and rolls, chocolates, liqueurs, cakes, and candies—as well as a freezer full of *pirogi/varenyky* (filled dumplings).

Not that long ago, America's "Chinatowns" were the only place to get Asian foodstuffs. Now, there's H Mart (www.hmart.com), the pan-Asian grocery chain that has seamlessly assimilated mainstream shoppers in Cambridge's Central Square. (For a truer ethnic experience, Asian food hounds might try the suburban-sized Kam Man Food in Quincy.)

At H Mart, piles of produce greet shoppers: hairy bulbs of rambutan (related to the lychee), lotus root, and sesame leaves are displayed alongside grapes and apples. There are nine varieties of mushrooms, and nearly as many types of tofu. Wander to the rear for dried shrimp and squid, boiled pork hocks, and rows of mochi and noodles, along with prepared foods. (Try the Korean bibimbap vegetables or seafood pancakes with hot sauce.) Be prepared for loud pop music overhead and a TV at every turn. H Mart is a young person's game, and a lot of fun. For a *slightly* quieter and quicker trip, just go to the store's food court for fresh sushi, a bowl of ramen spiced with scallions and pork—or a curry-flavored donut, just one of the items at the Korean/French bakery, Paris Baguette. It's *not* Paris, but H Mart is a global experience nonetheless. ♥

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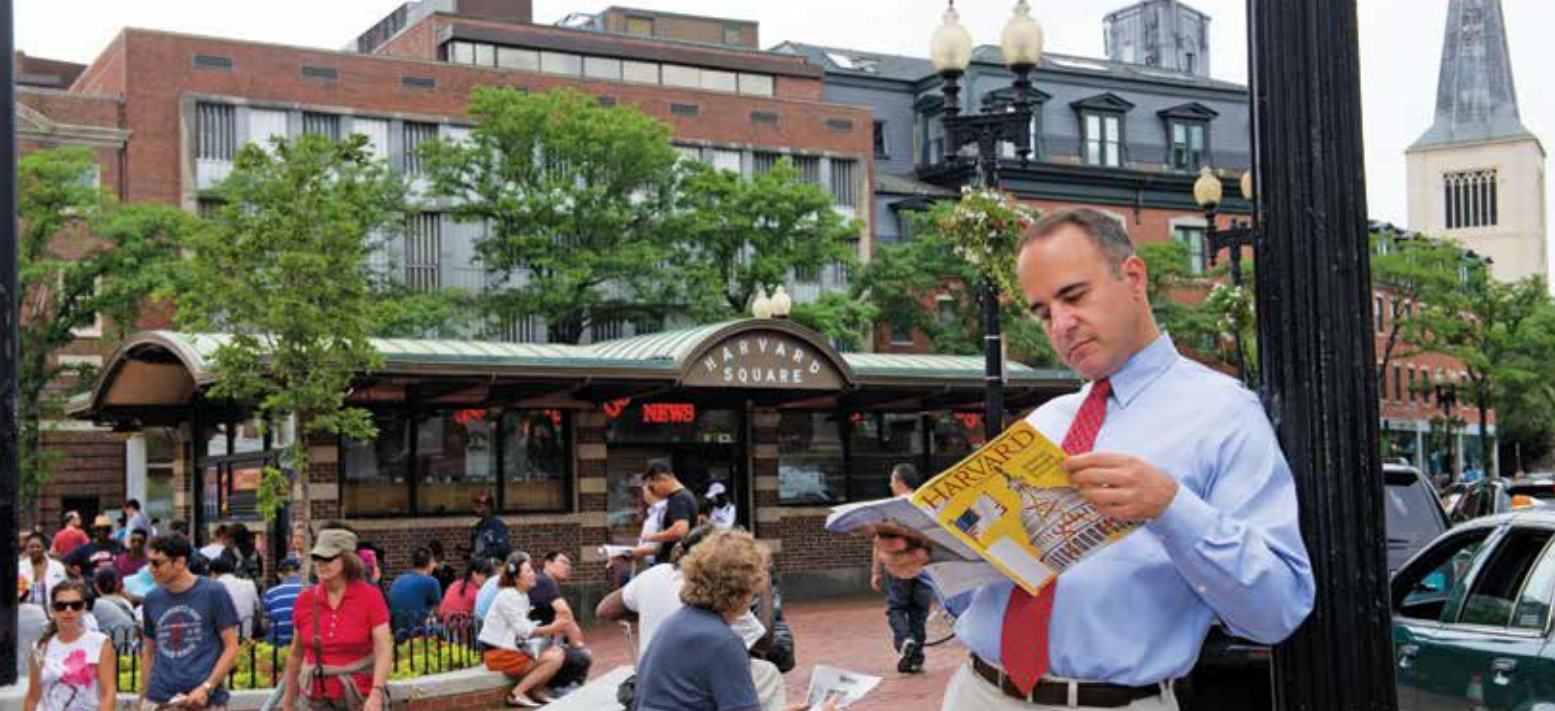
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Harvard Loves Hard Hats

THE CRIMSON couture of choice this summer—for buildings and those engaged with them—was the shroud and the hard hat. In a frenzy of construction, the former Holyoke Center (being refurbished and transformed into Smith Campus Center) and Gordon Hall (at the apex of Harvard Medical School's quadrangle, undergoing a complete façade cleaning, repointing, and, where required, replacement of deteriorated marble panels and volutes) were progressively scaffolded and wrapped, Christo-style. The shrouding material at Barker Center (roofing repairs) in fact was crimson-hued.

The scale and scope of the work are impressive. In the core of the Cambridge campus, the year-long renovation and expansion of Winthrop House—the fourth piece in the sweeping program to renew the undergraduate River residences (see page 17)—began immediately after Commencement. Memorial Church is being spruced up and reconfigured on its lower level; it is closed until year-end. (Fall-term Sunday worship will be at Radcliffe's Knafel Center, while Morning Prayers relocate to Holden Chapel.) The Greenhouse Café is closed, as part of the transformation of Cabot Science Library and associated Science Center spaces into a digital research hub; Cabot closed for the summer, but the second floor will be available in the autumn. The entire Harvard Kennedy School campus, opposite Eliot and Kirkland Houses (whose renewal has yet to be scheduled), remains a work zone. And then there were the sundry nips and tucks needed to maintain hundreds



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UNDER WRAPS. Opposite page: assembling the Harvard Life Lab, on Western Avenue, at the edge of the Business School campus (above) and (below) site work for the school's new conference center, Klarman Hall. This page: the wholesale reconstruction of the Kennedy School campus (top), and (clockwise from left) Smith Center, Soldiers Field Park, and the Medical School enshrouded for facelifts—and deeper renovations.

TYLER DAVIS/HMS

HARVARD PORTRAIT



Michael Brenner

Michael Brenner designed the popular General Education course “Science and Cooking” on successive nights between 11 P.M. and 3 A.M., after a lecture by Spanish chef Ferran Adrià moved him to teach science through physical transformations in food. “I decided this was the best possible way to teach physics to people with no desire to learn it,” he says. Now, in class and online, he’s “taught cooking to more than 100,000 people, which is sort of ridiculous.” The Glover professor of applied mathematics and applied physics grew up in the middle of Florida, where, he reports, “All there was were tennis courts, and all I did was play tennis.” At Penn, he traded tennis for a new obsession, physics, of which he knew nothing. Today, he laments, many Harvard students arrive so prepared that those with little background feel studying the sciences is impossible: “I couldn’t have been an applied math major here. I would’ve gotten scared.” With a Ph.D. from the University of Chicago, he joined MIT’s math department. “I still don’t know anything,” he asserts, “but at the time I *really* didn’t know anything.” Not knowing meant he could work on any problem he wanted, with anyone. He moved to Harvard’s School of Engineering and Applied Sciences because “this place was sufficiently interdisciplinary...so nobody knew what they were.” He resists defining the kind of research that interests him, suggesting instead that he uses math to answer “lots of different questions”: what happens when a water droplet splashes, or how bird beaks develop. Brenner’s Pierce Hall office doesn’t have a desk, making a visitor wonder how he gets his work done. “Why, is that bad?” he asks nervously. “Everything’s too fancy at Harvard. I decided it was better to just make my office into a living room.” ~MARINA BOLOTNIKOVA

of vintage buildings in working order: roofing projects at Barker, Dana-Palmer House, and Lamont Library; repainting the window sashes and mullions at Barker and University Hall (where John Harvard, protectively screened, remained visible to adoring tourists); modifications in a second-floor classroom in Harvard Hall and University Hall’s Faculty Room; renovation of Lamont’s circulation desk—all calculated to drive budget-minded administrators mad.

Even bigger projects are under way, or gearing up, across the Charles. Harvard Business School, a serial construction zone in recent years, began extensive site work and excavation for Klarman Hall, its replacement conference and convening facility, even before the early-June dedication of the newly completed Chao Center (see page 25). The prefabricated Life Lab, an extension of the Harvard Innovation Lab, was assembled as if meant to symbolize the building blocks of life itself—presumably, the stuff that engages the bioentrepreneurs eager to get to work there. At the edge of the campus, the four-year renovation of the Soldiers Field Park housing complex, itself a nearly \$200-million project, began in earnest. And just across Western Avenue, less visible work continued to prepare the existing foundation for modification and then erection of the \$1-billion science and engineering complex (a huge new building, a renovation, and an associated energy plant), designed as the new home for much of the School of Engineering and Applied Sciences come 2020.



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Virtual sidewalk superintendents can follow the major action at <http://construction.harvard.edu>. Nor do the diverse amusements tracked there exhaust the schedule of events. Coming attractions said to be in various stages of academic planning, design, and, of course, fundraising, include such significant projects as reconfiguring the Sackler Museum space (accommodating space needs for history of art and architecture, the Graduate School of Design, and possibly others); addressing the economists’ constraints at Littauer Center; pursuing the athletes’ goals for their basketball and football facilities; and proceeding on the new academic and administrative Gateway building in Allston. The University’s contractors can count on being enrolled at Harvard at least as long as its degree candidates. ~JOHN S. ROSENBERG

House Renewal Gains and Challenges

TWO DAYS BEFORE Commencement, the College quietly published the summary of a “Strategic Assessment Report” on House renewal, the \$1-billion-plus “first-phase” program to modernize the eight Neo-Georgian undergraduate residences along the Charles River (leaving newer parts of those Houses, and the Radcliffe Quad Houses, for some future date). The evaluation—conducted following the partial renovations of Quincy and Leverett Houses, and the complete overhaul of Dunster House—reveals successful elements of the physical and programmatic changes to the residences and highlights opportunities to refine and improve the rest of the project. It also underscores the very real financial challenges to be met if the project, as envisioned, is to be completed in a reasonable time, even given the successes of the current Faculty of Arts and Sciences (FAS) capital campaign.

Drawing on focus groups, interviews, survey research, and data on the use of renovated common spaces, the assessment revealed broad satisfaction with the renewed buildings’ role in increasing interaction among students; attracting students broadly to “neighborhood spaces” such as Leverett’s theater (making the Houses feel less like individual islands); improving circulation and accessibility along new horizontal hallways (facilitating contact among tutors and students); and integrating instruction into the Houses by building technologically enabled classrooms in basement spaces.

Reflecting student preferences for single bedrooms and disapproval of hallway doubles, future projects will emphasize the former format. The hallway common rooms created to serve residents of hallway bedrooms, while popular for reserved use (birthday parties, group meetings), have not functioned as originally envisioned; they will likely be deemphasized in future renovations, thus accommodating more suites (the perennially preferred housing option). The “smart” classrooms might be made a little less smart, so more users could operate them readily; and subsequent renovations might incorporate “maker spaces” to tie into the applied sciences and engineering complex scheduled for Allston. Students also endorse visual-arts spaces.

FAS’s construction managers have learned from the first three projects how

better to schedule the work, procure materials and services more economically, and so on. Less happily, the renovated buildings’ upgraded mechanical and electrical systems have caused energy consumption to increase. Including more community spaces and special-purpose areas (classrooms, performance facilities) has also increased

costs. Project managers no longer imagine being able to complete renewal of the larger Houses in 15 months (two summers and one academic year); the Lowell renovation is already scheduled for two years, displacing the affected residents for a longer period. Accordingly, the duration of future renovations will be determined by “project scale and construction market considerations.”

The last factor is ominous: the report



Work gets vigorously under way at Winthrop House, the second undergraduate residence being renovated in toto.

observes that the cost of future construction can be expected “to escalate between five to seven percent per year over the next five years” in Boston’s busy market. That is an uncomfortable prospect for a program originally expected to take eight to 10 years; where individual projects are now being stretched out; and—most significant—where financial constraints may argue for a more extended schedule overall.

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FINANCING HOUSE RENEWAL was never going to be routine. The sum involved is huge, \$1.4 billion or more, and much of the work is deferred maintenance: a hard sell to donors. From the outset, FAS administrators have called for an all-of-the-above strategy entailing “the use of endowment funds, philanthropy, reserves, both incremental and non-incremental long-term debt, and cash from operations,” as the dean’s fiscal year 2013 report put it. The hope was that jump-starting the program with existing FAS resources would show what a renovated House could be; then, after making it a major campaign priority, donors would become supportive. From there, the work could be completed by resorting to debt as necessary. (Yale followed this course, even during the financial crisis, when it borrowed heavily to complete the renovations of two residential colleges, concluding its undergraduate-residential renewal in 2011.)

The new report suggests how the strategy played out. Entering the financial crisis in 2008, FAS had incurred significant debt, primarily to build the Northwest Lab and the Laboratory for Integrated Science and

Engineering in mid decade; borrowings ballooned to about \$1.1 billion, and neither FAS nor Harvard had the capacity to borrow more. Accordingly, FAS relied on decapitalization of endowment funds (distribution of retained investment earnings) as the main source of funding revenue for the first three renewal projects, according to the report, which does not specify the amount decapitalized. Annual financial reports provide only gross sums decapitalized, not their specific uses: \$151 million in fiscal 2012; \$71 million in 2013; \$99 million in 2014; and \$70 million in 2015, the latest year reported—“as part of its strategy to fund current year costs, where possible and in accordance with donor terms, from restricted sources, allowing the FAS to free up unrestricted resources to support the



An existing frame home begins its transformation into the new Winthrop House faculty dean’s residence.

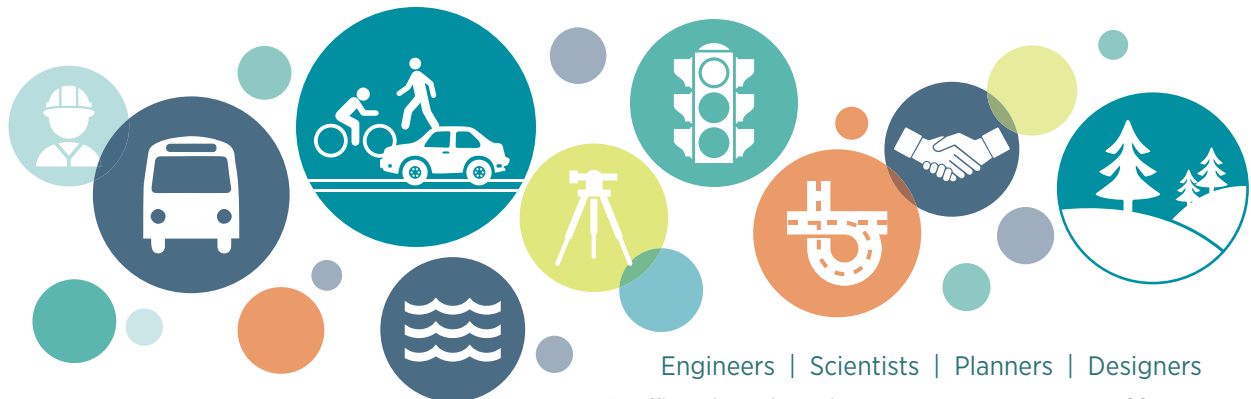
multi-year House Renewal Program.”

Operationally, the strategy has worked. The first three projects are done, work proceeds on Winthrop House—and through this past March 31, donors had given or pledged \$230 million for House renewal: more than half the \$450 million goal (within FAS’s \$2.5-billion campaign). Arrows remaining in the fundraisers’ quiver include



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Yesterday's News

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

1906 The Newsboys Union of Boston raises \$2,567.17 toward a scholarship fund that will send former newsboys to Harvard.

1931 President Conant decides that the football team shall play a postseason game, the receipts of which will go to unemployment relief.

1941 *The Harvard Crimson* drops its isolationist stand as the academic year begins. "That not only the *Crimson* but even the Leftist Student Union now find an isolationist position untenable is a sober comment on the state of mind of the undergraduates who returned to College this fall," the *Bulletin* comments.

1946 Fletcher P. Martin, a city editor and war correspondent at the *Louisville (Kentucky) Defender*, becomes the first Nieman Fellow of color. He is one of 14 fellows chosen from a pool of more than 100 applicants, and is also the first representative of the Negro press.

1956 The *Crimson* discontinues its annual "Miss Radcliffe" beauty contest due to Radcliffe pressure, much to the dismay of *Bulletin* editors, who mourn: "For the undergraduate who had to contend with...the harsh fact that the myth of the Radcliffe Plain Jane has a broad base in reality, it was nice to be able to look to the symbol of an idealized Radcliffe populated with angels."

1971 After a summer's trial run, Harvard's first day-care center moves from the basement of Memorial Hall to a permanent location in the former ROTC building near the Divinity School. The center has 24 children, and a waiting list of 19. Two Radcliffe day-care centers are already in operation.

* * *

Late-breaking news: A survey carried out during the twenty-fifth reunion of the class of '46 revealed that 76.2 percent would object to a son's becoming a hippie, and 48 percent opposed the women's liberation movement, but 96.8 percent were in favor of birth-control devices.

naming opportunities (House faculty deanships), a third challenge fund, and House-specific campaigns appealing to their alumni.

But, FAS argues, the cost has been high. As the report puts it, "Decapping endowments maintains a longer-lasting and costlier impact to the FAS operating budget than does the use of incremental debt. When an endowment is decapped to support operations or a project such as this one, the associated income from that endowment is lost forever." The report estimates that the effect of "[d]ecapitalizations taken to date will remove approximately \$25 million of available cash from the FAS operating budget by the conclusion of the program" (presumably the eight to 10 years originally envisioned—and continuing thereafter). Moreover, decapitalized funds no longer appreciate, so the adverse impact on income may well compound. "By comparison," the report notes, "debt has a 20-year impact."

Understanding how FAS arrived at that \$25-million figure requires some elucidation (being sought now). Nonetheless, such sizable withdrawals reduce the endowment, impair potential asset growth, and diminish future income to a considerable extent. In addition, the report argues, House renewal funding has leaned heavily on FAS's unrestricted endowments—making them unavailable for other uses—and has consumed *all* of the dean's unrestricted reserves, which totaled \$112 million in fiscal 2013.

Given those costs, and FAS's successful recent reduction of its debt-service expense, "debt must be reconsidered as a more immediate and larger component of future financing plans." Further, ardent fundraising continues, in pursuit of the "strong philanthropic support" required to complete "this ambitious and mission-critical project"—whose success continues to depend on multiple revenue sources. Finally, it is recommended that the construction schedule be shifted from a "set annual" program to "one tied to the successful achievement of House-level" fundraising—presumably for such large projects to come as Eliot and Kirkland, and perhaps even Lowell.

THIS REPORT'S measured phrasing advances a triangular argument, drawn within the unique rules of Harvard politics. FAS asks



loyal alumni to continue to support House renewal. It notifies its faculty members, eager to pursue research and welcome new colleagues, that unrestricted funds are scarce, or committed. And it argues that with long-term interest rates at record lows, the University should advance funds internally or allow the faculty to go to market to borrow money to pursue House renewal. Otherwise, it seems to imply, FAS is at risk of sacrificing core academic priorities and delaying renewal of the River Houses beyond the planned eight- to 10-year duration of the project—an outcome at odds with Harvard’s focus on the quality of the undergraduate experience. (Such a delay would also extend the time when undergraduates live in increasingly differentiated residences, and threatens an uneconomic escalation in costs, given Boston-area inflation.)

FAS, in other words, wants Corporation approval to become more leveraged to pursue House renewal. It would probably also like to make the case that, having decapitalized endowment funds to pursue a University priority, it should be able to assume new debt at current tempting, low interest rates. That is *not* how things work now: internal borrowers pay Harvard’s blended rate on its debt, currently about 4.6 percent.

From the University’s perspective, on the other hand, FAS *chose* to deplete some, perhaps most, of its valuable unrestricted funds precisely in pursuit of House renewal—in part by retiring existing debt in contemplation of taking on more later. Should it complete or slow House renewal, the unrestricted cash begins accumulating again—not least because *other* elements of the campaign aim to raise hundreds of millions of dollars to endow financial aid and existing professorships, which will in turn save tuition and other cash for unrestricted purposes as well.

Moreover, the University has other needs and opportunities to consider. Given market conditions, it may well want to refinance some hundreds of millions of dollars of existing debt, which now carries substantially higher interest rates. And construction costs for the Allston science and engineering complex are reported to be \$1 billion, at least some of which might require new debt, too—pushing up against whatever level of Harvard borrowing the ratings agencies will tolerate.

However these delicate politics play out among donors, deans, Harvard’s financial

managers, and the Corporation, it will be revealing to watch. The results may illuminate University leaders’ views of its financial prospects in light of continued, presumably successful fundraising; the costs of high-

quality facilities in an expensive metropolitan area; and an era of economic instability, uncertain endowment investment returns, and strained federal support for scientific discovery.
~JOHN S. ROSENBERG

A Moral Conscience for Economics

MUCH OF THE PUBLIC is interested in fixing America’s gaping level of wealth inequality, but few people feel responsible for paying for it. The new dean of the Harvard Kennedy School (HKS), Douglas Elmendorf, makes no secret of where the money should come from. At a panel on inequality during this year’s Commencement week (see harvardmag.com/inequality-16), he argued that to pay for broad investments in infrastructure, education—most importantly, in *people*—America must draw resources from the wealthy. Making sure his audience understood which “wealthy” he meant, he continued, “I don’t mean just Bill Gates.” He meant them, along with the broad swath of Americans in the upper tiers of the income distribution. Elmendorf, an economist who directed the Congressional Budget Office (CBO) before succeeding former dean David Ellwood last summer (see harvardmag.com/Elmendorf-16), recently talked to *Harvard Magazine* about the state of economics, the public role of the school he now leads, and his transition from research to administration.

Implicit in HKS’s role as a school training public servants, Elmendorf argues, is a duty to restore the public’s faith in the government’s ability to improve their lives—a mandate made more difficult by what he views as the dishonesty of anti-government politicians. “Many members of Congress have claimed that we can have high levels of health insurance without significant government subsidies,” he says. “That’s wrong.” One way to address this challenge is by filling gaps in the public’s basic knowledge of economics: to clarify, for example, “that investing in people is a good investment, [especially] when the cost of borrowing by the government is at extraordinarily low levels.”

“There’s been a degrading of the importance of expertise,” Elmendorf says. “I don’t think that social decisions should be made

by experts. The decisions need to be made by the people’s representatives. But we need to ground those decisions in an understanding of the actual trade-offs in the world.” A related problem is that the public, unlike economists, is not used to thinking about policy decisions in terms of trade-offs. “When I was director of the CBO, I was very frustrated when we would write a policy report [saying] a certain policy would have these two advantages and these two disadvantages, and the advocates would quote only the part about the advantages, and the opponents would quote only the part about the disadvantages. That encourages the view that there are simple answers. There aren’t generally simple answers. There are trade-offs.”



Douglas Elmendorf

Elmendorf’s analytic rigor and subdued temperament seem to belie his humane approach to policymaking. Where a more zealous advocate might stir doubts, Elmendorf’s restraint inspires confidence. He belongs to a class of economists who are paying increasing attention to the moral implications of their work. Despite his faith in the value of expertise, he suggests that the public has had good reason to be cautious of government and academic elites: “Many people in this country and in European countries are justifiably frustrated at not having shared in economic gains, and are legitimately frustrated by a pace of social change that they find hard to manage in their lives.” Economists have tended to focus on the impact of

Illuminations

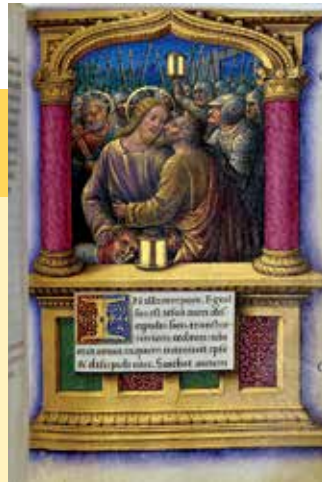
THE DEBUT of “Beyond Words”—on September 12 at Houghton Library and Boston College’s McMullen Museum of Art, and 10 days later at the Isabella Stewart Gardner Museum—represents the culmination of scholarly toil by Jeffrey F. Hamburger, Kuno Francke professor of German art and culture, and William P. Stoneman, curator of early books and manuscripts, initiated at the beginning of this millennium. A fitting gestation, perhaps, for an exhibition of some of the most important works created in human history, themselves extending back well into the prior millennium. Yet the 261 items scheduled to be displayed at the exhibition’s three venues, from 19 Boston-area libraries and museums, are only a fraction of the nearly 3,000 medieval and Renaissance manuscripts that the two scholars and their colleagues have examined since they began their project in 2000.

Stoneman recalls Hamburger’s interest in exploring local resources for his research and teaching (of late including a General Education course, “Openings: The Illuminated Manuscript,” and a freshman seminar, “The Book of Hours: Picturing Prayer in the Middle Ages”). Both knew about some of the treasures at the Boston Public Library, the Museum of Fine Arts, and Wellesley College, along with Houghton’s riches. But, Hamburger says, they suspected that some of Harvard’s holdings were less well known

to scholars than they should be—and indeed, the exhibition has examples from the University’s business, divinity, law, and medical libraries as well. Even among accessible items, their research proved fruitful: fellow curator Anne-Marie Eze, formerly of the Gardner Museum, identified a prayer book in Houghton as the *personal* prayer book of Pope Julius II (who rebuilt St. Peter’s and chose Michelangelo to decorate the Sistine Chapel ceiling); the volume contains a previously unknown portrait of the pope—a vivid illustration of the treasures awaiting scholars’ attention.

Such discoveries are, in Stoneman’s words, “hidden in plain sight.” The Greater Boston holdings, Hamburger says, are the largest group of medieval and

From top: “P” with Mary surrounded by 12 stars, from Richard de Saint-Laurent, *De laudibus beatae Mariae virginis*, late 1200s; Saint Barbara, attributed to the “Ghent Associates” of the Master of Mary of Burgundy, from a book of hours-missal, c. 1485-1490



From left: The arrest of Christ, by Jean Bourdichon, from a book of hours, c. 1490-1515; (detail) Gregory the Great at his writing desk inspired by the dove of the Holy Spirit, from the *Noyon Missal* by Villard de Honnecourt, c. 1225-1250

Renaissance works in North America to have remained so little known to researchers and the public.

No longer. Recent exhibitions in Philadelphia and Cambridge, England, did much to broaden appreciation of such collections. “Beyond Words” ought to have the same effect here. The consortium of lending institutions is important in itself. So is the cooperative work by those institutions’ curatorial and conservation staffs, and the deep engagement of Hamburger, Stoneman, Eze, and their exhibition colleagues Nancy Netzer, professor of art history and director of the McMullen Museum at BC, and Lisa Fagin Davis, executive director of the Medieval Academy of America (who teaches at Simmons College’s Graduate School of Library and Information Science, and is proprietor of the “Manuscript Road Trip” blog).

The exhibition’s reach extends online (beyondwords2016.org); into print (an enormous eponymous catalog, with 83 contributors, published by the University of Chicago Press); to an international conference at the three venues, November 3-5; into Hamburger’s and Davis’s classes this fall; and worldwide, through Hamburger’s medieval modules in the HarvardX course “The Book.”

Because the languages and scripts in which the manuscripts were created are not accessible to lay readers, the items chosen for display emphasize, as the subtitle puts it, “Illuminated manuscripts in Boston collections.” The exhibition overall explains the production and use of books in the Middle Ages and Renaissance (and collection and appreciation since); the separate venues are conceived as three readers’ idealized libraries: for clerics, monks, or nuns, the book-centered monastic life (“Church & Cloister,” Houghton); for a lay user, prayer or professional books (“Pleasure & Piety,” McMullen); for a humanist ruler and patron, during the fifteenth-century birth of the modern book (“Italian Renaissance Books,” Gardner). Pulling it all together, Hamburger jokes, has involved “a cast of thousands.”

One need not be steeped in their scholarship to marvel at the manuscripts’ creation, their survival through their ages, the intellectual heritage they represent—and their riveting beauty. ~J.S.R.

“Beyond Words,” September 12-early December (Houghton and McMullen), September 22-January 16, Gardner



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policies on a nation's income *overall*, while ignoring questions of fairness and the distribution of income—the effects that matter to *individuals*.

International trade, which has provoked populist ire on both sides of the aisle this election cycle, is perhaps the clearest example. Trade “generally raises the standard of living for a country on average, but it does not necessarily raise the standard of living for everyone in the country,” Elmendorf explains. “That has been understood by economists for centuries, but many economists have put more weight in their thinking and public comments on the gains to society as a whole.” Isn't the answer, then, simply to redistribute resources to those who are hurt by trade? Yes, he responds, “but what if you don't do the redistribution part? Redistribution is hard, and we as a society have not pursued it with sufficient vigor. Nonetheless, most economists say, ‘Well, that's too bad, but we should still go ahead and have more trade.’ And I think that's the leap that isn't so obvious.”

Another example is the debate over entitlements for the poor. Cutting benefits might raise national income by forcing low-income people to work more—but on balance, even for those who find jobs, earnings generally wouldn't offset their loss in benefits. A lot of economists, says Elmendorf, would focus on the benefit to society overall, but “you need to also look at whose income is going up and whose income is going down,” he argues. Economists today are becoming more comfortable asking these kinds of questions. “More economists are realizing that we need to focus on incomes for people at different levels of the income distribution, because the rising tide in this country over the last several decades has not lifted all boats to nearly an equal degree.”

In moving from a public-policy role to university administration, Elmendorf has had to weigh tough trade-offs of his own. “I miss the amount of engagement with analysis that I had in my previous jobs,” he admits. He's spent his career working for some of the most influential institutions in Washington—the CBO, the Federal Reserve Board, the Brookings Institution. Much of his time, of course, has been spent raising funds to meet HKS's \$500-million capital-campaign goal (the school has met the target, as of this summer, and plans to continue fundraising). Still, he's quick to add, “The donors to the Kennedy School are people who are smart, accomplished, and very interested in pub-

lic policy. They're very interesting people to spend time with, and their support for the work here is very gratifying. I don't begrudge that time at all.” He chose to pursue the job in the first place, he recalls, because he “saw in Washington how important were good ideas about public policy, and good people who put the ideas into practice.”

The most important piece of his agenda, Elmendorf says, will be replacing a wave of retiring faculty members: “We need to make sure we're bringing in people at early stages of their careers who can be as effective at teaching students and influencing policymakers.” Also on his list is modernizing the school's curriculum. Mirroring the University-wide move to embrace experimental learning methods, he says, “We need to do less traditional lecturing and more engaging students in the classroom, and digital technology can be a big part of that.” And, he adds, “We don't teach our students much about digital technology, but digital technology is central to national security now and to delivering government

services. It's central to the way the political process works.” Citing one painful example of government's failure to appreciate this, he continues: “The initial failure of HealthCare.gov was damaging not just for the particular program involved—because they fixed the website in a few months—but it was damaging for people's perception of whether governments are good at doing the things they're doing.”

Fittingly, Elmendorf, who served as the head Economics 10 teacher while an assistant professor in the 1990s, closed the conversation with an earnest defense of his field. “If you want to expand health insurance in this country, the basic tools of economics are how you figure out how to do that. Economists didn't see the financial crisis coming, but once it happened, it's understandable with the sorts of tools you learn in Ec 10. And the people who were surprised were the ones who did not take Ec 10,” he jokes. Despite its limitations, “Economics has been more right than wrong in the last 10 years.”

~MARINA BOLOTNIKOVA

Sesquicentennial Soirée

Harvard Advocate alumni take stock.

ON THE first warm night in May, several hundred literary New Yorkers gathered in a duplex apartment on Park Avenue. They were celebrating—not the publication of a recent book (despite the presence of authors like Louis Begley '54 and Nell Freudenberger '97), nor the success of their publications (though editors at *The New Yorker* and Farrar, Straus and Giroux were in attendance)—but the unexpected persistence of the magazine that had introduced so many of them to writing: *The Harvard Advocate*, now 150 years old.

Excess reigned. Above the Willem de Kooning on the wall: a Jackson Pollack. Atop the piano in the sitting room: a sculpture of a piano. On a terrace overlooking Central Park, Gay Talese was telling a group of women about the sartorial indulgences of decades past. “I had 100 suits. They never seemed to fall apart.” One undergraduate was saying that she had heard that Lena Dunham would be attending. Another was apparently upset because she had met an actor from *Downton Abbey* and had asked him his class year. A former *Advocate* member was nervously confiding to a friend that, in

a haze of excitement, she had complained to Zadie Smith about an allergic reaction to shoes bought at Urban Outfitters. (Journalistic ethics require me to identify that young woman as myself.) Other partygoers grumbled about the lack of snacks. Perhaps they hadn't noticed the cluster of grapes on a silver grape-shaped platter with a silver grape cutter, or a small bowl of candies one can only describe as “European.”

How different it was from the *Advocate's* small, white, clapboard house, with a door that never quite shut, a toilet always about to clog, drafty little rooms with stray papers and misplaced sweaters. When the magazine moved in 1957 from its offices on Bow Street to the two-story building at 21 South Street where it remains, the opening celebration featured a live stallion, with cardboard wings, tied to a large dictionary. (The *Advocate's* seal features Pegasus.) Former editor Donald Hall '51 read a poem. Former editor T.S. Eliot '10, A.M. '11, Litt.D. '47, sent his regards in a telegram.

But almost immediately after its opening the building seems to have lapsed into a state of charming disrepair, in part because it is so consistently used. At any moment you may find students analyzing poetry, finishing up papers, and or engaging in a host of other activities, many of which I cannot mention

here. "I so remember the smell of the stale, gin-soaked carpet....The locked offices were the settings for many romantic dramas," says Alexandra Jacobs '94, a features writer and editor at *The New York Times*. "It was the place you could go and talk about DeLillo," says novelist Benjamin Kunkel '96.

The Sanctum, the large open second floor room with the names of past editors inscribed in gold lettering on the walls, frequently hosts readings from professional writers. In the 1980s and 1990s, Seamus Heaney (not yet a Nobel laureate or Litt.D. '98) would visit occasionally. It was "one thing to study [his poetry] in English 10a, another to be hearing it in that room," says Anne Fulenwider '94, editor-in-chief of *Marie Claire*.

Several times a week, members of the different editorial boards gather to discuss submissions. "We had to develop a vocabulary for what makes stories good," recalls Lev Grossman '91, staff writer at *Time* and a novelist. "That ended up becoming one-half of my career as a book critic."

Then there are the parties that have left the floor permanently sticky and alumni still reminiscing in a tone of embarrassed excitement years later. A 1956 *Harvard Crimson* report recalls the glory days of *Advocate* events: "At parties for T.S. Eliot, of course, decorum has always prevailed, the atmosphere being more sentimental than sensual. But there was an entirely different air about the Elizabeth Taylor party. And the Dylan Thomas party was notable for the number of people who were thrown downstairs." More recent gatherings have perhaps been less illustrious. "There was an S&M party and someone brought handcuffs and was handcuffing people to people they didn't like very much," offers *New Yorker* writer Elif Batuman '99.

A LIST OF WRITERS who published their early work in the *Advocate* reads like a condensed introduction to American literature of the twentieth century: poets John Ashbery '49, Litt.D. '01, Adrienne Rich '51, Litt.D. '90, Frank O'Hara '50, Kenneth Koch '48, Frederick Seidel '57, translator Robert Fitzgerald '33, composer Leonard Bernstein '39, D.Mus. '90, novelists Sallie Bingham '58 and Francine Prose '68, journalist James Agee '32, and editor James Atlas '71.

Even *Advocate* rejections have their own distinction. Robert Lowell '39 was forced to nail down a carpet in the Sanctum when trying out for the magazine's literary board as an undergraduate, only to be told that he

wasn't talented enough to join. Years later, he conceded in a *Paris Review* interview, "I wasn't a very good writer then, perhaps I should have been turned down," though he also complained that the editor who rejected him was "out of touch."

The *Advocate* was founded in 1866. Its predecessor, the *Collegian*, lasted only a few months before being shut down by the school for attacking mandatory chapel attendance. The editors were told that they would be expelled if they published a new issue. Instead, a student named F.P. Stearns started a new magazine. "[I] cared little whether I was suspended or not," he wrote. He gave it two mottos: *Dulce est periculum* ("Danger is sweet"), and *Veritas nihil veretur* ("Truth fears nothing").

The British critic Frank Kermode once wrote that a position on the *Advocate* "confers on its holder a good chance of national eminence." This is evidently overblown. Yet members of the magazine often end up on the right side of literary history. As an undergraduate, James Laughlin '36, later the founder of New Directions, published a racy story by Henry Miller called "Glittering Pie." The Cambridge police confiscated issues, and the price of a copy went from 35 cents to a dollar on the black market. The assistant district attorney complained that the *Advocate* was "the product of youths who have made up for a deficiency in experience...by too close a study of subjects which were never prescribed by Harvard." His colleagues, Laughlin later wrote, were bought off with tickets to the Harvard-Yale game. James Agee, president of the *Advocate* in 1932, published a satire of *Time*, parodying the tone of that magazine as it applied to historical events. (*Elektra*, he wrote, was Aeschylus's "latest nerve-shatterer," a play "well worth a trip to the new State Theater.") The parody so impressed Henry Luce that he hired the young man out of college to begin his journalism career at *Fortune*.

Other undergraduate work did not obviously herald new talent. Wallace Stevens, president of the magazine in 1901, used the

pages of the *Advocate* to comment on the minutiae of Harvard life. "The present cheer, with its first three breath-consuming 'Harvards' followed by nine enthusiastic 'rahs,' generally brings up with a gasp on the last 'Harvard,'" he wrote. "It has to be coaxed; we need a cheer that would be irresistible." Years later, he begged Donald Hall to give him final say on the selection of his student

writing included in an *Advocate* anniversary anthology: "Some of one's early things give one the creeps." For decades, editors of the *Advocate* have debated whether Eliot's early poetry published in the magazine was really all that good. In 1986, editor James Atlas (now on the board of the magazine) wrote that those poems he'd found in the back issues "had the vaguely derivative feel of undergraduate verse—derivative of

what, I couldn't have said." This past year finally brought a clear stamp of professional approval: one of Eliot's *Advocate* poems was published in *The New York Review of Books*.

UNLIKE THE *Crimson*, which puts out a daily paper and whose editors are quickly hired by national newspapers, or the *Lampoon*, with its strong network of West Coast television writers, the *Advocate* has always occupied a rare amateur space at a school that rewards professionalism. "*Lampoon* editors usually went to *Time*, ours to oblivion," wrote former member Norman Mailer '43. True, young members of the *Advocate* are very aware of the tradition that precedes them—as with many things Harvard, the introductory comp meeting involves a long list of names of famous alums. But the attraction of the magazine also comes from the fact that it allows for a kind of experimentation that often isn't given a place of its own, whether on campus or beyond. The *Advocate* was "really about hanging around and talking about things," says Susan Morrison '82, articles editor at *The New Yorker* and a board member of the *Advocate*. "It wasn't something that you did to get a job afterwards."

The *Advocate* is primarily devoted to poems and fiction and other attempts at artis-



The Harvard Advocate's home on South Street, with Pegasus up above

DAN DEROT

Sexual-Assault Lexicon

As an aid to “contextualizing” terms governing sexual violence, the Office of Sexual Assault Prevention & Response has posted on its website a staff-written vocabulary, under its “Get Involved” tab, covering concepts from “accountability” and “activism” through “hegemonic masculinity,” “intersectionality,” and “victim blaming.” One topic is “innocent until proven guilty,” defined as “a principle of the American criminal justice system where a person who has been accused is presumed to be innocent until the crime is proven beyond a reasonable doubt. This principle ideally protects those who are innocent and is of particular significance to minority populations disproportionately targeted for arrest, prosecution, and imprisonment or other consequences. In the context of sexual assault, ‘innocent until proven guilty’ is sometimes invoked to silence survivors; when a survivor’s experience is validated...it is assumed that there is an infringement on the liberties of the person who has caused harm, as well as a presumption of their guilt. Survivor-centric policies do not take away from the necessity of ‘innocent until proven guilty’ in the criminal justice system, as these ideas are not mutually exclusive.”

Life-Sciences Largess

Joan and Sanford I. Weill, who have given more than \$600 million to Cornell, have now given \$185 million to the University of California at San Francisco for a neuroscience institute. Their philanthropy follows a 2012 gift of \$200 million from Mortimer B. Zuckerman, LL.M. ’62, to Columbia for interdisciplinary neuroscience, and Patrick and Lore McGovern’s support for MIT’s similar efforts, to the tune of \$350 million. Harvard is known to be seeking support for major investments in neuroscience at the Medical School and within the Fac-

Brevia



EXECUTIVE-ED GATEWAY. In early June, Harvard Business School dedicated the Chao Center, its new gateway for the extensive executive-education facilities at the eastern end of its campus. The facility replaces Kresge Hall, and serves as a convening and dining space for the Esteves, McArthur, and Tata residences (and for the wider business-school community). Chao completes a lushly landscaped executive-ed quadrangle, with ready access to the Charles River, Weeks footbridge, and Cambridge campus. Read about the ceremonial opening at harvardmag.com/chaodedication-16.

ulty of Arts and Sciences, too....Separately, Oracle Corp. founder and chair Lawrence J. Ellison made a \$200-million gift to the University of Southern California to establish the eponymous Institute for Transformative Medicine, which combines “interdisciplinary research with the holistic prevention and treatment of cancer.”

Easing into Gen Ed

With legislation adopted to revise General Education requirements taking effect in the fall of 2018 (see “General Education Reconstituted,” May-June, page 31), Jay M. Harris, dean of undergraduate education, notified returning students that they can take advantage of the liberalized requirements, too, during the transition. As

of now, students can satisfy the aesthetic and interpretive understanding (AI) and culture and belief (CB) requirements with one course from each group, two from one group, or one designated course and one selection from a departmental course in arts and humanities. Similar logic applies to the science of living systems (SLS) and science of the physical universe (SPU) Gen Ed offerings, and to the societies of the world (SW) and United States in the world (USW) requirements—effectively freeing students to fill

out their study cards with departmental, distribution-style course selections. They must still take an empirical and mathematical reasoning course; one in ethical reasoning, or an approved substitute; and one from the study of the past menu, or a recognized departmental substitute. The liberalization may help students find enough courses as the Gen Ed offerings are vetted and restructured for use in 2018 and after.

Humanities Inflection Point?

The American Academy of Arts and Sciences’ Humanities Indicators reported in early June that the number of faculty members in humanities disciplines increased 54 percent from 1999 to 2013 (during which postsecondary-student enrollment rose 41 percent), and then effectively plateaued. The proportion of newly minted humanities Ph.D.s reporting firm job offers shrank by 21 percent from 2006 to 2011. *Inside Higher Ed* reported that job listings for academic humanities positions are now 31 percent below the level reported in 2007-2008, the year just before the economic crisis; listings had been stable or increasing before the recession.

On Other Campuses

Access Yale, which aims to raise \$250 million for financial aid, in part to support 800

additional undergraduates phasing into the college during the next four years beginning next fall, had reached \$195 million in commitments at the end of the first quarter, the *Yale Daily News* reported....Northwestern plans to hire 20 additional computer-science faculty members—half in the core discipline and half as collaborative “CS+X” appointments with other disciplines (recent examples include music, journalism, and education); it anticipates a \$150-million fundraising drive to support the expansion.... Across town, the University of Chicago, midway through a \$4.5-billion capital campaign, is pursuing \$30 million in savings by seeking to reduce administrative costs and academic-division budgets, a second consecutive round of belt-tightening, according to *Inside Higher Ed*. The cost controls follow a significant period of borrowing, higher debt, relatively slim operating surpluses, and a recent reduction in its long-term debt rating by Standard & Poor’s.

Nota Bene

PRICEY PARKING. Fans who sought guaranteed “sideline seats” for *The Game* on November 19 were offered a package deal: \$95 for a seat in section 35 of the Stadium, plus a ticket to the home opener against Rhode Island, in September....and for “just \$50 a space,” Gate 14 parking passes for the Game.

ATHLETIC LIMITS. Ivy League scholar-athletes get a bit more time for their scholarship, beginning this season. The league adopted rules giving athletes a 10-hour window free from athletic activity following road trips, and a two-week period with no allowable team activities following completion of the season. A vote on

similar rules by the NCAA’s “Power Five” conferences was postponed last winter.

ENDOWMENT CHANGES. Harvard Management Company president and CEO Stephen Blyth, who assumed his positions in early 2015 and went on medical leave this past May, resigned those posts for personal reasons, effective July 27. A search for a successor is under way....Robert Jain, formerly of Credit Suisse Asset Management and now co-chief investment officer at Millennium Management, a large hedge fund, has joined HMC’s board of directors, the most recent in an infusion of new board members overseeing investment of the endowment. Harvard Campaign co-chair Glenn H. Hutchins ’77, J.D.-M.B.A. ’83, co-founder of the Silver Lake private-equity firm, reached the limits of his HMC board tenure and stepped down.

ACTING MEDICAL DEAN. For the second time, Watts professor of health care policy and professor of radiology Barbara J. McNeil is acting dean of Harvard Medical School, following the conclusion of Jeffrey S. Flier’s service on July 31. The search for his successor continues. Details are available at harvardmag.com/mcneil-16.

DEVELOPMENT DEAN DEPARTS. O’Neill A.S. Outar, who joined the Faculty of Arts and Sciences as senior associate dean and director of development in September 2014, departed in early July—signaling another change in fundraising leadership during the faculty’s \$2.5-billion capital campaign. No details accompanied the news, reported at harvardmag.com/fasfunds-16.

HLS ON THE TICKET.

Democratic vice-presidential nominee Tim Kaine, Virginia’s junior U.S. senator, is a 1983 graduate of Harvard Law School. Anne Holton, his wife, who is Virginia’s secretary of education, is also J.D. ’83. In 2012, *Harvard Law Today* reports, they returned to the school as panelists speaking about “How to Make a Lasting Public Interest Career Part of a Happy Life.”

ON DECK FOR NO. 366. Stephan Magro has been appointed Harvard’s Commencement Director, succeeding Grace Scheibner, who retired after 24 years of service following the graduation hoopla this past spring (Commencement Confetti, July-August, page 19). Magro previously organized alumni events such as the launch of the Harvard Campaign for Arts and Sciences and the annual Harvard College Fund Assembly.



Stephan Magro

COURTESY OF STEPHAN MAGRO

MISCELLANY. Samantha Earp, executive director of HarvardX, the online-learning initiative, since 2014, has been appointed chief information officer at Smith College, beginning September 1....Jocelyn Kennedy has been appointed executive director of Harvard Law School Library; she had been director for library services at the University of Connecticut School of Law....Julie Crites, formerly of Boston’s Museum of Fine Arts, is Harvard’s new director of Common Spaces, a presidential initiative ranging from the transformation of Smith Campus Center to programming for the Science Center plaza and the placement of casual furniture around Harvard Yard....In the brave new world of (Harvard) human resources, some employees learned this year that in lieu of a letter advising them of annual performance-based compensation increases they would “receive an email instructing them to view merit increase amounts in PeopleSoft self-service,” the University’s online personnel system....Bowing to financial pressures, the *Cornell Daily Sun* is reducing its print publication schedule to three days weekly, freeing staff members to report news online around the clock—and making room for longer-form stories in the printed edition....Access MIT, launched this summer, provides all Cambridge campus faculty and staff members free subway and local bus transportation, and increased subsidies for parking at public-transit station lots and for commuter-rail tickets; the low-carbon initiative may also lessen traffic pressure in congested east Cambridge. Harvard provides 50 percent subsidies for monthly mass-transit passes.



Barbara J. McNeil

LEN RUBENSTEIN



tic inquiry, yet student members do make sure that the publication comes out four times a year, despite the vagaries of undergraduate life and the magazine's seemingly constant money problems. "It's kind of an organizational miracle the way people were delegated to do things like tutor [other students through the comp process] and make decisions," says Jacobs.

Hindsight may, of course, give student work a polish it actually lacked. My friend the writer and translator Jessica Sequeira '11 recently forwarded to me responses to the many query letters she sent as a features-board editor seeking contributions from established writers. "Dear Jessica, Do you mean November 19 2010? That is eleven days from now. It takes me months to think of things. All the best, Colm [Toibin]."

Yet Mark Greif '97 found professional implications in the characteristic impracticality of fellow *Advocate* members. "The fact of having other people around you who are preparing for that particular life, with all of its ups and downs and sacrifices and glories, even while at other parts of Harvard people were really oriented to money or public life—it was really important in giving me the idea that you could do it," he said.

Greif is one of the ones who did "do it"—about 10 years out of college, he founded the literary magazine *N+1* along with several other *Advocate* graduates. (*N+1* is the closest we have to the *Advocate* in the outside world, says New Yorker writer and *Advocate* board member D.T. Max '83.) *N+1* editor Ben Kunkel had read his inspiring stories at the *Advocate* "to a rapt audience," says Greif. Fellow editor Keith Gesen '97 was among those who heard Kunkel read, though he was not a member of the magazine. "Arriving and finding the *Advocate* to be incredibly pretentious was just one of the disappointments that I experienced [at Harvard]," he says now. (He did later publish a story in the magazine as an upperclassman, an imitation of *Pale Fire*, "which I'm sure if a freshman read it, it would have sounded very pretentious.") *N+1* also found one of its first writers in the pages of the undergraduate magazine. "Keith said, 'Wasn't there that tall Turkish girl who wrote something amazing?'" Kunkel remembers. That is how Batu-man started contributing.

The *Advocate* honored *N+1*, as well as Louis Begley and John Ashbery, at the anniversary party. Alums described how the *Advocate* had appeared in unexpected ways after they left college. For years, as Greif had recalled earlier,

Clockwise from top right: the *Advocate*'s editors in 1869; the December 1967 cover, by Taite S. Walkonen '69; editors playing to the camera circa 1900-1910; the September 1950 cover, by Edward St. J. Gorey '50

students comping the fiction

board had to read "They Ride Us," a story written "by a mythical figure, Caleb Crain, which just seemed like a pseudonym." When he moved to New York later on, Greif said, "I went to a party at *The Nation*, where there was a bespectacled person sitting on a banquette. Someone said, 'Have you met Caleb?'" I said "Not Caleb Crain! Author of 'They Ride Us!'" ("For a while I worried that I had peaked early and that that [story] was going to be my most famous work," says Crain '89, author of the critically acclaimed novel *Necessary Errors*.)

In a corner, a young man was talking about undergraduate exorbitance. There's a reason, he was saying, that the event planner of the *Advocate* is called the "Dionysus." "Every party reached new heights

of debauchery." Yet the 150th celebration ended almost calmly, until in their orderly departure, too many guests crowded into the elevator and broke it. Stragglers left through the back exit.

~MADELEINE SCHWARTZ

Madeleine Schwartz '12, a former Ledecky Undergraduate Fellow at Harvard Magazine, was art editor of the *Advocate* from 2010 to 2011. She is assistant editor of *The New York Review of Books*.

News Briefs

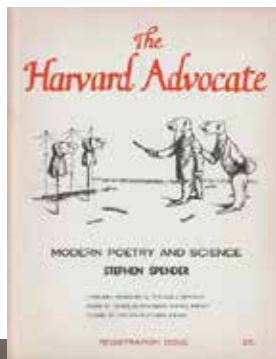
College Admissions Challenges

IN LATE JUNE, the U.S. Supreme Court upheld the limited use of race in admissions decisions, ruling in its second pass at *Fisher v. University of Texas at Austin* that properly constrained processes for reviewing applicants pass constitutional muster. Harvard had filed a brief in support of upholding the Texas procedures. (Read an analysis at harvardmag.com/fishercase-16.)

This is the third time the court has ruled on public institutions' consideration of race in admissions (following the 1978 *Bakke* and 2003 *Grutter* decisions). These rulings would seem to establish, nationwide, the principles underlying consideration of applicants' broad qualifications, going beyond single metrics such as grade-point average or standardized-test scores. But some analysts think the issues remain subject to further legal challenge. Writing for *The Chronicle*

of Higher Education, Mark G. Yudof (former president of the University of California and the University of Minnesota, and chancellor of the University of Texas at Austin) and Rachel F. Moran (dean emerita at UCLA School of Law) observed that "the patchwork of state approaches to affirmative action will persist, and every program of college admissions that treats race as a factor will be judged on its particular facts. Like [Justice] Powell before him [in *Bakke*], Justice Kennedy has left the courthouse door open to future litigation, even at the University of Texas" in his *Fisher* decision. Given an *Inside Higher Education*-Gallup poll finding soon after that ruling (majorities opposed any consideration of gender, race or ethnicity, or legacy status in admissions)—such challenges seem likely.

At least one such action—the 2014 Project on Fair Representation/Students for Fair Admissions (SFFA) lawsuit alleging that Harvard discriminates against Asian



Americans—continues. (Background on the case appears at harvardmag.com/sffa-l6.) That suit, filed under Title VI of the Civil Rights Act of 1964—therefore applicable to a private entity—asserts that “the proper judicial response” is “the outright prohibition of racial preferences in university admissions—period.” Activity associated with the suit had been deferred pending the *Fisher* decision; it has now resumed.

The SFFA case claims that *Bakke* was wrongly decided (an argument likely weakened after *Fisher*); that even if *Bakke* is the law, Harvard violates it by considering race too heavily in undergraduate admissions; and that the College imposes an illegal quota on Asian-American applicants. SFFA filed a similar action against the University of North Carolina.

A protracted period of discovery likely lies ahead. Making the second and third claims will depend on securing access to aggregate admissions data, and perhaps to individual records; Harvard will surely object strongly to the latter, given that applicants expected their information to remain confidential. The University may also challenge SFFA's standing to press its claims, since it has not, so far, identified claimants who've applied for admission or intend to. In case the lawsuit proceeds to trial, Harvard's legal team now includes both Seth P. Waxman, former U.S. solicitor general, an appellate expert, and Corporation senior fellow,

William F. Lee, a distinguished trial lawyer (and the University's highest-ranking Asian-American governing official).

Elsewhere, the Asian American Coalition for Education asked the departments of education and justice on May 23 to investigate alleged discrimination at Brown, Dartmouth, and Yale—and require Ivy League colleges to cease engaging in admissions practices that it maintains are discriminatory. The institutions “apply racist stereotypes and racial bias in their ‘holistic’ evaluation of Asian-American candidates” and “maintain a racial balance of Asian-American enrollment at an artificially low level, imposing an unlawful quota,” according to the complaint. It was countered by a statement from Asian Americans Advancing Justice in support of the institutions' admissions practices. A similar federal complaint against Harvard was dismissed, in light of the SFFA lawsuit entailing the same issues. Princeton's admissions practices, also subject to this kind of administrative challenge, were upheld upon federal review.

Delving into Faculty Diversity

NEAR THE END of a year of student protests about diversity on many campuses, Yale's new Faculty of Arts and Sciences Senate (Harvard has no analogous body) released a significant report on faculty diversity and inclusivity. It found that after progress

in diversifying faculty ranks from 1999 to 2007, Yale suffered a “lost decade” under the pressure of financial constraint—with particularly severe effects on the retention of underrepresented minority and junior faculty members. The report made 19 recommendations, ranging from a clear institutional commitment to fostering faculty and curricular diversity, to disseminating better data and performance metrics, and targeting Yale's \$25-million fund to match departmental diversity initiatives. Survey research revealed much higher levels of dissatisfaction among faculty members who are women or underrepresented minorities. That finding is consistent with “climate” surveys conducted at Harvard and elsewhere (see “How the Faculty Feels,” September-October 2014, page 21)—reflecting family-care demands, burdens of committee and other academic service, and relatively small peer cohorts.

Achieving sustained gains in diversity has proven difficult during a period of restrained growth. Data compiled by Harvard's senior vice provost for faculty development and diversity show that the tenured ranks have become steadily, if sometimes modestly, more diverse from academic year 2006 through 2016—but that in the junior (tenure-track) ranks, the underrepresented minority share has risen only one percentage point (to 11 percent) during that period. ~J.S.R.

New Fellows

The magazine's Berta Greenwald Ledecy Undergraduate Fellows for the 2016-2017 academic year will be Matthew Browne '17 and Lily Scherlis '18. The fellows join the editorial staff and contribute to the magazine during the year, writing the “Undergraduate” column and reporting for both the print publication and harvardmagazine.com, among other responsibilities.

Browne, of West Point, New York, and Adams House, is a senior concentrating in social studies. He is a staff writer for *The Harvard Advocate* and a member of the Signet Society. After summers previously spent doing research in a biology laboratory and working for a real-estate tech startup, Browne spent this past summer writing freelance articles for various publications and conducting research for a senior thesis about music festivals.

Scherlis, who hails from Pittsburgh, is a junior pursuing a joint concentration in comparative literature and visual and environmental studies. She is a staff writer for *The Harvard Advocate* and a member of *The Harvard Lampoon's* art staff. Before arriving at Harvard, she spent a year at art school in Greece. This past sum-



mer, Scherlis received an Artist Development Fellowship from Harvard's Office for the Arts to focus on her painting and writing, and worked as a research assistant at the Radcliffe Institute for Advanced Study.

The fellowships are supported by Jonathan J. Ledecy '79, M.B.A. '83, and named in honor of his mother. For updates on past Ledecy Fellows and links to their work, see harvardmagazine.com/donate/ledecy-fellowships.

Volumes to Write

by JENNY GATHRIGHT '16

*"Hope" is the thing with feathers—
That perches in the soul—
And sings the tune without the words—
And never stops—at all—
Emily Dickinson*

MY ROOMMATES threw a surprise birthday party for me the week our friend Vadim checked into the hospital. We worried about him, but his parents had flown up to be with him, and we would see him the next day. Plus, he was going to be just fine. Because when it is freshman year of college and your friend checks into the hospital with fever and difficulty making much sense, you think maybe he's gotten a weird virus or infection. People get weird viruses and infections in college, right? We had to believe he would be fine. There was nothing we could do that night. He had professionals taking care of him.

We would go visit Vadim in the hospital. Maybe we'd sneak him a milkshake. And then he'd come back to us, so we could keep being freshmen in college together, learning how to not save Ec 10 problem sets for the wee hours of the morning, figuring out how much dining-hall cereal was too much (Vadim's definitive answer: You can never have too much), and playing guitar in the common room (OK, so Vadim was basically the only one who played guitar).

Our entryway was full of characters. The boys on the first floor had an early 15 minutes of fame as a "party room," before they got in trouble with our proctor one too many times. Vadim lived on the third floor, the one above mine, home to a different kind of socializing. That group was very good at procrastinating on schoolwork, but in cool ways—often by listening to vinyl on the record player Vadim and his roommate Kevin had purchased. That fall, the two of them went to see the electronic trio, The xx, play live. Vadim told me that the first concert he ever went to was by Liz Phair, and that Tracy Chapman reminded him of his mom. He had, and has, impeccable taste in music and a love for variety.

Time went on. We kept visiting. Colin and Hannah, who lived on the fourth floor, made a Google sign-up for visits. We put his mom's cell phone number in our phones. His family started a CaringBridge journal online. Our Yard dean started visiting him in the hospital, too. We took care of each other. We entry-mates memorized the M2 bus schedule, visited periodically in the afternoons, and worked hard not to overwhelm his family. I had known Vadim for a semester and a half. It was not a lifetime. It was not even high school.

The doctors at Boston Children's Hospital figured out what it was. Vadim had something called paraneoplastic syndrome (PNS). The CT scan had revealed a semi-noma, a small growth, on his thymus. The

growth was benign, but it had caused everything—it had set off an autoimmune response that led to encephalitis, a devastating inflammation in his brain. It took doctors a long time, too long a time, to put out the fire in my friend's brain. He moved back near home, to Johns Hopkins Hospital, then to Children's in Washington, D.C. After a few failed hospital discharges, he finally made it back to his real home, with his family, and with 24-hour care.

THREE YEARS LATER, scans show that the inflammation in his brain has abated, but Vadim is not better. It's hard to know what he's thinking about, or if he's even thinking about things at all. You can't have a two-sided conversation with him on the phone or say something to him and know for sure that he's hearing you. It's difficult to describe if you haven't seen him in a while. How is it that, years after the end of encephalitis, a brain remains unable to tell its owner to speak audibly and intelligibly or maintain a normal sleep cycle or perform simple tasks? What kind of damage still lingers, and how does one heal?

I am not a scientist or doctor. Everything I



know about PNS came from Vadim's parents or the Internet. I have known this version of my friend, the version who struggles to open both eyes simultaneously, for longer than I ever knew his more vibrant, whole self. But, when it comes to Vadim, my favorite possible reality is the one where he has really been there this whole time, listening to everything, taking everything in (even the part where I might have told his mother about the weed candy he ate that one time), even though he hasn't been able to respond just yet.

Awhile back, on his CaringBridge page, Vadim's parents posted a cover of the Jackson Browne song "These Days" that he had done before he got sick. They wrote, "He will have volumes to write and to say in songs about his dark journey through the wilderness of encephalitis." When Vadim sang and played guitar with us in the dorm, he usually sang softly, like it wasn't a performance—just his way of keeping track of where he was in the song. So when I heard Vadim singing on this cover the way he spoke so often in conversation—full of clear, composed introspection, with much less breathiness—I felt just how little of him I knew. I had never heard him sing that way.

Browne wrote the earliest version of "These Days" when he was 16 years old. The song, I think, is about the regret you sometimes feel during transitions in life. Perfect, perhaps, for graduation time.

Well I've been out walkin'

I don't do that much talkin' these days

These days

These days I seem to think a lot

About the things I forgot to do... for you

And all the times I had the chance to...

THERE IS A LIFE that each of us makes with our words. Sometimes, I think I should talk more. Other times, I think I should say less and do more. Still other times, I think I should say less and do less. I feel like I'm never making the right choice about when to speak up and when to say nothing.

I didn't talk about Vadim much at school, unless I was among my old entryway mates. It wasn't a fun or easy thing to bring up. But I think this is a time to be loud. Because, as we celebrate the class of 2016, there is a person I would not like to let anyone forget.

I am so lucky—I have a place to write all of these words. And some of these words should be written about Vadim, my hilarious, sensitive, brilliant friend who has main-

tained, under harrowing circumstances, some of the best hair of anyone I've met in the world, and who, with the help of his incredible family, is fighting for a future.

It's common around graduation time to talk about how the word "commencement" can have two different meanings—it can refer to the actual ceremony where students get their degrees, or it can simply mean "a beginning or start." My friend was interrupted before he was able to get his degree. Before he could really start. But that doesn't mean he stopped, either. Vadim and the people who take care of him—his parents and siblings and doctors and nurses—are still

working on the mystery of recovery.

There is something to be said for talking about the future. There is also something to be said for using the present tense aggressively and persistently. It isn't right, or enough, to just save a spot for him and await his return. He is a part of our lives right now, and he will continue to be a part of our lives. Maybe we are crazy, but maybe it's just that there is something with feathers perched in our souls. ▢

Berta Greenwald Ledecy Undergraduate Fellow
Jenny Gathright '16 hopes the tune never stops—at all.

SPORTS

Strokes of Genius

Anne Cheng anchors Harvard's new golf prowess.

by DICK FRIEDMAN

TRADITIONALLY, Harvard has not been known as a golf power. The school's most significant figure in the sport (if you don't count Bobby Jones '24, who didn't tee it up for the Crimson) arguably is Frederick L. Stimpson

'27, M.B.A. '29, two-time captain of the golf team, who in 1935 invented the Stimpmeter, a device now widely used to measure the speed at which the ball rolls on the greens. But in the last few seasons, under Fred Scherneck '89, the Weissman director

of golf, and coach Kevin Rhoads, Harvard's linksters have been on a roll of their own. Last season the men's team captured its first Ivy title since 1975. That group is a bunch of duffers compared to the women, who have won five Ivy championships in a row. The mainstay of the last three titles has been steely Anne Cheng '17. She has been voted team captain for 2016-17 and will attempt to become the second Harvard player (after Emily Balmert '10) to be a four-time first-team All-Ivy selection.

Growing up in Torrance, California, Cheng became attracted to the sport watching its two



Anne
Cheng

dominant players, Tiger Woods and Annika Sorenstam. “Tiger was the man,” Cheng says. At nine, she began competing in local tournaments, then made a name for herself on the rough-and-tumble junior golf circuit. She was heavily recruited and briefly contemplated a pro career. Her swing coach in California, Don Brown, who believes she could have held her own on the LPGA tour and certainly would have been a force in big-time collegiate golf, says she “could have gone anywhere in the country—UCLA, Stanford, anywhere.” (He steeped his pupil in the moves of Ben Hogan, one of the sport’s iconic ball-strikers.) But Cheng chose Harvard “because of all the other things I liked to do, and I didn’t know if I wanted to dedicate myself full-time to golf.”

The hallmark of her game is consistency. In all three of her seasons in Cambridge, Cheng has had the team’s lowest scoring average; for her 24 rounds in 2015-16, it was 75.42 strokes. Her numbers generally stay in the low and mid 70s, no mean feat when weather and course conditions often limit practice time. Rhoads, last season’s Ivy League men’s and women’s coach of the year, marvels at her technical soundness. “She has a super-solid game that is foundationally extremely correct,” he says. “Her [swing] angles are fantastic. Her flow and her dynamics and sequence are also gorgeous to look at. Her putting is super-solid and her short game is solid. All those add up to the lowest scoring averages we’ve ever had.” Cheng is not particularly long off the tee; a typical drive goes perhaps 230 to 240 yards. (“Pretty far for her size,” says Rhoads of Cheng, who weighs 150.) But the ball invariably flies dead straight—right down the sprinkler line, in links parlance, just like the drives of her female role model, Sorenstam.

The best club in Cheng’s bag, though, might be one that no one sees: her mind. In a frustrating game that drives even the best players bonkers, her even disposition stands out. “I know what’s realistic for a given shot and what’s not, and what I should be happy with in a given situation, so I’m very calm and even and flat even if I shank a ball into the parking lot,” she says. Her humble mien



also masks a fierce competitiveness; Brown labels her “the quiet assassin.”

That mind-set allows Cheng to pull off shots that others can’t. Rhoads witnessed one such virtuoso effort at Brown during her freshman season. “There was a 205-yard par 3,” he says. “In front of the green was a massive, 20-yard-deep swale, and over the back was out of bounds. There was a hard left-to-right wind. Everyone was coming up short in the big dip. Anne hit a three-wood through the wind, right onto the green, to 20 feet of the pin. That was business as usual for her. Her intuition of how to control ball flight is unteachable, intangible.”

Cheng’s most recent stroke of genius came last season on the final hole during the second day of last spring’s NCAA regionals, at the University Club in Baton Rouge, Louisiana. “I hit a not-so-perfect drive down the right side of the fairway to leave myself with a little more than 200 yards onto the green of the par four,” she recalls. “The pin was tucked in the back corner, and the green was guarded by a bunker and a dip off to the right side. That day my woods had been a bit inconsistent, so my confidence had faltered when I saw that I had left myself with such a long shot. But I remember looking at the green in the distance and then looking at my

teammates standing behind the hole waiting for my group to come up. I had a momentary rush of inspiration. I was pumped to have the shot in front of me, and I didn’t want to let the team down. The few

Cheng’s flawless ballstriking technique has given her the Crimson’s lowest scoring average in each of her three seasons.

seconds of confidence, focus, and commitment I had as I stood over the ball was all that was needed for me to hit a shot I was proud of. It flew straight for the pin and ultimately ended up around 15 feet from the hole. I don’t think I hit a shot that solidly all season.” She went on to two-putt for a par and finish with a very fine 74. (The Crimson ended tied for ninth in the 18-team field, from which the top five schools advanced to the NCAA finals.)

The concern for the squad that Cheng displayed as she contemplated that shot also delights Rhoads. “She’s the most selfless teammate we’ve ever had,” he says. “It’s never about her. She’s always up and trying to figure out what she can do to help other people. And then she can really play. The combination sets a standard.”

When Cheng arrived in Cambridge, she planned to be an economics concentrator. But during her sophomore year she switched to neurobiology and now aims at medical school. Accordingly, this past summer she largely forsook the driving range for an internship in the neurology department at Massachusetts General Hospital. She admits that she “gets excited” when she reads of a professional victory by one of the ladies she played against on the junior circuit. But she does not ponder the carpath not taken. Instead, captain Cheng is focused on the task at hand: “Keep the team on the right track and hopefully results will come in the end.”

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A Literary Chameleon



Colson Whitehead plays for higher stakes in his new novel.

by JESSE McCARTHY

COLSON WHITEHEAD '91 has written a zombie-apocalypse novel, a coming-of-age novel set in the world of the black elite, a satiric allegory following a nomenclature consultant, a sprawling epic tracing the legend of the African American folk hero John Henry, a suite of lyrical essays in honor of New York City, and an account of drear and self-loathing in Las Vegas while losing \$10,000 at the World Poker Series. That work has won him critical acclaim. He received a MacArthur Fellowship in 2002, and has been a finalist for almost every major literary award; he won the Dos Passos Prize in 2012 and a Guggenheim Fellowship in 2013. In an era when commercial pressure reinforces the writerly instinct to cultivate a recognizable “voice,” his astonishingly varied output, coupled with highly polished, virtuosic prose, makes Whitehead one of the most ambitious and unpredictable authors working today.

He has gained a reputation as a literary chameleon, deftly blurring the lines between literary and genre fiction, and using his uncanny abilities to inhabit and reinvent conventional frames in order to explore the themes of race, technology, history, and popular culture that continually resurface in his work. In a country where reading habits and reading publics are still more segregated than we often care to admit, his books enjoy a rare crossover appeal. His first novel, *The Intuitionist*, is a detective story that regularly turns up in college courses; the zombie thriller *Zone One* drew praise from literary critics and genre fiction fans alike; *Sag Harbor*, about black privileged kids coming of age in the 1980s, was a surprise bestseller.

Beyond the books, Whitehead swims effortlessly in the hyper-connected moment: he maintains an active presence on Twitter, where his sly and dyspeptic observations on the curious and the mundane have gained him a devoted following. A sampling includes sagacious tips for the aspiring writer—“Epigraphs are always better than what follows. Pick crappy epigraphs so you don’t look bad”—and riffs on Ezra Pound: “The apparition of these faces in the crowd / Petals on a wet, black bough / Probably hasn’t been gentrified though.” In the pages of *The New York Times Magazine* and *The New Yorker*, he has wryly dissected contemporary mores and the light-speed metamorphoses of language in the age of social media. In a widely shared essay from last year, he parsed the current attachment to the “tautophrase,” as in “you do you” and “it is what it is.” Or Taylor Swift’s popularization of “Haters gonna hate.” Swift makes an easy target, of course, but Whitehead takes aim at the rhetoric of those in power too, and the narcissism in our culture more generally. He’s more gadfly than moralist, but there is a Voltaire-like venom to his sarcasms. “The modern tautophrase empowers the individual,” he observes, “regardless of how shallow that individual is.”

At 46, Whitehead is approaching the mid-point of a successful writing career. He exudes the confidence and ease of a man settled in his craft, and for that reason is also inherently restless, driven to test his limits and keep himself vivid. In recent years, some observers have questioned whether he was taking up subjects rich and deserving enough of his abilities. Dwight Garner in his review of *The Noble Hustle* (the poker book), vividly praised Whitehead’s talent—“You could point him at anything—a carwash, a bake sale, the cleaning of snot from a toddler’s face—and I’d probably line up to read his account”—while making it very clear he felt it was being wasted. Garner called the book “a throwaway, a bluff, a large bet on a small hand,” and questioned the sincerity of the undertaking: “you can sense that he’s half embarrassed to be writing it.”

As if to answer that criticism, Whitehead’s new novel, *The Underground Railroad*, pursues perhaps the most formidable challenge of all: taking readers through “the blood-stained gate,” as Frederick Douglass called it, onto the historical ground of American slavery. The uncompromising result is at once dazzling and disorienting, the work of a writer flexing, firing on all cylinders.

DURING A RECENT conversation at an Italian café in the West Village, Whitehead at times seemed slightly distracted. It’s clear he does not enjoy talking

about himself. He has always been highly skeptical of confessional modes. When he gives public talks, he likes to tell the audience he was born poor in the South—and then reveal he’s just quoting Steve Martin from *The Jerk* (in which Martin plays a white man who believes he is born to a family of black sharecroppers). “I never liked Holden Caulfield, *The Catcher in the Rye*,” he declares with a wink in his eye, in a promotional video for his most autobiographical book, *Sag Harbor*. “I feel like if he’d just been given some Prozac or an Xbox, it would have been a much shorter book, and a much better book.”

In person, this stance becomes a kind of awkward warmth, even nerdiness: the eccentricity of the “blithely gifted,” to borrow John Updike’s 2001 assessment of “the young African-American writer to watch.” In dark blue jeans, his dreadlocks draping over a crisp white shirt, his glance slightly diffident behind neat glasses, Colson Whitehead is unmistakably a New Yorker—from Manhattan. He speaks in the native tongue—a streetwise blend of ironic nonchalance and snappy precision, a jolting rhythm not unlike that of the subway, always with an eye towards the next stop.

Whitehead was born in New York City and grew up mostly on the Upper West Side. He lives in Brooklyn now, but recalls Manhattan with affection. “I like how Broadway gets really wide up there, how close the Hudson is,” he says. “I’d live up there again if I could afford it.” Asked what it was like growing up, *back in the day*,



The *Intuitionist* registered as a shot across the bow, as though Whitehead were daring readers to box him in.

he brushes off the perceived roughness of that era: “New York was pretty run-down in the ’70s and ’80s, but if you think that’s what a city looks like because you don’t know anything else, then it seems normal. When I got

out of college, I lived in the East Village and on cracked-out blocks in Brooklyn, and that seemed pretty normal, too.”

He paints a picture of a loving and kind of average household. He was always surrounded by readers. “My mother reads a lot, and I had two older sisters, so their hand-me-down libraries were always around. I didn’t need to be pushed.” In a rare autobiographical essay, “A Psychotronic Childhood,” he has described how this period of his life was deeply saturated by television, comics, and the “slasher” and “splatter” flicks, then in vogue, that he watched in New York’s B-movie theaters. A self-described “shut-in,” he “preferred to lie on the living-room carpet, watching horror movies,” where one could acquire “an education on the subjects of sapphic vampires and ill-considered head transplants” while snacking “on Oscar Mayer baloney, which I rolled into cigarette-size payloads of processed meat.” Unsurprisingly, he read “a lot of commercial fiction, Stephen King—the first thick (to me) book I read was in fifth grade, King’s *Night Shift*. I read that over and over.” His early literary ambitions, he has said, were simple: “Put ‘the black’ in front of [the title of] every Stephen King novel, that’s what I wanted to do.”

After graduating from Trinity School, Whitehead entered Har-

vard. It was the late 1980s, and the way he tells it makes it sound like he was a poster boy for Gen X slackerdom. (The archetype must feel almost quaint to the hyper-networking Zuckerberg generation.) It’s not that he didn’t enjoy his time at Harvard—he did attend his twenty-fifth reunion, he informed me—but he seems to have been determined not to try too hard to be involved in anything, or to stand out in any way. He read in his room a lot, he says, absorbing a wide range of things. But it was the way he was absorbing these strains that is most revealing: “I think it helped that, for my first exposure to Beckett, I took it to be a form of high realism. A guy is buried up to his neck in sand and can’t move; he has an itch on his leg he can’t scratch. That sounds like Monday morning to me.” (Responding to the suggestion that his novels suggest the influence of Ralph Ellison and Thomas Pynchon, Whitehead is noncommittal but open to the idea: “What excited me about writers like Ellison and Pynchon was the way you could use fantasy and still get at social and political themes,” he says. “That was very revealing to me...like here’s this serious book on race, but it has all this wild stuff in it.”)

At Harvard, Whitehead played the role of young aspiring writer the way he imagined it. The results were not necessarily promising. “I considered myself a writer, but I didn’t actually write anything,” he says. “I wore black and smoked cigarettes, but I didn’t actually sit down and write, which apparently is part of the process of writing.”

He applied to creative-writing seminars twice—and failed to get in both times.

The most important undergraduate legacy has been his lasting

friendship with Kevin Young ’92, an aspiring, charismatic poet from Kansas who was already involved with The Dark Room Collective, a gathering of young black writers that has played a major role in shaping contemporary poetry during the past two decades (see “Elbow Room,” March-April, page 32). Whitehead, never more than peripherally involved, says, “Kevin was always more serious than I was. He already knew where he was going, what he was about....I wasn’t much of team player.”

After graduation, Whitehead gravitated back to New York City. He went to work at *The Village Voice*, writing album reviews and television criticism. He soon mastered the magazine’s signature downtown stir-fry of pop-culture fluency, melding high- and lowbrow, theory and snark, punk and hip-hop: an inevitable rite of passage, given his influences. “I came up in the seventies and eighties reading *CREEM* [“America’s Only Rock ‘n’ Roll Magazine”], stuff like that, so I knew pretty early on that I wanted to be involved in that scene,” he says. Working in the book section at the *Voice*, he says, “was where I learned how to be a writer.”

THAT WRITER DEBUTED in 1999 to instant acclaim with the disquieting *The Intuitionist*, set in an unspecified midcentury Gotham, a noir metropolis straight out of Jules Dassin and Fritz Lang. In its conceit, the world of elevator inspectors is divided between rival schools: Empiricists, who work by collecting data and making methodical observations; and Intuitionists, a minority of gifted inspectors who have a second sight that allows them to read elevator mechanics intuitively—an ability scorned and feared by the dominant faction. The novel follows Lila Mae Watson, a member of the Department

of Elevator Inspectors, as she tries to solve the case of a suspicious crash, and also untangle the mysterious aphorisms of one James Fulton, whose gnomic text, *Theoretical Elevators*, may provide clues to a secret about its author and the nature of Intuitionism itself. It's impossible not to like Lila Mae, a black woman occupying a role stereotypically identified with the square-jawed private eye, who uses her cool and wits to navigate this murky underworld and stay one step ahead of the men trying to frame her. Part of the fun is in the writing itself. Whitehead's prose oscillates playfully between the pulpy, telegraphic neo-noir à la James Ellroy and the allegorical ruminations of Ralph Ellison's *Invisible Man*.

This gives the novel a slippery feeling, a cool detachment that makes it easier to admire than to love. It's as though Whitehead built that book on the principles of stealth technology, every facet rigorously designed to achieve what it is also about: a game of camouflage and detection, the irony of invisibility in plain sight. His interest in unstable visibility suggests the theme of racial passing, a concern with a long history in the African-American novel. As the scholar Michele Elam pointed out, *The Intuitionist* can be read as "a passing novel in both form and content." The familiar hard-boiled detective plot turns out to be merely a lure, a skin-thin surface masking a speculative novel of ideas.

As a first novel, *The Intuitionist* registered as a shot across the bow, as though Whitehead were daring readers to box him in. It was also a first glimpse of what has since become something of an authorial signature: an ironic deployment of genre as a mask for an eccentric but also cutting vision of American culture. It's an approach that can remind one of Thomas Pynchon in novels like *The Crying of Lot 49* (critics have compared its heroine Oedipa Maas to Lila Mae Watson) and *Inherent Vice*; or to the filmmaking of the Coen brothers, with their affectionate but sinister parodies of Hollywood noir in *Barton Fink* or *Fargo*. Like them, Whitehead delights in recasting the iconography of Americana, troubling its conventions and clichés by pressing them to their limits, and releasing that energy in the form of bleak satire and an impassive attitude toward violence.

IN 2008, novelist Charles Johnson published an essay in *The American Scholar* titled "The End of the Black Narrative," in which he argued that the history of slavery in America had become a crutch for understanding any and all experiences of black life—that at the dawn of the twenty-first century it had "outlived its usefulness as a tool of interpretation," and should be discarded in favor of "new and better stories, new concepts, and new vocabularies and grammar based not on the past but on the dangerous, exciting, and unexplored present." It's an argument that has analogs in academic circles as well, where a movement around "afro-pessimism" has prompted debates in recent years over whether contemporary black life can ever transcend the historical experience of slavery. Whitehead hasn't read the essay, but he says the argument makes sense to him if it means black writers need to have the freedom to write whatever and however they want. (He resists attempts to theorize his own work, and it's clear he's fairly allergic to the scholarly efforts to categorize his literature. He's an excellent parodist and, whether aiming his wit at the sophistications of academic vernacular or the flummery of marketing lingo, he's a master at deconstructing jargons. He once opened a talk at the Du Bois Institute at Harvard by delivering a compelling close reading of Flavor Flav's "Can't Do Nuttin For Ya Man" at the lectern.)

Yet his work has been viewed along these lines. His 2009 coming-of-age novel, *Sag Harbor*, follows a group of "bougie" black kids as they try to survive the summer of 1985 in the black enclave their parents have carved out in the Hamptons. A good part of the comedy revolves around the ways the main character, Benji Cooper, and his friends try and fail to act "authentically black": city boys with toy BB guns awkwardly grasping at gangsta status. Reviewing the novel, journalist and cultural critic Touré, known for popularizing the term "post-blackness," inducted Whitehead into a constellation of figures opening up the scripts of blackness: "now Kanye, Questlove, Santigold, Zadie Smith and Colson Whitehead can do blackness their way without fear of being branded pseudo or incognegro," he declared.

"Post-blackness" should not be confused with the "postracial." "We'll be postracial when we're all dead," Whitehead quips, alluding to *Zone One* (2008), in which his hero, an Everyman nicknamed Mark Spitz, is part of a sweeper unit clearing out the undead in post-apocalyptic downtown Manhattan. In fact, no one has more deliciously julienned this particular bit of cant. In a 2009 *New York Times* essay, "The Year of Living Postracially," Whitehead offered himself to the Obama administration as a "secretary of postracial affairs," who like the hero of his 2006 novel *Apex Hides the Hurt*, will rebrand cultural artifacts to meet new societal standards. "*Different Strokes* and *What's Happening!!* will now be known as *Different Strokes* and *What Is Happening?*" he suggested, and Spike Lee's *Do The Right Thing* would be recast with "multicultural Brooklyn writers—subletting realists, couch-surfing postmodernists, landlords whose métier is haiku—getting together on a mildly hot summer afternoon, not too humid, to host a block party, the proceeds of which go to a charity for restless leg syndrome..." The essay suggests the influence of Ishmael Reed, whose hallucinatory satires mine the absurdities of racism for comic effect, highlighting how their surreal and grotesque contortions are refracted in language and sublimated in collective phantasmagorias: television shows, music videos, and the movies.

The critic James Wood has complained about a "filmic" quality in Whitehead's writing. It is undeniable—but younger readers may find that that quality is its own kind of literacy, a clear picture where Wood sees only static. Rightly or not, there is something contemporary and vivid in Whitehead's direct apprehension of the way lives are overdetermined and bound by chains of mediated images. It's a gambit that has surfaced as a question for the contemporary novel before: David Foster Wallace famously worried that television had repurposed irony to commercial ends, defanging it as a weapon in fiction. Whitehead has drawn just the opposite lesson, wagering that irony not only sustains the postmodern novel—but that it can even deepen the stain of allegory.

CAN THIS IRONIC METHOD successfully take on American slavery? It might seem intimidating, perhaps even overwhelming, to write about a subject where the stakes feel so high. In recent years, the history of slavery, never far from the surface of American life, has seeped back into popular consciousness with renewed urgency. On television, *Underground*, which debuted this spring, follows the fugitive slave trail; and this past spring The History Channel remade *Roots*, the groundbreaking 1977 miniseries based on Alex Haley's novel. On film, black directors are also thrusting slavery to the fore, notably Steve McQueen in *12 Years a Slave* (2013) and now Nate Parker's *The Birth of a Nation* (2016), about Nat Turner's rebellion. This year has

also brought at least two other novels that will frame the reception of Whitehead's: Yaa Gyasi's *Homegoing* reconsiders how African identities interlock but also diverge from the "black narrative"; Ben H. Winters' *Underground Airlines* imagines a counterfactual history in which the Civil War never took place, and bounty hunters roam a contemporary United States seeking runaways. And all this still pales before the inevitable comparisons with major writers on the same theme. Whitehead anticipates these questions, and instantly brushes aside comparisons. "You have to do your own thing, right? Morrison"—that's Toni Morrison, Litt.D. '89—"already wrote *Beloved*; you're not going to compete with that. I have to write the book that makes sense to me, that's entirely my own vision."

The Underground Railroad follows Cora, a slave on a cotton plantation in Georgia, as she makes a break for freedom. She becomes a runaway, a "passenger" who must elude capture as she makes her way northward on the famous Underground Railroad—in Whitehead's conceit, made literal rather than metaphorical. "When I was a kid I always thought it was a real railroad," he says with a flashing grin. It's a testament to the power of metaphor, and, like the ghost in Morrison's *Beloved* that haunts the former slaves of Sweet Home plantation even as they try to recreate their new lives in freedom, it marks an assertion of the novelist's supreme freedom: the freedom

"When I was a kid I always thought it was a real railroad," he says with a flashing grin.

that allows fiction to breathe and stand on its own, and writers to carve out a personal dimension within material fraught with communal and ideological strictures.

If *The Underground Railroad* seems to give in to the inescapable pull of "the black narrative" which Whitehead had been celebrated for evading, the new novel isn't as new it may appear. "This project has been on my mind for at least 10 years," Whitehead says. "I started thinking about it around the time I was doing *John Henry Days* but I set it aside. I didn't feel like I was ready yet to tackle it, the way I was writing then...I'm much more into concision now, in my writing, and I think this book needed that."

For it, Whitehead did a good deal of research—looking to Eric Foner's *Gateway to Freedom* (2015) to depict the cat-and-mouse game between slavecatchers and freemen scouting for runaways along the docks of New York harbor, and reading the Works Progress Administration's collection of slave narratives for material details of slave life. But above all, Whitehead drew on the rich literary history to which he is adding a new chapter, refashioning famous scenes in Harriet Beecher Stowe's *Uncle Tom's Cabin* and Harriet Jacobs's *Incidents in the Life of a Slave Girl*—especially her account of seven years spent hiding in an attic (a passage he singled out as having profoundly marked him when he read it in college). The ominous figure of the slavecatcher Ridgeway suggests more recent antecedents. Cormac McCarthy's *Blood Meridian*, with its vision of bounty hunters chasing scalps on an American frontier steeped in apocalyptic gore, echoes in Whitehead's chronicling of the orgiastic violence that haunts the hunting grounds of slavery.

The novel explicitly links slavery to the engine of global capitalism. The theme has gained prominence in recent years, notably through works like *River of Dark Dreams: Slavery and Empire in the Cotton Kingdom* (2013) by Walter Johnson and *Empire of Cotton: A Global*

History (2014) by Sven Beckert (both of Harvard's history department), which have enlarged the context for our understanding of slavery and resuscitated neglected arguments put forth at least a generation earlier by black Marxists like Eric Williams and Cedric Robinson. The idea of a capitalist drive behind slavery always seemed intuitive to Whitehead, he says. "Being from New York," he suggests, "you can see the drive for exploitation all around you. It just always seemed obvious to me."

Rather than centering on one site or aspect of slavery, *The Underground Railroad* presents readers with a kind of composite. The novel proceeds episodically, with each stage of Cora's voyage presenting a variation on the conditions of enslavement and emancipation. Caesar, a fellow slave on the Randall plantation who encourages Cora to run away with him, compares their predicament to that of Gulliver, whose book of travels his more lenient master has allowed him to read. He foresees a flight "from one troublesome island to the next, never recognizing where he was, until the world ran out." This sense of variation on a theme—with no exit in sight—creates a sense of blind forward propulsion without "progress": scenes of medical experimentation that recall the infamous Tuskegee Syphilis Studies appear side by side with those of coffles, auction blocks, abolitionist safe houses, as well as the vision of Valentine farm, a haven in

Indiana founded by a successful mixed-race free black who believes that hard work and exposure to high culture will secure the acceptance of his white neighbors. "I wanted to get away from the typical, straightforward plantation," Whitehead

says. His novel doesn't seek to reenact history, but rather to imagine and represent simultaneously the many hydra heads of a system designed to perpetuate the enclosure and domination of human beings.

The genre of fugitive-slave narratives has long been haunted by sentimentality. As the scholar Saidiya Hartman has suggested, the use of the pain of others for readers' own purification or enlightenment—or at worst, entertainment—is a deep problem for this genre. Many have argued that the truth of slavery can only be understood first-hand. William Wells Brown, who published an account of his own escape to freedom in 1847, famously asserted that "Slavery has never been represented; Slavery never can be represented."

To write about slavery is to face head on this risk of representation. *The Underground Railroad* can feel at times over-represented, almost too explanatory—seeking at every turn to demonstrate how this or that aspect of slavery worked, flagging a character's motivations by relating them back to that system. There's precious little room for characters to be something other than what they appear to be, something more than allegorical props. At one point, Cora, staying at a temporary haven in South Carolina, goes up to the rooftop to look out over the town and up at the sky. The scene's only function seems to be to give the reader a chance to overhear some of her thoughts and hopes, something of who she is when she is not engaged in the business of trying to stay alive. Despite Whitehead's best efforts, Cora remains sketched rather than known, a specter seen through a glass darkly. She is a Gothic woman in the attic, haunting the national consciousness, a symbol more than a person. It's a connection Whitehead makes explicit: "Now that she had run away and seen a bit of the country, Cora wasn't sure the Declaration described anything real at all," says his narrator. "America was a ghost in the darkness, like her."

Yet there is something new and per- (please turn to page 79)

A LITERARY CHAMELEON

(continued from page 36)

haps unprecedented in the way Whitehead has reasserted the agency of black writers to reconstruct “the black narrative” from within. Whitehead interleaves *The Underground Railroad* with invented runaway-slave advertisements by planters seeking to recover their property. But in the last one, the hand of the author and that of his protagonist are momentarily overlaid, as though we are reading an advertisement Cora has left us, “written by herself,” as the subtitles of slave narratives habitually put it. “Ran Away,” reads the title and declares below: “She was never property.” The device harnesses the power of fiction to assert impossible authorship, to thrust into view the voice that could not have spoken—but speaks nonetheless. Cora becomes, in the last instance, a mirror not only for the drama of slavery, but for the whole problem of writing about slavery: a vector that points away from something unspeakable and toward something unknown—and perhaps unknowable.

INTERESTINGLY, *John Henry Days*, the book by Whitehead that deals most substantially with the history of Black America, is also almost certainly his least-read. Its hero, J. Sutter, is a freelance writer drawn from New York to an assignment in Talcott, West Virginia: the U.S. Postal Service is hosting a festival celebrating a new John Henry commemorative stamp. Whitehead uses the mythical man and J. Sutter’s pursuit of his meaning to transect the sediment layers of black history. His novel starts at the surface of a media-frenzied America circa 1996, simmering with racial unease and tortuous political correctness, then tunnels down to the labor of steel driving gangs in the 1870s. Along the way, it stops to recast figures like Paul Robeson or rewrite the rioting at Altamont Speedway. Suggesting another history, or set of histories, behind the one we think we know, Whitehead poses the thorny problem of how to interpret the stories we inherit.

In *The Grey Album*, his collection of essays on black aesthetics, Whitehead’s friend Kevin Young has advanced the idea of the “shadow book”—certain texts which, for a variety of reasons, may fail to turn up: because they were never written, because they are only implied within other texts, or simply

because they have been lost. One might add to this a category of books that are eclipsed. For *John Henry Days*, it was *Infinite Jest*. Both are postmodern leviathans, ambitiously unwieldy and bursting with insight, indelibly products of the 1990s. Yet Whitehead’s book has never acquired the kind of cult following that David Foster Wallace’s has. Published in 2001, it seems to have been eclipsed at least in part by historical events (though it can’t have helped that Jonathan Franzen wrote a self-absorbed review for *The New York Times* that ignored any discussion of race, a stupefying lacuna; Whitehead says that Franzen in fact later apologized for it). If *John Henry Days* is the “shadow book” of the nineties, the other great masterpiece behind the master-

“You have to do your own thing, right? Morrison already wrote *Beloved*; you’re not going to compete with that.”

piece everyone knows, it is also a powerful complement to this new novel on slavery. In time it may be recognized that these books are among Whitehead’s defining achievements, capturing the black experience in America with a wide-angle lens, carrying both its mythic and realistic truth, and delivering it over the transom into the maw of our digitally mediated Internet age.

In the meantime, with *The Underground Railroad* gone to press, Whitehead has been catching up on the reading he loves. He’s reading a lot of crime fiction, Kelly Link’s short stories, and he’s well into the latest Marlon James novel. His daughter is an avid reader of comics, so he’s catching up on those as well. Asked what he might work on next, he answers that he’s still focused on promoting the new book, of course—but possibly something about Harlem, something set in the nineteen sixties. After lunch wraps up, he heads down the block, walking smoothly, smoking a cigarette, back into the thrumming heart of the city.

“You are a New Yorker when what was there before is more real and solid than what is here now,” Whitehead writes in the opening pages of *The Colossus of New York*. A strain of apocalyptic foreboding, tempered by a refusal to sentimentalize trauma, courses through Colson Whitehead’s fiction. It’s present in the books he wrote even before 9/11. But the attacks of that day inevitably cloud the lyrical essays gathered in *Colos-*

sus, a collection published in 2001, a time of disaster and mourning in the place he has always called home.

Yet unlike so much writing about New York, Whitehead’s deliberately shies away from emphasizing what makes it special and unique. Whitehead writes instead of the invisible cities that everyone knows and carries within memory, not necessarily the ones that still exist in brick and mortar. He writes about the universal qualities of arrival and departure, loneliness and haste. His second-person address to “you” contains within it the gentle pressure of Walt Whitman’s “I too,” from “Crossing Brooklyn Ferry.” Whitehead’s answer to the calamity of terrorism is to insist, like Whitman, on the unbreakable power of



the city to transform the vulnerability of the huddled crowd into a heightened, even universal empathy.

“Talking about New York is a way of talking about the world,” Whitehead writes on the last page. True, but it is also a way of reflecting the world through one’s own experience of it. It seems not entirely a coincidence that elevators and underground trains, two of New York’s most iconic modes of transportation, are the symbolic vehicles Whitehead has invoked as he grapples with the wider meanings of America. Whether he is writing about the city he knows best, or the lives of characters in almost unimaginable circumstances, Whitehead has demonstrated time and again a remarkable capacity for turning what appear to be evasions into encounters, the historical arc we want to hide from into the narrative arc we can’t avoid. He is a writer who stands squarely in our present dilemmas and confusions, and suggests lines of sight no one else seems to have considered or dared to imagine. ▢

Jesse McCarthy is a graduate student in English at Princeton. His writing has appeared in *The New York Times Book Review*, *The Nation*, *The Point*, and *Dissent*.



Post-Regulatory School Reform

With many students still at risk, choice and competition remain the country's best hope.

by PAUL E. PETERSON

AT THE TURN of the twenty-first century, the United States was trying to come to grips with a serious education crisis. The country was lagging behind its international peers, and a many-decade effort to erode racial disparities in school achievement had made little headway. Many people expected action from the federal government.

George W. Bush and Barack Obama successively took up the challenge. For all their differences on how best to stimulate economic growth, secure the national defense, and fix the health-care conundrum, the two presidents shared a surprisingly common approach to school reform: both preferred the regulatory strategy. In 2001, Bush persuaded Congress to pass a new law, No Child Left Behind

(NCLB), creating the nation's first test-based federal regulatory regime in education. When NCLB ran into trouble, Obama kept the tests but invented new ways of extending the top-down approach. Unfortunately, neither president's program came close to closing racial gaps or lifting student achievement to international levels.

The Obama administration is now packing up and heading home, leaving the regulatory machine in ruins. A new law, the Every Student Succeeds Act (ESSA), passed by an overwhelming bipartisan majority in Congress, has unraveled most of the federal red tape. Although the mandate for student testing continues, the use of the tests is now a state and local matter. School districts and teachers' unions are rubbing their hands at the prospect of reasserting local control.

With districts beset by collective-bargaining agreements, organized special interests, and state requirements, choice and competition remain the main levers of reform. Vouchers and tax credits are slowly broadening their legal footing. Charter schools are growing in number, improving in quality, and beginning to pose genuine competition to public schools—especially within big cities. Introducing such competition is the best hope for American schools, because today's public schools show little capacity to improve on their own.

From Jawboning to Regulation

A BIT OF HISTORY. When presidents first tried to fix the schools, they relied strictly upon persuasion, resorting to the “bully pulpit” to bend the recalcitrant to their desires. Two years into the presidency of Ronald Reagan, the National Commission on Excellence in Education issued a report, “A Nation at Risk,” highlighting the low and declining performance of U.S. students. The report mobilized reform efforts in states and school districts across the country without any new federal regulatory framework. SAT scores, which had trended downward, now reversed direction. The reading scores of African-American 17-year-olds on the National Assess-

Charter schools are beginning to pose genuine competition to public schools, which show little capacity to improve on their own.

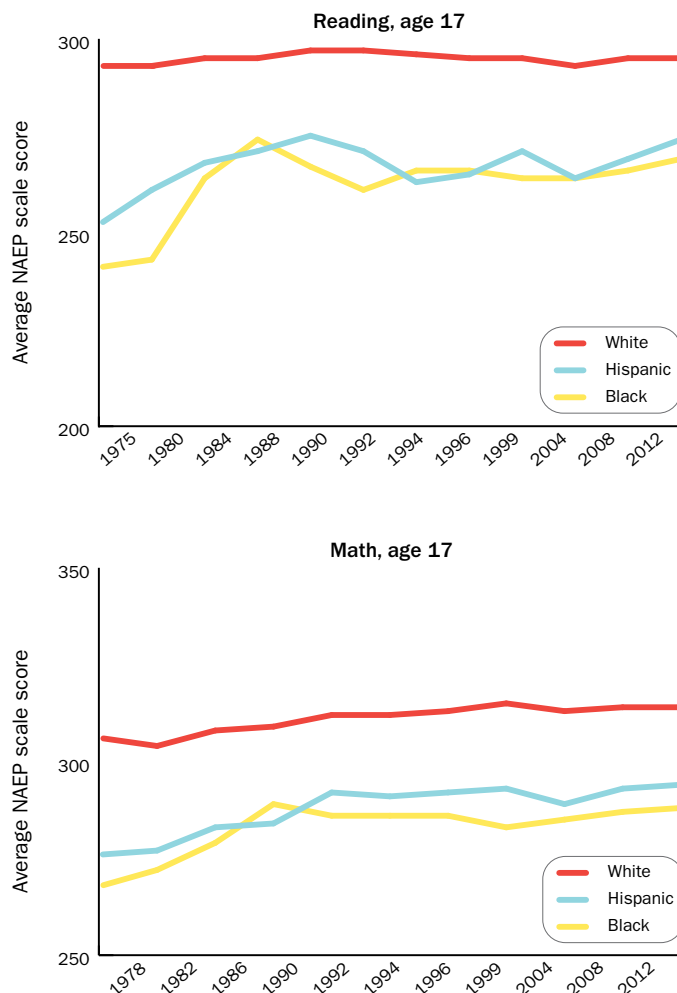
ment of Educational Progress (NAEP) leaped—a gain equivalent to roughly two to three years of learning (see figure 1). But in the 1990s, blacks' scores slipped backwards, leaving the racial gap in 2012 larger than the one in 1988.

In an attempt to reverse the trend, George W. Bush tried to channel Reagan by constructing “compassionate conservative” messages that insisted no child be “left behind.” But his oratory inspired little enthusiasm among either students or educators, perhaps because of the close, controversial election of 2000. Expectations for Obama were greater. Young people, especially within the African-American community, had flocked to support his campaign, but the president gave priority to his economic stimulus and healthcare redesign, leaving him with little leverage for K-12 education reform. Early in his tenure, Obama pointed out that “leadership tomorrow depends on how we educate our students today, especially in math, science, technology, and engineering.” Yet even that restrained language disappeared as his term wore on. By the time of his final State of the Union address in January 2016, he had *nothing* to say about K-12, other than to mislead the public into a false sense of well-being: “Today, our younger students have earned the highest math and reading scores on record. Our high-school graduation rate has hit an all-time high.” The rosy proclamation obscured the fact that few gains had been registered and racial achievement gaps were nearly as wide as when he entered the White House.

By the time the presidents vacated the bully pulpit, the billfold was barely opened. The Bush administration was reluctant to “throw more money at the problem” of educational disparities, though it agreed to some additional spending as the price for securing NCLB's enactment. During Bush's administration, federal expenditures edged upward from 10 percent to 11 percent of total spending on K-12 education (with the remainder of the costs shared about equally by state and local governments). When President Obama took office, it initially seemed that he would dramatically alter the federal fiscal role. With an overwhelming Democratic majority in Congress, he secured passage of a trillion-dollar economic stimulus package that included more than \$100 billion for K-12 education. The new money was to be spent over a two-year period, with some of it devoted to compensatory education or special education, the rest to district priorities. Federal aid to K-12 and preschool education jumped from \$39 billion in 2008 to a high of \$73 billion in fiscal year 2010 (0.49 percent of Gross Domestic Product). The following year, \$66 billion in federal funding continued to flow. Much of the aid targeted urban districts with heavy concentrations of low-income and special-education populations. Local school districts briefly enjoyed a generous flow of federal cash.

Ironically, the federal dollars arrived before the recession-induced fiscal crunch hit property-tax revenues (the principal form of local school financing), as it takes a year or two, sometimes longer, for depressed property to be assessed at its new, lower value. But the federal dollars had to be spent immediately, in the adminis-

Figure 1



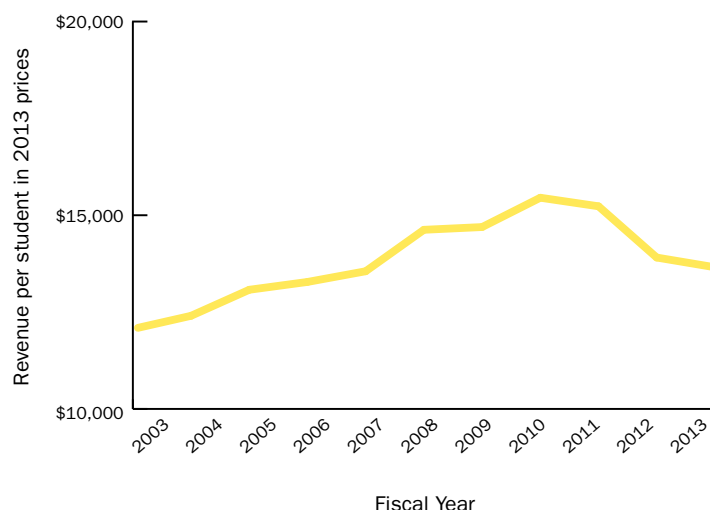
Philadelphia's Story

PHILADELPHIA STANDS as the perfect prototype of the broken urban school system that federal regulators were trying to fix. For decades the school district, beset by powerful unions, rampant cronyism, and bureaucratic sclerosis, has shown little capacity for self-improvement. The performance of its fourth-grade students on the National Assessment of Educational Progress trails those of the national average by more than 20 points in both math and reading—roughly two years' worth of learning. At the eighth-grade level, Philadelphia students are still trailing by about 15 points in both subjects. Philadelphia and Chicago have similar demographics, but Chicago leads Philadelphia by about 14 points at the fourth-grade level and 8 points at the eighth-grade level. Since 2009, Chicago's scores have ticked upward by about 10 points in each subject at the two grade levels, while Philadelphia's scores have hardly budged—and even slipped backward in fourth-grade reading.

The Obama administration's stimulus package induced more stress than relief. Between 2003 and 2010, revenue available to the city's public and charter schools increased (in inflation-adjusted dollars) from \$12,000 per pupil to well over \$15,000, a 25 percent increment facilitated primarily by expanded federal aid (see graph). The money was easily spent. Philadelphia's teacher salaries rose 4 percent in 2009, 3 percent in 2010, and another 3 percent in 2012. With all those increases, the average teacher earned just short of \$71,000, plus free healthcare for all family members. Teacher pensions rose by a corresponding amount, the bill to be paid by the state. The average pupil/teacher ratio declined by one student per teacher to about 16:1.

Those halcyon days ended abruptly in 2013 when the stimulus package dried up, while state and local revenues failed to make up the difference. In that year, the district received only \$13,700 per student in revenue from all sources, more than a 10 percent decline from 2010. Not surprisingly, teacher unions and local officials slammed the state government for failing to fill the gap the federal government had left behind. When schools nearly failed to open on time, Philadelphia mayor Michael Nutter moaned, "It

Revenue Roller-coaster



is a sad day in public service that we find children being held on the railroad tracks awaiting rescue to come from somewhere." Clearly, school-board officials had discovered it was easier to expand than retrench.

Meanwhile, Philadelphia's charter schools keep perking along. They receive about the same amount per pupil as district schools, though the district receives extra monies to serve its larger number of special-education students. The widely respected study by CREDO at Stanford, which takes special care to identify similar students in charter and district-school settings, found in 2015 that students in Philadelphia's charter schools performed at a level that implied they had received the equivalent of an additional 43 days in reading and math instruction each year. Not surprisingly, charter enrollment more than doubled between 2007 and 2013 (the last year for which official data are available). That is no less than 30 percent of all public-school students in the district, an exodus from district-operated schools that shows little sign of slowing.

(For a fuller account, see John Caskey and Mark Kuperberg, "The Philadelphia School District's Ongoing Financial Crisis," *Education Next*, Fall, 2014.)

tration's view, and local expenditures could not be reduced. As a result, per-pupil expenditures for current education operations reached a near all-time high in the recession school year of 2008-09, climbing (in constant dollars) to \$12,302 from \$10,890 in 2001-02, an increment of 13 percent over that seven-year period.

The education industry hoped and expected the stimulus package would set a new floor for federal expenditure. But the 2010 election overturned that assumption, as the newly elected Republican majority in the House of Representatives reduced federal funding. Federal aid to preschool and K-12 education dropped steadily—to just \$41 billion in 2014 (0.24 percent of GDP): less than in the last year of the Bush administration. State and local governments could not—or would not—make up the difference. Expenditures per pupil (in constant dollars) slid to \$11,732 in 2011-12, the latest school year for which data are available, a decline of nearly 5 percent over

that three-year period. For big cities, the cuts were much larger (see "Philadelphia's Story," above).

Regulation to the Rescue

SHORT ON BOTH rhetoric and ready cash, the presidents turned to regulation. The effort was bipartisan from the beginning. Putting aside the differences sparked by the nail-biting 2000 presidential contest, Senator Edward Kennedy and President Bush worked together to persuade their party colleagues to pass NCLB. Signed into law in January 2002, the law required annual statewide tests in grades 3 through 8, and again in high school. Every state was asked to set proficiency standards toward which students had to make adequate progress each year until all students had crossed that bar in 2014. If students were not making the requisite progress, families would have the option of picking another public school within the district. If that didn't work, students

were to have access to afterschool study programs. And if *that* failed, schools were to be reconstituted under new leadership.

All these steps required numerous regulations. But school districts found ways of undermining federal objectives. They instituted byzantine procedures that parents had to navigate before they could exercise choice. Reconstitution of low-performing schools often consisted mostly of window dressing.

Nonetheless, NCLB did shine a spotlight on the public schools. If schools failed to make adequate progress, officials had to explain themselves to reporters, parents, and the public at large. As the goal was to make all students proficient by 2014, the explanations proliferated with each passing year.

That utopian 2014 objective was never meant to be taken seriously. NCLB, like many other federal laws, had a five-year expiration date, and it was generally assumed that new legislation would be on the books by 2007, long before the full-proficiency deadline was reached. But Congress became deadlocked, so legislators simply extended NCLB from one year to the next, a necessary step if federal funds were to continue flowing to the states. Not until

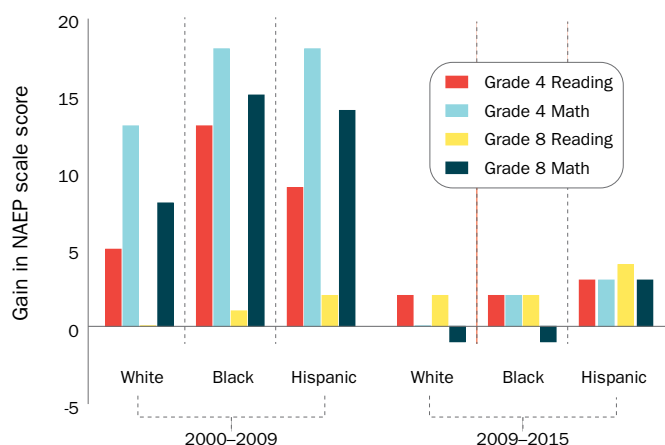
peared to be a brilliant maneuver, Duncan in 2009 announced “Race to the Top” (RttT), a competitive-grants program that had been authorized and funded by the trillion-dollar stimulus package. The money for RttT, \$4 billion, was but a tidbit within the package, amounting to less than two-tenths of 1 percent of U.S. school expenditures. Yet the idea of a competition among states for a fixed sum of money captured public attention. RttT’s purpose, the president said, was to “incentivize excellence and spur reform and launch a race to the top in America’s public schools.” RttT encouraged applicants to propose a broad range of innovations, including policies akin to Common Core State Standards being proposed by the National Governors Association, among others. States were also encouraged to design plans that would evaluate teachers, in part on their students’ test scores. Most states entered the competition, and 18 states and the District of Columbia won awards, ranging from \$17 million to \$700 million—sums insignificant in themselves but highly prized for the praise received for winning a grant.

The competition proved so successful the U.S. Department of Education relied upon its framework for an even bolder policy: states could seek a waiver of the most onerous NCLB requirements by submitting alternative reform plans similar to those encouraged by RttT. Eventually, 43 states, the District of Columbia, and Puerto Rico were granted such waivers, in effect gutting the federal law.

RttT and the waiver policies it engendered must therefore be counted as extraordinary political successes if only because they allowed the Obama administration to substitute its priorities for those of its predecessor. But as the University of Virginia’s late scholar of federalism Martha Derthick, Ph.D. ’62, wrote at the time, waivers “undermine the rule of law,” raising “a concern that extends well beyond the field of education.” Secretary Duncan had left himself badly exposed by constructing an education policy on a series of questionable administrative maneuvers rather than a solid legislative footing. Political opposition began to rise against two of the waivers’ key recommendations: establishing higher state standards and tightening teacher evaluations. Tea Party activists objected to what the Heritage Foundation called the administration’s intent to nationalize “the content taught in every public school across America.” And teachers’ unions balked at unfair evaluations of teacher performance. “Old tests are being given, but new and different standards are being taught,” National Education Association president Dennis Van Roekel declared. “This is not ‘accountability’—it’s malpractice.” Meanwhile, student progress on NAEP tests came to a virtual standstill, leaving regulation with hardly a substantive leg on which to stand (figure 2).

Caught in the maelstrom, the administration was unable to defend against the enactment of ESSA, which upset nearly all the federal regulatory reforms of the prior 15 years. The new law requires annual testing—but leaves it to the states to decide how the results will be used—and removes any federal role in setting standards or teacher evaluation requirements as well as most other regulations, shifting authority over schools back to states and localities. As an education-reform strategy, federal regulation is dead. Nor is there much appetite among the states for asserting new accountability rules. The regulated captured the regulators. If reform is to proceed now, it will happen because more competition is being introduced into the American education system.

Figure 2



December 2015—eight years past the deadline for new legislation—did Congress replace NCLB with ESSA.

In the meantime, the absurdities in NCLB were becoming increasingly apparent. With nearly every school failing to bring all students up to full proficiency, nearly every school was theoretically at risk of reconstitution. Criticisms of NCLB escalated—and many were justified. The definition of “failing schools,” for instance, unfairly picked on those serving disadvantaged students. But the critiques quickly degenerated into blanket attacks on all standardized tests: “The tide on testing is turning,” said Randi Weingarten, president of the American Federation of Teachers, who then called for NCLB revisions that would “address the root cause of test fixation.” Secretary of Education Arne Duncan, averring that testing was “sucking the oxygen out of the room,” promised to do something about it.

Race to the Top

INITIALLY, the Obama Administration attempted to sustain the overall policy by cutting back on most of the detailed regulations, even while keeping annual student testing. In what at first ap-

Catalyzing Competition

CREATING A SYSTEM of competition among educational providers in the hope that it will improve student performance is no easy task. The political process is bound to be slow, arduous, disruptive, upsetting, and divisive. Defenders of the status quo will argue that some indefinable essence is lost if anyone other than a government agency operates a school, no matter how segregated the homogeneous neighborhoods are that form the school's attendance boundaries. Quite apart from the substantive debate, the politics is messy at best, disastrous at worst. The winning schools are ingrates who almost always feel they deserve any benefits they enjoy. Losers can hardly be faulted for blaming not themselves but changes in the rules of the game. But the long-term consequences of greater competition within an industry for consumers and society as a whole can be highly beneficial, as deregulation of the airlines and telecommunications industries has shown. Comparable gains have yet to appear throughout American K-12 education, but to see how it might happen, consider the slow growth of choice and competition—via vouchers and charter schools—that has taken place during the past quarter-century.

• *Vouchers.* Milton Friedman made the case for choice and competition in his seminal 1955 article on school vouchers, writing:

[School choice] would bring a healthy increase in the variety of educational institutions available and in competition among them. Private initiative and enterprise would quicken the pace of progress in this area as it has in so many others. Government would serve its proper function of improving the operation of the invisible hand without substituting the dead hand of bureaucracy.

It was another 35 years before Wisconsin enacted a voucher program for the city of Milwaukee. Since then, another 28 states have legislated some kind of voucher program, tax credit, education savings account, or other intervention that provides government aid to students attending private schools. None of these programs are at scale, however: nationwide, less than 1 percent of the school-age population is participating. Yet careful studies show that voucher students of minority background, even if they do not perform much better on

Vouchers command majority backing within minority communities, both black and Hispanic. Whites are less enthusiastic: only one-third of them support income-targeted vouchers.

standardized tests than their peers in public school, are more likely to graduate from high school and go on to college. Apparently, private schools seem to do better at fostering character and grit than academic instruction per se.

Perhaps this is why vouchers command majority backing within minority communities, both black and Hispanic. Whites are less enthusiastic: only one-third of them support income-targeted vouchers, though support for and opposition to universal vouchers is more or less evenly divided (see sidebar on page 43).

The strongest opposition comes from teachers and the unions that represent them. Al Shanker, the brilliant (if controversial) leader of union efforts to win collective-bargaining rights in New York City, denounced the idea: "Without public education, there would be no America as we know it," he cried. Vouchers for the poor would

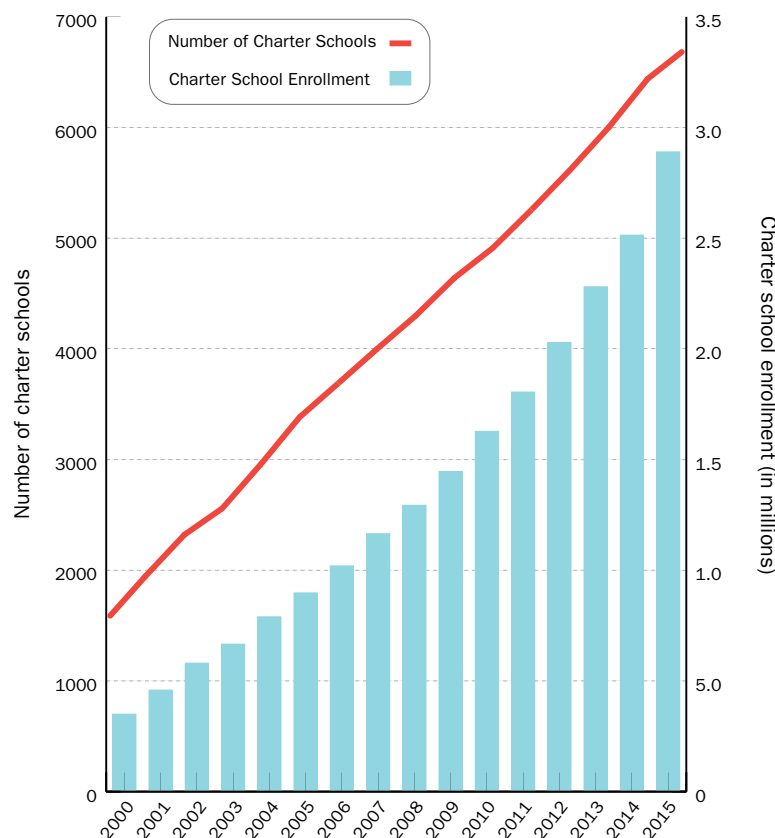


be “merely the nose of the camel in the tent.” School boards and teachers themselves could not have agreed more.

• **Charters.** Union opposition to vouchers was so intense that it opened the way for another choice reform: charter schools. When first enacted in Minnesota in 1989, charters appeared to be nothing more than a safe place for teachers to try out new ideas that public schools could adopt. Shanker himself initially endorsed charters, making it difficult for subsequent union leaders to express unconditional opposition. Unions nonetheless resist charter growth because the schools are run by nonprofit organizations rather than the government; they are free from many state regulations; and they are usually not subject to collective-bargaining agreements. Yet charters can claim that they *are* in fact public schools. They are authorized by a government agency (a state department of education, state university, mayor’s office, or local school district). Their operating funds come primarily from government sources. Their educational mission is secular. When parental demand for a charter school exceeds available space, the school typically holds a lottery in order to choose impartially among the applicants.

Charters regularly win endorsements from Democratic and Republican leaders alike, and the movement has enjoyed steady, if unremarkable, growth. Forty-three states allow the authorization of charters; more than 6,000 charter schools have been established; and nearly three million children now attend them (figure 3). As their numbers grow, charters are beginning to disrupt the status quo more than vouchers.

Figure 3



Admittedly, charter schools have had difficulty penetrating rural and suburban communities. There, a public school, no matter its quality, is perceived as a valuable community institution. In suburban areas, charters often sport progressive pedagogies that yield poor testing performances compared to traditional public schools. Moreover, school choice already exists for those who have the resources and resourcefulness to live in suburbs that offer better schools. The affluent already have the options they need.

A different story emerges from central cities. Big-city public schools are in big-time trouble, and many families send their children to their local school more out of necessity than choice. For these families, the charter-school option often holds strong appeal. Compared to district schools, the charters are generally perceived to be smaller, safer, friendlier, and, more often than not, a better place to learn. In contrast to charters in suburban areas, central-city charters typically embrace the “no-excuses” model of teaching and learning: strict dress codes, rigorous discipline, extended school days and years, and high expectations for performance on standardized tests. Though critics complain that these schools are too restrictive, studies regularly reveal they are outperforming their traditional public-school counterparts. The charter advantage seems to be particularly striking for African-American students from low-income families.

The charter-school movement has benefited from the spectacular results achieved by the Harlem Children’s Zone Promise Academies, Success Academy, BASIS Schools, KIPP Schools, Uncommon Schools, and others in New York City, Boston, Los Angeles, New Orleans, Washington, D.C., and other prominent cities. Led by strong entrepreneurs, staffed by high-quality teachers from selective colleges, financed by local donors and major foundations, these institutions are providing rigorous instruction over an extended school day and year. Their ability to lift students who come from low-income, single-parent families to a high level of performance that prepares them for college has shed a warm glow over the entire charter-school undertaking. In 16 cities, more than 25 percent of public-school students are enrolled in charter schools. In New Orleans, the percentage is no less than 79 percent; in Detroit, 51 percent; in the District of Columbia, 43 percent; and in Philadelphia, 28 percent. In Los Angeles, Boston, New York City, Chicago, and elsewhere, enrollments would be much higher were the supply not artificially constrained by state laws limiting charter growth. According to the scholarly journal *Education Next*’s 2015 poll, supporters of charters outnumber opponents by a two-to-one margin, both among the public at large and in minority communities. However, a majority of teachers oppose the innovation (see sidebar, opposite).

Will the competition between charters and standard, district-operated public schools intensify in the next decade? Is this competition the new reform wave that will sweep over American education? Is there a tipping point at which the demand for charters will force a reconstruction of the educational system more generally? Several factors point in that direction:

- Many charters in urban areas are oversubscribed.
- Big-city school districts must spend a large share of

What the Public—and Teachers—Think About School Choice

ANNUALLY since 2007, *Education Next*, a journal of opinion and research about education policy, has asked a representative sample of U.S. adults for their opinions on a range of education policies. The design provides for a sampling of teachers and African American, Hispanic, and white adults large enough to allow for reasonably precise estimates of the opinions of these groups. Presented in the accompanying figure are the levels of support observed in June 2015 for three types of school choice: charter schools; vouchers for low-income students; and vouchers for all students.

As can be seen, a majority of teachers are opposed to all three of these forms of school choice. By contrast, African-American, Hispanic, and white members of the public as a whole all favor charters by a roughly two-to-one margin. However, blacks and Hispanics are considerably more likely to favor school vouchers than are whites. If vouchers are targeted to low-income families, 66 percent of African Americans and 58 percent of Hispanic adults favor them, but only 33 percent of whites do. If vouchers are made available to all students, white support increases to 41 percent with 43 percent opposed (the remainder taking a neutral position), but it still trails black and Hispanic support by a considerable margin.

(For a full discussion of the *Education Next* survey, see Michael B. Henderson, Paul E. Peterson, and Martin R. West, “The 2015 EdNext Poll on School Reform,” *Education Next* [Winter, 2016], pages 9–20. Available online at educationnext.org. Paul A. Peterson served as the journal’s editor-in-chief until July 1, 2016, when Martin R. West, an associate professor at the Harvard Graduate School of Education, succeeded to that post.)

Opinions on Choice Options



their budgets for employee healthcare benefits and pensions, secured by expensive collective-bargaining agreements—a problem charters have escaped thus far.

- Charter-school parents can be mobilized in numbers when political confrontations occur.
- Student performance at charter schools is showing signs of improvement over time (mainly because of the closing of weak charter schools).

These are straws in the wind, but it is still too soon to predict confidently the degree to which choice will be introduced into American education during the next decade. Teachers’ unions are mobilizing to block charter expansion in state legislatures and through collective bargaining with local districts. Nor is there much support for charters in suburbia, small towns, or rural America. If charters achieve a breakthrough, it will be in the country’s largest cities. Spreading out from that base will be a slow, arduous process—and then only if charters demonstrate that they can deliver a superior educational experience.

If the future of charter schools remains uncertain, the same cannot be said for top-down regulation. Unless teachers surprise us all by embracing a new curriculum generated by Common Core State Standards, and that curriculum motivates students to higher levels of performance, reforming the system from within is unlikely to succeed. If school reform is to move forward, it will occur via new forms of competition—whether vouchers, charters, home schooling, digital learning, or the transformation of district schools into decentralized, autonomous units. And if student testing has an impact on reform, it will be due to the better information parents receive about the amount of learning taking place at each school. The Bush-Obama era of reform via federal regulation has come to an end. ▢

Paul E. Peterson, Education Next’s senior editor, is Shattuck professor of government and director of the Program on Education Policy and Governance at the Harvard Kennedy School. This essay draws upon his article, “The End of the Bush-Obama Approach to Regulatory Reform,” published in the fall 2016 issue of Education Next.

George Bucknam Dorr

Brief life of a persistent conservationist: 1853-1944

by STEVEN PAVLOS HOLMES

JULY 8 marked the centennial of the founding of the Sieur de Monts National Monument in Maine, which within a few years became the new National Park Service's first Eastern property. The creation of what is known today as Acadia National Park was spearheaded by a wealthy Bostonian, George Bucknam Dorr, A.B. 1874, who also served as its first superintendent.

Dorr's Brahmin family lived in bucolic Jamaica Plain until he was seven, and he wrote later, "My earliest recollections are concerned with gardens...." Of his grandfather's home in rural Canton, he recalled: "There, in real country, with woods and a lake for neighbors, dogs and horses for companions, my brother and I grew up, springs and falls, till college days." His mother read him works by the Lake Poets, and "Wordsworth, Coleridge and Southey, Carlyle and Ruskin came to be part of me, grew into my being." In 1868, the family bought property on Mount Desert Island in Maine, where Harvard president Charles William Eliot was a summer neighbor.

The lifelong impact of Dorr's youthful stuttering is harder to gauge. Thanks most likely to a supportive family and the insights of an understanding doctor, Edward Warren, A.M. 1826, M.D. 1829 (himself a stutterer), the condition proved no bar to his becoming a sociable and publicly engaged man. Warren's assertion that a stutterer searching for a career should choose "that pursuit in which his defect shall afford the smallest obstacle to his progress" may have supported Dorr in forging a new kind of profession suited to his passions and abilities—including the very qualities of persistence and tenacity required to manage his stutter.

After college, Dorr largely spent time with his parents in Europe and in Maine. Around 30, though, he began a decades-long engagement with philosophy. An early spark may have been his chance meeting in Boston with Josiah Royce, whom Dorr then introduced to his friend William James. After Royce joined James in Harvard's philosophy department in the mid 1880s, Dorr read Spinoza with him privately, exploring the unity of God and nature in light of new scientific theories such as evolution. Spinoza's belief in the existence of enduring order and meaning within the constantly changing material world may have colored Dorr's growing appreciation of the weather-beaten granite rocks and ceaseless waves of Mount Desert Island, shaping (together with the Transcendental influences of his youth) his later outlook on conservation as "not a question of breathing-spaces and physical well-being only; it goes far beyond that and is deeply concerned with the inner life of men."

Dorr's philosophy connections also led him to serve on (and sometimes chair) the department's visiting committee for two decades. He led fundraising for a new building, Emerson Hall, to house the department and helped Harvard acquire properties be-

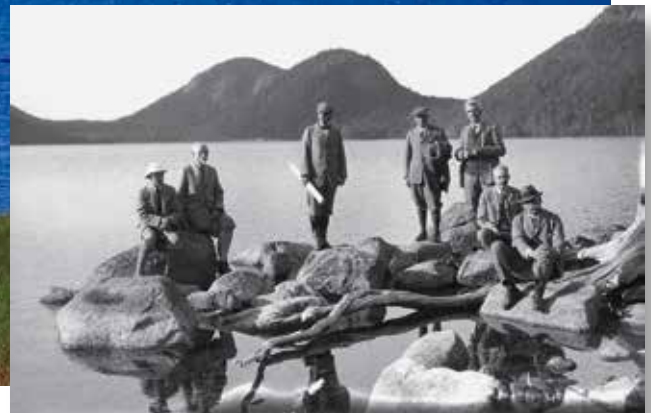
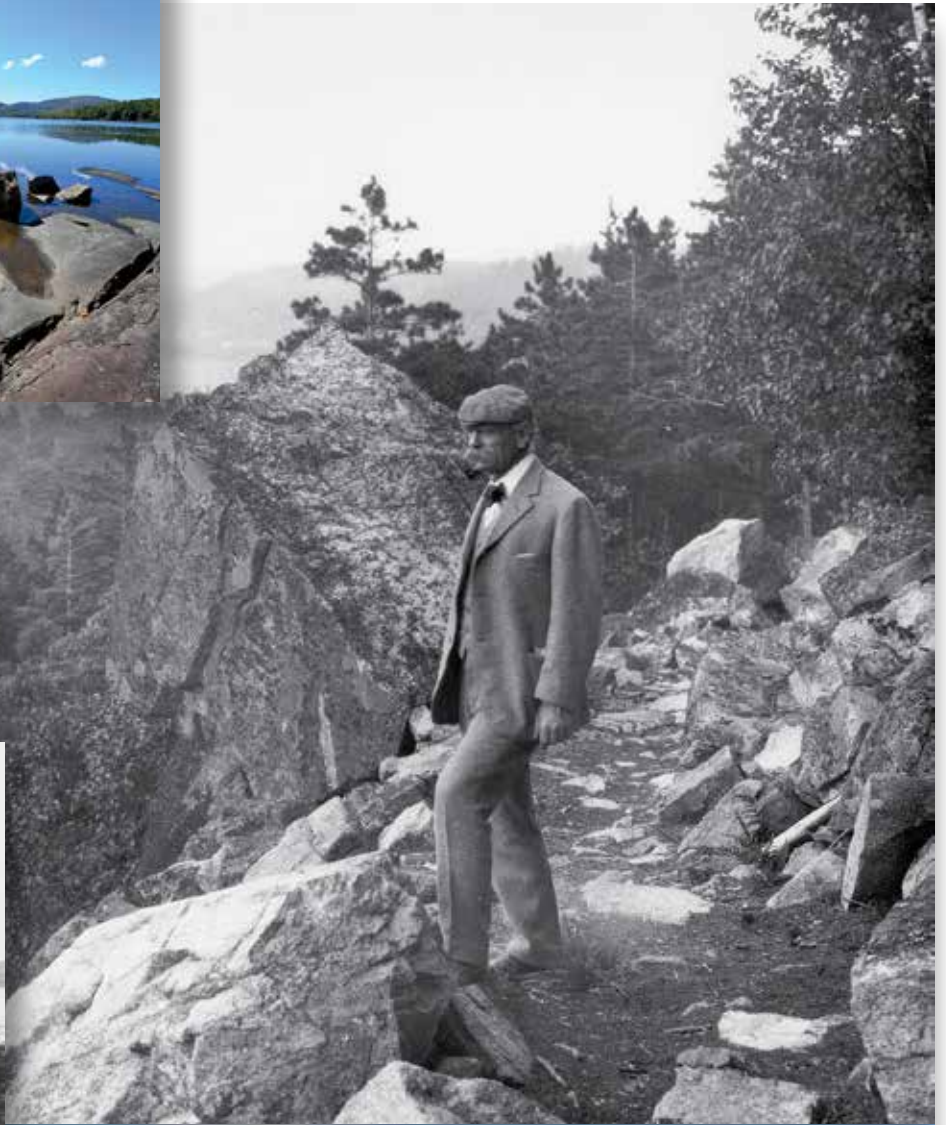
tween the Yard and the Charles River. These tasks honed skills of planning, negotiation, and administration on which he drew when he turned to conserving open space on Mount Desert Island.

In the 1890s, living at his family's home on the island, Dorr developed a real interest and expertise in landscape gardening, founding the Mt. Desert Nurseries, working on other landscaping and conservation projects there (sometimes alongside future landscape architect Beatrix Farrand), and, further afield, advising friends such as the novelist Edith Wharton on her estate in the Berkshires.

In 1891, President Eliot's son Charles, a landscape architect, and others founded The Trustees of Reservations in Massachusetts "for the purpose of acquiring, holding, arranging, maintaining and opening to the public, under suitable regulations, beautiful and historical places and tracts of land" within the Commonwealth. By the early 1900s, increasing threats to the scenery of Mount Desert Island led to that model of private ownership of conservation land being transferred to Maine: the Hancock County Trustees of Public Reservations was created, with Charles William Eliot as president and Dorr as vice president and executive officer. After initial land acquisitions and conservation measures, it became clear that negotiating the varied interests involved would require not a private organization but rather public ownership and management, achieved with the transfer of the assembled properties to federal authority as a national monument in 1916.

During his long tenure as superintendent, Dorr committed all his personal, social, and financial resources to the site's development—solidifying its status through designation as Lafayette National Park in 1919 (renamed Acadia in 1929), expanding its holdings through negotiation with local landowners, and working with John D. Rockefeller and others to create the park's famous system of carriage roads. In contrast to the first Western parks—claimed as "wilderness" and expropriated wholesale—the gradual development of Acadia respected the legal and cultural precedents of its Eastern (and white) constituency. Yet in shaping a national park in "a peopled region where human associations replace in a measure the appeal of far-reaching wildness made in other parks," Dorr's vision of Acadia still offered "one great element of wildness"—"contact with the ocean and the sight from mountainous heights of its great plain of waters stretching boundlessly away till hidden by the curvature of the earth." ▢

Steven Pavlos Holmes, M.T.S.'87, Ph.D. '96, is Scholar-in-Residence at the Boston Nature Center in Mattapan, Massachusetts. He is indebted to Ronald Epp for his groundbreaking *Creating Acadia National Park: The Biography of George Bucknam Dorr* (Friends of Acadia, 2016).



The Plastic Earth

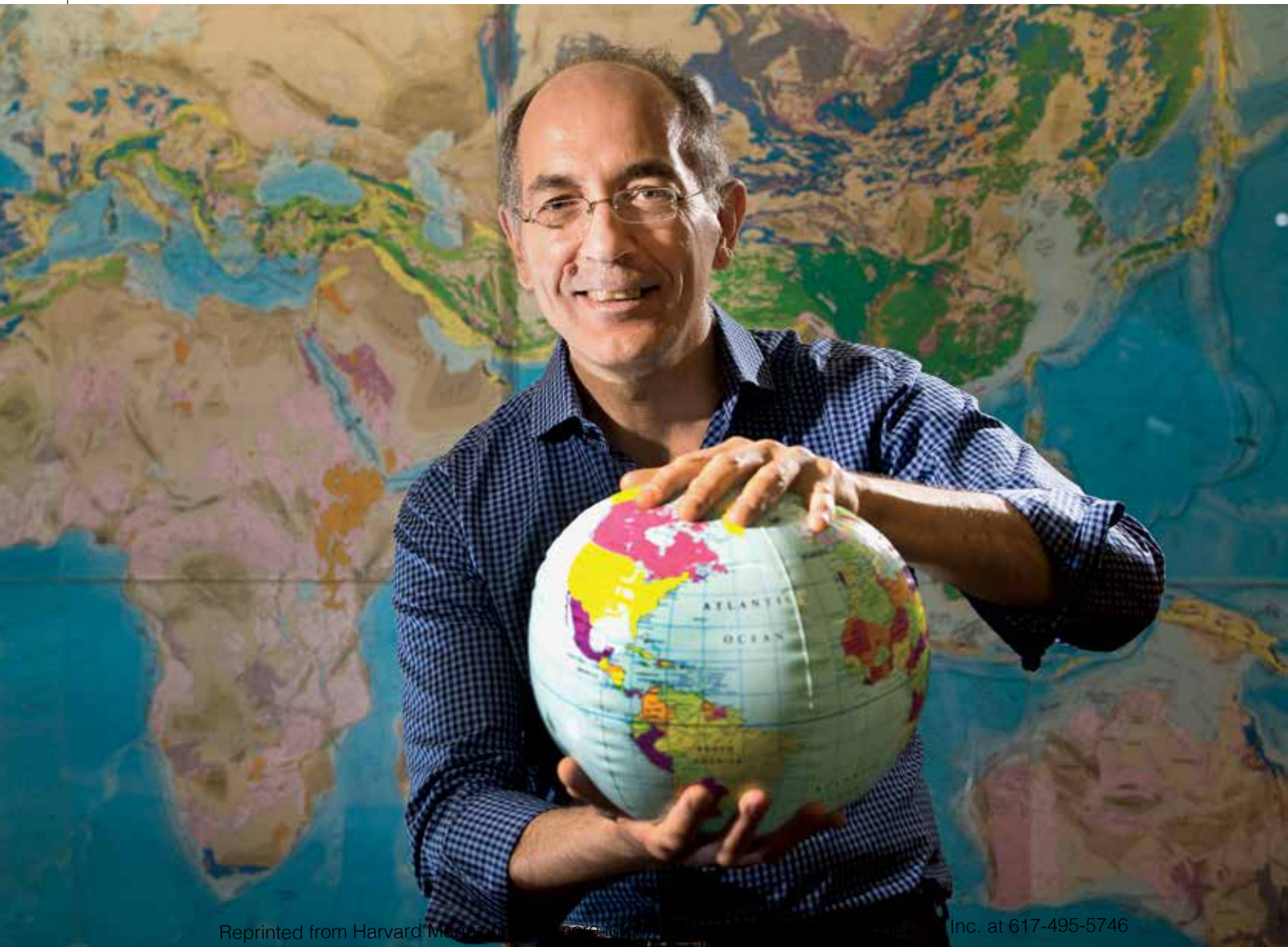
Jerry Mitrovica studies the planet's dynamic history to illuminate climate change. by JONATHAN SHAW

JERRY MITROVICA is a solid-earth geophysicist, but the description is inapt. He spends much of his time demonstrating that the earth is not firm at all—it moves. His lab in Cambridge, for example, oscillates up and down by nearly eight inches twice a day. Mitrovica is a pioneer of dynamic topography, the study of such vertical motions. For most people, these ebbs and flows are new ground. But for Mitrovica, who investigates changes large and small to the planet's shape, on timescales ranging from hours to eons, using evidence that ranges from the history embedded in coral to eclipse records, it's terra firma.

His research, of fundamental importance to earth scientists, also has a public resonance, because his discoveries about the planet's plasticity, and his explorations of its shape-changing past, bear directly on the problem of melting ice sheets and rising sea levels in an era of rapid climate change.

Fame of the academic variety came early to Mitrovica and mushroomed about a decade ago, when he reminded people what happens to local sea levels in the vicinity of a melting ice sheet, like those covering Greenland and Antarctica.

The effect was first described a hundred years ago, but “people had forgotten how big it was,” he says. “It’s big.” If Greenland’s ice sheet melted entirely, sea level would *fall* 20 to 50 meters at the adjacent coast. That’s counterintuitive, but the ice sheets are so massive (Greenland’s ice, one-tenth the size of the Antarctic ice sheets, weighs on the order of 3,000 trillion tons) that two immediate effects come into play. First, all that ice exerts gravitational pull on the surrounding ocean. When an ice sheet melts, that gravitational influence diminishes, and water moves away from the ice sheet, causing sea levels to drop as far as 2,000 kilometers away. (The drop is most pronounced close to the glacier,



because gravity's effects dissipate with distance.) But because the sea level has fallen where the ice sheet melted, it rises everywhere else beyond that 2,000-kilometer boundary, and on distant shores this rise is far *greater* than the global average. The effect amplifies the rise in average global sea level attributable to the addition of the meltwater itself to the oceans. (Greenland alone contributed a trillion tons of melted ice from 2011 to 2014.) Second, the land beneath the now-vanished ice sheet slowly rebounds, rising as the weight of the mass above diminishes, a process that continues for thousands of years after the ice sheet is gone. Locally, this doubles the relative drop in sea level. But globally, the uplifting crust pushes water outward, further raising sea levels around the world.

Intuition guides people to think of the ocean as a bathtub, says Mitrovica: add meltwater and sea level rises equally everywhere. He remembers the reaction at a lecture in the Netherlands when he explained that the sea rises most at the places *farthest* from the melting source. "You have less to worry about from the melting of Greenland," 3,000 kilometers away, "than from ice sheets in Antarctica," he explained to his Dutch audience. But even well-educated people trained to challenge intuitive judgments don't believe it, he says. That counterintuitive finding matters today because temperatures are rising faster toward the polar regions, where ice sheets still remain, but the effect on sea level will be felt most strongly far away, along the coasts where much of humanity has settled.

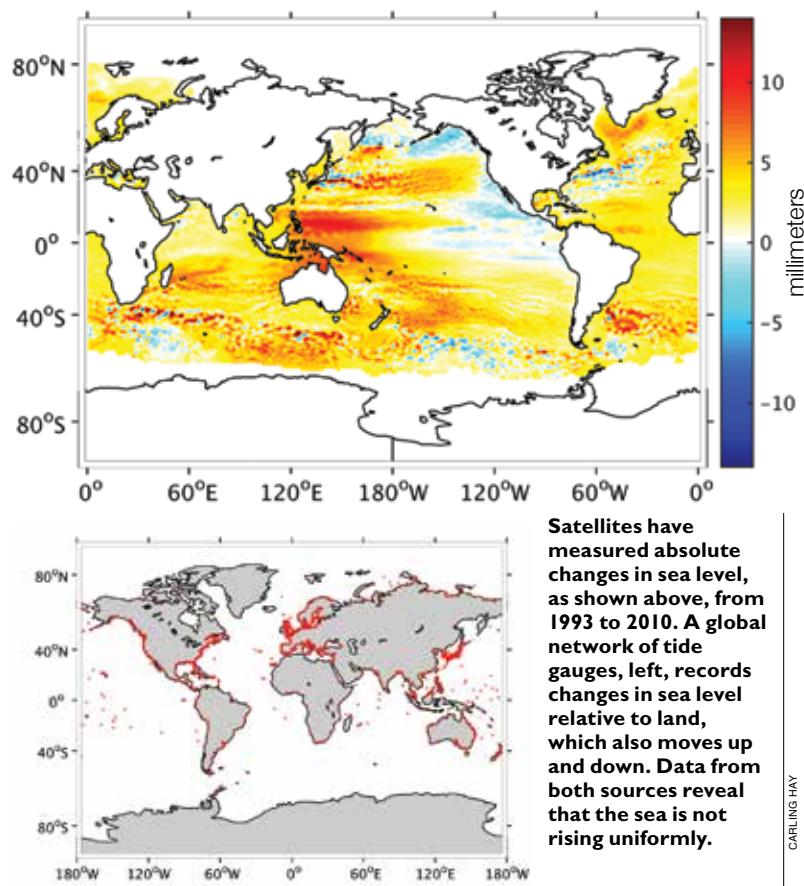
Data from global tide gauges stretching back a century have confirmed differences in the rate of sea-level rise from one place to another. Mitrovica's work not only explained why this is so, but showed how the signals from each melt source—the pattern of progressively higher rates of sea-level rise at locations farthest from an ice sheet—could be disentangled to infer how rapidly Greenland's ice sheets, or those in Antarctica, are melting. Among the places distant from both poles that will be hit hard are the east and west coasts of North America.

Probing the Paleoclimate

DESPITE THE public interest in Mitrovica's work, his main focus is neither the present nor the future. He uses geophysics principally to study paleoclimate during, for example, the mid-Pliocene ice age of three million years ago, when "the earth was as warm as we are about to get in the next 100 years—and yet we don't really know how the polar ice sheets fared." Figuring out what happened to them, and by extension, to sea level, he explains, poses "questions that a solid-earth scientist can answer."

Focusing on the distant past, he says, also affords him and his students a temporary refuge from politically charged scientific debates: "Sometimes we avoid modern climate questions just because there are thousands of people who study them, and it is nice to be able to take a little bit of time to just think through things. We have had the luxury of doing that more than we would have if we were 100 percent in modern climate research." The reaction to a 2015 paper on modern sea-level rise by his postdoctoral fellow Carling Hay underlines the point. "Carling demonstrated that the rise in global

As Jerry Mitrovica demonstrates, the enormous weight of ice sheets in polar regions can actually flatten the earth's rocky mantle, altering the speed of the planet's rotation and changing sea levels, with local results that can differ from the global effects.



average sea level during the twentieth century proceeded at a slower rate than previously believed," Mitrovica says. Climate-change skeptics pounced, claiming, "You see, it is not as bad as we thought."

"But this was in no way a good-news result," he continues. After taking into account contributions such as melting glaciers and ice sheets, and thermal expansion of the warming oceans, they concluded that global average sea level rose between 1 millimeter (mm) and 1.4 mm annually between 1901 and 1990, significantly less than previous estimates (1.6 mm to 1.9 mm per year). But they estimated that between 1993 and 2010, the average global sea level rose at about 3 mm per year, in agreement with other published estimates. Accordingly, they concluded, sea-level rise from the twentieth to the earliest part of the twenty-first century is accelerating faster than previously believed, and faster than at any time in the past 5,000 years.

"You write a paper like this, and you think the message is clear, but people can misrepresent the message quite easily. It's a lesson," he says. Having been "caught up in that mud that comes from studying modern sea level," he adds, resignedly, "These are important problems. We will always do them when we feel we have a contribution to make, but the pushback on these issues does make you a little bit weary."

At the beginning of his career, Mitrovica never imagined that his research would become politicized. He completed his undergraduate and graduate studies at the University of Toronto, a center of plate-tectonics research. His first major paper was on the topography of the American West, where the interior of the continent was under water some 80 million years ago. Debate was raging over whether the land had sunk or the sea had risen. With guidance from a generous colleague, Christopher Beaumont at Dalhousie

"Earth is not an onion with layers that vary with depth. There are large-scale changes sideways."

University, Mitrovica showed that the western half of the North American tectonic plate had tilted downward, causing the ocean to inundate the interior. At the time, he declares, "I can assure you, I wasn't thinking of it as a sea-level problem. I was thinking of it as a plate-tectonics problem. It never dawned on me that I was entering into what is now called 'long-term sea-level research.'"

How Earth Shapes Its Climate

MITROVICA CAME TO HARVARD from Toronto in 2009 for opportunities to expand his interdisciplinary research. "In Toronto, for example, we did no work on ice-sheet stability, and we didn't look at the statistical analysis of climate signals." Since arriving in Cambridge, he and his students have "branched out in ways I would not have predicted, and each of them has really made an important contribution." At Harvard, he landed among people like professor of earth and planetary sciences Peter Huybers, with whom he and his students have collaborated on a number of important papers, and Adam Dzierwonski, then Baird professor of science, who pioneered the use of seismic tomography—the measurement of waves propagating from earthquakes—to create images analogous to sonograms of the earth's interior.

"Earth is not an onion with layers that vary with depth," Mitrovica explains. "There are large-scale changes sideways." Imagine

geophysicists modeled everything from plate tectonics to deformations in the planet's shape.

His presence in the office next door also influenced the work of one of Mitrovica's current graduate students, Harriet Lau. Inspired by seismic tomography, Lau is attempting to develop a parallel technique, "tidal tomography," using the daily rise and fall in land elevations, like the eight-inch flux observed in Cambridge, to see whether these movements can enhance understanding of the planet's internal structure. Measured by GPS receivers on the earth's surface, such "body tides," which vary by geographic location, are caused by the same predictable forces that drive ocean tides (the gravitational pull of the sun and the moon). The goal of Lau's ambitious work is to determine whether the two large structures Dzierwonski imaged are buoyant, energetically upwelling features, or dense anchors on the slow creep of rock within the earth's rocky mantle. Answering that question will shed light on the pace of the earth's evolution since its birth 4.5 billion years ago, a key unresolved issue in understanding how the atmosphere, ocean, geology, and climate have changed over time.

"When most people think of climate, they think of the atmosphere and things like that," Mitrovica says. "They don't imagine that the solid earth plays any role in the evolution of the climate system." In fact, "it plays a crucial role." For example, at the height of the last

ice age, glaciers covered Canada, Scandinavia, and much of the northeastern United States. Twenty thousand years ago, the glaciers began melting; by 5,000 years ago, they were nearly gone. But how much ice was there at the glacial maximum? Scientists want to know because that will tell them something about ice-age climate and about how the ice sheets responded to cooling and warming.

One way to estimate the size of those ice sheets, which locked up a lot of water, is by reconstructing what happened to sea level as they melted. Scientists often use Barbados as a gauge to calculate ancient sea level because the island lies far from the polar ice sheets' maximum extent. Cliffs of fossilized coral, which grows only underwater, ring the island and record how sea level has changed in the past 20,000 years. But "the problem with that is that Barbados is not a magical meter stick," Mitrovica explains. "It is influenced by a number of solid-earth processes." Some of these geophysical processes cause the island to sink, others to rise. "There is no way to model

What Roman Ruins Reveal

GEOPHYSICAL PROOFS are not the only kinds of evidence Mitrovica marshals to illuminate the history of sea-level rise. One of his favorite examples comes from a fellow researcher at the Australian National University, Canberra. Kurt Lambeck, a professor of geophysics, has used 2,000-year-old Roman fish tanks to illuminate changes in sea level. In an era long before refrigeration, wealthy Romans built holding tanks beside their coastal villas so they could eat fresh fish whenever they wished. Sluice gates positioned with their tops eight inches above the high-water mark let seawater in and out, flushing the tanks with the natural ebb and flow of the tides. To work, they had to be built at a precise level relative to high tide.

Lambeck, after correcting for known geophysical influences such as the ongoing changes in Earth's shape due to the ice age, showed that there has been virtually no change in sea level at these sites since the height of the Roman empire. The finding refutes climate skeptics' claim that sea level has been rising continuously for a long time. Had the water been rising at

two millimeters per year for two millennia, these tanks would today be under four meters of water. Lambeck's work thus underscores the significance and implications of Mitrovica's recent finding that sea level rise has accelerated dramatically in the past two decades.

Roman fish tanks in Cyprus, built at a precise level relative to high tide, show that sea level has barely changed in two millennia.



© JAMES SCHUTTE/ALAMY STOCK PHOTO

those processes accurately if you don't know something about the structure underneath Barbados. To get a measure of how much water entered the ocean as the glaciers melted, you have to know how the crust around Barbados" uplifted as a result of forces ranging from plate tectonics to deformations caused by the melting ice itself. Information gleaned from seismic or tidal tomography, he hopes, "will allow us to better constrain that internal structure and improve our estimates of ice volumes."

Several years ago, Mitrovia's graduate student Jacqueline Austerlitz used seismic imaging of the structure beneath Barbados, which included a portion of a tectonic plate that had descended beneath the crust, to do just that. She found that the existing consensus of a 120-meter rise in sea level was low by as much as 10 meters, or about 33 feet. In other words, an additional volume of water greater than that now stored in the Greenland ice sheet had been missed. (The Greenland ice sheet currently holds enough fresh water to raise average global sea level 20 feet, while the Antarctic ice sheets hold another 200 feet). The melting of that much ice would be sufficient to affect sea level significantly, to deform the earth's crust, and even to affect the axis of the planet's rotation.

"The better we understand the earth's internal structure, the more we can learn about paleoclimate," says Mitrovia. Lau's work, in other words, has an application well beyond describing the structure of the deep earth. "Imagine, she is using tides measured by GPS receivers around the world to improve estimates of ice mass 20,000 years ago," he says. "It is shocking in a way, but more and more scientists are making these connections, and I think that is a really positive development."

Last year, Mitrovia won the Geological Society of America's Day Medal, which recognizes "outstanding distinction in the application of physics and chemistry to the solution of geologic problems." The award was given in part for research that tackled a problem that had been unresolved for nearly 15 years: Munk's enigma. Walter Munk, a renowned professor emeritus at the Scripps Institution of Oceanography, argued that if all the land-based ice that has supposedly been melting for the last century really *has* been melting, the water that was released from polar regions should have flowed toward lower latitudes and the equator—and this redistribution of mass should have slowed the rotation of the earth (much as spinning skaters slow as they extend their arms). But modern satellite observations suggested that the earth's spin has not slowed as much as forecast. Although Munk wasn't questioning estimates of sea-level rise per se, his enigma posed a serious challenge to earth scientists involved in studies of global warming.

The solution to the enigma required a reanalysis of a very different class of Earth rotation data. Specifically, ancient eclipse records extending back thousands of years from "Babylonian, Chinese, Arab, and Greek astronomers indicate that the earth's rotation has slowed about four hours" in two and a half millennia, Mitrovia explains. Geophysicists have long attributed this slowing to two effects. First, tides crashing on shorelines apply a brake on Earth's rotation—an effect known as tidal dissipation. The second is a remnant effect of the last ice age. "The earth 20,000 years ago was covered by ice at the poles" and that mass "squished the solid earth down, so that the earth's shape was a little flattened. As those ice sheets melted—and continuing to the present day—the earth has gradually become more and more spherical," and therefore less flattened—and fattened—at the equator. "As it comes back," he says,



Coral reefs in Barbados, above, reveal changes in sea level relative to land. But did the sea fall, or did the land rise? The structure beneath Barbados holds the answer. Eclipse records, like this Babylonian report written on a clay cuneiform tablet from January 30, 10 B.C.E., capture Earth's slowing rotation through time.



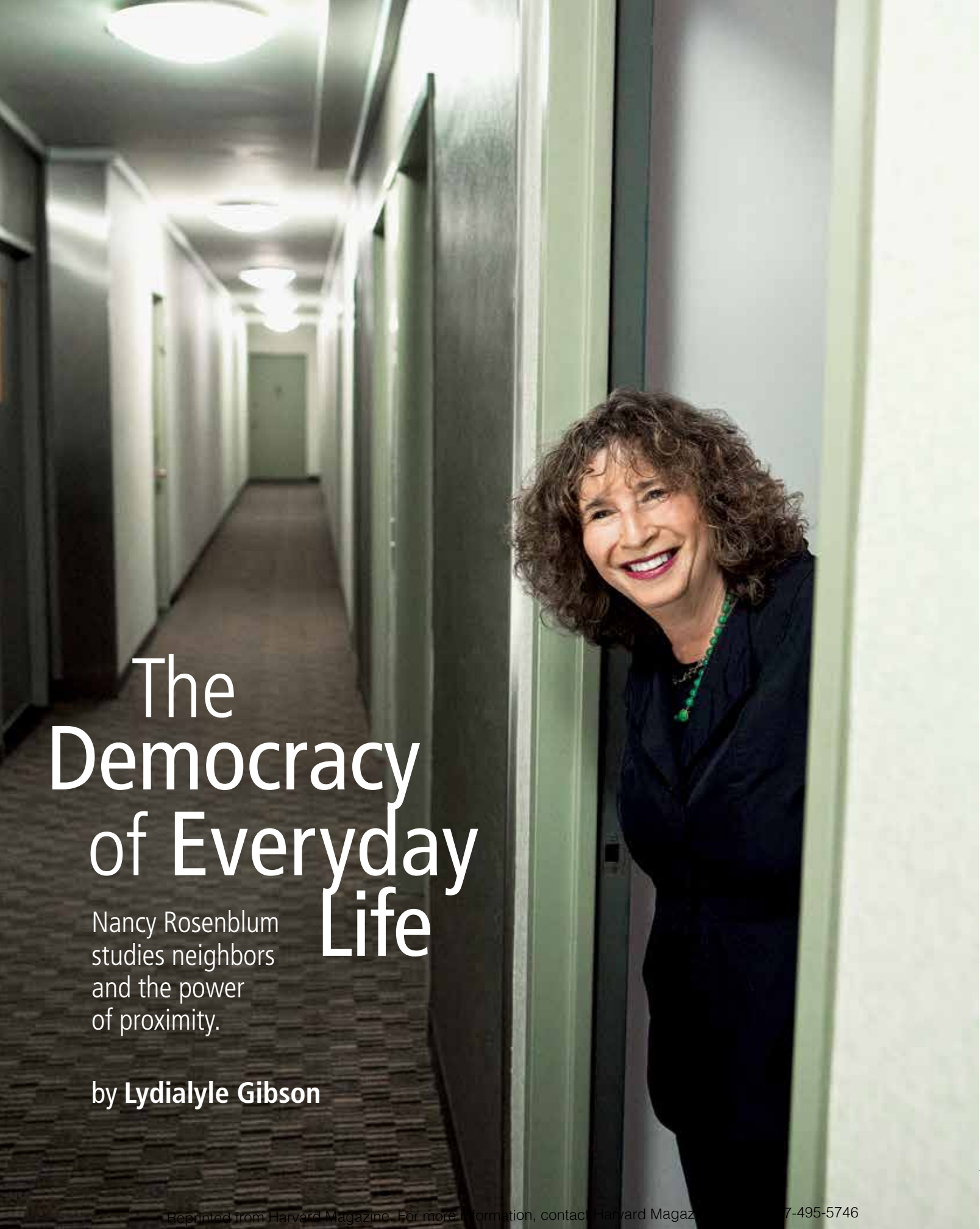
linking the planet's evolving geometry to figure skaters drawing their arms in—"it's speeding up." These two effects neatly added up to the four hours of slowdown evident in the eclipse record.

But Mitrovia and his colleagues realized that a very important process had been left out of this analysis. Magnetic coupling between the earth's iron core and its rocky mantle has also been causing the rotation of the crust to slow. When Mitrovia's team included this braking effect, the numbers no longer worked. They realized that the ice-age model scientists had been using in their calculations had been inaccurate. The model had to be revised so that all three effects—tidal dissipation, ice-age shape changes, and magnetic coupling—added up to the four hours of slowing.

How does that connect to Munk's enigma, which asked why modern glacial meltwater had not measurably slowed the earth? The answer is a roundabout one. Modern satellite measurements allowed scientists to make an independent measurement of the earth's rotation. When the satellite data were corrected for ice-age effects using the new model that fit the eclipse records, a small, unexplained slowdown was revealed. This discrepancy, Mitrovia says, was precisely the signal one would expect from the melting of glaciers during the past century. Munk's enigma was solved—and another, albeit subtle, perturbation to the progressively warming Earth system was revealed. As Mitrovia explains, "Munk's enigma reinforces my view that significant progress in understanding the real, long-term effects of climate change—past, present, and future—will sometimes require that we look downwards to embrace the complex, dynamic evolution of the solid earth." ▢

Jonathan Shaw '89 is managing editor of this magazine.

THE BRITISH MUSEUM



The Democracy of Everyday Life

Nancy Rosenblum
studies neighbors
and the power
of proximity.

by **Lydia**lyle Gibson

IT STARTED WITH A BULLY. “The noise bully,” Nancy Rosenblum calls him, a man who lived in her Cambridge loft building years ago and tormented the family next door with a rooftop air conditioner whose roar and vibrations shook their apartment day and night. They couldn’t sleep. They tried earplugs and insulation; they tried moving their bed to the back of the room. Finally they tried selling their place. They received no offers.

Meanwhile, the noise bully refused to move the air conditioner, even after Rosenblum and other neighbors confronted him on behalf of the sleepless family, even after they got together and offered to help pay for the cost of relocating the AC unit to a quieter spot on the roof. Instead he hired engineers to certify that the sound and vibration were within legal limits and posted the paperwork in the hallway. “This was malice,” Rosenblum says. “It was an act of deliberate cruelty.” In part, he liked the attention. “Some people will accept even negative attention.” But, she believes, he was also enjoying the power of proximity: “There’s a saying that goes, ‘No man can live longer in peace than his Neighbour pleases.’”

Eventually the bully moved away, and things more or less resolved. But the episode stayed with Rosenblum ’69, Ph.D. ’73, who until her retirement this past May was the Clark professor of ethics in politics and government. She kept thinking about the particular social sphere that neighbors inhabit, distinct from family or friends or citizenship at large, a separate moral identity with its own ethos and structure and set of norms. Neighbors’ daily encounters—their feuds and friendly nods, barking dogs and blaring televisions, unkempt yards and usurped parking spots, tools borrowed and returned, plants watered in one another’s absence, silences kept or broken—make up what Rosenblum has come to describe as “the democracy of everyday life.”

That idea anchors her book *Good Neighbors: The Democracy of Everyday Life in America*, released this past May. In it, Rosenblum lays out her theory of neighborliness: “both a supplement and corrective,” she says, to American democracy’s more formal frameworks and institutions. The concept of “good neighbor” (and its opposite) goes back as far as the country itself. Writing *A Model of Christian Charity* on board the *Arbella* in 1630, before he reached what would become the Massachusetts Bay Colony, John Winthrop insisted on the foundational significance of “love thy neighbor”: “Upon this ground stands all the precepts of the moral law.” In her introduction to *Good Neighbors*, Rosenblum extends Winthrop’s argument. “The democracy of everyday life rises from the ground of day-to-day reciprocity and neighbors’ responses to ordinary kindnesses and ordinary vices,” she writes. “We give and take favors and offense; we assist, speak out, monitor, scold and rebuke, and rally others to enforce ‘what anyone would do, here’; we live and let live.”

Good Neighbors is a curiously gripping book, with its amalgam of political philosophy, moral psychology, and stories drawn from literature, journalism, and Rosenblum’s own life. In its pages, she roams a wide terrain. There are the sleepy (or sinister) suburbs and troubled urban neighborhoods where danger and distrust make it harder—and all the more important—to “live and let live,” a practice that in Rosenblum’s formulation is not a shrug of indifference but a deliberate way of letting neighbors know that you mean them no harm. She digs through oral histories of Japanese internment camps and early twentieth-century lynchings, atrocities in which the social framework broke down and neighbors betrayed and murdered one other. She explores the rescue that neighbors

offered in the rising floodwaters of Hurricane Katrina.

Rosenblum also spends time with fictional neighbors: Willa Cather’s frontier settlers, Robert Frost’s mending-wall repairers, the Polish immigrants jostling together in Saul Bellow’s *Chicago*, the suburbanites in John Cheever’s and Raymond Carver’s short stories. She devotes a whole chapter to Henry David Thoreau and the neighbors around Walden Pond to whom he gave such attentive and sustained observation. “Literature gives you what anthropologists get when they do field research,” Rosenblum says. “If you want a good description of the phenomenology, the *felt experience*, of neighbors in different contexts, and over different times—where else are you going to get it?” The stories and novels and poems don’t merely illustrate her ideas, she adds—they influenced them. She couldn’t have written the book otherwise. “The phenomenon of neighbor relations so infuses American literature that our greatest writers and thinkers have written about neighbors.” And small wonder: “Neighbors are not just people living nearby,” she writes. “Neighbors are our environment. They are the background to our private lives at home.”

A Fence and a Neighbor

HOME. That word expresses perhaps the most deeply felt theme in *Good Neighbors*. The idea of home is not explicitly a part of the book’s core philosophical argument, but it suffuses every page, a shadowy undercurrent, a beating heart. Home is the place with “no exit,” Rosenblum tells us, whose refuge is precious and fragile, where people—neighbors—are at their most vulnerable. In political theory, home is an “underappreciated moral and psychological phenomenon,” she says. “We can’t overestimate what it means to have a home, even if it’s a shack under a bridge. A place that’s yours, that you can control, that you can close the door on, that you can keep people out of. And that you can let people into.”

Four years ago, Rosenblum moved to New York City. On a one-year fellowship at New York University, she rented a little apartment right off Washington Square Park, at Macdougall and Bleecker streets—the heart of Greenwich Village and a place with, among other things, a whole new cast of neighbors. She loved it. “The youth I never had,” she says. After that, she never really left. When she returned to teaching at Harvard the following year, she commuted back and forth by train.

Most of Rosenblum’s youth was spent in Cambridge, where she arrived as freshman at Radcliffe in 1965. The rest was in suburban Teaneck, New Jersey, in a neighborhood of schoolteachers and social workers. “I used to say that ours was a mixed neighborhood—Orthodox and Reform Jews,” she deadpans. Rosenblum’s parents were divorced; her father was an economist, her mother a social worker, and her stepfather taught math at a junior high school in the Bronx. As the oldest of seven, Rosenblum helped raise her brothers and sisters; she was 13 when the youngest was born. “Our most remarkable neighbors lived across the street,” she recalls. “It was one of those developments where the houses are all alike, and these two identical twin brothers had married identical twin sisters, and they lived right next door to each other in identical houses.”

Then at 17 she came to Radcliffe, and in the five decades since, Cambridge became an anchor, emotionally, intellectually, and geographically, even as her home life moved beyond its borders. “Almost every physical bit of this campus—the Law School, the Yard, the river Houses—are part of my life,” she says, sitting in her office

on Cambridge Street one April afternoon, midway through the last semester of her teaching career. “I mean, I had my first love affair in Winthrop House. It’s odd, this kind of personal archaeology as you walk through the campus.” The decades have deposited new layers of remembrance: faculty seminars and meetings with the dean and other business of grown-up academic life. “But still,” she says. “It’s there. And every once in a while, an emotion comes over me with some memory that surfaces.”

The neighborhoods around campus, too, inhabit that sphere of memory. She recalls the shabby Green Street apartment in Cambridge where she lived as a political-science graduate student in the early 1970s, before she and her husband married and decamped for Somerville. Her grandmother, a Polish immigrant, visited once. Her grandparents “were people who had truly worked themselves up in the world—I mean, they *really* had lived on potatoes,” she says. Her grandmother walked in the door of her apartment, took one look around, and started to cry. Rosenblum laughs about it now. “It was like, *shtetl* to *shtetl* in two generations.”

She and her husband, Richard Rosenblum, a sculptor, spent most of their married life in Newton, Massachusetts. “A replication of Teaneck, New Jersey,” she says, “except a little more affluent, a little less mixed.” They raised their daughter there, moving from one house to another. It was also during those years that Rosenblum’s academic life detoured from Cambridge to Providence. She had joined the

Stories of disputes between suburban neighbors are easy to come by, abundant both in literature and in life. Rosenblum could have filled her whole book with them. And it makes sense, she explains, when you consider Americans’ striving perfectionism. “The United States has always been a country of utopian communities,” she says. “We’re ground zero.” All that cheap land and wide open space, plus the bursting eclecticism of the American population. Decades after the communes of the 1960s and ’70s and almost two centuries after Fourier Societies—inspired by the early French socialist Charles Fourier—first flowered across the Northeast and Midwest, utopianism remains deep in our bones. “I think there’s a spillover from that to suburban life, where you’re, in a sense, designing a community,” Rosenblum says. “The peril is, when you move in, you think you’re getting like-minded people and that the rules are going to protect and buffer you.” But often they don’t, and disappointed expectations lead to anger and acrimony and lawsuits. “People don’t understand that you can only resist randomness so far, and then there are just the people who actually live up the street.”

Rosenblum moved back to Cambridge after her husband’s death in 2000 from cancer, to the loft building where the noise bully would earn his nickname. The building was fertile ground for lively neighbor relations. A former nineteenth-century elevator factory in Porter Square—Rosenblum moved there for the high ceilings that could accommodate her husband’s massively tall sculptures—it had origi-

“When you move in,” Rosenblum says, “you think you’re getting like-minded people and that the rules are going to protect and buffer you.” But often they don’t.

Harvard faculty in 1973, right after receiving her doctorate; in 1980 she moved to Brown University’s political-science department, returning periodically to Harvard and Radcliffe for fellowships and visiting professorships before coming back for good in 2001.

While living in Newton, Rosenblum and her husband got into a scuffle with neighbors over a gate her husband wanted to build at the edge of their property, with a Chinese-inspired imperial roof. Rosenblum and her husband called it a “fence,” which municipal rules sanctioned; their neighbors insisted it was a “structure.” In the end, a city inspector came out and declared their gate a fence, and that was that. It stayed. “But it did sour relations between us and our neighbors,” Rosenblum says. “It was never quite the same. That’s almost always how it is once you have some sort of negative relationship with a neighbor—it’s really awkward in ways that are hard to repair. And it’s not a major life event, but it alters the experience of home.”

On Cape Cod, where she and her husband owned a house for a time, an uglier dispute engulfed their community. She describes it briefly in *Good Neighbors*: in 1997 her homeowners association sued and was countersued by a wealthy buyer whose construction plans for a new home violated the association’s covenants. The lawsuit dragged on for nearly a decade (“He thought he could out-lawyer us,” she says), before a district court ruled in favor of the homeowners association and the wealthy buyer sold and moved. The fight “transformed us from stakeholders,” Rosenblum writes, “into neighbors united by a common adversary—a reliable source of solidarity. We always had something to talk about.”

nally been converted into cheap lofts for artists. “So that they would have neighbors who appreciated that they might work all hours of the day and night,” she says, “that they would use welding machines, that there would be noise.” But as the neighborhood began to gentrify, so did the building. And the new residents “didn’t necessarily want the noise and the smells and the acid from the etching plates,” she says. Sometimes their building’s particular democracy of everyday life all worked out; sometimes it didn’t. “It was this changing, dynamic mix of people.”

“We’re Not of a Piece”

THAT *Good Neighbors* arose so directly from Rosenblum’s own daily experience makes it unusual in the world of political theory, but not in her oeuvre. “Something happens, and I’m startled into thought,” is how she puts it. “It’s not a straight line, but neither is a research agenda.” That everydayness is one of the threads tying together her work, in a career of few obvious ones. Rosenblum’s subjects are eclectic and contrarian and deceptively ordinary; they often set up a tension between the formal aspects of political theory—institutions, rights, analytic categories—and the personal and psychological. Almost always her subjects have gone unnoticed by the rest of her field.

In 2008, after discovering to her alarm that most of the students in her course on election law rejected party labels, calling themselves not Democrats or Republicans, but Independents—years later, she still sputters in disbelief telling the story of that discovery—she

wrote *On the Side of the Angels: An Appreciation of Parties and Partisanship*. The book traces the history of American anti-partyism and defends the “moral dignity” of partisanship and party identity. She wound up arguing that parties constitute a fundamental and historic achievement of liberal democracy, and that they give structure and coherence to politics and regulate its conflict.

Ten years before *Angels*, Rosenblum wrote *Membership and Morals: The Personal Uses of Pluralism in America*. It grew out of her observations about civic groups that had come under fire for being illiberal and undemocratic—the Boy Scouts with its ban on gays, the Jaycees with its all-male membership. On the way to an argument in favor of unfettered pluralism and freedom of association, even when those associations are authoritarian or outright oppressive, the book surveys a vast landscape of Americans’ voluntary civic attachments: prayer groups and bowling leagues, homeowner associations, self-help groups, secret societies, and book clubs—as well as hate groups, paramilitary organizations, and racial identity groups. “People are complex,” she says. “We have the capacity for holding and entertaining—as parts of our moral identity, not just superficially—a variety of practices and political and moral aspects. We’re not of a piece, and neither is our society.” She argues that people navigate this motley landscape by having a certain kind of freedom. “I’m always guided by a love of liberty, and particularly freedom of association. I would say that’s our most important constitutional freedom.”

At an event in early May celebrating Rosenblum’s work and marking her retirement, her former student Emma Saunders-Hastings, Ph.D. ’14, described how Rosenblum’s scholarship “takes up one of the neglected tasks of political theory: capturing our intuitive reactions to political life.... This is the thing she does better than anyone.” Now a postdoc at the University of Chicago, Saunders-Hastings was discussing Rosenblum’s 1987 book, *Another Liberalism: Romanticism and the Reconstruction of Liberal Thought*. Rosenblum calls it her first “real” book (her dissertation gave rise to her actual first book, *Bentham’s Theory of the Modern State*, published in 1978). *Another Liberalism* considers the inherent conflict between what Rosenblum calls the “romantic sensibility”—heroic individualism and self-reliance and self-improvement—and the strictures of liberal democratic government. During the discussion, Saunders-Hastings elaborated: “Nancy’s work expresses a particular kind of hope: that we might be able to see reflected in political theory the experiences and emotions of real human beings. Exceptional people, ordinary people. That we be able to see the blood in the veins.”

For many years, Rosenblum taught Government 1061, “Modern Political Philosophy,” which she herself took as an undergraduate. The course begins with Machiavelli and progresses through Hobbes and Locke, Rousseau, Kant and Hegel, and Marx, on its way to Nietzsche. In other words, it covers the canon. Her introductory lecture for that course was titled “The Anchored Book, the Needy Reader, the Eternal Truth, and the Jumping Mind,” and it offered four ways of reading: historicist, utilitarian, traditionalist, and something closer to aesthetic. She would tell her students that if they paid attention to how they read and what attracted and excited them, then they would learn something about themselves, not just about the works. Rosenblum herself is the fourth

kind of reader, she says: the jumping mind. “What I respond to in these texts is just the sheer creative genius of these writers. I find them inspiring, both for their pictures of political greatness and their pictures of evil.... The jumping mind response to these books is, I think, what makes you want to do political theory. The idea of trying to understand your time politically in this way.”

She recalls two lines from Wordsworth that she frequently quoted in meetings with new graduate students: “What we have loved, / Others will love, and we will teach them how.” She laughs. Word-



sworth got it wrong, she says: you can’t teach someone to love anything. “But you can explain to them why you do. And you can suggest to them the different ways that they might. And that’s what I’ve tried to do.”

There is something of Rosenblum’s beliefs about liberty in her teaching, too. At the event in May, Cornell law professor Aziz Rana ’00, Ph.D. ’07, another former student, noted the breadth of research subjects and opinions among Rosen-

White teenagers kick an African-American man during a 1950 lynching (top); Japanese Americans bound for internment camps board a bus at Lone Pine, California (bottom).

blum's graduate students over the years. "Nancy's really had no desire to replicate her own arguments," he said. "That's quite rare." Describing what he called her generosity and warmth as a mentor, he talked about her ability to "think within the terms of her students, to produce arguments in conversation that are the natural extension of how they're conceiving of their own project." Looking up at Rosenblum sitting a few rows away in the auditorium, he added, "That's why so many students gravitated toward you." McGill professor Jacob Levy, who was Rosenblum's student as a Brown undergraduate, said that she had "deeply shaped my sense of the possibility of political theory." At the end of the evening, a handful of current graduate students rose up from the audience to present Rosenblum with the Everett Mendelsohn Excellence in Mentoring Award, established by the Graduate Student Council; she is one of five Harvard faculty members to receive it this year. One of the students handed her an engraved silver bowl. "From many grateful students," he said.

Rosenblum's own mentors at Harvard were political theorists Michael Walzer, Ph.D. '61, now a Princeton professor emeritus, and Cowles professor of government Judith Shklar, who died in 1992. Walzer advised Rosenblum on her undergraduate senior thesis, and years later his 1983 book *Spheres of Justice* opened up a concept that's become fundamental to her work: the idea of "giving dignity to the autonomy of different spheres of life and the experience we have in them and the norms that should guide our behavior. Those things came to lie behind everything I wrote."

"Neighbors hold our lives in their hands," Rosenblum writes again and again, and it is true.

Shklar was Rosenblum's graduate adviser, and she still rereads Shklar's 1984 collection of essays *Ordinary Vices*, a "deep phenomenology" of cruelty, hypocrisy, snobbery, betrayal, and misanthropy. Like Rosenblum, who was then a young professor working on *Another Liberalism*, Shklar plumbed the depths of literature to bring out truths about her subjects. And like Rosenblum, Shklar drew on moral psychology. "She gave me permission to do what I was already doing, already experimenting with," Rosenblum says. "I saw that you could go somewhere with it."

From Lynching to Katrina

ROSENBLUM SPENT the better part of a decade researching and writing *Good Neighbors*, teasing out the norms and customs and regular principles that govern neighbor relations. But the passages that come back to her now are not the norms, but the outliers, the extremes: violence and rescue, murder and deliverance. She's haunted by what remains unexplained, and unexplainable, the "deep ethic," as she calls it. "People who save other people talk about being a good neighbor," she notes, "and I think there's a sort of double resonance there. There's a moral take-home about the significance of being a good neighbor, the internalization of that idea." And it goes back to the notion of home and why its disruption is so catastrophic. "Neighbors hold our lives in their hands," Rosenblum writes again and again in the book, and it is true. Narrating what happened to Japanese citizens in 1942 when the order was given to evacuate them to internment camps, Rosenblum describes how so

many were assaulted by people they knew in drive-by attacks, how their neighbors vandalized and set fire to their property, "swooped down like scavengers" to profit from the forced sale or abandonment of Japanese shops and businesses, farms, machinery, property, homes. And heartbreakingly—and in some ways just as cruel—they turned away. Rosenblum describes how, seeing their Japanese neighbors herded off with overstuffed suitcases, some people didn't even wave goodbye.

Even worse is the "unique horror" and "intimate violence" of neighbors lynching neighbors. In a chapter called, simply, "Killing," Rosenblum describes the chaos and terror and wounded confusion. Often enough, "victims knew the people who mutilated and killed them," she writes. "Murderers knew their victims. Locals knew who the killers were." Rosenblum quotes the testimony of an Alabama freedman who saw his son cut to pieces with a knife. "I knew him," he said of the perpetrator. "Me and him was raised together."

Civil-rights activist James Cameron's survival memoir chronicles a 1930 lynching attempt in Marion, Indiana, when he was 16 years old. He and two friends had been accused of killing a white man in an armed robbery and of raping his girlfriend. A mob stormed the jail the same night the three were arrested and grabbed the other two boys, whom they beat and hanged; one of them died even before the noose was around his neck. When it was Cameron's turn, an unidentified woman interceded on his behalf. He was beaten but returned to the jail alive. Rosenblum quotes his memoir: "It is impossible to explain the impending crisis of sudden and terrify-

ing death at the hands of people I had grown to love and respect as friends and neighbors," he wrote. And of the crowd at the lynching: "I recognized a few faces from homes near my own neighborhood. I saw customers whose shoes I had shined many times. Boys and girls I had gone to school with were among the mob...neighbors whose lawns I had mowed and whose cars I had washed and polished."

At the other end of the spectrum are the rescuers and protectors: local sheriffs who faced down lynch mobs, neighbors who did not take part, the woman, whoever she was, who saved James Cameron from hanging. "Even in a caste system, some neighbors signaled 'I know you' and 'I will do no harm,'" Rosenblum writes. "During the Florida massacre in 1923 that killed six blacks, burned the entire black section of Rosewood to the ground, and sent people running for refuge in the swamps, white neighbors took in women and children to protect them from the gunfire, hid them, and got them onto trains to safety. Moving firsthand accounts describe the interruption of viciousness as men and women recover their own identity as a neighbor....A memory, a familiar gesture in the present, the appearance of a person they know from home—something mundane returns me to the person I am there where I live."

In modern memory, Hurricane Katrina looms large, both for the massive governmental failure to protect the most vulnerable citizens, and for the way those citizens—neighbors—looked after one another. "Neighbors' presence on the deranged terrain around home...provides more than physical orientation," Rosenblum writes. "Congregation on the street stimulates an awakening." People with

boats rescued neighbors from rooftops and trees; neighbors shared food and water and siphoned off gasoline and drove people out of immediate danger. They scared off alligators and rescued each other's pets; they found liquor and cigarettes, diapers, medicine, mops, bleach. They comforted one another and kept each other safe. They told each other that it would be OK, and they made it true. Rosenblum describes people "venturing out into a chaos that was unimagined, with no instructions or protocols, judging immediate necessity and taking action." Mutually vulnerable, neighbors were defending their lives and homes.

* * *

IN NEW YORK CITY, Rosenblum recently moved in with her companion of the past few years, Robert Jay Lifton, a psychiatrist and scholar who studies war and political violence (his best known book is *The Nazi Doctors: Medical Killing and the Psychology of Genocide*). Lifton's place is on the West Side, but Rosenblum's own apartment, the one she bought and still uses as a studio, is back down in the Village, in a white-brick high-rise just around the corner from Union Square Park. Her living-room window gazes out to the Empire State Building in the distance and, in the blocks in between, to dozens of brick apartment buildings, both facing and facing away, their low, square shoulders stacking up one behind another, with aging water towers perched on every rooftop. It's like a jigsaw puzzle, a view of the layered Manhattan neighborhoods laid down in the nineteenth century. "This is old New York," she says. "This is New York as I imagined it."

Her neighbors in this building are physically closer to each other than she's used to. "I'm from suburbia and Cambridge," she says. "The accident of proximity was brought home to me when I got this place." The smell of meat, distractingly intense, emanates all day long from the kitchen across the hall, whose door backs up catty-corner to Rosenblum's—a problem she hasn't yet figured out how to broach. She's learning new norms, new etiquette, the democracy of everyday life in a building like this one. "The elevator is a phenomenon," she says. "I've begun to see that many, many people relate to one another through the elevator." They know little things about each other, the kind of information you would get from traveling together for 20 stories. One day, Rosenblum got on the elevator and about two floors down another woman boarded. She was elderly, and Rosenblum noticed she was barefoot. "And she says to me, 'I can't put on my shoes.'" So Rosenblum helped her put them on. "I get the sense that there are a lot of people in this building who are older and living alone." Neighbor relations have a different urgency here, a different rhythm. "This woman was riding down in the elevator to find somebody who could help her put her shoes on."

In this new environment, Rosenblum is learning again what kind of a neighbor she is. During the dispute with noise bully all those

years ago, she was struck not only by the feeling of pride in being a good neighbor and comrade, but also the growing awareness of other neighborly traits she hadn't realized she had: a limited capacity for friendly exchange in the hallway, a judgmental attitude toward neighbors' disarray, a reticence that was hard to shake. In *Good Neighbors*, she writes that those living nearby "can illuminate our reluctance to know ourselves and they can spur self-understanding." In her Greenwich Village building, she's discovering herself all over again: sympathy, patience, attention.

Improbably, amid the commotion of old New York and the closeness of a high-rise apartment building with a shoeless old woman and a neighbor's kitchen that smells of meat, she thinks of Thoreau and his years on Walden Pond. An intellectual polestar for Rosenblum (in 1996 she edited a book of his political writings, and her own writing returns to him often), Thoreau occupies 15 pages toward the end of *Good Neighbors*. A reviewer for her publisher, Rosenblum says, suggested leaving him out—in some ways that chapter feels out of synch with the rest of the book—but she kept him in. "All the complexity of the neighbor relationship was right there, in the mind and the writing of a great American thinker," she says.



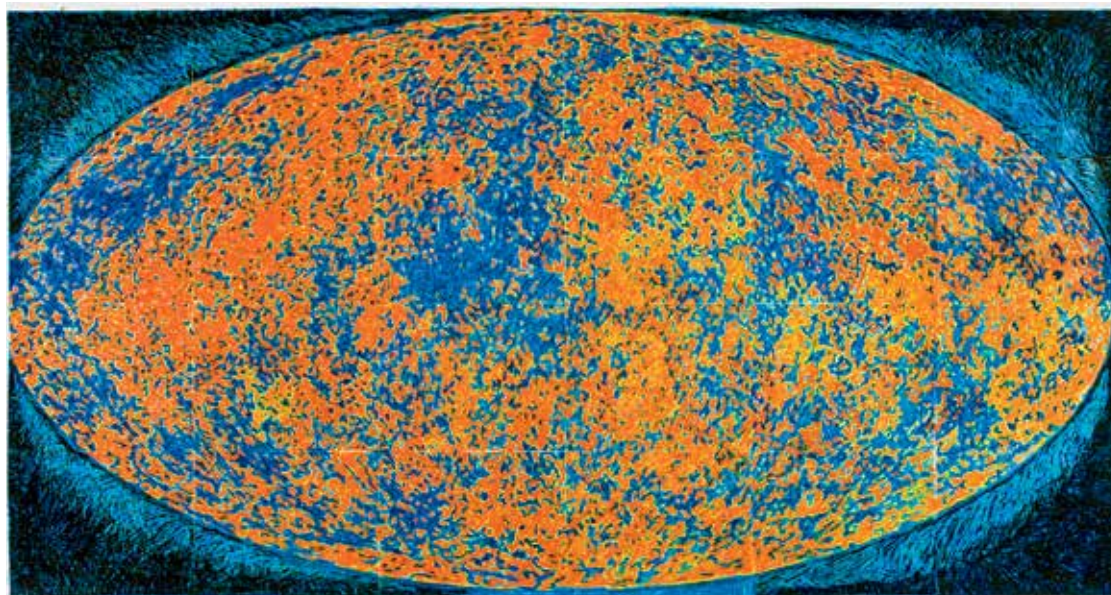
After Hurricane Katrina, New Orleans residents are rescued from the rooftop of a school in the Lower Ninth Ward.

"His somewhat odd relations with people were basically relations with neighbors": the woodchopper, Irishman Seeley, the inhabitants of a poor shanty where he sought hospitality. She's particularly moved by what she calls a "romantic bit" in *Walden*: "the importance of seeing people, neighbors, as not just familiar—his phrase is, 'the old musty cheese that we are'—but foreign. As unique individuals and interesting." Thoreau claimed that we rarely see our neighbors for who they are: "We live thick and are in each other's way, and stumble over one another," he wrote. Appreciating their separateness is a way of taking neighbors as they take themselves. "Thoreau has this beautiful line," Rosenblum says. "*They are our Austrias and Chinas, and South Sea Islands.*" She pauses a moment to let that sink in, Manhattan unfurling out the window beside her. Finally, she says, "Neighbors are our distant places, and they are right in front of us." ▽

LydiaLyle Gibson is a staff writer and editor at this magazine.

Montage

Art, books, diverse creations



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Beauty from Disarray

Judith Brodsky's work in art and advocacy

by VIOLET BARON

JUDITH BRODSKY'S ENTRY into the art world began with a hand-drawn circle. Then a young wife and mother just years out of Radcliffe, Brodsky '54 traced a radius around a map of her home in Princeton, New Jersey, and considered how far away she could go to study art and still be home by the time her children returned from school. Now an accomplished printmaker and Distinguished Professor emerita of the visual arts department at Rutgers, Brodsky recalls that at college, "There were these pulls in different directions": students were encouraged to be scholars, but *The Radcliffe News* was filled with news of engagements and weddings. While pursuing her degree in the history of art, Brodsky herself was married by the end of her junior year.

By the early 1960s, she was itching to stage her first rebellion. The radius of her circle brought her to Temple University's Tyler School of Art, in Philadelphia, where she studied printmaking and began to identify male dominance in fine art. When women's movements rose to challenge this status quo in the 1970s, Brodsky helped launch FOCUS, a festival celebrating women artists that drew feminist art pioneer Judy Chicago and abstract expressionist Lee Krasner,

showing women." She kept up this dedication to outsider



Judith Brodsky with works in her current series, *The Twenty Most Important Scientific Questions of the 21st Century*: (from top) *Could Science Prove There's a God?* (2014); *How Many Body Parts Can Be Replaced (Male)?* (2013); *How Many Body Parts Can Be Replaced (Female)?* (2013); and (opposite) *How Does the Brain Work?* (2013)

among others. The program's success became evident from the pushback: "We got sued," Brodsky recalls, "by a male artist who said he couldn't get a show during that period because the galleries were only



The series *The Meadowlands Strike Back* includes: (clockwise from top) *The Animals Run Away* (1990); *Iron Horses* (1988); and *Garbage Mountain* (1990)

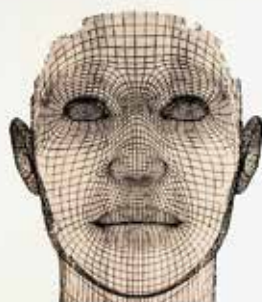
and around the world. The genius was in the medium: “It was easier for an institution to buy a print,” she explains, “than to risk spending a lot of money to buy a painting or sculpture.”

Brodsky has also earned acclaim for her art: provocative print installations, etchings, and collaged images. Her own attraction to printmaking comes from its physicality, she says. The sketching, etching, and transferral involved in the medium constitute a whole-body procedure that “becomes almost meditative” and provides a deep connection to her work: “There’s no part of you that’s not involved in the process.” More than 100 museums and companies

consists of black-and-white photographs, each enlarged and framed by a black background. She culled these images from her personal archives; the selections show several generations of a Jewish-American family moving through a changing world. Beneath the sometimes somber, sometimes joyful images is stark text that explains what Brodsky knows about the subjects, and the particular memories they evoke.

In other series, Brodsky offers a playful look at relationships between humans and nature. The *Meadowlands Strike Back*, from 1996, was conceived as a reaction to her workday commute on the New Jersey Turnpike. “As I was driving up and down the Turnpike,” she writes in a statement accompanying an exhibition at the Rhode Island School of Design, “the imagery of the refineries, the garbage mountains, and the ports impinged on my consciousness.” One image, “The Animals Run Away,” is a deep red hell-cape of burning pines, with oil derricks rising to the top of the frame while bear-like creatures flee at bottom. “Garbage Mountain” shows a rising pile of fly-covered bags, with interlaid images of dead fish saturating the print’s lower half in Technicolor. “It’s one of my ways of making people aware of what the world is like around them,” she says of her habit of rendering apocalypse in cheery hues. She likens her style to literary satire, forcing commentary by drawing beauty from disarray.

Elsewhere, Brodsky blends popular science with philosophy. Her latest series, *The Twenty Most Important Scientific Questions of the 21st Century*, is a science fiction-like response to a *New York Times* list from 2003; it offers her take on what these questions, and their answers, could look like. One work, “Why Do We Sleep?” is an enlarged sepia image of wide-open eyes, surrounded by a neat halo of bulbs as if in an old diagram. The eyes themselves seem distressed by the question, as if it is what keeps them awake. Another, “How Many Body Parts Can Be Replaced? (Male)” centers on a Vitruvian Man-like figure, with skeletal parts and human organs orbiting him; an almost whimsical pattern of eyes and ears frames the piece. This neat menu of parts mocks the question, as if invasive surgery could be ordered from a buffet. By carrying them to their absurd extremes, Brodsky makes the questions themselves a target for her cynicism, and forces this century’s



artists: in 1986, she founded the printmaking center at Rutgers that now bears her name, The Brodsky Center for Innovative Editions. The center provides studio space and materials for women artists, artists of color, and gay and lesbian artists, whose work might be too politically charged for museum curators. It has also helped place their art in collections throughout the United States

now house her pieces in their permanent collections, including the Library of Congress, London’s Victoria and Albert Museum, Berlin’s Stadtmuseum, and the Fogg Museum at Harvard.

Some of her projects skew more personal, addressing her own memories as they align with historical themes. One major series, *Memoir of an Assimilated Family* (2003),

thinkers to consider what they are really asking. “If you replace all the body parts,” she says, “is it really science at the bottom of this? Or is it the desire never to die?”

Balancing her competing commitments as artist, curator, and advocate has not always been easy. During her lengthy career, Brodsky has periodically paused to consider her direction and legacy: “I thought, when I’m on my deathbed, do I want to look back and think about what I’ve done as an administrator, or do I want to have made more artwork?” But since that first, private rebellion, when a younger Brodsky sought to expand her creative horizons, her radius has expanded outward—drawing others, who were previously excluded, into the circle of accepted art.

Supporting Cast

The “mystery” of composing movie music

by SOPHIA NGUYEN

NICHOLAS BRITELL '03 fell in love with music through the movies. *Chariots of Fire* made him want to study classical piano, and as a 12-year-old, he took obsessive notes on James Horner’s score for the 1992 hacker film *Sneakers*. If, like Horner’s shimmer of flutes and choir, his own work as a film composer doesn’t immediately jump out at the average viewer, it’s because Britell

considers his role a supportive one, aimed at realizing another artist’s vision.

Understatement can be especially key with documentary scores, he says. Overly explicit music can hinder the narrative: “You have to be very careful, because it can be very easy to veer into melodrama.” Recruited to work on *The Seventh Fire*, a documentary on Native American gang life, by friend and collaborator Jack Riccobono '03, Britell began

O P E N B O O K

Making a Beeline

as the subtitle suggests, a personal guide to finding wild hives (as opposed to the industry of keeping colonies of bees in hives). With enriching nods to such Harvardian predecessors as Henry David Thoreau and George Harold Edgell (*The Bee Hunter*, 1949), Seeley’s book is richly informed by both research and the author’s sheer love for “the most intelligent insect in the world.” Here’s what you are in for, if you follow his directions during the autumn goldenrod bloom:

Generally speaking, the best times for bee hunting are when the bees are experiencing a definite honey flow, such as the milkweed flow or the goldenrod flow, for this means that it will not be hard to find bees on flowers. Bee hunting only works well, however, during *the start or the end of a honey flow*—that is, when nectar is available but is not super plentiful. The peak days of a honey flow are usually useless for a bee hunter because the rate at which a honeybee colony is taking in nectar has a strong effect on the motivation of its nectar foragers to recruit additional bees to their food sources.... This is true regardless of the source, be it a patch of flowers brimming with sweet nectar or a bee hunter’s comb loaded with sugar syrup.

The bees’ disinclination to bring nest mates to a comb filled with sugar syrup during the peak of a honey flow is a serious problem for the bee hunter. After all, once you have found bees on flowers, have caught a dozen or so bees in your bee box, have baited them with a comb filled with sugar syrup, and have released these bees to fly home [suitably marked with dots of paint!], what you desire most keenly to happen next is for some of your bees to reappear quickly at your comb. Even more, you want your baited bees to bring lots of their sisters to your comb, so that you will have plenty of bees to observe flying home from where you are launching your hunt [so the hunter can time their flights and mark their course].

If the honey flow is just starting up or is winding down, then

Thomas D. Seeley, Ph.D. '78, studies swarm intelligence, notably in the complex lives of honeybees. *Apis mellifera* arrived on this continent with European settlers, perhaps in the 1620s. A long line of scientists has engaged with the species, including Seeley, of Cornell, whose *Honeybee Democracy* was sampled here in 2011. A delightful new book, *Following the Wild Bees: The Craft and Science of Bee Hunting* (Princeton, \$22.95), is,



Autumn harvest: a honeybee on *Solidago gigantea* (goldenrod)

the bees that you’ve trapped in your bee box were probably experiencing only mediocre foraging success before you captured them. If so, then they are likely to be sufficiently impressed with your sugar syrup to want to return for more and to share with their nest mates the news of your wonderful free lunch. Indeed, if the bees are receiving only vanishingly small nectar rewards from the flowers, and the weather is delightful, then you could soon have dozens of bees mobbing your comb.

composing well before many of the shoots took place, using Neil Young's score for Jim Jarmusch's *Western*, *Dead Man*, as a reference point. Later, though, he came to feel that "A lot of music that I wrote no longer felt right for the movie. It felt straightforward, almost. It was very clear music. It sounded like a quiet rock song." After changing tack, "we wound up with these synthesizer tone poems." Britell's quiet, amorphous sonic landscape mapped to the unfamiliar topography of the White Earth Reservation, in Minnesota. Instead of handholding the audience through the narrative, the score was an aural extension of the scenery, immersing them in the documentary's setting.

Brash and star-studded, *The Big Short* might seem the polar opposite of an art-house documentary. But however shellacked with Hollywood handsomeness, that movie was also a nonfiction adaptation, Britell points out—and openly didactic. There too, his job was to support the delivery of sophisticated ideas, as the film strove to educate (and enrage) audiences about the financial crisis. For a sequence offering a brief history of banking, Britell supplied exuberant

Britell is also a pianist and producer (most recently of *Whiplash*, by Damien Chazelle '07).

brass; when another scene explained the stupendously elaborate fraud inflating the 2008 mortgage bubble, jittery broken chords rippled beneath the dialogue. "The audience had to feel it," Britell says. "What was at stake, the complexity."

Specifications for other projects have varied widely. Commissioning new intro music for their podcast, the hosts of the Slate Culture Gabfest gave Britell verbal prompts ranging from "Kierkegaard" to "gamelan," and made a tongue-in-cheek request for "something that will challenge people, but doesn't trouble the conscience." His work composing the on-screen music in *12 Years a Slave* had almost



COURTESY OF NICHOLAS BRITELL

the opposite imperative. As National Public Radio critic Ann Powers pointed out, the

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movie, about a violinist sold into slavery, also examined “how hate and fear gave vibration to music, how music turned those emotions into more without losing their sting”—and he had to write with a dual purpose: “It had to be plausible, but it also had to work dramatically.” Reconstructing period-appropriate fiddle tunes, field songs, and spiritu-

als, he says, was “an almost archaeological process.” (He found that collections of such music published in the 1860s lamented the inadequacy of Western musical notation; the books’ prefaces even called the textual result a mere “shadow” of the real thing.)

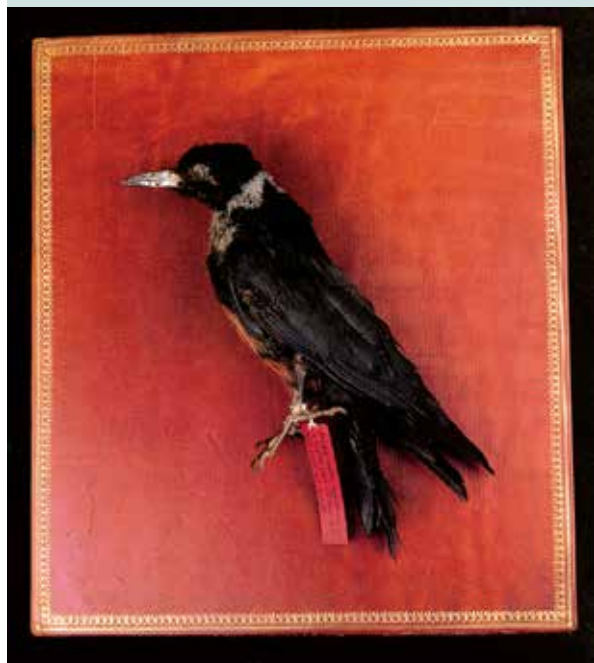
With his music, Britell aims to create atmosphere or add texture, and to lend films

a sense of intimacy. He tends not to write soaring, hummable melodies in a sweeping orchestral style. His score for the historical epic *The Free State of Jones* features an 11-note melody for the hero, first heard on a distant-seeming horn, then darkly returning in a crucial scene, on cello; for *The Seventh Fire*, he composed a motif associated with the cen-

Off the Shelf

Recent books with Harvard connections

Progress and Confusion: The State of Macroeconomic Policy, edited by Olivier J. Blanchard, Raghuram G. Rajan, Kenneth S. Rogoff, Cabot professor of public policy, and Lawrence H. Summers, Eliot University Professor (MIT, \$31.95). The global financial crisis and Great Recession exposed weaknesses in regulation and policy, and they and the sluggish aftermath have shaken the intellectual underpinnings of macroeconomics. The lingering uncertainties, explored here, are a worry—and a welcome antidote to hubris. From a different perspective, the Law School’s Hal S. Scott, Nomura professor of international financial systems, examines **Connections and Contagion** (MIT, \$38), and argues that regulators need more powers than Congress has been willing to grant to stave off future financial panics.



Nothing like a topsy-turvy election year to bring out a longing for past leaders. Larry Tye, NF '94, delivers a substantial biography of **Bobby Kennedy** ['48]: **The Making of a Liberal Icon** (Random House, \$32), while Nick Littlefield '64 and David Nexon '66, former members of their subject's staff, profile the **Lion of the Senate** (Simon & Schuster, \$35): the work of Edward M. Kennedy '54, LL.D. '08, in the Newt Gingrich-era, Republican Congress. And **While England Slept**, by John F. Kennedy '40, LL.D. '56 (Praeger, \$75), appears in print again with a new foreword by Stephen C. Schlesinger '64, LL.B. '68. Spooling back to a previous dynasty, former *New York Times* executive editor Joseph Lelyveld '58, A.M. '60, portrays in dramatic depth **His Final Battle: The Last Months of Franklin Roosevelt** [A.B. 1904, LL.D. 1929] (Knopf, \$30).

Celebrating its collections, the Museum of Comparative Zoology, with Scala Arts Publishers, has released two book-like catalogs: **The Rarest of the Rare** (\$22.95), a narrative cum stunning selection of photographs of interesting specimens, and the new **Sea Creatures in Glass** (\$24.95), on the recently restored and cleaned Blaschka marine animals, the lesser-known cousins to the glass flowers. Nifty mini coffee-table books, with eminent authors (Edward O. Wilson, James Hanken, et al.) to boot.

For the quantitatively inclined, or those who would like to be, **Summing It Up:**

Melanerpes lewis, Meriwether Lewis's woodpecker, in the MCZ's collections

From One Plus One to Modern Number Theory, by Avner Ash '71, Ph.D. '75, and Robert Gross (Princeton, \$27.95), begins with addition (you need only algebra to follow) and proceeds, with calculus, to probe the results of the initial “enormous intellectual effort to conceive of an abstract theory of addition.” Turning to applications and a more accessible voice, mathbabe.org blogger Cathy O’Neil, Ph.D. '99, disaffected from Wall Street, writes **Weapons of Math Destruction** (Crown, \$26), examining the data and algorithms used for credit scoring, insurance underwriting, and more—to explain “how big data increases inequality and threatens democracy.”

Copernicus, by Owen Gingerich, professor of astronomy and of the history of science (Oxford, \$11.95 paper), is indeed one in the series of “very short introduction” volumes, by an outstanding scholar and writer (first sentence: “In or around 1510 Nicolaus Copernicus...invented the solar system”). Other eminent thinkers enjoy a fresh vogue in **The New Worlds of Thomas Robert Malthus**, in which Alison Bashford and Joyce E. Chalpin, Phillips professor of early American history, reread the author of the *Essay on the Principle of Population* and cast his ideas in the New World and global context, rather than that of the teeming cities of Europe (Princeton, \$49.50); and **Lyenko’s Ghost**, in which Loren Graham, an MIT historian of science emeritus and associate of the Davis Center for Russian Studies, examines the notorious Russian biological theorist in light of current understanding of epigenetics and the living expression of organisms’ genetic code—and renewed enthusiasm for such ideas in some Russian circles (Harvard, \$24.95).

China’s Economy: What Everyone Needs to Know, by Arthur R. Kroeber '84 (Oxford, \$16.95 paper). China was an

tral subject's young daughter. But, he says, "I think more often than not, themes work for relationships, more than for individual characters. It's less like the sort of Wagner leitmotif" (or, to use a pop reference, the "Imperial March" announcing Darth Vader). "Themes are more about interconnections, sometimes. That's something I'm continu-

ing to discover in film projects."

Other recent collaborations include scores for the sophomore films of two up-and-coming indie talents—Barry Jenkins's *Moonlight* and Adam Leon's *Tramps*—as well as music for classmate Natalie Portman's feature directorial debut. For that project, an adaptation of Amos Oz's novel *A Tale of Love*

and *Darkness*, Britell was encouraged to compose independent of the footage. He ended up with a "dreamlike sound": Western classical forms, but with extreme reverbs and bells. What fascinates him about his craft is the unpredictable alchemy between image and sound. "How they interact," Britell says, "is the biggest mystery."

economic nonentity when the author entered college; now it looms so large that everyone *does* need to know about its output of steel, consumption of soybeans, and much more. Kroeber, an on-the-ground expert for 15 years (and a participant in this magazine's "Changing, Challenging China" roundtable, March-April 2010, page 25), provides clear, level guidance to the needed economic reforms that an official once described as "walking a tightrope over a bottomless pit—and the rope behind you is on fire."

Vision: How It Works and What Can Go Wrong, by John E. Dowling, Gund research professor of neurosciences, and John L. Dowling Jr. (MIT, \$32). An admirably lucid, succinct explication of the scientific understanding of vision, and of disorders of that vital sense, by a leading researcher and an ophthalmologist—a paired approach that one craves for other senses and conditions.

Old genres in a new era: **Never Better!** by Miriam Udel '98, Ph.D. '08 (University of Michigan, \$60). The title exactly captures the ironic insouciance mingled with despair of modern Jewish picaresque literature. The author, a former Ledecky Undergraduate Fellow at this magazine, is associate professor of Yiddish language, literature, and culture at Emory. Meanwhile, in **The Lyric in the Age of the Brain** (Harvard, \$40), Nikki Skillman, Ph.D. '12, now professing at Indiana University, explores how feeling, memory, and thought, once the domain of the lyric, now function poetically when informed by neuroscience, too, as in works by Ammons, Ashbery, Graham, and others.

When the Fences Come Down, by Genevieve Siegel-Hawley, Ed.M. '05 (University of North Carolina, \$27.95). In an era of increasing racial and economic seg-

regation across school-district lines, the author, an assistant professor at Virginia Commonwealth University, examines school-desegregation efforts in four southern metropolitan areas—and develops evidence of clear gains in school and housing desegregation.

Retreat and Its Consequences, by Robert J. Lieber (Cambridge University Press, \$24.99). A Georgetown professor argues that a robust American foreign policy is essential to world order, and therefore, the nation's own interests. An academic argument against the current "pullback," it concludes that the United States will reengage as a world leader, given a new perception of opportunities—or of perils.

The Curse of Cash, by Kenneth S. Rogoff, Cabot professor of political economy (Princeton, \$29.95). In approachable language, a leading economist lays out the case for doing in paper money. He cites abuses of currency (tax evasion, corruption, terrorism, trade in illegal goods like drugs, human trafficking), and the practical problem that physical money sloshing around has made it much harder for central bankers to effect monetary policy in a near-zero interest-rate environment. The poor would need access to subsidized debit cards, among other interesting details.

From the design perspective: **Beyond the City: Resource Extraction Urbanism in South America**, by Felipe Correa, associate professor of urban design (University of Texas, \$40), looks



An 1854 wood-block-print map of land and sea routes through northern Japan, from *Cartographic Grounds*

closely at cities shaped less by the migration from the countryside than by the intersection of heavy infrastructure and global demand for oil, minerals, and related goods. To keep track of the growth, one might consult **Cartographic Grounds**, by Jill Desimini, assistant professor of landscape architecture, and Charles Waldheim, Irving professor of landscape architecture (Princeton Architectural press, \$50), a technically advanced book that lay users will find breathtakingly beautiful and mind-expanding, as it sweeps from historical examples to data visualization.

Thomson: The State of Music and Other Writings (Library of America, \$50). One need know nothing about music to know that Virgil Thomson '22, D.Mus. '82, could write. So it is delightful to have this volume, with its vivid autobiographical passages on Harvard ("In Cambridge, on the first day I took a room; on the second I acquired a piano and a piano teacher").

The Business of Lies

Making crime pay

by BAILEY TRELA

“WE CAN’T GO ON together / With suspicious minds,” Elvis crooned in ’68—though roughly 50 years later, if you feel so inclined, you can graft the title of Joseph Finder’s new thriller *Guilty Minds* onto the lyrics without seriously neutering the themes of either work. Both guilty minds and suspicious minds hurt people—and even though the mechanics of a thriller are necessarily powered by outsize doses of suspicion, Finder second-guesses this force. He knows that minds trained in suspicion, trained to act on suspicion, will sometimes make dangerous mistakes. In his novels, the suspicious mind is ever on the precipice of becoming guilty.

Finder has been publishing thrillers for the past quarter-century, beginning with 1991’s *The Moscow Club*, which took as its jumping-off point the dissolution of the Soviet Union. (He earned a master’s in regional studies, focusing on the Soviet Union, in 1984.) The end of the Golden Age of espionage serves as a tonal backdrop to Find-

er’s fictions; the post-Cold War matriculation of intelligence agents into the private sector served as inspiration for his series character Nick Heller, who first appeared in 2009’s *Vanished*. Throughout his works, all the leftover postwar suspicion hovers like a vile force.

The plot of *Guilty Minds*, as you’d expect, is taut, rapid, and tensely recurving. Private spy Heller has been hired by D.C. socialite and political power player Gideon Parnell to debunk a salacious story about one of Parnell’s good friends. The online gossip rag *Slander Sheet* is threatening to release an exposé linking the publicly milquetoast Chief Justice Jeremiah Claflin (one thinks of the blandish Everyman air of John Roberts ’76, J.D. ’79) to a series of liaisons with a District-based escort pseudonymously named, à la Ian Fleming, Heidi L’Amour. Heller’s charge: disprove the tale, and resettle the status quo.

Crafting one of his thrillers involves extensive, detailed, and peripatetic research, including interviews with specialists of his chosen *mise en scène*; if it takes him, on average, a year to produce a manuscript, only three

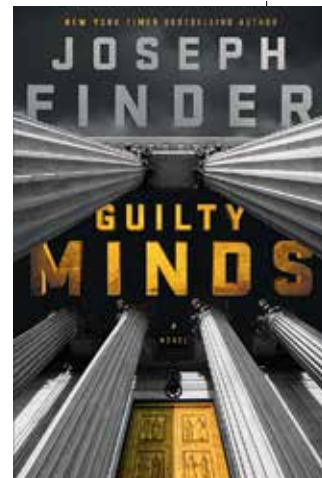
to four months are given over to the actual writing. In prepping for *Guilty Minds*, for instance, he spoke with call girls and private investigators and even visited the offices of the gossip website Gawker, where he studied the company’s business model and spoke to employees about their fear of lawsuits. (“You can see,” he says, “how we haven’t fully negotiated privacy, or the responsibility of journalists.”)

Speaking with Finder, it becomes evident that he knows a lot, yet his conversation is pleasant in the way the conversation of a happily condescending professor is—he is pleased enough to engage with others on the level of their curiosity; it’s the hunger for knowledge, shared between speakers, that matters to him.

Though he’s primarily written stand-alone thrillers, Finder notes that working with the Heller series has yielded special technical benefits. In a one-off literary treatment, “the central character’s world has to be turned upside down—but you can’t have the character’s life be upended in every book.” In exchange for

sacrificing that high drama, Finder reaps opportunities for increased topicality and societal commentary, which in turn augment intellectual heft—what he calls his works’ “ballast.” (*Guilty Minds*, for instance, treats of the dilemma of privacy in the digital age.) Though he raised himself on the thin, snappy novels of Ian Fleming, he also paid his dues with the baroque doorstoppers of writers like Herman Wouk, James Michener, and Tom Clancy. “I actually loved those books,” he says. “There was a time when popular entertainment meant a thick book, but then books began to slim down—I suspect it had a lot to do with the shortening of the American attention span.”

Joseph Finder at the Boston Athenaeum. The private investigator hero of his Nick Heller series is also based in the city.



Technology, too, has whittled down the standard-issue thriller's page-count, he points out: "I was on a panel once a long time ago and someone said, 'You know, the one thing that's gonna really screw up detective novels is the cell phone'—because in the old days you could be out of touch, and you couldn't find a payphone anywhere nearby, and that took up time. But I realized it's actually going to transform the storylines. Technology is going to make things more difficult in some ways, and more interesting in other ways."

For all its digital hijinks, *Guilty Minds* remains driven by what Finder calls "gumption work": stakeouts, stalking, and visual clue-grubbing.

In Finder's works, technology doesn't needlessly complicate the plot. "What I didn't like about Clancy and his thousand-page books," he says, "was that they were so drily technical....Reading them was like reading an owner's manual for a submarine—I don't actually want to learn how to operate this thing; I'd like to ride in it." Nor is technology, in his novels, the spectacle-in-itself. "I've heard people describe my books as technothrillers," he adds, "and that terrifies me, because to me a technothriller is a thriller that's completely taken up with the exposition of technology—and...I'm much more interested in people. Technology is simply the texture of the world in which I set the book."

For all the cell-phone tracking, password hacking, and digital hijinks that stipple *Guilty Minds*, the narrative remains driven by what Finder refers to as "gumption work"—the classic private-eye footwork of stakeouts, stalking, and visual clue-grubbing. If a complicated technological device springs up at any point, it always leads back to the characters, and the sometimes sordid interconnectedness of their lives.

Finder's career itself began with an instance of gumption, during his degree-work at Harvard's Russian Research Center (now the Davis Center for Russian and Eurasian Studies). He paid his bills teaching expository writing; he passed his afternoons haunt-



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ing used bookstores in Harvard Square. “I wanted to be a writer,” he recalls, “but I had no idea how to do it.” One afternoon, browsing at Harvard Bookstore, he picked up a copy of *Walt Whitman: A Life*, by Justin Kaplan ’45, and discovered, upon reading

the author’s note, that the Pulitzer Prize-winning biographer lived in Cambridge. “So I went home and I looked in the phonebook and I found his number and I called him up, and I said, ‘You don’t know me, but I want to write, and I don’t know what to do,’ and

he invited me over to his house on Francis Avenue, and he told me how it works. He helped me write my first proposal—and he introduced me to his agent.”

As in sleuthing, the old ways will always pay.

America’s Higher-Education Agenda

A focused briefing on degree-attainment, democracy, and economic opportunity

by CLAYTON SPENCER

IN A PUBLIC DISCOURSE defined increasingly by “post-factual” and policy-annihilating debate, *Lesson Plan*, by William G. Bowen and Michael S. McPherson, is a short, yet disarmingly rich and precise, primer on higher-education policy and its compelling relevance for the future of our economy and democracy. Two of the most respected figures in higher-education policy, the authors have led parallel and intertwined careers as economists, college and university presidents, foundation leaders, and scholars of higher education (Bowen as president emeritus of Princeton and of the Andrew W. Mellon Foundation, McPherson as president emeritus of Macalester College, and president of the Spencer Foundation). They are the authors of many of the most important empirical studies in higher education published during the past five decades, and those they did not write, they often sponsored, reviewed, participated in, or advised on. As a result, this latest collaboration—a slim, 140-page volume—combines the precision born of encyclopedic knowledge with the plain-spoken prose of experts for whom policy analysis is second nature.

With a didacticism appropriate to a lesson plan,

Bowen and McPherson begin by reminding us of why we should care about getting higher-education policy right. Higher education itself is a “means of investing in human capital,” even “human improvement.”

It equips people to “lead more productive and rewarding lives.” And, they point out (citing Harvard economists Claudia Goldin and Lawrence Katz), in a knowledge-driven economy characterized by the relentless advance of technology, it is our only hope for meeting the pressing national need for an increasingly educated and productive workforce.

These statements may seem self-evident—but Bowen and McPherson argue that they no longer actually guide our country’s approach to higher education. While our political discourse clings to the “conventional civic mythology” (quoting MIT economist David Autor, M.P.P. ’94, Ph.D. ’99) that higher education is the engine of economic opportunity and social mobility—the key to the American dream—the underlying reality has shifted fundamentally since the 1980s. In fact, the authors report, the United States now has both the lowest mobility and the highest inequality among all wealthy democratic countries. We will not fix this problem if higher education continues on its current path. As things stand, higher education increasingly mirrors and reinforces, rather than counterbalances, the inequality in opportunity and income that characterize our society at large.



According to the authors, any course correction requires moving beyond our current preoccupation with “access and affordability”—maximizing the number of people who *begin* college—and thinking instead about what we need to do to increase the number of people who *complete* a degree. In the United States, almost two-thirds of high-school graduates pursue some kind of post-secondary education, but the fraction of any given population group actually attaining a degree or credential is much smaller. Among 25- to 29-year-olds, for example, a mere 34 percent had bachelor’s degrees in 2014. These numbers have improved slightly in recent years, but the authors emphasize that current educational attainment rates are “simply too low to ensure the success of this country in a

Lesson Plan: An Agenda for Change in American Higher Education, by William G. Bowen, LL.D. ’73, and Michael S. McPherson (Princeton, \$24.95).

rapidly evolving global economy, and too low to give many Americans the improved life chances they deserve.”

Lesson Plan is particularly compelling on the question of



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In Case You Missed Them...

Coverage of recent exhibits, on Chinese pottery and Babar the elephant. harvardmag.com/neolithic-16 and harvardmag.com/babar-16

unequal life chances and the role of higher education in perpetuating stark disparities in outcomes based on socioeconomic status. Bowen and McPherson offer extensive commentary on the fact that socioeconomic status trumps academic ability in determining who ends up with a college degree. A look at high-school sophomores from 2002 a decade

later, for instance, reveals that 60 percent of high socioeconomic status (SES) students had a bachelor’s degree or higher, compared with just 14 percent of students from the lowest third of the socioeconomic spectrum. Adjusting for academic achievement, these differences persist. Almost three-quarters of high-SES students (74 percent) who scored

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in the highest category in math proficiency had achieved bachelor's degrees 10 years later, compared with 41 percent of low-SES students with the same scores.

To address this problem, the authors argue that Americans need to think carefully about how to target scarce resources to meet critical goals—broadening educational attainment, not just access; investing in the two- and four-year public institutions that educate most students from disadvantaged backgrounds; reducing time to degree to increase completion rates; and strengthening academic support for students in critical subject areas.

The Community-College and Student-Debt Myths

IT MAY TAKE TIME, though, for these lessons to penetrate the political debate. Bowen and McPherson, for instance, are sharply critical of President Obama's proposal to make community college free for a large portion of the student population. They argue that steering students—particularly the most vulnerable ones—to community college is not the way to achieve the pressing need to increase the number of people who complete bachelor's degrees, and have both the credentials and the knowledge to show for it. According to the authors, students who begin at four-year colleges have a *much* higher probability (as much as 30 percentage points or more) of receiving an A.B. than do students who aspire to that degree but start out at two-year institutions. Thus, a policy that establishes a price differential between the first two years at a community college versus a four-year college risks setting the

least advantaged students up for failure.

And if the argument implicit in the Obama community-college proposal is that getting students through a two-year skills-oriented program is sufficient, that effort is equally misguided, Bowen and McPherson assert. Given the impact of technology and globalization on labor, it is *routine* skills and procedures that are most amenable to computerization—a reality that reduces the half-life of highly targeted, vocationally focused education. By contrast, the skills learned in earning a bachelor's degree—tasks that demand critical thinking, judgment, flexibility, and the exercise of common sense—are hardest to replace with machines, and thus most durable over a lifetime of employment.

Bowen and McPherson are equally skeptical of the calls heard from various presidential candidates to make college “free” for everyone, or the related suggestion that college should be “debt-free” for students. With characteristic matter-of-factness, they point out that *someone* actually needs to pay the direct institutional costs of education. Thus focusing exclusively on the price for the individual student is simply an exercise in cost-shifting: reducing the price charged one group of citizens and shifting it to an unspecified other.

Similarly, say the authors, the issue of student debt, as dramatized in the current election cycle, is seriously overblown. Not surprisingly, as economists, they see nothing wrong with expecting students with good earnings prospects to pay back part of the costs incurred by taxpayers and others in educating them. Of course, the point here is “good earnings prospects,” which materialize only

for students who actually complete their degrees. In fact, as Bowen and McPherson point out, the average student debt of a bachelor's-degree recipient who borrows (and 30 percent don't borrow at all) is around \$30,000: roughly the amount of a new-car loan. Debt is most troubling for those students who fail to complete their degrees and end up behind where they started, even with small amounts of debt, or for students who enroll in high-debt, low pay-off programs such as those offered by many of the for-profit institutions. Bowen and McPherson point out that the for-profit sector accounts for about 8 percent of total higher-education enrollment, while generating 44 percent of federal student-loan defaults.

Solutions Wanting

AS THIS DISCUSSION SUGGESTS, Bowen and McPherson are most effective when they are parsing the issues at the heart of higher-education policy, exposing myths, and calibrating—as no one can do better—how we should define our policy goals and where we should target solutions. But when they set out to define an “Agenda for Change,” their arguments begin to lose focus and conviction.

The most striking example arises in their discussion of transforming the federal role in higher education from “passive check-writing” (funding individuals through Pell grants, campus-based aid, and student loans) to “more active attempts” to promote college completion and greater accountability by funding states or institutions directly, creating a stronger federal role in providing information and counseling, running experiments to test innovations, and working with states and institutions to measure their performance and outcomes. Although the authors note that previous efforts at an activist federal role have been highly problematic—as in the Education Department's recent, misguided, and ultimately abandoned, attempt to create a ratings system for colleges—they don't seem to draw the most obvious conclusion: that increasing the heavy-handedness of the federal government in higher education may not be the best solution to the problems they so compellingly identify. It is a standard trope that the success of American higher education is due in no small part to an enabling, but circumspect, federal role. The fact that this structure has failed to ensure the equality of opportunity and substantive outcomes we would all wish for does not necessarily mean

Chapter & Verse

Correspondence on not-so-famous lost words

H. John Rogers writes: “The Onala Club in Pittsburgh has a placemat on its wall that reads, ‘*Fai bene—Do good/Scordate—Forget about it/Fai male—Do bad/Pensaci—Think about it.*’” He wonders if this is an old Italian saying, or if someone can provide a specific source.

“something wrong with the experiment” (May-June). Robert Kantowicz supplied a sidelight on this topic from Walter Isaacson's *Einstein: His Life and*

Universe (2007), which states on page 252 that when a student asked Einstein how he would have reacted had eclipse observations contradicted the general theory of relativity, the physicist replied, “Then I would have been sorry for the dear Lord; the theory is correct.”

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

ALUMNI

Private Eye

“A bit of an oddball in this business”

by NELL PORTER BROWN

that a solution is to be found in a more active and intrusive federal government.

When the authors turn to other questions, such as how to take costs out of the higher-education system writ large, the “Agenda for Change” runs even further afield. They rightly suggest, for instance, that we have too many doctoral programs at second- and third-tier institutions generating an over-supply of Ph.D.’s in the marketplace. Yet the solution they proffer is simply a call for a “tough reexamination of real national needs and costs,” without much hope for success. Similarly, they discuss the “reckless and wasteful” and integrity-destroying role of high-profile sports at many institutions. Yet, again, the authors are short on solutions. They cite legal challenges to the system or direct governmental action as the only realistic (but not at all likely) path forward. Finally, although they correctly note the promise of “adaptive learning”—a blend of face-to-face instruction with technology-assisted feedback loops—for improving student outcomes, they fail to explain how the institutions serving the most needy students can acquire the capital and expertise required to make progress in this domain.

These caveats notwithstanding, *Lesson Plan* is an invaluable guide for anyone who cares about the core American value of equal opportunity, and the role higher education has and should continue to play in translating this value into economic vitality and a healthy democracy. One hopes that the wisdom offered by these distinguished scholars will find a receptive audience as this consequential political season continues to unfold. ▢

Clayton Spencer, A.M. '82, is president of Bates College; she was previously vice president for policy at Harvard, where she worked with four University presidents during a 15-year period, and chief education counsel of the U.S. Senate from 1993 to 1997, serving under Senator Edward M. Kennedy '54, LL.D. '08.

WHILE SNOOPING for signs that a suburban salon was illegally shooting up its clients with Botox, Sarah Alcorn '90 went undercover: “I wore too much makeup and acted like a ditz.” Searching Boston’s homeless shelters for a junkie who’d witnessed an armed robbery, she feigned dishevelment and “dressed in sweats.” Once she donned a brunette wig and sunglasses to tail an alleged adulteress at a hotel. “I like to fit into any canvas,” says the petite faux blond while scrolling through the database of public divorce records at the Middlesex County Probate and Family Court for background information in an assault case. “Changing personas appeals to me.”

A fine-arts concentrator at Harvard, Alcorn worked on props and set design in Hol-

lywood (hence the fondness for hairpieces) before becoming a private criminal investigator 17 years ago. Chameleonic versatility and cleverness aren’t the only traits she exploits to succeed in a field traditionally dominated by tough men—but they have helped. “I spend a lot of time knocking on doors and getting people who don’t want to talk to me to talk to me,” she reports. “Some people respond to the P.I. who’s an ex-cop and might throw his weight around a little. I find the social worker/nice lady vibe often works better for me.”

She has worked on at least a thousand cases, including an ancillary trial connected to the Boston Marathon bombing, and is on the defense team in the high-profile murder of Boston toddler Bella Bond, whose body washed up on Deer Island last year. Some 25



Posing with a tool of the trade, Alcorn can revel in her job's reflection of film noir.

other current cases range from sexual and armed assaults, financial frauds, and robberies to adult murders, drug deals, bar fights, and domestic abuse. She also takes on civil suits and divorces, along with the occasional missing-person search.

A few years ago, on an icy February night, Alcorn was out looking for a mentally ill teenage runaway. Worried that he might freeze to death, she urgently checked police stations, shelters, parks, and hospitals, and questioned homeless people sleeping outside. It turned out “the kid had his parents’ credit card and was staying at a four-star hotel. Living like a lord,” she says. “The lesson there was: Follow the money.”

It also clarifies that detective work is rarely glamorous. Alcorn spends most of her workdays alone, logging hours at the computer trawling social-media sites and proprietary databases for authorized law enforcers and private investigators, like IRBsearch and Locate PLUS, or talking on the phone, trying to reach relatives, friends, and other potential witnesses who can shed light on a crime or a defendant. She gets out of the office to document crime scenes, collect information at courthouses, libraries, and archives (often a tedious process, even without the wheedling), attend hearings or trials, visit inmates, and drive around neighborhoods looking for people.

“People would not enjoy watching real detective work,” says David J. Prum ’80, a former longtime private investigator who was Alcorn’s mentor and then business partner until she opened her solo practice, Greystones Investigation, in 2005. It’s not about building a broad, alluring narrative, but “getting raw information, exactly the words and intention around ‘what A said and B said and C said’ and laying them all down and keeping it all straight in your head while you’re trying to get the story out of the next person,” he adds. “In a complex case, it’s like needlework or dissection: you have to be precise and have extreme patience and tolerance” for pinning down minutiae.

Staying Fit Through the HAA

The Harvard Alumni Association (HAA), says new president Martin J. Grasso Jr. ’78, offers “the luxury of staying in the conversations we had as undergraduate and graduate students with the most interesting and intellectually stimulating people we know.” The Boston-based CEO of Pearl Street Capital Group began his one-year term July 1, taking over from Paul L. Choi ’86, J.D. ’89. The HAA includes 330,000 alumni worldwide, and coordinates clubs, SIGs, and class reunions, along with educational trips, online learning, international gatherings, and opportunities for professional and social networking.

The HAA also harnesses the power and talents of scores of alumni volunteers who serve on committees, help put on Commencement, recruit and interview applicants for admission, produce class news and notes, and otherwise keep classmates engaged in University life.

As one such volunteer, Grasso has served on the HAA board’s executive committee since 2013 and is a former co-chair of the College broadening engagement committee charged with cultivating a critical base of support: alumni between their twenty-fifth and fortieth reunion years. The work has kept him close to intellectual life at the University, the vitality of young, bright students, and a cohort of enthusiastic fellow alumni. He says he has also enjoyed “mentoring high-school students in the college application process who are keenly interested in attending Harvard.” He credits his public-school teachers in Revere, Massachusetts, as well as a “young, scrubby-faced, junior admissions officer”—William R. Fitzsimmons ’67, Ed.D. ’71, now dean of admissions and financial aid—with convincing him that “Harvard might actually be within reach, both academically and financially.”

Grasso’s also grateful to his parents’ teachings: the effective



**Martin J.
Grasso Jr.**

and “cheery nature” that his mother, a homemaker, brought to volunteer civic work; the way his father, a postal worker, gas-station manager, and World War II veteran, exemplified “the value of a job well done by somehow dignifying even the most menial of tasks.” Both still influence his approach to life and work.

Pearl Street Capital Group, he explains, “provides debt capital to very rapidly growing technology and life-sciences enterprises that are backed by the elite venture capital syndicates in the U.S.” The job not only stimulates Grasso’s “brain plasticity, virtually every day,” it also contributes to the former ice-hockey player’s lifelong, extensive workout regimen: he monitors scientific advances in sports medicine and fitness training in search of “new methodologies for maintaining physical health and longevity.”

These stimuli helped him set the theme for the HAA board of directors’ upcoming annual meetings. (The February session, for example, features George Church, Winthrop professor of genetics and director of the Personal Genome Project.) Grasso plans to emphasize how “volunteerism in general, and being a part of the HAA in particular, greatly improves the quality of one’s life,” he adds. “My experience at the HAA has made this notion axiomatic for me.”

—N.P.B.

In the larger scheme, Alcorn's daily doggedness reinforces the integrity of the criminal-justice system, she hopes, and helps keep jury trials "healthy." Prosecutors rely on police detectives to gather evidence, primarily of guilt, but defense attorneys hire private investigators, like Alcorn, to dig up information that exculpates, or at least raises reasonable doubt among jurors. About half her cases involve indigents with assigned public defenders—"low-paying work, but abundant and interesting," she says. (More lucrative corporate and security work, or insurance investigations, are "boring.") Early on, she enthusiastically sought to "Put away the bad guys! They're a bunch of scumbags!" she recalls—"I am not a bleeding-heart liberal, by the way"—but she soon saw enough to conclude that with the "full weight of the police department, the prosecutor's office, the Commonwealth against them, the little guy or the little woman needs help," even if it's just mitigating the charges against them.

She points to an old Cambridge case, where a police officer reported seeing a drug deal in a park. When she went to the scene, not only was the distance between the deal's alleged location and the officer's position too great to see "a little baggie get passed between hands," she says, but the transaction supposedly happened at night—and the view was "blocked by trees." "There's no way anyone could see that. It was absurd," she declares. "Now, was the alleged drug dealer a questionable character? Probably. However, in this case it doesn't matter if he dealt drugs 50 times before. They can't just make up stuff to get a guilty verdict."

One of the few times she has felt threatened came while investigating a police shooting, and someone—either a fellow private detective or a law-enforcement officer (she believes it was the latter)—used an authorized database to link her to the case. "They published my name and address and my parents' address and wrote 'This is the woman,'" she says. Police misconduct occurs, she

"I am not anti-police; I think it's a very tough job."

says, but "I do wonder to what extent a lot of police officers are suffering from a kind of PTSD, and so [they display] this hypervigilance. It doesn't excuse [misconduct] but it maybe explains some of the behavior. I am not anti-police; I think it's a very tough job."

Within an often overheated, adversari-



New Leader, New Look

The Harvard Club of Boston, established in 1908, has elected its first female president. Belmont resident Karen Van Winkle '80, vice president of business development and marketing for Creative Office Pavilion, has been among those who helped



The Harvard Club of Boston's renovated Harvard Hall foyer (above), and new library-styled restaurant, Veritas

launch and oversee the renovations that have transformed the Commonwealth Avenue club (see harvardmag.com/hcob-16). The improvements include a new rear entrance and elevator, six overnight room makeovers, numerous cosmetic updates, a revamped athletic club, and a new restaurant, called Veritas.

al system, Alcorn's duties are surprisingly neutral. She finds out what witnesses saw and think they know to be true (the accuracy of eyewitness testimony, once the bedrock of guilty verdicts, is increasingly being contested by scientists and in the courts), and what they will say on the stand, taking notes that can lead to depositions. She

to understand crime in moral terms," David Prum notes, "but crime is a completely normal human activity." There are lawbreakers devoid of a moral compass, he explains, "just like some people are color-blind," but among the thousands of cases he has worked on, "I've only run into a few stone-cold psychos. And it's obvious when you do.

You can't fake that, nor would anyone want to."

reports "whatever it is: good, bad, or indifferent." If someone tells her the gun was in her client's hand, she needs to know that's what will surface at trial.

The work resembles social anthropology, in its conscious avoidance of moral judgments. "People waste a lot of time trying

Instead Prum, who like Alcorn has theater experience, looks at many crimes as "bad performance art. What you see in courts is the result of a lot of young men—because the majority of violent crimes are committed by men between the ages of 16 and 24—who are stuck in a malignant narrative. They are dramatizing themselves,

acting out to have an impact on their environment, not to be noticed but to notice themselves, expressing their beings in the face of a reality that ignores them.” He has never carried a gun because “What’s going to happen in a tense situation when a bad guy with a gun knows you’ve got one? He’s likely to use his first. I’ve been in bad situations with armed people and simply walked away. It’s not worth their while to attack if they see you leaving.”

With this in mind, Alcorn favors Mace over a gun. She approaches the job, at least when interviewing potential witnesses, largely as a creative employment of empathy. “The ability to imagine other people’s states of mind,” Prum calls it—to “care about what they are going to share with you.” Often, for

witnesses and victims, these are the gritty details of the most traumatic event of their lives. Alcorn, he says, has an “incredible curiosity about other people—not because she is superficially interested in what she can get out of them, but because she is genuinely interested in the person sitting in front of her.”

ALCORN ADMITS TO an abiding “affection for morally ambiguous people.” Where it stems from, she has no idea, but she seems to root for the “Tony Sopranos of the world.” And she finds crime—“why it happens, how it happens, how it’s solved, forensics, the incidental narratives—infinately fascinating, you know?” She is also nosy. Engaging with thousands of people and visiting their

homes, seeing how they live, offers “a view of the range of humanity that most people don’t get to see.” A hoarder’s home where “every single item was pink or purple, even the Christmas decorations. Floor to ceiling, filled with pink and purple clothing, boxes, toys.” The backyard of a house in the country where a murder had taken place, that was strewn with a dozen deer legs sticking out of the frozen ground—“someone had been dressing deer back there”—and a dead cat.

Thirsty from an early age for such extreme sights, Alcorn moved to New York City after graduation to work in theater production, then quickly on to Los Angeles. There, she focused on production design, like creating props for *Bottle Rocket*, idiosyncratic director Wes Anderson’s first movie (she was also his girlfriend for a year). Her Hollywood career ultimately “tanked,” she says, “mostly because I was bottoming out on partying and bad activities.” In 1997, she returned to Boston, moved in with her parents (her father, Alfred Alcorn ’64, writes academic murder mysteries; see “Curating Murders,” July–August 2010, page 15), and got sober through a 12-step recovery process that she still abides by, finding that “doing the next right thing” serves her well.

Once clear-headed enough, she decided to put her love of research (likely inherited from her father, she adds) and preoccupation with crime to constructive use. She applied to become an FBI agent but, fortuitously, around that time met Prum through mutual friends, and “basically stalked him until he hired me.” (He confirms that.)

Alcorn had already been victimized by then, and responded with stealth. An ex-boyfriend had been stalking *her* (“to the tune of trying to break down the door of my apartment”) and despite a restraining order, he didn’t stop. Alcorn staked out his house, followed him, and called the police on her cell phone until they served him with a restraining order-violation notice.

After five years as Prum’s apprentice and an interview with the Massachusetts State Police (both requirements for her state license), she officially became a private detective—and, along the way, got married, had a daughter, Juliet, and soon divorced. She loves the jolt, what she calls the “hit,” of moving from “playing Barbies” on the carpet at home to, an hour later, locking up her valuables and “being processed” through the metal detector by guards at



COURTESY OF THE HARVARD ALUMNI ASSOCIATION

Seniors Help Houses Thrive

The Harvard Alumni Association (HAA) has named Annalee Perez ’17, of Dunster House, and Brittany Wang ’17, of Quincy House, the 2016 David and Mimi Aloian Memorial Scholars for “honoring the value of House life.”

In addition to serving in other roles on the House committee, Perez, of Murfreesboro, Tennessee, spearheaded the Big Moose and Little Moose mentoring program that pairs newly arrived sophomores with juniors and helped organize Senior Common Room dinners, Dunster Downtime, and other social gatherings to promote inclusion.

House committee co-chair Wang, of Southlake, Texas, spread awareness of mental-health issues by connecting fellow students with Quincy Wellness Tutors. She also instituted Quincy Quarnival, an evening of games, to build a sense of community.

Ninety percent of Alcorn's cases result from people doing "something stupid to get money to get drugs, or being on drugs or alcohol."

a prison in order to interview a murderer.

As a Harvard-educated, artistic single mom, Alcorn knows she's "a bit of an oddball in this business." At educational workshops, conferences, and meetings of the Licensed Private Detective Association of Massachusetts, most of her colleagues have been "male, Republican, ex-cops with bellies," she says—and "total sweethearts, helpful and accepting of me." More women have entered the field within the last decade, however, and Alcorn, who stays abreast of the latest forensic procedures, legalities, databases, and technology through conferences and seminars, enjoys following the expertise of two of them—"location/background gurus" Cynthia Hetherington

and Michèle Stuart. At a recent course on conducting Dark Web searches (for typically illegal content that exists apart from the publicly accessible Internet and search engines), Alcorn says Hetherington warned that, "from a cyber safety perspective, it's like walking with open cuts into a room full of vampires."

Humorous—were it not true. Criminal work is steeped in "the darker side of human nature," Alcorn acknowledges. "It is psychologically taxing, if nothing else." More than 90 percent of her cases result from people doing "something stupid to get money to get drugs, or being on drugs or alcohol," she reports. Without insight into the addict's frame of mind, and her own hard-earned

recovery, she wouldn't have lasted in the job "because there is so much hopelessness and death." Every day she meets people struggling just to get by and build a clean life who are consistently "hobbled by the system." A witness she recently spoke to is on probation and therefore on call for drug testing, meaning that even at work (and he feels lucky to have a job, she says), for a spot-check, he must leave his post, take a long, round-trip bus ride to the site, and pay \$11 for the test. "How is he supposed to do that, and keep his job?" she asks.

Alcorn can't help identifying with some people, especially women, especially women who drink. "I'll show up in court sometimes and see some woman whose hair is all messy, her eyes are sunken, she's got handcuffs on, she looks completely confused, she's hit someone with her car," she says. "And I am no different. If I had not chosen the path that I took, I could be that woman, you know?"

Outstanding Service

SIX ALUMNI are to receive Harvard Alumni Association (HAA) Awards—for outstanding volunteer service to the University through alumni activities—during the HAA board of directors' fall meeting.

Walter K. Clair '77, M.D. '81, M.P.H. '85, of Nashville, is a former member of the Harvard Board of Overseers and of the governing boards' joint committee for alumni affairs and development. An HAA-elected director from 2002 to 2005, he has also served as an executive committee member of the Harvard Club of Middle Tennessee, and as a member of the admissions committees at Harvard Medical School and the Harvard T.H. Chan School of Public Health.

Ann Rand Eldridge '57, M.A.T. '59, of Cambridge, received the Radcliffe Distinguished Service Award in 2007 for her work with the Radcliffe College Alumnae Association (RCAA) and the Radcliffe Institute. She is currently a Radcliffe Campaign volunteer and, at the HAA, a college director and former co-chair



Walter K. Clair

of the committee focused on maintaining connections with alumni. In addition, she chaired the Harvard Club of Eastern New York's schools and scholarships committee for more than two decades, for which she received the Hiram S. Hunn Award in 2000.

Frederick V. Fortmiller '51, M.B.A. '53, of Wellesley, Massachusetts, is a veteran of the U.S. Navy and the Korean War who, after his fifty-fifth reunion, organized and published *The Harvard College Class of 1951: In the Nation's Service*, a collection of classmates' service remembrances. As a class committee member since graduation, he has also been active with the reunion gift and planning committees and co-chaired the sixty-fifth reunion. He is also a stalwart on the HAA board of directors' Happy Observance of Commencement committee.

Kalle J. Heikkinen, M.B.A. '91, of Helsinki, is the founder and former president of the Harvard Club of Finland, which hosted the 2007 HAA European Club Leaders Meeting, and has raised scholarship money for Finnish students to attend Harvard. He has



Frederick V. Fortmiller

chaired the club's schools and scholarships committee for nearly 20 years, and joined the HAA's board of directors in 2009 as a regional director for Europe.

Juanita C. Hernández '82, J.D. '85, of Washington, D.C., is a longtime leader within the Harvard Law School Association, and a founding member and chair of its Latino alumni committee. She has been instrumental in organizing the school's Celebration of Latino Alumni conferences, is president of the HLSA Club of Washington, D.C., chaired her thirtieth law-school reunion, and served as an HAA elected director from 1994 to 1997.

Carl F. Muller '73, J.D.-M.B.A. '76, of Greenville, South Carolina, worked with the HAA in various roles for more than a decade, and ended his tenure there as president in 2013. He was a key member of the task force that rewrote the HAA's constitution and helped align the work of the HAA and the Harvard College Fund. On the local level, he is a former president of the Harvard Club of South Carolina and has been an alumni interviewer since 1973.

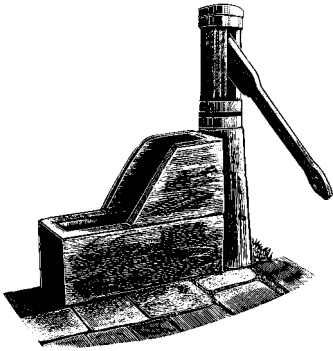


Juanita C. Hernández



Carl F. Muller

Soldiers, When Young



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

NEW YORK attorney Robert M. Pennoyer reports speaking at his class of 1946's reunion lunch at the Faculty Club, on May 25—billed as its last reunion. In case that is so, some of what he had to say about World War II deserves permanent recording. The class enrolled in September 1942, after Pearl Harbor, he notes. Among the recollections:

At Harvard that September, along with Tommy [Lamont, who died in a submarine in 1945], Norman Walker, Frank Hatch, and countless other friends and classmates, I enlisted in the Navy's ROTC program. The Navy took control of life at Harvard. Most of us were in uniform. In my last year some of us were "billeted" in Kirkland House, renamed "U.S.S. Kirkland." Instead of floors, walls, ceilings, rooms, beds, and stairs we had decks, bulkheads, overheads, compartments, bunks, and companionways. When a bugler woke us up at six we put on Navy issue sweatpants and "formed up" in platoons, in the courtyard, then ran in formation to the Charles River for a half-mile run before returning to "the chow line" in the "mess hall." Before going to class we had to make our "bunks" (learning to make a "Navy corner" came in useful later!)... and make sure our "compartment" was ready for inspection by a warrant officer....

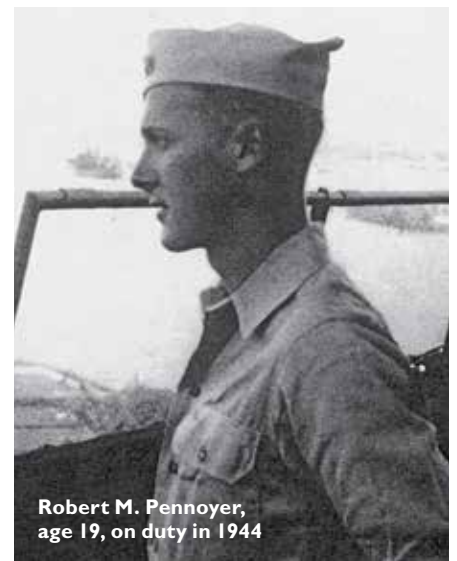
In October 1944, working through two years with no vacations to complete the

credits needed for a college degree and our ROTC training, Frank Hatch and I, at age 19, received our college degrees, our ensign's commissions, and orders to report to the cruiser *Pensacola* somewhere in the Pacific. It took a month to cross the Pacific to find the *Pensacola* in the harbor at Saipan, about 1,200 miles from Japan, that had just been taken by the marines. A few hours after we boarded, a voice over the ship's speaker ordered all officers to the wardroom. When we had assembled, the ship's executive officer, Commander Behan, uncovered an eight-foot scale model of...Iwo Jima. He explained that the next morning our ship, along with two other cruisers and six destroyers, would sail for Iwo, some 600 miles closer to Japan, where we would bombard targets he pointed out on the model....

The ship had a crew of 1,000, all volunteer, all young....The day before the landing at Iwo Jima, the ship was heavily damaged by Japanese shore fire, with almost 150 killed and wounded, when we closed to within one mile of the island to attack guns overlooking the landing beach....I was in the main battery turret just forward of the bridge. Frank Hatch was two decks below the bridge in CIC, Combat Information Center, which controlled the ship's radar. Another shell, exploding through the deck in the gap between my turret and the bulkhead leading up to the bridge, blew in the back of my turret and destroyed CIC. When we were out of range and ordered to put out the fires and help the wounded, I ran to the passageway leading to CIC and found Frank sitting on the deck outside the door to CIC, dazed but not seriously wounded. Of the 13 men in CIC he was one of four to come out alive. The night before, when we knew that our ship would be in trouble...before climbing...to stand a four-hour watch at the top of the mast 140 feet above the sea, I had given

Frank my lucky piece, a large silver Napoleon coin with the date 1808, telling him, "Here, you may need this."

...When the war ended in August 1945, I became the first American to land on Hokkaido....Our ship was ordered to participate in the occupation of northern Japan, and when we dropped anchor in the harbor at Hakodate on the south coast of Hokkaido a few days after the surrender was signed in Tokyo Bay, the captain ordered me, one of the youngest officers on the ship, to "take 20 sailors, with no weapons, and find a way



Robert M. Pennoyer,
age 19, on duty in 1944

to get ashore to let the Japanese know the Americans have arrived."

...In May 1946, when Frank and I walked down the gangplank for the last time in San Diego, there was no place to sleep in town, and the Navy bussed us up to the zoo which had been emptied of animals during the war, where we spent the night on cots in the monkey house, with the sign "Baboon" on the cage. From there, there was nowhere to go but up.

~PRIMUS VI

Reading Tea Leaves

How dried plants help divine the future

NOBODY KNOWS exactly how many plant specimens there are in the Harvard University Herbaria. Five to six million is a good guess, which makes it easily the largest such university collection in the world. The numbers matter, because Herbaria director Charles Davis, professor of organismic and evolutionary biology, aspires to digitize them all. His vision is to make the miles of collections available online so he and researchers around the world can mine them for the vast and valuable data they hold. “They’ve been ‘dark,’” he says, “hidden in locked cabinets for generations.”

Online, they will fill important gaps in understanding how changing climate and weather patterns affect plant distribution and biology, such as flowering time, and help scientists predict which plants will be winners or losers in the future. The ranges of some species will expand and



(clockwise from right) purple lovegrass (*Eragrostis spectabilis*) collected in Winchester, Massachusetts, in 1888; ladyslippers (*Cypripedium acaule*) gathered in Needham, Massachusetts, from 1883 to 1894; and a common thistle (*Cirsium vulgare*) found in an open pasture in Hillsborough, New Hampshire, in 1921. Davis characterizes the project as a “moonshot” that nevertheless was completed in less than two years with the aid of a system of conveyor belts, barcodes, and digital cameras: an assembly line for digitization that lets his team capture a specimen in 10 to 15 seconds—generating as many as 14,000 records a month.

Not all the specimens are photogenic. One collector, granddaughter to the king of Romania, liked to collect pond weeds, among other things. Henry David Thoreau’s collecting tastes were more catholic, but parochial in a regional sense: most of



his specimens hail from Concord, Massachusetts. Across the collection, there are broad spatial and temporal biases, too, says Davis.

“Many of the collections are concentrated around roadways and university towns,” he says. “We see a peak in efforts just prior to World War II in the 1940s, and then we see collecting declining shortly after that.” But partner institutions have picked up where Harvard left off, making digitization a compelling way to complete the record of shifting climate. What do the data so far tell him? “Thank God for Canada!”

—JONATHAN SHAW



Visit harvardmag.com to view additional images from the collection.



the ranges of others contract as they all shift toward higher, cooler latitudes. Some lineages of plants, he notes, may have difficulty keeping up.

An Herbaria team just finished digitizing all 340,000 of the specimens from New England, including

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