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Cambridge 02138

Feeding the world, Alain Locke's faith, divestment

ENDANGERED EXPERTISE

THE MAGAZINE'S email message title, "Has Ignorance Become a Virtue Today?" (referring to "The Mirage of Knowledge," March-April, page 32) particularly caught my attention because I am in the middle of reading the *Collected Writings of Thomas Paine* as part of my effort to reengage with the fundamental principles that the founding generation of our American republic cared so much about.

A few nights ago, I was reading "Public Good" (December 30, 1780), which contains this statement toward the end: "Where knowledge is a duty, ignorance is a crime."

It is hard to rise to the highest principles of our founding as a nation. At our best we have honored them, but we also have fallen below them. However, it is sad to see just how low we have fallen today. Most disturbing—and what seems new—is how large a portion of our population seems not to know what these principles are or to consider them important and even to be openly hostile to them. And, of course, concurrent with this is how shamelessly many in public life encourage that ignorance and hostility for their own ambitions.

It's as if the whole nation could use a good civics lesson.

CHRISTOPHER GREENE, M.B.A. '84
San Jose, Calif.

I APPRECIATED "The Mirage of Knowledge" for describing how Tom Nichols analyzes and laments the decline of fact-based reasoning in America, as well as the concomitant rise in anti-science and ignorance.



While this phenomenon has been growing for some time (e.g., the rise in creationism teaching), it is being accelerated by the Internet's malign influence as a source of "alternative facts" to suit any preconceived point of view.

The Trump presidency is the latest (and perhaps the most dangerous) manifestation of this dynamic.

Russia, and other hostile states, recognize this fact and continue to exploit this weakness in our national fabric. Nichols states "we're in a very perilous place right now." I certainly agree.

GARY USREY, M.P.A. '85
Arlington, Va.

I HAVE NOT read Tom Nichols's *Death of Expertise*, but Lydialyle Gibson's summary of it says nothing about how common practices and attitudes of experts or their educations might have helped lead to the backlash Nichols correctly decries. For decades now, it has seemed mandatory to focus as narrowly as possible in order to succeed as an expert. Failing to do so put one at an enormous competitive disadvantage. But narrowness led easily to arrogance, ethical blindness, and ignoring the wider context in which one's certainties could be contradicted by aspects outside one's ken.

Thus, experts in military strategy got Vietnam entirely wrong, did it again in Afghanistan and then Iraq, and so on. Nichols himself evidently suffered from the insensitivity of nuclear-war strategists to the effects on children's psyches, among their other thoughtlessnesses. Economists quite commonly ignore the negative effects on some groups of policies that may

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Making the Case

THE UNITED STATES OF AMERICA is an idea—and an ideal. Each of us has a role to play in realizing its promise in our individual lives and in the communities that we inhabit and influence. When I became president in 2007, I didn't anticipate just how often—and how urgently—I would be called upon to make Harvard's case, and the case for American higher education, to Administration officials, members of Congress, journalists, and others in Washington, D.C., but it is a role I have come to embrace.

Over the last decade, I have made dozens of trips to our nation's capital, most frequently in the last two years, as attacks on higher education have increased. I meet regularly with members of Congress and others to discuss the enduring value of the partnership between American universities and the federal government in basic and applied research, to urge support for Pell Grants and other forms of financial aid that help make college affordable, and to advocate for the rights of DREAMers to be part of campuses and part of our country.

Colleges and universities strengthen these United States. Through public investment in basic research and the application of new knowledge, American health and wellbeing are improved, human minds and imaginations are expanded, and extraordinary advancements and innovations in business, security, technology, and other sectors are sparked. In this publication and elsewhere, I have described the many ways in which federal funding is driving our efforts to improve life and to deepen understanding, and creating the possibility of a future free of disease and illness—a future in which aging itself is slowed. We ought never lose sight of these aims because they give us hope and inspire the types of effort that change the world by incremental steps and enormous leaps. Without investment, there can be no dividends.

The federal government also plays an essential role in Harvard's efforts to attract some of the world's most talented individuals to study and work on our campus. Today, international students comprise nearly a quarter of our community, and we host more international scholars than any other college or university in the country. Our cosmopolitan campus—and all of the global connections and collaborations that it enables—depends on a visa system that does not create undue delay or hardships, as well as an effective and thoughtful approach to security at our ports of entry. Making it more difficult for highly capable women and men to contribute to our innovation ecosystem as students and faculty erodes economic competitiveness at a time when other nations are working to make their campuses appealing to the people who will make discoveries and drive progress—and prosperity—for decades to come.

These aspects of Harvard cannot easily be assessed and mea-



sured, and part of my work on the Hill is ensuring that statistics about economic growth and talent development enabled by the University are shared broadly and frequently. But what about the less tangible outcomes—the propagation of ideals and values that are the heart of our enterprise and the soul of this country? There are, perhaps, no better stories to illustrate the promise of American institutions than the stories of undocumented students who call this country and our campus home. They embody the very qualities that emboldened our nation's founders—confidence, drive, and optimism—and they are unquestionably qualified to make significant contributions among their generation's thinkers and doers. It has been my honor to represent their interests as they anxiously await action in Washington.

On innovation and immigration and many other issues, I have found strong allies among Democrats and Republicans alike, and I leave Washington after each visit impressed and heartened by alumni who are devoting themselves to public service in the Senate, the House, the Judiciary, and throughout all levels of our government—from Congresswoman Katherine Clark, Congressman Joaquin Castro, and Senator Chuck Schumer to Secretary Elaine Chao, Senator Dan Sullivan, and Congressman Scott Taylor. These individuals continue a long and proud tradition that has stood our country in good stead since its earliest days, and they bring to their deliberations a level of civility, decency, and intelligence that reflects well on their alma mater and their offices. I am proud and appreciative for all that they do to continue the work of perfecting an imperfect union.

Sincerely,

Drew Faust

be beneficial overall. Management experts also ignore the human costs of their decisions—as when eliminating whole categories of jobs. Doctors who just look at the disease and not the whole patient or the family can make what amount to grievous mistakes. Ecologists, who one might hope would have wider horizons, still often don't consider it their province to try to imagine how to mitigate negative effects on humans of even wise environmental policies. And on and on.

Unfortunately even Harvard has not seemed particularly able to widen horizons for typical undergraduate and graduate students in highly competitive fields of expertise, where the pressure for narrowness as part of success always dominates. A partial answer may be for Harvard and similar institutions to offer some students a “deeply broad” general education with the intent that they may somehow serve as public guardians against the flaws and oversights of experts. That is what—class- and gender-biased as it was—a “gentleman’s” education at Harvard once promised at its best. Reviving and modernizing such a path now would be going against entrenched power structures in which experts now dominate even at Harvard. They can be expected to fight against such a program as a waste of talent and resources. But the alternative, as Nichols—and Trump’s election victory—show, may be far worse.

MICHAEL H. GOLDBERGER ’63, Ph.D.
Berkeley, Calif.

I AGREE with the issues and concerns that Tom Nichols outlines: “Ignorance and unreason in American Public Discourse”; Trump; opinions over facts; the future of our Republic; and so on.

Where I lose him is with the comment that “the failures of experts...are spectacular but rare.” Experts may have a good deal of knowledge about a certain subject, but they, like the rest of us, are also prone to a num-

ber of epistemic flaws, including confirmation bias; the tendency to view a changing world through old paradigms; and the ability to convince themselves that they know more than they really do. Experts, like the rest of us, are also self-interested, often reluctant to admit when they are mistaken, and eager to protect and expand their turf. These and other factors can lead to serious, unanticipated consequences.

Nichols does not acknowledge that our country has a number of significant problems with deep, bipartisan roots that preceded our turn against experts. For example, we have made a mess of our foreign policy; we cannot extricate ourselves from an endless stream of foreign wars; we continue to add to our debt at an unsustainable rate; our drug policy hasn’t worked, but it has contributed to scores of drug-related deaths and to the world’s highest incarceration rate...Presumably, many of the long-standing policies and practices that led to these outcomes were designed and implemented by experts. We cannot, of course, blame experts for all of our problems, but maybe it is both the reality and perception of expert malpractice that contributed to today’s unfortunate “mirage of knowledge.” Recognizing and acknowledging this might be the first step toward counteracting the turn against experts.

HOWARD LANDIS, M.B.A. ’78
Naples, Fla.

I HOWLED laughing while I read “The Mirage of Knowledge”! Tom Nichols suggests that Trump and his supporters have rejected the “experts”...no kidding! Nichols further suggests this is a bad thing. But what have the “experts” given us in the last 30 years? Horrible trade agreements that hollowed out U.S. manufacturing, flat wages for American workers for over 15 years, two useless wars that cost trillions of dollars and thousands of American lives, the rise of communist China poised to surpass our GDP, \$20 trillion of debt, government-run healthcare with skyrocketing premiums and poor service (see VA hospitals), the crash of 2008 brought on by cheap Fed money and the moral hazard of GSEs, and bullies in Washington who weaponized the IRS against patriots and forced the Little Sisters of the Poor to offer abortion coverage [Editor’s note: The issue was coverage for contraception.] against their religious convictions. Oh, and all the “experts” said Trump couldn’t win! In Trump, Americans

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7 WARE STREET

Agenda-Setting

WITH A NEW administration comes a new agenda. The election of Lawrence S. Bacow as Harvard's twenty-ninth president on February 11 (see page 14) inaugurated that transition. He does not assume office until July 1, of course, and may choose to begin outlining his priorities when the academic year commences, or at his formal installation on October 5. But the community will be eager to hear more about how he will articulate the case for higher education to the larger society at a fraught moment—and how that complements his to-do list on campus.

Herewith, thoughts about the home front, combining close scrutiny of what the president-elect has said and written with observations from strolling around the place.

They arise in the context of continuing financial constraint (despite Harvard's gigantic capital campaign)—a concern for any new president. For instance, the Faculty of Arts and Sciences' (FAS) endowment was *smaller* at the end of fiscal 2017 than in 2008, but must support undergraduate financial-aid spending that has risen by \$100 million yearly during the past dozen years. The number of professors has been held essentially level, even as new fields blossom. House renewal has been slowed, and FAS is incurring additional debt to sustain the program. Even a high priority like FAS's "Inequality in America" initiative (which would seem timely and of broad social import) is on a tight leash; the same holds for other initiatives. FAS as a whole may even operate at a deficit this year; both its engineering and applied sciences school and Harvard Medical School—each with expensive research operations—have persistently done so.

Costs vs. Harvard's culture. During the past couple of years, Bacow has highlighted higher education's expenses. He did so again on February 11. In a University culture that has pointed to the desirability of more revenue (even as income has been growing more than 5 percent per year), he talks about controlling costs and operating efficiently. Indeed, while underscoring his deep commitment to securing students' access to college regardless of their means, he premised a recent major address on this question: "Why do I believe that bending the cost curve is the biggest challenge that we face?" Because, he explained, rising costs jeopardize access, public support, and ultimately universities'

financial foundations: in a word, everything.

More tubs vs. more partners. In a place historically eager to have its own top-quality *everything* (witness the current enormous investment to augment Harvard's modest footprint in engineering and applied sciences), the new leader emphasized partnerships and collaborations. He has, separately, remarked upon a relationship between scale and academic excellence, such as that found in MIT's large departments. Might he want to powwow with former colleagues down Mass. Ave. about joint ventures?

People vs. places. Speaking optimistically about Harvard's opportunities and intellectual capital on February 11, Bacow said: "We are blessed with extraordinary students, faculty, and staff. In fact, every time I walk into the Yard and I see flocks of tourists there taking pictures of the statue of John Harvard, of Mass Hall, of University Hall, I always want to stop them and say, 'No, no, no! That's not Harvard. Harvard is its people.' That's what makes this place special." Might he want to examine the University's current, epochal love affair with construction? If so, his timing may be good. House renewal continues, but a lot of deferred maintenance has been remedied, and many new projects on the wish list have been built. Redoing the Divinity School's Andover Hall and augmenting the Graduate School of Design's campus loom large locally, but less so from a University perspective. Possibly, a Bacow administration will bend the curve from cranes and contractors toward the faculties and academic programs that benefit society.

Allston. The Corporation has identified life sciences as a current strength—and a field with huge potential for Harvard, its affiliated hospitals, other area schools, and Greater Boston's biotech and pharmaceutical businesses. It is also of rising interest to Stanford and its neighbors. Investing here could sop up huge sums: "wet" bench research is as expensive as it comes. The requisite facilities would logically seem to fit well in Allston, linking Longwood researchers to those in FAS—and to other universities, Kendall Square, and companies that might gravitate to the "enterprise research campus" at Allston Landing. Notwithstanding a general disposition to attend to expenses, might a snap campaign focused on life sciences, promising new cures and jobs in new companies, be in the offing?

Other ambitions? How to weigh that *research* investment against, say, expanding the College's *teaching* mission—a powerful signal of


serving promising students from the lowest-income households and under-resourced K-12 schools? (Yale and Princeton are pursuing such efforts.) For Harvard, the requisite expansion of the faculty, House space, and financial aid associated with a maximum effort to educate more undergraduates would probably entail a further few billion dollars in endowment and building funds. That might be feasible in time, but longer term and far more expensive than, perhaps, disseminating Harvard online learning in new, more effective ways—or deemphasizing the legacy admissions preference to make room for additional first-generation applicants.

Making choices. Bacow's scholarship focused on negotiating and resolving complex disputes with contending interests: ideas he has since *applied* in higher education. The matrix of interests here is internal: good things Harvard would like to do. So perhaps this will be an interesting moment for trading off dreams and means, resulting in a new set of University priorities.

In light of worries about the political environment, fueled by public skepticism about the worth of higher education, it will not be easy for the institution with the largest endowment (and an elite education and research mission) to lead efforts to persuade the broad public about the value of what Harvard and peers do. Even if donors were willing, the *appearance* of doubling down on Harvard Campaign-scale fundraising anytime soon might be toxic. Maybe the president-elect will revisit programs, restructuring some and ending others, to redeploy the millions they now consume. Coming from Tufts, where resources were far scarcer, may prove helpful in examining what Harvard has chosen to do, and may aspire to pursue.

* * *

GIVEN HIS SERVICE on the Corporation, Lawrence S. Bacow comes to his new role with current, broad knowledge of Harvard. He has also led a university before; reflecting on his assumption of the Tufts presidency, he wrote: "I am a sailor. One of the most dangerous portions of any passage is leaving the harbor. It is actually safer once you get off shore. There are fewer things to run into. Beginnings are really, really important. How we plan them, how we transition, how we reveal our deeper moral convictions, is key." Faculty and staff members, students, alumni who care about Harvard, even politicians who may care less, might want to tune into this one. —JOHN S. ROSENBERG, *Editor*



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Summer Reading List

LETTERS

voted for their own bully to stand up to the “experts,” disrupt the status quo, and return power to the people.

DOUG KINGSLEY, M.B.A. '90
Boston

Editor's note: The article contained three errors: a misspelling of the name *National Enquirer*; a misstatement of the American dead in World War II as 470,000, instead of 417,000; and a mischaracterization of Nichols's childhood as a typical 1950s experience when the 1960s was intended. (Nichols was born in 1960.)

GREEN REVOLUTION?

JONATHAN SHAW's article (“A New Green Revolution?” March-April, page 44) presents for-profit agricultural technology as a panacea for a hungry world, one about to face an “immense” shortfall in food as population increases. Reading it, one would never guess that we actually have plenty of food already. In fact, according to the UN's Food and Agriculture Organization, we currently produce enough to feed 10 billion people—the persistence of hunger is about geopolitics, poverty, and strife, none of which will be altered by modified seeds, and also about the dominance of monocultures, a legacy of the last “green revolution.” (There's also the issue of meat consumption; Cornell recently estimated that we could feed 800 million people just on the grain that the U.S. currently devotes to livestock, a massively inefficient concentration of calories.)

This doesn't mean dismissing these innovations out of hand; designing seeds that can resist drought, for instance, is laudable and of obvious utility, but the history of the “green revolution” has often been one of unintended and devastating consequences, and that should urge us to be cautious with new agricultural technologies. The article presents not a single downside to this latest revolution, but we have already seen negative consequences to allowing for-profit companies to patent essential elements of the food supply. Instead of allowing fear to push us into blind acceptance of this newest wave of GMOs, we should carefully assess both the science and the social consequences associated with them, especially in contrast to tested solutions such as agroecology, while we also work to reduce meat consumption and food waste and to build the kind of world

where we can distribute food more equitably. That last will need to happen in any case for us to feed 10 billion people, with or without Indigo Ag's (and Monsanto's) latest products.

TARA KATHLEEN KELLY '91
Gloucester, Mass.

Editor's note: For the record, Shaw wrote about some of these issues in “Eating for the Environment” (March-April 2017, page 11).

ALAIN LOCKE

ON THE OCCASION of Jeffrey Stewart's new biography of Alain Locke, I truly appreciated Adam Kirsch's “Art and Activism” (March-April, page 36) on that too long unheralded “quiet man” of the Harlem Renaissance. However, the article, like so many books about Locke, leaves out mention of the important fact that Locke was a Bahá'í. Just as his Harvard and his Rhodes experience at Oxford were germane to Locke's intellectual evolution, the Bahá'í Faith was intrinsic to his spiritual development.

Locke embraced the Bahá'í Faith in 1918, the same year that he received his doctorate. The teachings of Bahá'u'lláh soon became the dominant spiritual influence in his life and on his thinking. Bahá'í became his core identity, eclipsing that of race or sexuality. Indeed, it was his active work for unity through diversity—on a worldwide scale—that caused the more partisan W.E.B. DuBois to part activist ways with him. Locke saw racism as he saw so many narrow allegiances: as symptoms of a deeper spiritual disease. As he wrote in his 1943 essay “Lessons in World Crisis,” “[S]ome basic spiritual reorientation is a pre-requisite to the effective solution of many, if not most of the specific political, economic and cultural issues of our time.” That reminder is even more relevant for today's “world crisis” than it was during World War II.

TOM LYSAGHT '74
Los Angeles

MAY I BRING to your attention that a previous biography of Locke appeared from University of Chicago Press: *Alain L. Locke: The Biography of a Philosopher*. It was written by Leonard Harris and me. The article in the March-April issue creates the impression that the new (please turn to page 86)



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COULD A SIMPLE POSTCARD, properly deployed, make a measurable impact on student absenteeism from school? The answer is yes. “Reports of the death of mail are greatly exaggerated,” quips Todd Rogers. A professor of public policy at Harvard Kennedy School, Rogers runs a lab that develops high-impact interventions to improve educational outcomes. As a former political strategist, he once applied skills at the intersection of behavioral science and social psychology, learned during his Harvard doctoral studies, to get voters to the polls (the work is described in Sasha Issenberg’s *Victory Lab*).

But eight years ago, he dropped politics, and turned his focus instead to education. “I wanted to help kids succeed.”

He returned to Harvard to focus specifically on mobilizing family support for students. “A handful of experiments showed these crazy effect sizes,” he says, because “when you give parents useful information, they act on it.” The Student Social Support (S3) R&D lab was born to “use behavioral insights to develop scalable interventions that mobilize the social network around students” to support achievement. An ideal intervention, he says, occupies a sweet spot at the center of a Venn diagram that maps

the intersection of three overlapping circles of expertise: insights into human decision-making; an understanding of key problems in education; and mechanisms for reaching scale without imposing new burdens on teachers and administrators. “It is hard to nail all three,” he explains.

Rogers is currently running an experiment that leverages preexisting relationships among 3,000 K-12 students and mentors nominated by their parents (grandparents or coaches, for example) to increase grades and test scores. The mentors receive weekly letters that might read, “Hi, these are the classes Caroline is taking, ask her what are her favorite subjects and why.” Early results in Britain testing a similar approach (but using text messages) to help students earn a high-school equivalency diploma have been very promising, he reports. Another project pushes administrative data about grades, class-skipping, and test scores—information that teachers already record—out to parents via text-messaging in order to lift grades. In an experiment with 7,000 families in Washington, D.C., when parents were automatically enrolled in the program, 96 percent of them stayed in, and the effect on student achievement was “very large,” say Rogers. Even better, “parents want more information afterward.” In other words, “Parents don’t know what they don’t know. When they get actionable information, they act on it. That improves student achievement, and then they want more.”

The project Rogers is most excited about, however, was inspired by behavioral research in energy conservation. In the utility industry, he explains, many states have empowered regulators to decouple profits from energy sales. In such markets, power companies get a



fixed amount of profit per user, and then additional profit for demonstrating *reductions* in energy consumption. When consumers are given information about how much energy they use and how that compares with their neighbors' consumption, they tend to cut back or become more efficient, and the effect improves over time. "People really respond," says Rogers, "when information can correct false beliefs."

Rogers wondered if he could adapt this approach to improve school attendance. About five years ago, he conducted a survey in Philadelphia public schools and found that the majority of parents of low-attending kids think their child's attendance is *better* than that of classmates. "They also think that their kids miss half as many days as they actually do," he reports. In a pilot study of 3,000 Philadelphia families, he and Avi Feller, then a doctoral student of statistics, mailed parents information about their child's total absences and how that compared to classmates', and found that it reduced absenteeism at a cost of \$5 to \$10 per incremental day generated—making it by far the most cost-effective intervention to reduce absenteeism. (The next best intervention appears to be the use of truancy mentors and social workers; that costs about 50 times as much.) The following year, he replicated the pattern of results with 28,000 families, and a year later with 20,000 more in Chicago, as well as in 10 districts in California. The work appears in a paper, currently in press, in *Nature Human Behavior*.

Schools are paying attention. The federal government's new education law, the Every Student Succeeds Act, has led at least 36 states to select student absenteeism as one of the metrics on which their educational quality is evaluated. In turn, these states have made absenteeism one of the metrics on which school districts are evaluated. Rogers, who has done research studies with about 2,000 schools and colleges around the country, suddenly found that there was tremendous demand for help implementing such programs.

His first instinct was to help districts implement the program themselves, but "none managed to do it at scale with fidelity." Nor was his research lab equipped to offer such services. He therefore co-founded a for-profit company, In Class Today, staffed with professionals, to help school districts around the country implement the program. The company has found that it can reduce chronic absenteeism (missing a day or more of school

every two weeks) by 10 percent to 15 percent. "Obviously, this doesn't solve the problem," says Rogers, "but it is insanely cost-effective, easy to implement, and frees up resources" to tackle other causes of absenteeism.

Why are the postcards so effective? Continuing research revealed that the biggest push for action came not from the social comparison, but from "correcting parents' beliefs about how many days their kid has missed." Others have found that text messaging this information has no effect on absenteeism, Rogers reports. But the postcard

becomes a social artifact, Rogers explains, something that is shared with others in the home. "We have started adding messages—'Please show this to Johnny'—to try to encourage this virality," he says. Parents love it, and the program even has spillover effects to siblings. In households that receive the postcards, "everyone attends school more."

—JONATHAN SHAW

TODD ROGERS WEBSITE:

<https://www.hks.harvard.edu/faculty/todd-rogers>

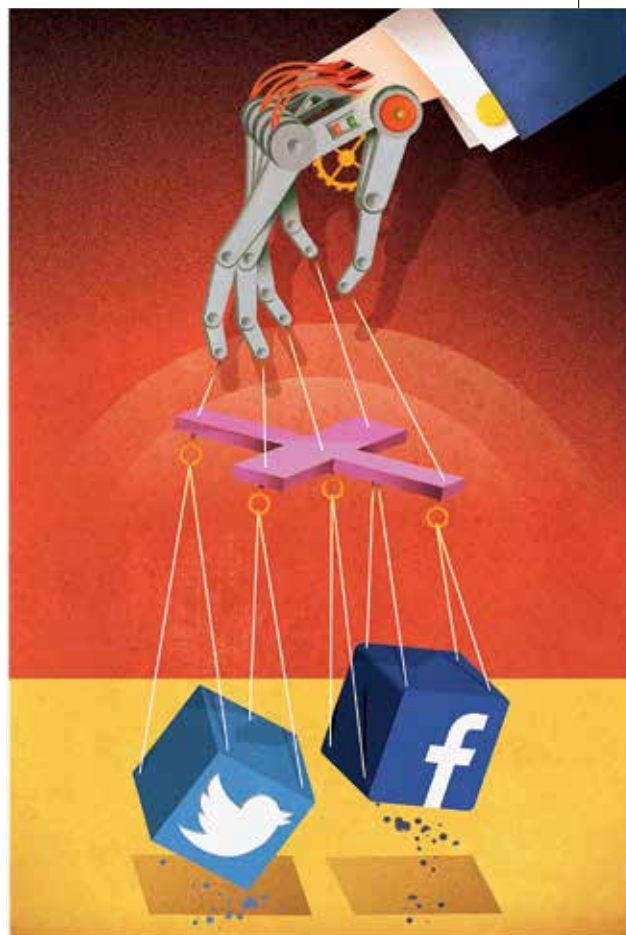
RUSSIAN DRESSING

The Disinformation Dilemma

IN THE discussion of how Russian operatives manipulated public opinion during the 2016 presidential election, it's easy to overlook how their malicious goals were easily advanced thanks to tools originally designed to further the economic interests of leading Internet companies like Facebook and Google.

Dipayan Ghosh, a fellow at the Kennedy School's Shorenstein Center on Media, Politics and Public Policy who previously worked at Facebook on privacy and public policy and consulted on the Clinton campaign, spent the months immediately following the election researching how Russian disinformation campaigns had used tools such as search engine optimization, behavioral data collection, and social media management software (SMMS) to spread and promote "fake news" widely online. He teamed with Ben Scott, a senior adviser to the nonprofit Open Technology Institute at New America and a fellow adviser to the Clinton campaign, to raise awareness about these abuses by publishing a paper, "Digital Deceit: The Technologies Behind Precision Propaganda on The Internet," with New America in January.

Disinformation agents were fundamental-



ly successful, Ghosh says, because they were able to tap into the lifeblood of the modern digital advertising landscape—behavioral data. Those data exist because websites

compile every click, share, and search query into a user profile. One way to do this is by using a “cookie,” a piece of data that tracks users’ activity in order to predict their preferences and interests. Advertisers use these inferred preferences to show users advertisements in line with those interests, like hiking boots instead of high heels. It seems a harmless, mutually beneficial marketplace, in which users are exposed to the kinds of

use of SMMS. Such software helps brands schedule and select the kinds of content they wish to promote to certain audiences. Ghosh emphasizes that these tools are not inherently malicious—they help advertisers connect with consumers with less effort and more frequent success by reinforcing messages across media. But a political disinformation agent could just as easily use the software to push a fake story on multiple

there’s a scale issue in fighting such challenges. Even if Google wanted to “throw its entire security team at this problem” it couldn’t, because “the number of black-hat SEO attacks per security person at Google is just not a ratio in Google’s favor.” For this reason, he encourages companies to adopt “bug-bounty” programs that financially reward people outside the organization who can figure out ways to push disinformation through the existing system—thus pinpointing loopholes and security issues that companies can fix. “It’s throwing money at the problem,” Ghosh says, “which is really something we have to get more comfortable with doing.”

He and Scott offer a number of technical solutions to help ensure that SMMS companies, Internet platforms, and advertisers head into the 2018 and 2020 elections with more control over misuse of their digital toolkits. But in the effort to promote policy change and push Internet companies to implement better security processes, Ghosh believes primarily in the power of public opinion. “The best way we can raise awareness” about how “the threat of disinformation can linger on these platforms, and surface at the most critical times in our national history, is by talking about and writing about it,” he says. “I’m talking about the pitchforks coming out.” —OSET BABÜR

DIPAYAN GHOSH E-MAIL:
dipayan_ghosh@hks.harvard.edu

Mass data collection provides ample opportunities for disinformation agents to manipulate users’ experiences in the political landscape.

content that they want to see and advertisers are able to generate revenue.

But Ghosh says that this practice of constant mass data collection also provides ample opportunities for disinformation agents to manipulate users’ experiences in the political landscape. Location data collected through apps and sites, for example, can be used by a disinformation campaign to determine where a voter lives, in order to tailor ads to races and hot-button issues for that specific region.

After using Internet data to determine what kinds of propagandized messages might speak to specific audiences, disinformation campaigns can also synchronize their efforts across platforms such as Twitter, Facebook, and Instagram through the

platforms while simultaneously tailoring each iteration of the story by using data on what is most likely to persuade specific audience segments. In cases like these, SMMS makes disseminating destabilizing rumors and sensationalized stories faster and easier.

One of the easiest ways to detect manipulation of search results from providers such as Google is to watch for instances where content from less credible sources ranks above that from well-established outlets. Foreign agents in 2016 used so-called black-hat (as in old Westerns) search engine optimization techniques to understand, replicate, and ultimately trick Google’s algorithm into promoting their propagandized content to the top of search results. Ghosh says

REVERBERATIONS OF BONDAGE

Slavery’s Southern Legacy

WHEN Avidit Acharya, Matthew Blackwell, and Maya Sen were assistant professors at the University of Rochester, they got to talking over lunch about politics. What made the United States more conservative than other Western democracies? Within America, what made the South more conservative than other regions, especially on race-related issues? And what explained differences within the South? Take the 2008 presidential election. Barack Obama won next to zero support from white residents of Greenwood, Mississippi and its surrounding county, who are among the most conservative voters

in the country; he won 57 percent support from white residents of the Asheville, North Carolina area, long considered a progressive enclave.

The researchers argue that chattel slavery caused political divides that still exist in the South. White people living in counties where slaveholding was more prevalent tend to be more conservative and more hostile toward black people. Greenwood, set on the alluvial plain of the Mississippi Delta, became a major cotton producer in the nineteenth century; by 1860, enslaved people made up 68 percent of its population. Asheville, meanwhile, started as a trading outpost within the Blue Ridge and Smoky Mountains, and

in 1860 only 15 percent of its population was enslaved. “It’s not simply that more conservative people live in these areas—these are more conservative areas *because* of their past,” they write in their new book, *Deep Roots: How Slavery Still Shapes Southern Politics*.

“This is a break from what research in political science and public opinion might tell us,” acknowledges the introduction. Blackwell, now an assistant professor of government at Harvard, says that usually in political science, “Objects of study are paired closely in time.” Studies will link local opinions on affirmative action to an area’s current demographic makeup, for example, or support for the Whig Party in 1860 to cotton exports from that decade. In contrast, their study investigates processes that unfolded over more than a century and a half.

Acharya, Blackwell, and Sen took historical data about slaveholders and enslaved people from the 1860 census and mapped

that onto modern-day counties, where they had survey data that recorded party affiliation, stances on race-related issues, and measures of racial resentment. They also looked into data from the Reconstruction era: after the Civil War, counties that once had high slave populations became areas with high rates of lynching—and in these counties, today, white survey respondents express “cooler attitudes” toward blacks. The trio’s study also considered other reasons why formerly slave-holding areas are more conservative. For example, perhaps slavery affected where in the South different groups ended up living, which in turn influenced political attitudes—or perhaps an area’s political attitudes actually predated, and indeed drove, slavery. But neither fit the data.

The researchers posit that areas with economies reliant on slavery passed “Black Codes” to control black people’s movements and their political and economic activities, and to secure cheap labor. Social norms governing how blacks and whites interacted in public further reinforced the racial status quo, and were passed down by parents to their children. Local governments, schools,

A deputy sheriff confronts civil-rights marchers in front of the county courthouse in Greenwood, Mississippi, in 1966. Greenwood, nicknamed “the Cotton Capital of the World,” depended heavily on slave labor in the nineteenth century and became a flashpoint for racial strife throughout the twentieth.



BETT MANN/GETTY IMAGES

and churches encouraged these sentiments as well. Long after the original economic incentives faded, racial attitudes persisted.

First published in a paper in 2016, their conclusion drew mixed reactions. “We’ve had two general classes of responses,” reports Sen, now an associate professor at the Kennedy School. “Well, it’s *obvious* that history should and does have an impact on present-day attitudes. So what you do is as-

toundingly obvious.’ That’s one category of response. And the other category is exactly the opposite, where people say, ‘It’s outrageous that you think that something that collapsed 150 years ago still predicts how I think, or still predicts how I vote.’”

With their book, the researchers hope to convince people that their current beliefs are directly tied to the past. They also advance a theory they think could apply to contexts

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beyond the United States: when an important institution collapses, a society makes choices about how to proceed, and the political attitudes that form during that critical moment are passed down through the generations. "Once a community has moved along a path," the authors conclude, "it be-

comes firmly rooted and difficult to reverse or change." Though the original incentives no longer apply, the disparities persist, even as, in this case, Americans across the board are more racially tolerant than in the past.

This divide may last even longer in the absence of behavioral interventions like the truth and reconciliation commissions set up in post-apartheid South Africa and post-genocide Rwanda. The United States has had major legal interventions, including the Civil Rights Act of 1964, which promised equal access to the vote and to public resources, but "in terms of trying to change people's hearts and minds," Blackwell says, "the government never really got involved in that, either at the national or the state level."

Deep Roots joins a growing body of what's known in the social sciences as "persistence literature." For example, a 2011 study found that anti-Sem-

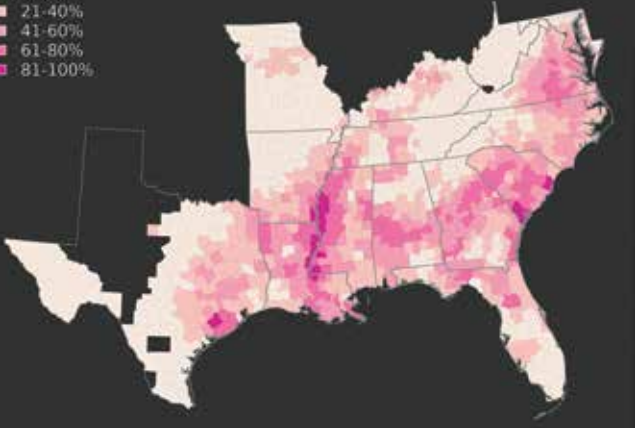
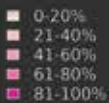
itism in Germany has persisted at the local level for centuries: cities that witnessed pogroms after the Black Death in the fourteenth century also saw more violence against Jews in the 1920s and more votes for the Nazi party. Abbe professor of economics Nathan Nunn, at Harvard, and professor of politics Leonard Wantchekon, at Princeton, have shown that even today within Africa, individuals whose ancestors lived in communities that were heavily raided during the transatlantic and Indian Ocean slave trade are less trusting.

In political science, a field where a lot of effort goes into measuring the impact of outreach strategies—sending a mailer to a potential voter, making a phone call, sending a volunteer to knock on doors—studies like *Deep Roots* take a longer view. "It's trying to understand really long-term forces that dictate who opens the door," says Sen—and how that person might react.

—SOPHIA NGUYEN

Slavery in the United States, 1860

The density of slavery is shown within modern county boundaries.



COURTESY OF MATTHEW BLACKWELL AND MAYA SEN

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SEASONAL

Ceramics Program

Spring Show and Sale

<https://ofa.fas.harvard.edu>

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Cambridge River Arts Festival

www.cambridgema.gov

From left: a scene from director Luchino Visconti's *Il Gattopardo* (*The Leopard*) at the Harvard Film Archive; the annual Ceramics Program Spring Show and Sale; and *Art Book*, by Susan Kapuscinski Gaylord, part of an exhibit at the Arnold Arboretum

Live performances of dance, theater, music, and poetry, along with community and art vendors, and all kinds of food from around the globe. Lechmere Canal Park. (June 2)

Park Fest

www.decordova.org

The day-long celebration of “art, nature, and creativity” at **DeCordova Sculpture Park and Museum** in Lincoln, Massachusetts. The line-up includes a 5K run, sculpture hunts, food trucks, art demonstrations, and art-making opportunities (for any age) that are inspired by the museum’s spring ex-

FROM LEFT: HARVARD FILM ARCHIVE; HARVARD CERAMICS PROGRAM; SUSAN KAPUSCINSKI GAYLORD



Triangle Constellation by Carlos Amoraes
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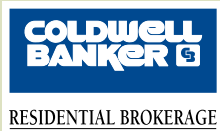
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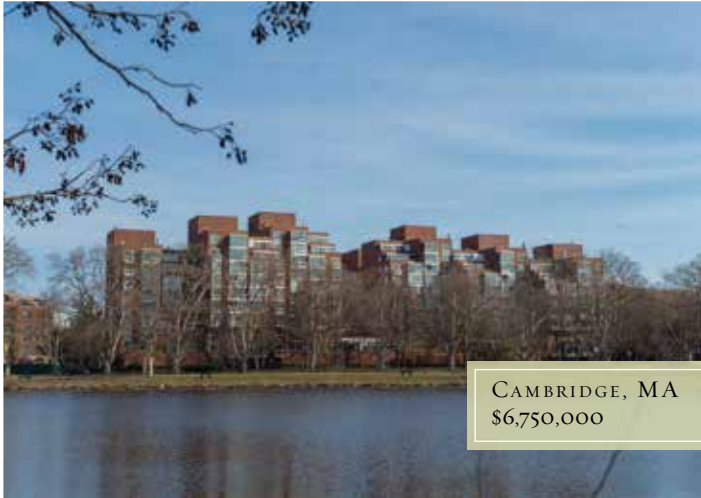


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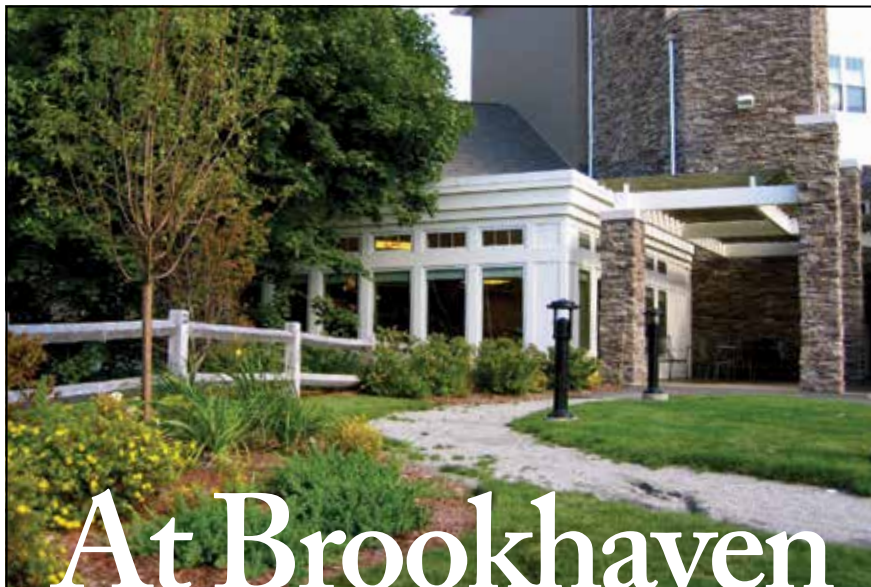
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HARVARD SQUARED

hibits—**Sculpting with Air:** Ian McMahon and John Oh and **Lived Space:** Humans and Architecture. (June 23)

Boston Historical Costumers' Picnic

Anyone can join in this second annual stylish homage to the past by showing up in outfits, from elaborate to vintage to casual, that pre-date 1960, and enjoying an afternoon by the river. Charles River Esplanade. (June 25)

Boston Harborfest

www.harborfest.com

More than a hundred events help celebrate America's birth, from historic reenactments and Freedom Trail tours to concerts, a "chowderfest," and an outdoor screening of *Yankee Doodle Dandy*. (June 29-July 1)

NATURE AND SCIENCE

The Arnold Arboretum

www.arboretum.harvard.edu

The Spirit Books. Artist Susan Kapuscinski Gaylord incorporates tree branches, roots, and vines in her hand-stitched, wordless book sculptures, and encourages viewers to "read" them as contemplative connections to nature. (Opens May 4)

Impressions of Woody Plants: Disjunction, Two Artists, and the Arnold Arboretum explores exotic and native plant life, along with the relationship between botany and art through copper etchings by Bobbi Angell and watercolor paintings by Beverly Duncan. (Opens May 11)

Tower Hill Botanic Garden

www.towerhillbg.org

Join docents for weekend tours, take gardening and art classes, or just stop by Tower Hill anytime—or on **Family Day**, which offers activities for all ages, including a talk and book-signing by Jana Milbocker, author of *The Garden Tourist: 120 Destination Gardens and Nurseries in the Northeast*. (June 16)

THEATER

American Repertory Theater

www.americanrepertorytheater.org

Little Jagged Pill explores the story behind the eponymous Grammy Award-winning 1995 album by Canadian-born singer and musician Alanis Morissette. Directed by A.R.T. artistic director Diane Paulus. Loeb Drama Center. (May 5-July 15)



COURTESY OF THE CONCORD MUSEUM

Dainty blue boots (c. 1870-80) on display in "Fresh Goods: Shopping for Clothing in a New England Town: 1750-1900" at the Concord Museum

Wig Out! is a fun and illuminating look at the culture of "drag balls," in which contestants from respective family "houses" strut their stuff—attitude, dancing, costumes, impersonations, etc.—for applause and prizes. The show, presented with Company One Theatre, in Boston, was written by Tarell Alvin McCraney and directed by Summer L. Williams. Oberon. (Through May 13)

EXHIBITIONS & EVENTS

Houghton Library

www.hcl.harvard.edu/libraries/houghton

Balanchine at Home and Abroad: Ballet as Cold War Cultural Exchange offers vibrant and historic souvenir programs from performances by George Balanchine's New York City Ballet in the Soviet Union and the Bolshoi and Kirov Ballets' visits to the United States in the 1960s and 1970s. (Opens May 1)

Drawing on collections from across the University's libraries, **Passports: Lives in Transition** examines the timely issue of travel and immigration through archival documents, as well as items related to a Harvard student's story of Latino immigration to the United States, and a multimedia art installation about contemporary geopolitics and activism.

Harvard Art Museums

www.harvardartmuseums.org

Analog Culture: Printer's Proofs from the Schneider/Erdman Photography Lab, 1981-2001 highlights master printer Gary Schneider and those he worked with, including Richard Avedon, James Casabere, Nan Goldin, and David Wojnarowicz. **A.K.**

Harvard
Art Museums

Fogg Museum
Busch-Reisinger Museum
Arthur M. Sackler Museum

Analog



**Printer's Proofs
from the Schneider/
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Lab, 1981-2001**

May 19–August 12, 2018

Culture

harvardartmuseums.org/analogculture



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Spotlight

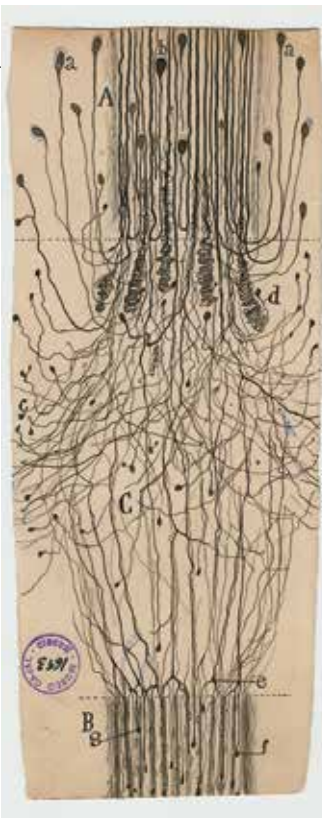
Opening May 3 at the MIT Museum, “The Beautiful Brain: The Drawings of Santiago Ramón y Cajal” features 80 works by the Spanish neuroscientist and pathologist. His explorations into microscopic structures of the brain earned him the Nobel Prize in 1906, yet he was also an exceptional artist. He pursued medicine and science on the advice of his father, and easily combined

drawing with his study of anatomical forms.

The renderings now on display at the museum date from the 1880s through the early 1930s. They depict neural pathways and cellular activity through squiggles, cross-hatchings, dots, blobs, and swirls

that swim elegantly across the pages. “Purkinje neurons from the human cerebellum” resembles a waving fan of sea coral; “tumor cells of the covering membranes of the brain” could be tree bark. The 1913 pen-and-ink drawing at right, of “a cut nerve outside the spinal cord,” evokes an aerial view of pent up streams and tributaries finally let loose. At once abstract, accurate, and beautiful, these intricate works speak to the dynamic universality among organic forms.

MIT Museum
<https://mitmuseum.mit.edu>



COURTESY OF INSTITUTO CAJAL

Burns: Survivors' Remorse, a complementary installation, offers responses to the photographs. (Opening May 19) On May 21, Schneider and artist John Schabel will appear for a moderated discussion on “Photography as Performance.”

Nam June Paik: Screen Play. Examples drawn from the museums' collections reflect central themes of the multimedia artist's work, such as the “subversion of conventional technologies and media” and “the potential of moving images to explore alternative temporalities.” (Opens June 30)

Harvard Museums of Science and Culture
www.hmsc.harvard.edu
 The **Summer Solstice Celebration** offers activities, live music, and free admission at the Harvard Museum of Natural History, Peabody Mu-

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seum, Semitic Museum, and Collection of Historical Scientific Instruments. (June 21)

Schlesinger Library

www.schlesinger75radcliffe.org

75 Stories, 75 Years: Documenting the Lives of American Women at the Schlesinger Library reveals the richness of its holdings (established in 1943 with the Woman's Rights Collection). Among the objects are a large-format camera used by early photojournalist Jessie Tarbox Beals, the 1986 "toilet paper diary" that itinerant poet Eleanor Skelton Cash kept while living in a homeless shelter, and a white Panama



TERESA GANZ

hat that belonged to surgeon Mildred Jefferson, M.D. '51, the first African-American woman to graduate from Harvard Medical School, and a longtime, influential anti-abortion activist.

Addison Gallery of American Art

www.addisongallery.org

Gun Country explores historical contexts and iconography through an array of firearms and related objects. **Photographers Among Us** highlights images dating from early reform movements, the Depression, and wartime to more modern portraits of communities and of the nation's changing natural landscapes.

Celebrating the summer season at the Harvard Museums of Science and Culture

A still from *Storm Diptych* (2015), a video installation by Theresa Ganz on display at the RISD Museum

Institute of Contemporary Art

www.icaboston.org

Caitlin Keogh: Blank Melody presents works that combine the fine lines and delicate color sense of a graphic artist with the brainy exploration of female forms and decorative motifs. (Opens May 9)

Concord Museum

www.concordmuseum.org

Objects, vestiture, and stories offer insight into the early American industries and marketplace in **Fresh Goods: Shopping for Clothing in a New England Town: 1750-1900**.



HARVARD MUSEUMS OF SCIENCE AND CULTURE

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RISD Museum

www.risdmuseum.org

Theresa Ganz: Storm Diptych. The video installation by the artist (and assistant professor of visual art at Brown University) offers dramatic footage of rain-

storms and hurricanes set to the first movement of Mozart's String Quartet No. 19. The work captures the moodiness and volatility of Romantic-era paintings and underscores the current destruction of nature.

Museum of Fine Arts

www.mfa.org

Klimt and Schiele: Drawn compares and contrasts the artists' styles through rarely seen works on loan from the Albertina Museum in Vienna. (Through May 28)

STAFF PICK: Art Reflecting a "Declaration of Love and Guts"

In **T.C. Cannon's** *Two Guns Arikara*, a stately Native American sits in an armchair, loosely holding cartoonish blue firearms. He's dressed in a mash up of what looks like U.S. cavalry pants, Plains Indian and European garb, and sports ornate silver jewelry. His puffy violet hair cascades down against a riotous purple, polka-dotted background.

Like many of the 30 color-splashed paintings in "T.C. Cannon: At the Edge of America" (through June 10 at the Peabody Essex Museum in Salem), the salon-style portrait below reflects works by van Gogh, Gauguin, Matisse, and even Pop art. Yet Cannon's bold figurative images also stand on their own as what he once called "real art," made as "a declaration of love and guts."

Born in Oklahoma in 1948, Cannon was a member of the Kiowa Tribe. He went to art school, completing *Mama and Papa Have the Going Home Shipwreck Blues* (1966)—a simply rendered Navajo couple sitting unwittingly at the crossroads of American and Native American cultures—that influenced the New Indian Art movement, and then surprised those he knew by joining the U.S. Army, ultimately earning two Bronze Stars for his service during the Tet Offensive. Back home, Cannon was apparently conflicted about his role in violence and in suppressing other indigenous peoples. During the next decade, he produced a significant body of work that was at once deeply personal and political, developing his voice on canvas, and as a musician and writer. The art spoke to the inevitable co-existence of past and present, pain and triumph, and to the turbulence of the times. And it still does.

At the museum, his 22-foot mural *Epoch in Plain History: Mother Earth, Father Sun, the Children Themselves* (1976-77) streams across a wall reveling in moonlit early tribespeople in animal skins, bison and hieroglyphics, a shamanistic bare-breasted woman with an owl and eagle in flight, and, finally, a Native American in a Stetson standing on a swath of green grass under a sun rendered as a woven textile. Cannon's Kiowa name is Pai-doung-a-day: "One who stands in the sun."

He completed about 50 major canvases, along with more than a hundred sketches, drawings, poems, and personal documents, many also on display. In all, they illuminate a flourishing artistic vision, albeit one cut short. Cannon died following a car crash in Santa Fe, at the age of 31. —N.P.B.

Abbi of Bacabi (1978), among Cannon's last and unfinished works, and *Two Guns Arikara* (1974-1977), below



© 2017 ESTATE OF T. C. CANNON. PHOTO BY THOSH COLLINS.

Peabody Essex Museum
www.pem.org

FILM**Harvard Film Archive**

www.hcl.harvard.edu/hfa

The Complete Luchino Visconti presents *Ossessione*, *Rocco and His Brothers*, and *Death in Venice*, among other masterworks by the Italian theater, opera, and film director, who often explored themes of betrayal. (June 1-July 21)

The Complete Howard Hawks highlights the creative range of this hugely influential Hollywood director. Screenings include all of his extant works, including his silent films and *To Have and Have Not*, *The Big Sleep*, *The Thing from Another World*, and the newspaper-industry gem, *His Girl Friday*. (June 8-August 5)

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LECTURES**The Radcliffe Institute for Advanced Study**

www.radcliffe.harvard.edu

Composer Camilo Mendez, RI '18, presents "**Reimagining Musical Instruments: The Sounds of Impossible Objects in My Music**," a concert of his recent works performed by the New York-based quartet Yarn/Wire. Knafel Center. (May 2)

MUSIC**Boston Philharmonic Youth Orchestra**

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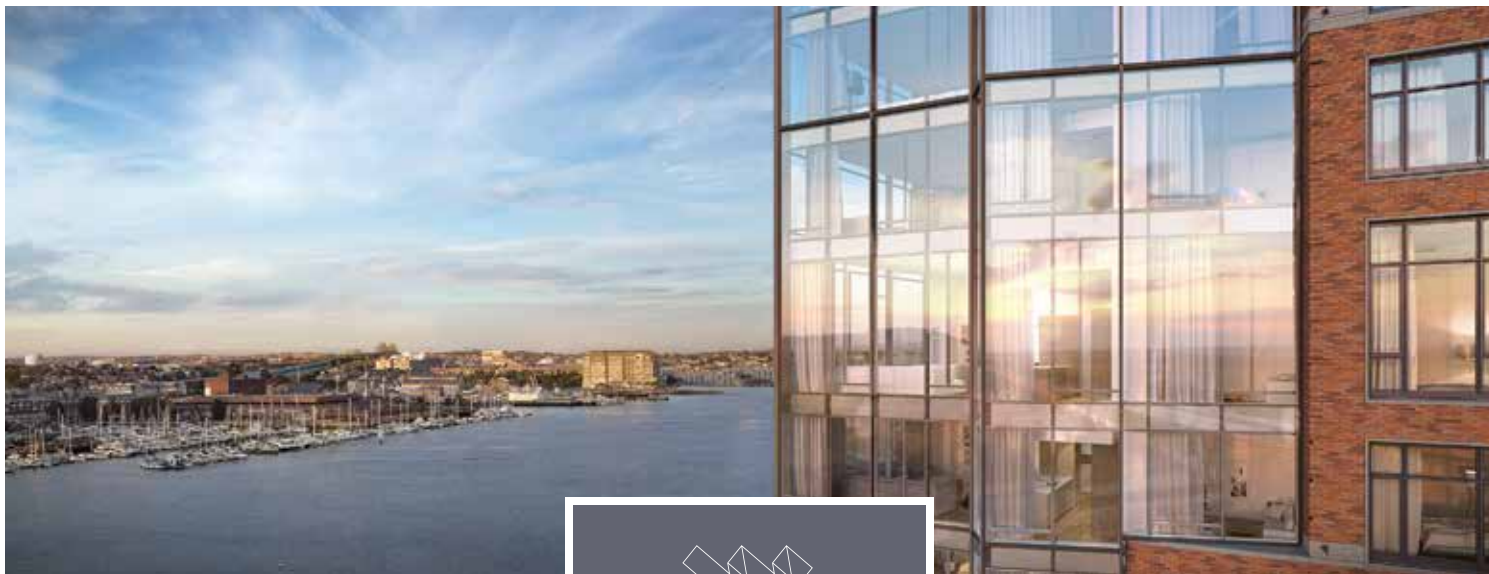
The program includes *Three Places in New England*, by Charles Ives, and *Till Eulenspiegel's Merry Pranks*, by Richard Strauss. Sanders Theatre. (May 6)

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The group performs "Essential Voices: Ralph Vaughan Williams." Sanders Theatre. (May 13)

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



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Beauport's Lively Creative Spirit

An historic Gloucester mansion highlights decorative arts and Henry Davis Sleeper.

by NELL PORTER BROWN



BEAUPORT, perched on Gloucester's Eastern Point, is much more than a beautiful house. Touring its maze of rooms offers a romantic exploration of literary and historical themes through decorative arts. It's also a trip into the artistry of Henry Davis Sleeper, one of the

country's first professional interior designers. "Beauport feels as though he just walked out the door, even though he died in 1934," says Martha Van Koevering, site manager with Historic New England, which owns the property (also known as the Sleeper-McCann

Sleeper's summer home sprawls across Eastern Point with views of Gloucester Harbor (above left and opposite). Interior rooms (above) are inspired by the China trade, the octagon, and Colonial kitchens. (Opposite) A portrait of the pioneering interior designer



COURTESY OF HISTORIC NEW ENGLAND

House). "It's a very personal place, his own creation. The whole composition is a work of art."

Beaumont's charm begins with lush gardens of perennial flowers and coastal grasses, and a rear brick terrace overlooking Gloucester Harbor. The home's fairy-tale exterior—

pitched rooflines, tower, belfry, diamond-paned leaded-glass windows, and chimneys are an amalgam of Arts and Crafts, Gothic, medieval, and early Colonial architecture.

The interior is just as eclectic. Sleeper originally built a modest Arts and Crafts-style cottage, but expanded it slowly during the years he summered there. The resulting 40 rooms (26 of which are shown on daily guided tours) are mostly packed together like a warren, with alcoves, odd-angled rafters, and linking stairways. And everywhere, exquisitely displayed, are the more than 10,000 objects and furnishings that Sleeper acquired, with special fondness for salvaged architectural artifacts.

Each space is a meticulous stage set with a specific theme. A two-story book tower, with a balcony and arched windows, was designed around antique carved wooden curtains that Sleeper had found. Three early bedrooms pay homage to English figures: Lord Byron, naval hero Horatio Nelson, and the Gothic novelist Horace Walpole. The "China Trade" room, with its soaring ceiling, features a pagoda-inspired gold-curtained balcony, a marble fireplace, and bold

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ALL IN A DAY: Neponset River Greenway

At Boston's Pope John Paul II Park, in Dorchester, cyclists can hop on the Neponset River Greenway to enjoy scenery—from beaches and marshlands to parks and old industrial sites—and to explore neighborhoods that are rich with historic legacies and cultural diversity.

"The goal was to build the greenway as a really pleasant travel corridor between the Blue Hills Reservation and Boston Harbor, and to reconnect neighborhoods to the water," says Jessica D. Mink, chair of the Neponset River Greenway Council, which has worked for decades, along with residents, government agencies, and organizations like the Neponset River Watershed Association, to clean up, conserve, and celebrate this "forgotten river."

The park itself itself was once a landfill and a drive-in movie theater. Now there are playing fields, and visitors can walk its perimeter paths along the Neponset River under an open sky while listening to birds sing. Looking across toward Quincy, says Mink, an astronomical software developer at the Harvard-Smithsonian Center for Astrophysics, "you can sometimes see harbor seals under the bridges."

The greenway runs north of the park about a half a mile, offering digressions to the swimmable Tenean Beach and the Port Norfolk residential enclave.

But for a nearly five-mile trip, cyclists should head south. The trail snakes through Boston's Adams Village and Lower Mills sections, crosses into Milton Village, and ends in Mattapan Square. It's a car-free zone of relatively flat terrain, so adults and kids can easily do it while hunting for landmarks (murals and wildlife), and destinations (playgrounds and a wading pool).

Heading out, the trail soon passes the Neponset River Reservation, offering walking paths and marshland views. The historic Cedar Grove Cemetery looms up quickly, and within a mile is the Butler Street stop for the MBTA's Ashmont-Mattapan trolley.

Veering off here in Lower Mills and following Butler Street to Huntoon and Medway Streets, to Ventura Park to overlook the river, or riding inland half a mile on residential streets to the restorative Dorchester Park, listed on

the National Register of Historic Places. From there, it's a short pedal to Adams Street, where the historic red-brick industrial complex (built between 1868 and 1947) once housed, among other factories, the landmark Walter Baker Chocolate Company (first makers of the rich stuff in America and co-founded by physician James Baker, Harvard class of 1760). Break for sustenance at the nearby Ice Creamsmith or Lower Mills Tavern.

Back on Butler, the trail soon enters Milton. Look for the Lower Mills Gorge, Mink says: "A lot of people don't even know it's there." Then travel into Milton Village—passing the remains of a mill on the embankment, and the insect mural—before rolling on to the Central Avenue trolley station and the worthy food stops Steel & Rye and The Plate.

The greenway returns to Boston over the "basket-handle-style" Harvest River Bridge. Completed last year, it connects cyclists to Ryan Playground, where shady spots and a seasonal wading pool cool anyone in need of relief.

The last leg of the route rises up and over the Canopy Bridge. Stop at the top and gaze across the landscape or down to the maintenance shop for the vintage streetcars that trundle two and a half miles through Boston and Milton on the line that opened in 1929. Everyone, it seems to Mink, "loves to watch and ride the trolleys!"

The bridge ends in Mattapan Square. Try Brothers Deli and Restaurant for hot meals or the Le Foyer Bakery for Haitian-style sweets. Intrepid riders can follow the greenway another three and a half miles—although not always on a contiguous or car-free path—from Mattapan's Blue Hill Avenue to Fowl Meadow, which is in the Blue Hills Reservation. Along the way are the Martini Band Shell, a site for summer concerts, and the Fairmont

Street business district.

The path, a remarkable and beautiful achievement, took decades of work, tenacity, and patient collaboration. And it's not over yet. "What we'd like to do is complete the remaining parts of this trail," Mink says, "continue it through Milton and Canton, and then keep going upstream as far as we can."

—N.P.B.

Neponset River Greenway
www.masspaths.net



Cyclists at the Harvest River Bridge (above). An iconic Mattapan trolley car; a greenway view of Lower Mills; and the wading pool at Ryan Playground



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CURIOSITIES: Learning from Dolls

In 2004, Debra Britt and her sisters, Felicia Walker and Tamara Mattison, began to collect and make dolls, doll clothes, and accessories. By 2012, the serious hobby had overrun their homes and “our husbands were, like, you got to get this stuff out of here,” Walker says. So they rented a storefront space in downtown Mansfield, Massachusetts, where they lived, and transformed it into the National Black Doll Museum of History and Culture.

The nonprofit now features about 2,000 of their figures, Britt says, roughly a quarter of their still-growing collection. Their mission is to “nurture self-esteem,” especially among children, and to preserve the legacy of black dolls. The toys also pointedly reflect aspects of the centuries-long African-American experience. One room is

packed with 780 African-style rag dolls (most crafted by the sisters), to recreate the inhumane conditions of a slave ship. “The Ugly Truth” display represents demeaning characterizations of black people: Buckwheat, Little Black Sambo, Aunt Jemima, and golliwogs, among them.

Yet there are also hundreds of more contemporary figures symbolizing triumphs, artistry, and power: pint-sized Obamas; comic-book superheroes, including Black Panther; plenty of athletes, like Michael Jordan and Serena and Venus Williams; and leaders Martin Luther King Jr., Condoleezza Rice, and Jesse Jackson—along with scientists, legal scholars, businesspeople, and other color-barrier-breakers.

“If we can’t find a doll, we make it,” Walker notes: those collaged “Stand-Ins” include boxing hall of famer Jack Johnson, Thurgood Marshall, and Angela Davis. “Record-Makers” highlights musical artists, from Josephine Baker and Louis Armstrong to Tupac Shakur and Beyoncé—and the sisters’ father, a teacher whose record store was an offshoot of his own 5,000-album reserve. “My other siblings are collectors, too,” Walker adds of the family habit. “I say ‘collecting’ is just a fancy word for hoarding.”

Both parents were also members of the Black Panthers, and patrolled their Dorchester neighborhood. Pride in black culture was paramount; the kids played with any

black-focused toys and games available; commercial black dolls were, and still can be, hard to find. One display explains how their grandmother, a maid, disassembled white dolls, “then dyed them all brown, and put them back together for us,” reports Walker. “Everyone wants to see something that represents them,” Britt has concluded. “It immortalizes you.” ~N.P.B.

National Black Doll Museum of History and Culture
nbdmhc.org

antique 1780s wallpaper (originally ordered by Robert Morris, a signer of the Declaration of Independence) depicting the rice and porcelain industries of China. There’s also a Jacobean-style dining room with a

wood-beamed and white-plaster ceiling and heavy oak furnishings that feels like an old English pub. “Yet he wasn’t a stickler for pure authenticity,” Van Koevering says. “The ‘Pine Kitchen,’ one of the later rooms, is Sleeper’s romanticized view of a Colonial-era kitchen.” It has a wide brick hearth hung with antique cast-iron pots and utensils, but he had a local furniture-maker create the simple wooden chairs, which are “a little different from what the Colonials would have had, and a little

more comfortable. So he would break the rules sometimes.”

He also freely repurposed historic materials: Beauport’s central hall is lined with pine paneling (rescued from the dilapidated eighteenth-century William Cogswell estate in nearby Essex); from the hall one can also see the bulk of one wall filled with a graceful double-wide, leaded-glass door, obtained from a home in Connecticut, that Sleeper altered to hold his perfectly arranged 130-piece collection of amber-glass objects. He cleverly installed a skylight in the pantry behind the door “so that the amber is always naturally back-lit,” Van Koevering notes. Nothing was collected in the name of investment. “He deliberately selected only objects that personally appealed to him, in as much as he didn’t have the deep pockets of other collectors in Boston at that time,” she says. “And he had this fabulous ability to showcase things.”

Sleeper’s light-filled “Golden Step” room, holding a bank of diamond-paned windows overlooking Gloucester Harbor, is a nod to New England’s maritime history. Woodwork, the trestle tables and chairs, and a cabinet painted a sea-foam green set off majolica and Wedgwood dishware. Prow ornaments of bare-chested mermen hang on the wall amid models of a China trading vessel and whaling and fishing ships.

Adjacent is the “Octagon Room.” Aubergine walls dramatize Sleeper’s amethyst and ruby-red glassware and red antique



Debra Britt (below) in the glamorous “Fashion Doll” room; “Ugly Truth” figures (above); and musicians, including D.M.C.



HARVARD MAGAZINE/NFB



JOHN TLUMACKI/THE BOSTON GLOBE VIA GETTY IMAGES

toleware (tin objects, typically kitchenware) that he brought home from France. Visitors can hunt for the groups of “eights”: hooked rugs, chairs, sides of the table, scores in the ceiling, and even facets on the door knobs, Van Koevering points out. So excited was Sleeper about creating this space that in 1921 he wrote of his plans to his friend, the art patron Isabella Stewart Gardner (of the eponymous Boston museum), “Of course, I have all the details visualized and am enjoying it accordingly.”

GARDNER VISITED Beauport many times, as did other prominent members of Boston and New York society and art circles; Eastern Point itself was developed at the turn of the twentieth century as a wealthy summer enclave (which it still is). Yet the residents, at least those Sleeper socialized with, tended to be the less conventional members of the elite, more “bohemian-minded” and intellectual.

Sleeper himself came from a Boston family of comfortable means: his father, Jacob Henry Sleeper, was a revered Civil War veteran, and his grandfather, Jacob Sleeper, a founder of Boston University. Reportedly frail, the young Sleeper was presumably tutored at home, Van Koevering says, but no record of any formal education exists.

In 1906, as a 28-year-old bachelor, he was introduced to Eastern Point by Abram Piatt Andrew, Ph.D. 1900. An economics professor at Harvard, Andrew served as director of

the U.S. Mint in 1909 and 1910 and played a role in the creation of the Federal Reserve System. Also a bachelor, he had already built his own summer home, Red Roof, on Eastern Point's rocky ledge. Enamored of the site's beauty and “clearly besotted” with Andrew, Van Koevering says, Sleeper

purchased a lot one house away, and by 1908 had moved into Beauport, named for French explorer Samuel de Champlain's description of Gloucester Harbor. The two men became close, and years later during World War I, when Andrew founded the American Field Service, an organization of volunteer American ambulance drivers who worked on the front lines in France, Sleeper



Abram Piatt Andrew

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HARVARD SQUARED



Beauport's "Golden Step" room celebrates maritime history and culture.

served as its administrator and fundraiser both in Boston and in Paris.

That "besotted" assertion is based on 60 extant letters he wrote to Andrew between 1906 and 1915. There is no explicit proof the men were gay, or that they had a romantic or sexual relationship. (Sleeper's personal papers might have contained evidence of his preferences, but those items, although listed in inventories of Beauport's holdings following his death, were missing by the time the mansion was opened to the public in 1942.) Yet, about a decade ago, after a close friend of Sleeper's identified him as gay in an oral history, Van Koevering says, Historic New England began acknowledging that idea during its tours. The organization also encourages discussions on the subject. "A Celebration of Pride and History at Beauport Museum" (on June 10) highlights "the story of a gay man in the early twentieth century," according to the promotional blurb, and explores Sleeper's circle of family and friends. And on June 28, a tour of Beauport will be followed by "Codman, Sleeper, and the Gay Man Cave," a lecture at the nearby Rocky Neck Cultural Center by Wheaton College art-history professor Tripp Evans. He plans to discuss "how these men disarmed the stigma of same-sex attraction by creating spaces that asserted their authority, provided sanctuary, and reimagined the historical past." (Ogden Codman Jr., himself an interior designer, and co-author, with Edith Wharton, of *The Decoration of Houses*, contributed to alterations of the decorative scheme of the Codman Estate, in Lincoln, Massachusetts, now also owned by Historic New England.)

Other special tours offered throughout the 2018 season include "Nooks and Crannies" (the first of them on May 26 and June



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16), which take visitors on a longer, more detailed tour of rooms not seen on the regular tour, and “Designing Beauport, Room by Room” (beginning on June 8), which delves into Sleeper’s personal process and progression in creating the mansion. “Touring the house, you can begin to see the early rooms with an English theme and then see the additions, in 1910 and 1912, and the emphasis on Americana—the Pine Kitchen, the Franklin Game Room—and see how he moved through different phases, and when he gave up wallpaper,” Van Koevering explains. “He clearly loved glass, and displaying it, but he didn’t start collecting it until 1917. The amber-glass window in the central hall was the last reconfiguration of the house, in around 1929.”

BEYOND BEAUPORT, friends in Eastern Point and Boston sought Sleeper’s artistic talents. After the war, he chose to work as a professional designer, opening an office in Boston (where he lived when he was not in Gloucester). His clients included Isabella Stewart Gardner and Henry Francis du Pont, for whom he worked on a Long Island estate and, in the latter 1920s, as a consultant on a remodeling at Winterthur, the Delaware estate that is now a premier museum of American decorative arts. In the early 1930s, Sleeper also traveled to Hollywood to work for several celebrities, and he was working on a Vanderbilt family home in Connecticut when his life was cut short by leukemia. He was buried in the family plot at Mount Auburn Cemetery, and Andrew wrote a *Gloucester Times* tribute to his friend, noting, among other assets, his “impeccable taste” and “ingenuity in color and design which was distinctly creative.” (Andrew died two years later of influenza; his ashes, at his request, were scattered from an airplane flying over Eastern Point.)

Beauport drew crowds even during Sleeper’s lifetime; it was not that unusual for people to show up at the front door requesting a tour, which Sleeper’s longtime housekeeper, Mary Landergan Wonson (who stayed on after his death), typically obliged. He had earned a national reputation as a designer, curating decorative art exhibits and serving as a consultant to museums and collectors. In 1924, those planning the new American wing at the Metropolitan Museum of Art in New York City spent several weeks at Beauport, soaking up the placement of antiques and color schemes of its period-



WHY I JOINED THE HARVARD CLUB OF BOSTON

There are many different reasons to join the Harvard Club of Boston. Mike Seward is a Harvard alum and former varsity hockey player for the Crimson. Here's why he joined.

"I joined the Harvard Club in my freshman year, and brought my Harvard friends as well as friends from other colleges to the fun events like Member Mixer at the Downtown Clubhouse. Seven years later, I'm still a member because of the people and the programs offered by the Club. Every month, there is an exceptional line-up of activities, like food and wine or beer tastings, networking events, and access to Red Sox and Bruins tickets. And the wide range of people in the Club is also a huge reason I stay. The Club has members from many different schools, like MIT, Boston University, and Holy Cross - not all the members are from Harvard. And I get great career and life advice from them."

-Mike Seward '15

For more information regarding membership, please call 617-450-4402 or visit harvardclub.com.



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HARVARD SQUARED

Beauport's verdant grounds (below) and Sleeper's cleverly back-lit display of amber glass

style rooms. From 1909 to 1911, Sleeper even served as the first “director of museum” (overseeing the collections) at the Society for the Preservation of New England Antiquities, which later became Historic New England.

Sleeper's brother inherited Beauport, but couldn't afford to keep it. In 1935, the conservation-minded Helena Woolworth McCann, heir to the Woolworth department store chain, bought the mansion and preserved it virtually as Sleeper had left it. The McCann family spent several years summering there, but by 1941 both she and her husband had died. Their children, knowing their mother's wish that Beauport be preserved as a house museum, donated it to Historic New England with the caveat that they could stay there whenever they wanted. One of them often did, into the 1970s, amicably closing the door to her quarters in the “Red Indian” room when tours came through.

And therein lies much of Beauport's appeal. It's not stuffy, or built on a grand scale; and it lacks the ostentatious flash of many



of the Newport mansions. Instead, the place speaks to a generous creative spirit, and still holds a warmth that's unusual in a house museum. “It was a place that was lived in, was comfortable, and enjoyed,” Van Koevering says. And it will just stay that way. ▢

Visiting Gloucester

The city offers plenty of things to see and do, along with great restaurants and cafés. Some suggestions:

Good Harbor and Wingaersheek Beaches. Both have alluring sandy expanses, rocks to climb at low tide—and crowds. Best to arrive early, or late.

Rocky Neck Cultural District. Cape Ann has long drawn artists, from Winslow Homer to Milton Avery. Current art-makers regularly mount exhibits, open their studios, and hold other special events.

Cape Ann Museum is downtown. “Harold Rotenberg: An American Impressionist” (through June 17) features vibrant, textured works by the local art-

ist, and “Unfolding Histories: Cape Anne Before 1900” (through September 9) tells regional history through a range of archival materials.

From there, it's easy to walk to restaurants, shops, and the harbor. **Pleasant Street Tea Co.** serves lunch, smoothies, and caffeine, or stroll farther, up Main Street, to the lively local favorite **Lee's Diner**. For creative cuisine and cocktails, try **Franklin Cape Ann, Short and Main**, or **Tonno**. And don't miss stops at both **Dogtown Bookshop**—where proprietor Bob Ritchie presides over thousands of used, rare, antique, and out-of-print books—and, two doors down, **Main Street Arts and Antiques**, which holds something unique for everyone.

The Week's Events



JIM HARRISON

COMMENCEMENT WEEK includes addresses by President Drew Gilpin Faust and Congressman John Lewis, LL.D. '12. For details and updates on event speakers, visit harvard-magazine.com/commencement.

TUESDAY, MAY 22

Phi Beta Kappa Exercises, at 11, with poet Kevin Young '92, director of the Schomburg Center for Research in Black Culture at the New York Public Library and poetry editor at *The New Yorker*; and orator Neil Shubin, Ph.D. '87, a paleontologist who is Bensley professor of organismal biology and anatomy at the University of Chicago and author of *Your Inner Fish*. Sanders Theatre.

Baccalaureate Service for the Class of 2018, at 2, Memorial Church, followed by class photo, Widener steps.

Class of 2018 Family Reception, at 5. Tickets required. Science Center plaza.

Harvard Extension School Annual Commencement Banquet, at 6. Tickets required. Annenberg Hall.

WEDNESDAY, MAY 23

ROTC Commissioning Ceremony, at 10:30, with President Faust and a guest speaker. Tercentenary Theatre.

Harvard T.H. Chan School of Public Health Convocation at 11, with Mary Robinson, LL.M. '68, LL.D. '98, former president of the Republic of Ireland and United Nations High Commissioner for Human Rights. HMS Quad.

Senior Class Day Picnic, at noon. Tickets required. The Old Yard.

Senior Class Day Exercises, at 2, with

A Special Notice Regarding Harvard University's 367th Commencement Exercises

Thursday, May 24, 2018

commencement.harvard.edu

SINCE 1642, with just nine graduating students, Harvard's Commencement Exercises have brought together the community unlike any other tradition still observed in the University. Degree candidates with family and friends, faculty and administrators who supported them, and alumni from around the world are anticipated to participate in our 367th Commencement Exercises this spring. To accommodate the increasing number of people planning to attend, we ask that any interested readers carefully review the guidelines governing ticketing, regalia, security precautions, and other important details, which are available online at <http://commencement.harvard.edu/ticket-information>.

Commencement Day Overview

THE MORNING EXERCISES begin when the academic procession is seated in Tercentenary Theatre. Three student orators deliver addresses, and the dean of each School introduces the candidates for their respective degrees, which the president then confers. Toward the conclusion of the ceremony the graduating seniors are asked to rise, and their degrees are conferred on them as a group by the president. Honorary Degrees are then conferred before the Exercises are adjourned.

DIPLOMA-GRANTING CEREMONIES AND LUNCHEONS: Graduates and their guests return to their respective undergraduate Houses or graduate and professional Schools. Harvard and Radcliffe College alumni/ae who have celebrated their 50th Reunion are invited to join the Tree Spread luncheon, while all other alumni may pre-purchase tickets for boxed lunches at the Alumni Spread in Harvard Yard.

THE AFTERNOON PROGRAM features an address by Harvard President Drew Gilpin Faust and the Commencement speaker. Officially called the Annual Meeting of the Harvard Alumni Association, this program includes the Overseer and HAA director election results, presentations of the Harvard Medal, and remarks by the HAA president.

— *The Harvard Commencement Office and The Harvard Alumni Association*

the Harvard and Ivy Orations, remarks by incoming Harvard Alumni Association president Margaret Wang '09, and a guest speaker. Tickets required. Tercentenary Theatre.

Harvard Kennedy School Commencement Address, at 2, by Ohio governor John R. Kasich. JFK Memorial Park.

Law School Class Day, 2:30, with a featured speaker. Holmes Field.

Business School Class Day Ceremony,

2:30, with guest speaker Carla Harris '84, M.B.A. '87, managing director, investment management at Morgan Stanley. Baker Lawn.

Graduate School of Design Class Day, at 4, with Paola Antonelli, author, editor, and senior curator of the department of architecture and design at the Museum of Modern Art. Piper Auditorium, Gund Hall.

Divinity School Multireligious Commencement Service for the Class of 2018 at 4. Memorial Church.

Graduate School of Arts and Sciences Dudley House Faculty Dean's Reception, 4-6.

Harvard T.H. Chan School of Public Health Award Presentation and Celebration, 4-7. Kresge Courtyard.

Faculty Deans' Receptions for seniors and guests, at 5. The Undergraduate Houses.

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



THURSDAY, MAY 24

Commencement Day. Gates open at 6:45.

Academic Procession, 8:50. The Old Yard.

The 367th Commencement Exercises, 9:45 (concluding at 11:45). Tickets required. Tercentenary Theatre.

All Alumni Spread, 11:30. Tickets required. The Old Yard.

The Tree Spread, for the College classes through 1967, 11:30. Tickets required. Holden Quadrangle.

Graduate Schools Diploma Ceremonies,



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from 11:30 (time varies by school).

GSAS Luncheon and Reception, 12 to 3. Tickets required. Behind Perkins Hall.

College Diploma Presentation Ceremonies and Luncheons, at noon. The Undergraduate Houses.

Alumni Procession, 1:45. The Old Yard.

The Annual Meeting of the Harvard Alumni Association (HAA): The Commencement Afternoon Program, 2:30, includes remarks by HAA president Susan Morris Novick '85, President Faust, and Commencement speaker John Lewis; Overseer and HAA director election results; and Harvard Medal presentations. Tercentenary Theatre.

Medical and Dental Schools Class Day Ceremony. Ticketed luncheon at noon, followed by a speech, at 2, by Neal Baer, Ed.M. '79, A.M. '82, M.D. '96, pediatrician, televi-

sion producer and writer, and HMS lecturer on global health and medicine. HMS Quad.

FRIDAY, MAY 25

Radcliffe Day opens with a morning panel discussion, "Toward a New Global Architecture? America's Role in a Changing World," moderated by Nicholas Burns, Goodman Family professor of the practice of diplomacy and international relations. The panelists are foreign-policy experts Michèle Flournoy '83, a former undersecretary of defense; *Washington Post* columnist David Ignatius '72; Kirkpatrick professor of the practice of international affairs Meghan O'Sullivan; and political scientist Anne-Marie Slaughter, J.D. '85, who served in the State Department under Hillary Clinton.

During the luncheon that follows (12:30-2), former Secretary of State Clinton is to receive the 2018 Radcliffe Medal. Former Secretary of State Madeleine Albright (the 2001 Radcliffe Medalist) will deliver a personal tribute to Clinton, and a three-way conversation with Massachusetts Attorney General Maura Healey '92 will follow. Tick-



JIM HARRISON

ets are required, and the events will be webcast live at radcliffe.harvard.edu.

For updates on Commencement week and related activities, visit alumni.harvard.edu/annualmeeting or commencement.harvard.edu/morning-exercises.



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BRYAN GATEB



Clockwise from top center: Pammy's "Spaghetti 2.3" and jewel-box interior; mussels served in the plush Les Sablons dining room; Italian-style octopus at Benedetto, at the Charles Hotel

excels, matter when the goal is to make diners happy.

Polished, caramel-colored leather banquettes and tables line the white-painted brick walls; potted fronds, textured globe chandeliers, and a queen-sized gilt-framed mirror reflecting convivial subjects soften the room's sparseness. The waitress who set down our plate of "Spaghetti 2.3" (\$19) described the "cured pomodoro" sauce: tomatoes immersed in soy sauce and rice-wine vinegar for a day, then dehydrated, then soaked again, with honey added, before they're slow-roasted to condense the flavors. "It's so simple," she said,

plush, fancy spots to casual stop-ins, these restaurants are eager to feed a range of local appetites.

Pammy's, between Harvard and Central Squares, must be the prettiest (www.pammyscambridge.com). Flowers are always in bloom on a long communal table, amid glistening glassware so well-designed it feels naturally snug in the hand. Details like that, at which Pammy's

Harvard and Central Squares, must be the prettiest (www.pammyscambridge.com). Flowers are always in bloom on a long communal table, amid glistening glassware so well-designed it feels naturally snug in the hand. Details like that, at which Pammy's



EMILY HAGEN

SAILING INTO Commencement Week and longer days to follow likely means more gatherings with friends and evenings out on the town. If the usual bistros and bars don't beckon, look to some of the newer restaurants around. From

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"but the effect is intense."

That's Pammy's. The husband-and-wife team, Chris and Pam Willis, hail from restaurants and restaurateur stock, respectively. He cooks, she hosts. They live down the street from their creative venture, and like to say that the place is an extension of their home. Patrons have responded, quickly making Pammy's a favorite haunt for anyone seeking a warm welcome and inventive New American cuisine.

Chris Willis likes to mix it up on the menu. A salad of crisp, salty fingerling potatoes, chicory, and red ruby grapefruit, laced with garlic-chili pesto (\$13), cleansed the palate, and left us craving it as a daily diet. The mushroom bruschetta is also atypical: (\$14): chewy toast topped with fresh ricotta, sautéed fungi, and slices of jalapeño. The peppers don't rock the mouth—they contextualize the soft rich cheese and meaty mushrooms. Just as playful was the branzino entrée (\$26). Braised sunchokes, that versatile, nutty vegetable, and honeycrisp apples were paired with the slightly salty fish, and the whole dish came together in whiffs and tastes of honey, ginger, and fine mustard. More bitter, thanks to strings of broccoli rabe, was the "Nodi Marini"—so-named for noodles resembling nautical knots (\$22). The pasta was tossed with rabe and bits of *guanciale* (cured pork) capped with a poached egg and a sprinkling of *bottarga* (salted cured fish roe).

For dessert, we shared a buttery apple crostada, with crème fraîche ice cream. Too much of a good thing? It wasn't—just like everything else at Pammy's.

Diners have also been flocking to another woman's namesake, Giulia's, outside of



Open from brunch until late at night, the small Momi Nonmi offers izakaya and contemporary Hawaiian specialties.

HIEN NGUYEN (2)



Harvard Square, but for perfect Italian food. That restaurant's team has now opened **Benedetto** (www.benedettocambridge.com) in the space that formerly housed Rialto at the Charles Hotel.

The simple, crisp geometry and muted tones of Benedetto's interior veil the painstaking preparation required for its range of traditional regional Italian dishes. Don't resist the "house-pulled stracciatella" with white Cilento figs, prosciutto di Parma, and hazelnuts (\$19) or the roasted halibut replete with muscat grapes, capers, rhubarb, and tangy Swiss chard (\$32).

Or visit the nearby Les Sablons (www.lscambridge.com)—although upon entering this French-inspired restaurant, it's difficult to know exactly what to expect: white tablecloths and velvet stools are lined up by the bar, but there's also exposed brick and an installation of more than a hundred yellow tubs of Play-Doh framing a photograph of David Bowie.

It is, in fact, a high-end spot. Most en-

trées cost around \$40, but at least there's no need to worry about sharing: Les Sablons bets against the small-plates trend. The brown-butter parsnips are the star of the scallop dish (\$42), and the duck with steamed bok choy is served with a crispy scallion pancake (\$39). Dessert is the underrated highlight here, though: Meyer lemon posset (\$10) is refreshing, and the grapefruit tart with rosé sorbet (\$10) is an unexpected way to enjoy that ideal summer wine.

For more explicitly French and French-Canadian cuisine, go to **Café du Pays** (www.cafedupays.com) in Kendall Square. It's around the corner from the cinema (and typically offers discounted movie-ticket vouchers with dinner), but is well worth stopping by at any time for drinks at its intimate, kindly lit bar. Staple dinner dishes include pork and venison pie, *tourtière* (\$12), hearty pea soup (\$6), smoked chicken or duck (\$26), and *poutine*—fries topped with cheese curds and gravy (\$10).

Closer to Inman Square, **Momi Nonmi** (www.mominonmi.com) is tucked away on a busy Cambridge Street. It offers takes on both *izakaya* (casual Japanese) and modern Hawaiian cuisine. For seafood-lovers, the salmon sashimi with kiwi and avocado (\$12) and tuna poke with sweet onion and mung bean (\$16) are stellar alternatives to tradi-

tional New England recipes. And the tiny kitchen stays open late, when it turns out hot dumplings with indulgent heaps of wagyu beef (\$18).

Another newer Asian-food entrant, **Wafu-Ya Japanese Kitchen** (www.wafuyaboston.com), is



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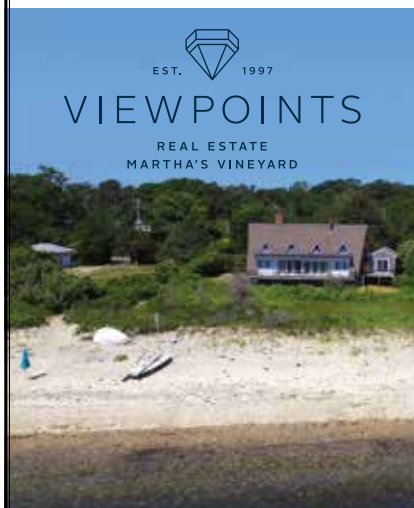
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part of "Little Japan" inside the Porter Exchange Building. There's sushi and sashimi, but the cooks aren't afraid to experiment. One night, bacon figured heavily among the specials: bacon *okura*, bacon *enoki*, *shimeji* bacon. But so did quail eggs and ginkgo nuts (with or without sausage). There are all manner of skewered edibles and noodle soups, along with *tatsuta-age* (a.k.a., chicken nuggets). Regarding the flickering TVs, more than none are too many, but at least the sound was off. And the place was alive on a Friday with date-nighters, families, and students happily slurping broth and munching raw fish—and bacon.

Stepping outside of Cambridge, notable newer restaurants include Field and Vine, in Somerville's Union Square (www.fieldandvinesomerville.com). The owners used to produce pop-up meals, but have settled down to offer innovative, seasonal fare, such as focaccia with tahini spread and cranberry chutney (\$5) and smoked sausage with beans and charred cabbage (\$18).

Our Fathers (www.ourfathers-boston.com), right

across the river in Allston, serves what it terms "modern Jewish cooking"—Middle-Eastern and Mediterranean deli-style and hot food. Think: falafel, lamb kibbe, pastrami, matzo-ball soup, and za'atar-encrusted salmon (\$9-\$28).

A labor of love that entailed a Kickstarter campaign, La Bodega (see the Facebook page) is a Uruguayan-influenced tapas bar and restaurant in east Watertown. It deserves a full review, but here are some highlights: a unique wine list and charming, candle-lit ambiance (the owners, formerly of the beloved Salts in Cambridge, revamped a neighborhood bar and attached a vintage train car). The place is rustic, sleek, and authentic, just like the menu. Try the tenderloin beef *chivito* (a juicy slider), the beet salad with sections of orange, almonds, and shaved sheep's milk cheese, and the mushroom *escabeche* with parsley, poached egg, and aged Manchego (\$5-\$27.)

New is not always better, but, sometimes, maybe it is. ♡



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- 5/13** Mother's Day
- 5/24** 367th Harvard Commencement
- 5/31** Patios in Bloom Kick-off
- 6/9** Jose Mateo Dance for World Community
- 6/16** 11th Annual *Fête de la Musique* / Make Music Harvard Square
- 6/17** Father's Day
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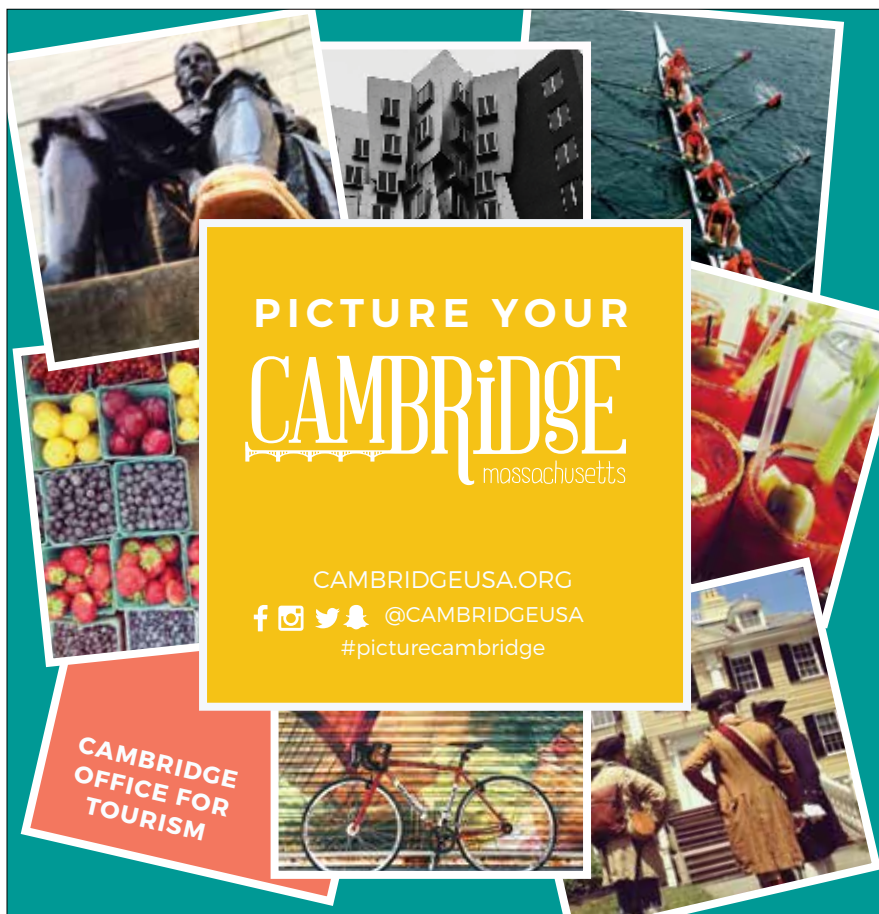
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JOURNAL



Continuity and Change

Lawrence S. Bacow named Harvard's twenty-ninth president

LAWRENCE S. BACOW, J.D.-M.P.P. '76, Ph.D. '78, will become the twenty-ninth president of Harvard on July 1. He was elected on Sunday, February 11, by the Corporation, the University's senior governing board, with the consent of the Board of Overseers, and introduced at a news briefing that afternoon by William F. Lee, the Corporation's senior fellow and the leader of the search to identify the successor to President Drew Gilpin Faust. Lee said:

Larry Bacow is one of the most accomplished, admired, insightful, and effective leaders in American higher

education. This is a pivotal moment for higher education—one full of extraordinary possibilities to pursue new knowledge, enhance education, and serve society, but also a time when the singular value of higher education and university research has too often been challenged and called into doubt. Such a time calls for skillful leadership, strategic thinking, and disciplined execution. Larry will provide just that.

He will bring to the task not only

wide experience, deep expertise, and an intimate familiarity with Harvard's opportunities and challenges, but also a passionate commitment to helping universities, and everyone within them, serve the larger world. He is ideally positioned to hit the ground running and keep Harvard moving ambitiously forward. In his own remarks, Bacow said:

The Harvard I have known has always stood for at least three things: the pursuit of truth, or as we say, *Veritas*; an unwavering commitment to excellence; but also to opportunity. In a nation divided, these guiding ideals have never been more important. We

should never shy away from nor be apologetic about affirming our commitment to making the world a better place through our teaching, through our scholarship, but also to our commitment to a search for truth, a commitment to excellence, as well as a commitment to opportunity for all.

The Case for Continuity

IN ONE SENSE, Bacow did not need much of an introduction: a seasoned hand in higher education, at Harvard and within Greater Boston, he has referred to his “Red Line” career along the MBTA subway from Kendall Square (MIT) to Harvard Square and then back to MIT, up to Davis Square (Tufts), and now back to Harvard.

After completing his bachelor’s degree in economics at MIT (in three years), Bacow earned three more a couple of miles up Massachusetts Avenue; returned to MIT for a distinguished 24-year career on the faculty, where he was Martin professor of environmental studies, chair of the faculty, and, ultimately, chancellor; decamped all of half a dozen miles to Medford, where he had an accomplished record as president of Tufts University from 2001 through 2011; and then made homes at Harvard’s Graduate School of Education and Kennedy School of Government—respectively, as president-in-residence and leader-in-residence, advising other higher-education leaders, teaching in executive-education classes, and writing about an array of education issues. Not trivially, he was elected a member of the restructured, expanded Corporation in 2011.

Because of the latter service, Bacow was a member of the search committee, and so his emergence as president-elect flummoxed the pundits. (It also made the day a complete success for members of Harvard’s news staff, whose interim goal was keeping the resourceful reporters of *The Harvard Crimson* from discovering the president-elect’s identity prematurely. Mission accomplished.) Lee, who was an Overseer member

of the search committee that chose Faust, recounted this one’s final turning:

From the summer through late last year, as we reached out widely to solicit advice and nominations, increasingly many people within Harvard and beyond—faculty, students, staff, alumni, institutional leaders here and elsewhere—encouraged us to consider Larry for the presidency.

We ultimately decided to ask him if he would consider becoming a candidate. After pondering the request, he agreed to step down from the search committee in mid-December. In doing so, he emphasized his deep belief in the University’s mission and values and his desire to do everything he can to enable Harvard to be the best it can be.

(The switch in roles is not unprecedented: Corporation member Shirley Tilghman served as a faculty member on a Princeton presidential search committee until it asked her to step down and be considered for the post—to which she was elected in 2001, serving until 2013.)

In turning to Bacow, the Corporation is, in many senses, opting for continuity—witness Lee’s comments on the new president’s “intimate familiarity with Harvard’s opportunities and challenges” and capacity to “hit the ground running.” Indeed, the announcement itself, in Barker Center’s Thompson Room, where Drew Faust was introduced as the twenty-eighth president exactly 11 years earlier, on February 11, 2007, lent a further aura of continuity to the day’s proceedings. (Note to future Crimeds: calendar February 11, 2029—and yes, it’s a Sunday.)

It merits recalling the discontinuities that attended Faust’s selection. The turbulent presidency of Lawrence H. Summers had been cut short by his departure in 2006. Derek Bok returned to Massachusetts Hall to lead



A homecoming: Announced as president-elect, Lawrence S. Bacow speaks on February 11—and poses with Neil L. Rudenstine and Drew Gilpin Faust.

the University for a year, calming matters in the interim. Then came the promise of a new presidency, with a daunting agenda: restoring a sense of collegial community; replenishing decanal and senior administrative ranks; and beginning to plan in earnest for a delayed, pressing capital campaign. Faust came to the task after a half-dozen years as founding dean of the Radcliffe Institute: a solid place from which to gain a broad understanding of Harvard, to be sure, but on a *much* smaller scale than the University itself (and without the complications of leading multiple faculties and thousands of students).

Given the complexities of mastering this Byzantine institution and moving its myriad parts forward, choosing a new president who already has significant knowledge about the place confers a notable operating advantage. Bacow sounded those notes at the very beginning of his remarks, acknowledging Faust and another predecessor, both of whom were present:

I am truly honored and humbled by this opportunity to succeed my good friend and colleague and somebody who I admire greatly, Drew Faust, and also to have a chance to follow in the footsteps of some wonderful leaders that Harvard has enjoyed. Neil [Rudenstine], it’s an honor to have you here today.

On several substantive matters, he firmly embraced the path established by the administration and Corporation—on which he and Faust, of course, have been colleagues.

Allston development. As past chair of the governing board’s committee on facilities and capital planning, and chair of its finance committee, Bacow has had ample oppor-

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Adele Fleet Bacow and Lawrence Bacow

tunity to engage with Harvard's ambitious plans for physical growth in the community abutting Harvard Business School. His scholarly work on environmental policy and dispute resolution, negotiation, economics, and land use and development surely provided an especially solid foundation for that work.

In his February 11 remarks, necessarily broad in nature, he spoke specifically about "being excited by the extension of our campus that's taking shape in Allston. Allston

gives us the opportunity to forge new partnerships across Harvard's many parts, both intellectually and otherwise: between Harvard and our neighbors, between Harvard and our sister institutions, between Harvard and the rest of the world. And it also gives us the opportunity—not just in Allston but across all of Harvard—to envision the university of the future, and to bring that future to life. Very exciting indeed."

One Harvard. With "every tub on its own bottom," Harvard has historically, and famously, been a decentralized university, where deans exercise academic and fiscal clout. As the institution has progressively directed physical growth and fundraising in a coordinated, central way, presidents have sought a larger presence, and have played a more visible role, in determining both. And as intellectual challenges and opportunities have arisen across departmental, disciplinary, and even school lines, presidents since Rudenstine have explicitly encouraged interfaculty initiatives, sought to foster new intellectual collaborations, and pushed to make logistical obstacles (uncoordinated academic calendars, for example, or rigidities in teaching arrangements or appointments) less formidable and

boundaries more permeable. Under Faust, that theme has coalesced as "One Harvard," to the point that bringing existing, but scattered, expertise and capacities together has often seemed as important as adding to the professoriate—or even more so.

Bacow is on board, too. "One of the things that has always drawn so many of us to Harvard," he said, "is how it aspires to excel across such a wide range of academic domains." After listing each school, he continued, "Our breadth has long been our great strength. And our great opportunity now is the chance to combine our strengths in new ways that help address some of the world's most-pressing problems." Responding to a reporter's question about Harvard's engagement with society, Bacow returned to this theme, citing world problems the academy could help resolve. The clash of fundamentalism and modernity (in the Middle East, Israel, the United States, and elsewhere), he said, will become "informed in due time by humanists, by philosophers"—the sort of perspectives Harvard can contribute. Similarly, he declared that the science of climate change is "set," but debate continues about the responsibilities of one generation to another: that is, the policy questions are matters of ethics and values, where again a broad university like Harvard has much to offer. "That excites me."

Diversity and inclusion. Asked by a *Crimson* reporter about diversity (in the context of the result of the search), Bacow cited his record of promoting excellence at MIT and Tufts and said, "I think diversity is a pathway to excellence," which cannot be attained by sampling just a small part of the population. When *The Boston Globe*, noting his own involvement in a fraternity at MIT, sought his views on Harvard's recently enacted sanctions on undergraduate membership in final clubs, fraternities, and sororities, he observed the "very different times" (MIT was minimally coeducational a half-century ago) and said that "Drew and her team" have put together a policy that is "the right one for Harvard today." (The Corporation voted to adopt it late last year, before Bacow stepped down from the search committee.)

And he was blunt and forceful in response to a question about DACA students (the Dreamers: immigrant children safely resident through the Deferred Action for Childhood Arrivals program, until President Donald Trump set an expiration deadline, seemingly with no congressional resolution

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"Good Trouble"

Students from Parkland, Florida, speak on gun violence at Harvard Kennedy School.

harvardmag.com/parkland-18



An Imposing Honor for Harvard's First Black Graduate

The University of South Carolina recognizes its first African-American professor—Richard T. Greener, A.B. 1870.

harvardmag.com/greener-18

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in sight)—an increasingly urgent concern for Faust and peer institutions' leaders throughout this academic year. Referring to his own life circumstances (his father came to the United States to escape pogroms in Eastern Europe, his mother arrived as a refugee on a Liberty ship—the only member of her family to survive Auschwitz), he said, “I would not be standing before you today, literally, if this country turned its back on refugees.”

An experienced hand. Beyond his understanding of Harvard's priorities and alignment with its trajectory, Bacow brings to the presidency broad experience in university management and leadership. Based on his record, he has very much walked the walk. During his decade at Tufts, where he had far fewer resources to work with—the endowment now is \$1.8 billion, *one-twentieth* Harvard's (of course, the institutions differ significantly)—he championed need-based financial aid; directed new resources to the aid budget, replacing loans with grants for low-income undergraduates; realized a significant increase in sponsored research; managed the relationship with the university medical center; and conducted a record capital campaign.

As Tufts president, Bacow was a higher-education leader, building a coalition focused on colleges' and universities' civic role and social responsibilities. He was chair of the council of presidents of the Association of Governing Boards of Universities and Colleges, chair of the executive committee of the Association of Independent Colleges and Universities in Massachusetts, and a member of the executive committee of the American Council of Education's board of directors. He has also served as a member of the American Academy of Arts and Sciences' Lincoln Project, which made the case for strengthening public research universities, whose finances were punished as state governments slashed support in the wake of the financial crisis and recession that began in 2008. These ties throughout academe may prove potent at the present moment (see “The Challenging Context,” below).

Following news of his Harvard selection, the comments about Bacow from throughout higher education bordered on the euphoric. The following, from Overseer John Silvanus Wilson Jr., M.T.S. '81, Ed.M. '82, Ed.D. '85, former president of Morehouse College, is representative: “Since meeting and befriending Larry Bacow over 25 years ago at MIT, I have had the privilege of working with one of the most effective

HARVARD PORTRAIT



David Davidson

Times have changed since David Davidson started in food service in 1982, managing a Somerville McDonald's. Food ethics have become a cultural flashpoint, making his role more complex and more central to Harvard's perceived values. His team at Harvard University Dining Services (HUDS), where he is managing director, works to make meals more “plant-forward”: “Now, I wouldn't characterize myself as a *vegetarian*. Tofu—I could take it or leave it. But last week I had a tofu burger, and I was like, ‘Wow!’” he enthuses. “We're slowly going to change people's minds about what they should be eating. We're meeting with the Lentil Board [Saskatchewan Pulse Growers] to learn about different ways to use lentils.” At the same time: “We are not the food police! Our job is to provide options. The football players come in and get their 12 chicken breasts.” Raised on the North Shore (his parents worked alternating shifts at General Electric), Davidson started at HUDS in 1991, as manager of the Dudley House Café. After stints at Yale, the Back Bay Restaurant Group, and Phillips Exeter, he missed Harvard. Exeter was small: “We were feeding 600 or 700 kids.” In 2007, he returned to HUDS, where he oversees 650 staff members who deliver 27,000 meals per day—and is looking to expand. He's bidding on the cafés at Harvard Medical School, currently run by an outside contractor. “Our entry-level dishwashers start at \$21.89 an hour—I'm very proud of that. But we're competing with very low labor costs in the service industry,” he says. How does he convince clients to choose HUDS? “I'm exceptionally good at developing relationships. I always say, ‘You're Harvard, I'm Harvard, and we're going to do everything possible to achieve your mission.’”

—MARINA BOLOTNIKOVA

leaders in all aspects of the living and learning environment of university life.” As past executive director of the White House Initiative on Historically Black Colleges and Universities, Wilson said, “I encouraged President [Barack] Obama’s interest in appointing Larry to the advisory board” of the initiative “because of the transformational impact he had at Tufts....” (Their perspectives remain closely aligned: Wilson is taking leave as an Overseer to become senior adviser and strategist to the presidents, implementing the inclusion and belonging report released on March 27; see harvardmag.com/diversity-report-18.)

Richard P. Chait, professor of education emeritus—whose scholarship and advisory practice have focused on higher-education

governance, boards of trustees, and leadership—has known Bacow for a couple of decades, and worked with the Tufts board while Bacow was president. He was also an important adviser on the reforms that remade the Harvard Corporation at the end of 2010 (shortly before Bacow became a fellow). Characterizing the president-elect as both a friend and someone he has observed in action, Chait said, “*Nobody* dislikes [taking] credit more broadly than Larry—he is always explicit in the attribution of credit to others.” In addressing difficult challenges, he said, Bacow demonstrates “a remarkable ability to articulate sensitive, delicate issues with full frankness and no edge”—dealing with controversies over free speech, for instance, “with a refreshing forthrightness”

that nonetheless manages not to provoke advocates or instigate hostile reactions. Those traits are deeply rooted in “a person of unimpeachable integrity,” who applies his energies to institutional ends, not personal ones.

As William Lee said in his announcement to the Harvard community February 11 (sentiments he echoed warmly in the news conference), having worked alongside Bacow for six years, he knew this sterling résumé took root in “equally extraordinary human qualities—of integrity and collegiality, intelligence and compassion, humility and high standards, openness and warmth.”

Lee told the audience in Barker Center (and watching on Facebook) that Harvard’s twenty-ninth president

inspires trust. He is not just smart,

University People

Dean Dench

McLean professor of ancient and modern history and of the classics **Emma Dench**, the interim dean of the Graduate School of Arts and Sciences during the current academic year, will assume that post on a regular basis as of July 1. She succeeds Jones professor of statistics **Xiao-Li Meng**, who became dean in 2012 and is on sabbatical this year; upon his return, he will be engaged with the Harvard Data Science Institute, launching a journal, and will also become president of the Institute of Mathematical Sciences. For a full report, with a description of the issues on Dench’s agenda, see harvardmag.com/dench-18.



Emma Dench

ROSE LINCOLN/HFAC

Enduring Fellow

Charles P. Slichter ’45, Ph.D. 49, LL.D. ’96, a physicist (and son of Lamont University Professor Sumner Slichter) whose quarter-century of service on the Harvard Corporation concluded in 1995, died February 19. Slichter was senior fellow for nearly a decade. The longevity of his service will not be equaled, given the Corporation’s term limits, adopted in 2010. Nor is it likely that his travel on Harvard’s behalf will be exceeded: he commuted to Cambridge from the University of Illinois at Urbana-Champaign for meetings,



STEPHANIE MITCHELL/HFAC

Departing Dean Smith

Michael D. Smith, dean of the Faculty of Arts and Sciences since 2007, announced on March 19 that he would step down and return to teaching (he is Finley professor of engineering and applied sciences) upon the appointment of a successor by president-elect Lawrence S. Bacow. Smith had the unenviable task of steering his faculty through the financial crisis and recession—which constrained distributions from the endowment, the source of about half of FAS’s operating revenue—while advancing the enormous (and enormously expensive) House renewal project and sustaining enhanced financial aid. A fuller account of his deanship appears at harvardmag.com/smithstepsdown-18.

which were then held 20 times yearly—about 500 round trips, with no direct flights.

Sunstein Shines

Walmesley University Professor **Cass Sunstein** has won the 2018 Holberg Prize, conferred on an outstanding researcher in the arts and humanities, social sciences, law, or theology. The prize, accompanied by an honorarium of approximately \$765,000, recognizes his work on behavioral economics and public policy, constitutional law and democratic theory, administrative law, the regulation of risk, and the relationship between the modern regulatory state and constitutional law. The prize announcement called him “the leading scholar of administrative law” in the United States, and noted that he is “by far the most cited legal scholar in the United States and probably the world.” Sunstein and his research were profiled in depth in “The Legal Olympian” (January-February 2015, page 43).



Cass Sunstein

STEPHANIE MITCHELL/HFAC

Faculty Deans

Professor of biology **Brian D. Farrell** (an entomologist whose field work was profiled in “Brian Farrell in Bugdom,” September-October 2003, page 66) and **Irina Ferreras**, a curatorial assistant in the Harvard herbarium, have been appointed faculty deans of Lever-

ett House, succeeding Mallinckrodt professor of physics **Howard Georgi** and **Ann Georgi**.... Separately, Lowell House faculty deans **Diana L. Eck** and **Dorothy A. Austin** announced they will step down at the end of 2018-2019; they have been leaders of the House, now being renovated, for 20 years.

but wise. He is innovative and entrepreneurial. He has high academic standards and excellent judgment in people. He has a strong moral compass and extraordinary emotional intelligence. He relates easily to all different kinds of people and motivates them to commit to something larger than just themselves. He is deeply curious—intellectually curious, highly interdisciplinary, and naturally collaborative. He has the confidence to set priorities and to make the hard choices to implement them. He is...all about the institution and the people in the institution, not about himself. He is someone who loves Harvard, but whose love isn't blind, who is

always asking how Harvard can do better, not just for Harvard, but for the wider world.

The Challenging Context

THAT NOD to the the universe beyond Harvard's footprint in Boston and Cambridge carries a larger significance. Hanging over the discussion of Bacow's ever-upward higher-education record, and his ready-to-roll preparation for assuming the University presidency, is a pervasive sense that the external environment is threatening—perhaps even uniquely adverse.

In reviewing the search, Lee outlined the three characteristics judged most important for the next president as:

- “broad and deep experience with the

many, many challenging issues confronting universities today”;

- the ability to apprehend “the huge opportunities before us in education, in research, and in serving the world broadly”; and

- the ability to clearly see and readily confront “the great challenges facing us at a moment when the value of higher education is being questioned, at a moment when the fundamental truth of fact-based inquiry is being questioned and called into doubt.”

The emphasis lingered on the last of those desiderata. Underscoring the point, Lee said the ability to assume the presidency seamlessly counted “because neither we nor higher education have time to spare.” He amplified that Bacow acceded to the

Alumni Newsmakers

Katherine A. Rowe, Ph.D. '92, a Renaissance and medieval drama scholar active in digital-humanities research, has been appointed president of William & Mary—the first woman leader of the nation's *second*-oldest institution of higher education (1693); she has been provost and dean



COURTESY OF WILLIAM & MARY

Katherine A. Rowe

of the faculty at Smith College....The Andrew W. Mellon Foundation, the leading source of philanthropic support for the humanities and related fields, has appointed poet Elizabeth Alexander, RI '08, a former faculty member at Yale and Columbia, as its president; Conant University Professor Danielle S. Allen, chair of the Mellon board of trustees, made the announcement....Columbia's Hamilton professor of American studies, Andrew Delbanco '73, Ph.D. '80, a National Humanities Medal honorand and literary scholar who has written forcefully on higher education, has been appointed president of the Teagle Foundation, which supports efforts to improve teaching and learning in the liberal arts....The Perelman Performing Arts Center at the World Trade Center, in New York City, has appointed Bill Rauch '84 as its first artistic director. He was a co-founder of the Cornerstone Theater Company, profiled in the magazine in 1990, and has been artistic director of the acclaimed Oregon Shakespeare Festival since 2007 (see “Bards of America,” September-October 2017, page 55).

Faculty and Staff

Mark D. Gearan '78, former director of the Peace Corps and president of Hobart and Wil-

Commencement Headliners

Congressman John Lewis, LL.D. '12—already in possession of an honorary degree in recognition of his lifetime of leadership in the American civil-rights movement—returns to Tercentenary Theatre as the principal guest speaker for the 367th Commencement. His appearance on the afternoon of May 24 comes 50 years after the class of 1968 invited Martin Luther King Jr. to be its Class Day speaker; after his assassination, on April 4, his widow, Coretta Scott King, appeared in his place. That background, and Lewis's connection to President Drew Faust, are detailed at harvardmag.com/comm-lewis-18. On Radcliffe Day, May 25, Hillary Rodham Clinton—former U.S. senator, secretary of state, and presidential candidate—will receive the institute's Radcliffe Medal; further information appears at harvardmag.com/rias-clinton-18. The poet and orator at the Phi Beta Kappa Literary Exercises on May 22 will be Kevin Young '92, poetry editor of *The New Yorker* (read a review of his new book, *Bunk*, at harvardmag.com/bunk-18), and paleontologist and evolutionary biologist Neil Shubin, Ph.D. '87 (profiled at harvardmag.com/shubin-08).



COURTESY OF CONGRESSMAN JOHN LEWIS



COURTESY OF THE RADCLIFFE INSTITUTE FOR ADVANCED STUDY, HARVARD UNIVERSITY



THE INSTITUTE OF POLITICS AT HARVARD KENNEDY SCHOOL

Mark D. Gearan

liam Smith Colleges, has been appointed director of the Kennedy School's Institute of Politics....Andrew Elrick, Ed.M. '07, most recently director of administration for the Business School's global initiative, has been appointed executive director of the David Rockefeller Center for Latin American Studies, the University-wide entity that organizes research and learning experiences throughout Central and South America....The 2018 Tyler Prize for Environmental Achievement, a leading recognition for work in environmental science, environmental health, and energy, will be conferred on professor of biological oceanography James J. McCarthy in early May; past honorands include Pellegrino University Professor emeritus E. O. Wilson and Heinz professor of environmental policy John P. Holdren.

Yesterday's News

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

1913 The *Alumni Bulletin* applauds the *Crimson* for advocating more enthusiasm at Harvard baseball games, which have been "as staid and solemn as the literary exercises on Commencement Day."

1918 The Harvard Club of North China contacts President Lowell, offering a prize of \$100 to the Harvard undergraduate or graduate student "who writes the best paper on any subject connected with China." The 64 Chinese students on campus far outnumber those from any other country: Canada is second with 25, and Japan, with 21, is third.

1933 The Phillips Brooks House Association votes to forgo its annual dinner and use the money to send undernourished children to summer camp.

1938 Lucius N. Littauer, A.B. 1878, lays the cornerstone for the Littauer Center of Public Administration, the new home of the new Graduate School of Public Administration. Inaugural dean John H. Williams tells the audience that in addressing policy problems, "the economist, the political scientist, the sociologist, and the lawyer all have contributions that may lead to a broader and clearer understanding..."

1968 A new department

of visual and environmental studies is set up in the College to replace the existing fields of architectural sciences and the practice of the visual arts.

1973 "Flying in the face of tradition," a committee representing a cross-section of the Harvard community reschedules the annual alumni meeting and alumni parade to Wednesday afternoon, a day before Commencement, rather than on Commencement afternoon. When rain pours down on Wednesday, experienced alumni grumble that it's "asking too much to expect two fair days in a row."

* * *

Commencement-week protest at the University, meanwhile, shifts from politics to plumbing as women distressed by the general shortage at Harvard of toilet facilities for their sex stage a protest in front of Lowell Lecture Hall.

2003 With a record 20,986 applicants having sought spots in the future class of 2007, the acceptance rate at the College falls below 10 percent for the first time.

search committee's request that he consider becoming a candidate because he felt the present moment was critical for higher education in general and Harvard in particular.

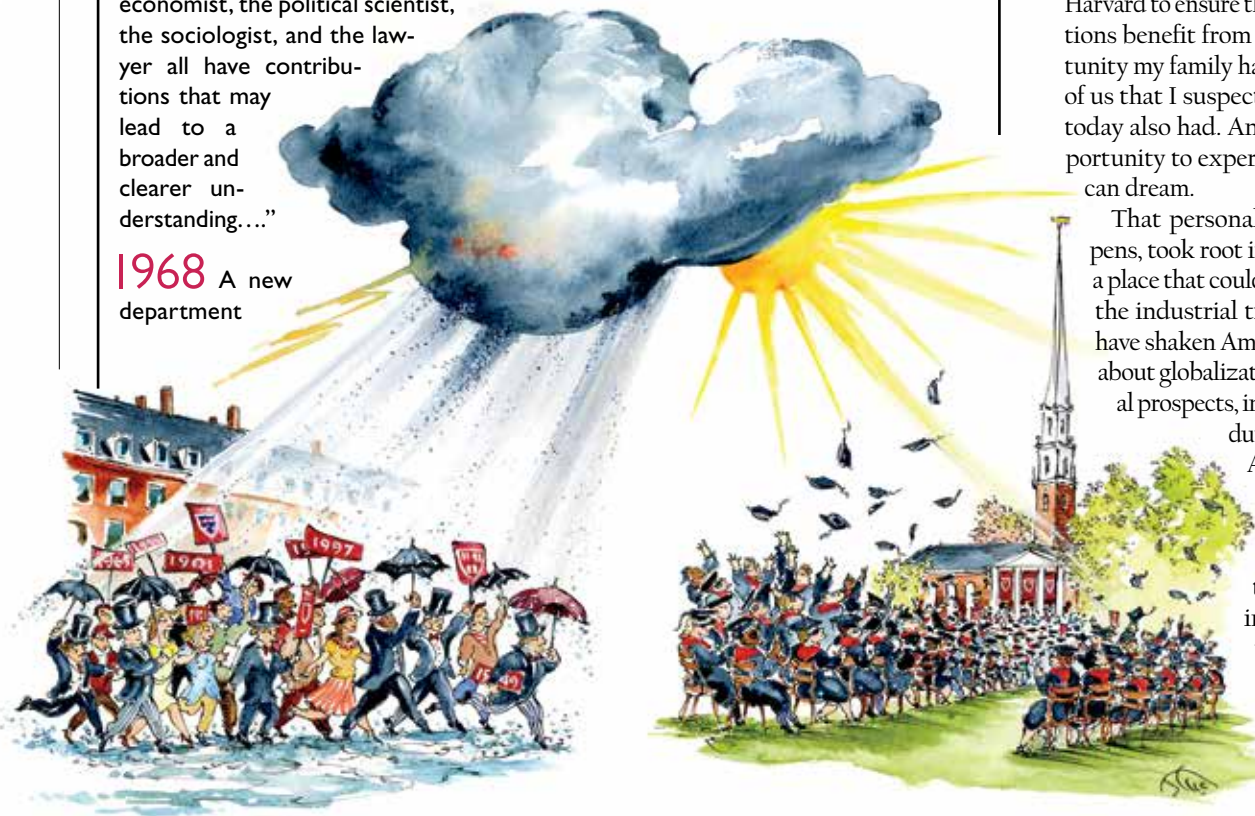
Taking education personally. During the news conference, Bacow addressed those issues in a way that began to make the presidency-to-be his own. Drew Faust entered Mass Hall as an historian of the first rank; her default approach in situating Harvard issues and pointing a way forward was to delve into the institution's history. Bacow's scholarship, as noted, has focused on negotiating and making policy in complicated circumstances—but his research career has now been succeeded, for two decades, by a second one, as a leader in and thinker about higher education. As he takes up the reins for this ultimate stage of that second career, he chose to frame the stakes in highly personal terms.

Rather than talking abstractly about why higher education matters, he told about his parents' paths from the Old World to the New and then said:

When I reflect upon my parents' journey to this country, I realize how lucky I am. Where else can one go, in one generation, from off the boat, with literally nothing, to enjoy the kind of life and opportunity that I and my family have been fortunate to enjoy. It was higher education that made this all possible. I look forward to working every day as president of Harvard to ensure that future generations benefit from the same opportunity my family had—and so many of us that I suspect sit in this room today also had. And that is the opportunity to experience the American dream.

That personal journey, as it happens, took root in Pontiac, Michigan: a place that could be a poster child for the industrial transformations that have shaken Americans' assumptions about globalization and their personal prospects, in a battleground state during the 2016 election.

Asked what larger role Harvard might play in the national political conversation, Bacow homed in on his hometown; when he was growing up, he said, the three General Mo-



tors plants there practically guaranteed that high-school graduates could get a job and attain the accoutrements of the middle-class good life. Today, he said, “That’s all gone” (in unspoken contrast to the advantages accruing to those able to pursue higher education). Accordingly, “academic institutions, including Harvard, have to pay more attention to those in this economy who have been left behind.”

Alongside the day’s messages about universities’ potential to advance discovery and teaching, and the expectations of those seeking a higher education, Bacow urgently sounded a theme about the threats to the essential enterprise itself, beginning with that warning note about “a nation divided.” Echoing Lee, he said, “these are challenging times for higher education in America.”

In the questions and answers that followed the formal news-conference remarks, he responded to a query about his decision to become a candidate by talking about the “tough times” he perceived: that for the first time in a life shaped entirely by academe, the value of attaining higher education had come into question, as had the utility of supporting it. Accepting the Harvard presidency, he said, was an opportunity to serve higher education, “and I hope serve the nation.” In a brief private conversation later, he emphasized again, “I feel like I owe my entire life to higher education.” He described the present circumstances, and the announcement of his presidency, almost as a calling: “This was not an opportunity I sought, but I also realized this was not an opportunity which I could turn away, because of the challenging times we face.”

Minding the store. Emphasizing the external concerns opens a way to consider another prospective element of the Bacow presidency: the sense that he can identify needed changes—and effect them. Hence Lee’s line, not a throw-away, about Bacow as someone whose love of Harvard “isn’t blind, who is always asking how Harvard can do better, not just for Harvard, but for the wider world.” In the president-elect’s formulation (following his enumeration of Harvard’s commitment to *Veritas*, excellence, and opportunity), “[W]e should always recognize that [despite] all of our progress toward realizing these ideals over decades, even centuries, at a place like Harvard that there is still much we can do, much we can learn, and more that we can contribute to make the world better, together.”

But rather than stopping at that lofty



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place, he went further:

These days, higher education has plenty of critics. And candidly, I think some of the criticism is fair. We need to do a better job of controlling our costs. We need to do a better job of operating more efficiently. We need to collaborate with others, with our peer institutions, with industry, and the broader world. And we need to be vigilant to ensure that our campuses are always open to new ideas—that they are places where all our members feel free to express themselves, and also where every member of this community feels that he or she belongs.

Striking a Balance

IT IS PREMATURE to leap from that language to an actionable agenda: Bacow, after all, doesn’t assume office until mid year—and his installation will not occur until October 5. Nonetheless, his words merit careful consideration. (See page 5 for some crystal-ball gazing; and look for a detailed profile of the president-elect in a future issue.)

But the knowns confronting any new Harvard leader are clear enough.

The external environment is certainly not propitious. The list of worries includes, *inter alia*, citizens’ alienation from higher education (its high sticker price and doubts about the return on investment)—and proliferating challenges to the mean-

ing of truth and facts generally; the newly legislated tax on elite institutions’ endowments (in part a vivid reflection of that public mood); threats to federal research funding and support for financial aid; litigation about selective institutions’ admissions policies; and arguments about campuses’ political biases and elitism.

As noted, these concerns seem at the forefront of the Corporation’s, and Bacow’s, minds. How to address them? Therein may lie the appeal of Bacow’s compelling personal narrative and the reach of his higher-education contacts list. Defining and leading the debate over the importance of higher education, at this political moment, from this Crimson redoubt, promises to be a demanding, time-consuming effort.

At the same time, there are plenty of items on the University’s internal agenda—some of which pertain importantly to how successful it might be in advancing the conversation in the world beyond Greater Boston.

The crude way of perceiving such issues is through a financial lens. Yes, the endowment was \$37.1 billion at the end of last fiscal year; and yes, The Harvard Campaign will certainly bring in at least \$9 billion by its end, on June 30, and perhaps

considerably more. But three intersecting trends tell a tale perhaps at odds with that eye-popping headline figure.

First, the University has had not one but



Installation manual: a binder summarizing Drew Faust’s inauguration

Educational Improv

Over lunch last fall, faculty members from Suffolk University gathered to watch a history class fall apart. As a befuddled professor strained to steer the conversation to the week's reading on the Boston Tea Party, his students got mired in an argument. "I mean, aren't *India* Indians, Indians now? Do you know what I mean?" asked a senior. "'Native Americans' isn't even the politically correct term anymore," interjected a freshman, rolling her eyes.

The scene came from "Teaching Beyond the Timeline," by Harvard's resident improv troupe, the Bok Players. Based at the Bok Center for Teaching and Learning, they use theater activities to educate audiences. "DEIA—diversity, equity, inclusion, and accessibility, in whatever order—is the heartbeat of the work that we do," explains artistic director Mara Sidmore. The players are mostly professional actors, whose other credits range from *Shear Madness* to Shakespeare to portraying "standardized patients" in medical schools. During rehearsals, they go over lines, and also other show elements: How big is the audience? Is attendance mandatory, or voluntary? What are the demographics of the student body? They adapt each performance to its venue.

For them, the play's only half the thing: after a sketch ends, the actors stay in character for a "talkback" in which the audience asks about their motivations. (Everyone involved is impressively committed: at Suffolk, Sidmore polled the characters about how "class" had gone, nodded thoughtfully at their answers, and thanked them for their honesty.) After that, the real fun begins. Faculty members are invited on stage to act out other ways the scene could have unfolded and afterward, the actors help them role-play similarly "hot" moments from their real work lives.

The Bok Players formed in 2007, in response to a recommendation from the Task Force on Women in Science and Engineering (itself a response to the firestorm sparked by former Harvard president Lawrence H. Summers's comments on women's "intrinsic aptitude" in those fields): all science doctoral students should take a pedagogical training course with a component on gender bias. Lee Warren, then an associate director at the Bok Center, had been inspired by a University of Michigan teaching troupe to try interactive theater at Harvard. "No faculty member wants to go to a training session on diversity," she says. "They just think they'll throw up!"

The players' first sketch, "Trouble in the Lab," was about an untenured researcher wading into a fight involving a female first-year, a short-tempered older student, and an absent-minded



postdoc. At early performances, reactions were mixed. "It's not obvious to me how this matters," one student complained to a reporter from *Nature*. "The problems in the play weren't real problems, like faked data."

But administrators were impressed, and various Harvard departments kept requesting the players' help—including one major early client, Catalyst, the center for clinical medical research. So they spun off more scripts: "Sign Here" explored ethics in obtaining consent from study participants; "The Right Fit" tackled a faculty hiring committee. As word spread, they started performing at Boston hospitals and schools throughout New England. With this steady line of work, the Bok Players weathered the financial crisis and a five-year institutional limbo when Harvard severed ties with them in 2010. Posters from the time advertised "New plays commissioned on request" and "Improvational programs tailored to client needs," and even offered one-on-one coaching.

Today, the troupe finds itself turning some performance requests down. As Sidmore sees it, "We need to focus on how we fit into the Center, because otherwise we're just sort of this satellite program." Now incorporated into the Bok Center's larger Applied Theatre Initiative, the players also run "Theater Lab," a workshop in which Bok staff discuss how theater concepts can be adapted into teaching tools. (At one session last semester, participants learned acting warm-ups, and pantomimed "The Three Little Pigs.") They also provide course support, plying their trade in classroom settings. Recently, faculty members have called them in to coach students for a class debate, and to role-play as clients seeking legal advice on the benefits of marriage versus a civil union.

Sidmore, meanwhile, says she's on the lookout for longer-term "strategic alliances" throughout the University. Maybe, she suggests, the Office of Student Life would be interested in developing training materials connected to the "Me, Too" movement, or the Presidential Task Force on Inclusion and Belonging will inspire more faculty programming.

A Bok Players performance can be a surreal cocktail: one part corporate-sensitivity workshop, one part avant-garde performance art, served up by actors radiating the can-do cheer of summer-camp counselors. Yet the ritual of roleplay seems to have intrinsic power. "If you embody it, there's something that happens with the person you're embodying it with, where you're able to see, suddenly, 'Oh, *that's* what that person perceived,'" says Sidmore. "And it's often kind of a release."

As Lee Warren puts it, theater "gets people below the neck. It's not just the heads working."

—SOPHIA NGUYEN

A freshman's hand flies up during the Bok Players' performance at Rhode Island School of Design.



two financial crises in the past decade. The acute losses associated with the national financial crisis and recession in 2008-2009 decreased Harvard's net worth, abruptly, by \$14 billion. That has been followed by the simmering, but persistent, underperformance of endowment investments in the decade since (over time, a couple of percentage points of annual return less than the 8 percent goal, aggregating to hundreds of millions of dollars per year, and compounding continuously). In toto, that shortfall has constrained the flow of funds that deans expected to be distributed from the endowment into their schools' budgets for teaching and scholarship.

Second, as a result, the endowment is nominally about the same size today as in fiscal 2008 (and billions of dollars less when adjusted for inflation), but it supports operating expenses that have risen from \$3.5 billion in fiscal 2008 to \$4.9 billion last year. The academic impacts are consequential. Faculty growth has been constrained. Research initiatives have been supported with internal grants, not more permanent funding. High-profile ventures like the University data-sciences initiative and the College's theater, dance, media concentration are staffed with postdocs and adjunct teachers, not new professorships: a new, flexible model of investing without incurring permanent costs, maybe—or a sign of stretching limited resources.

Third, given the depth of the endowment-income shortfalls, the capital campaign—*essential* to shoring up both the balance sheet and underwriting operations and buildings—could not suffice to fill the gap. "Capital" is a bit of a misnomer: through last June, when the campaign reached \$8 billion of gifts and pledges, about \$2.3 billion had been received to bolster the endowment. The majority of campaign funds are for nongovernment sponsored research and current use (which are obviously quickly spent), and building projects (House renewal, the Kennedy School campus expansion, the Business School's new executive-education and conference facilities—most of which permanently *increase* operating expenses).

At Harvard, nearly doubling current-use giving during the campaign has provided invaluable support for the University's academic mission. But unless sustained at that level, it does not substitute for mission-focused endowments and the operating funds they theoretically provide in perpetuity.

In short, Harvard is a big university, ex-

pensive to run. The endowment shortfalls are presumably being addressed: Harvard Management Company, under new leadership, is in full tear-down mode. But it may take years to improve results, and the investment environment is not guaranteed to remain effervescent.

And in the meantime, of course, there will be decanal vacancies to fill (notably, in the Faculty of Arts and Sciences; see page 18), perhaps senior administrative searches to conduct, and the myriad activities of simply running the place. That work—together with setting and paying for major Harvard priorities, and attempting to influence the public discourse about higher education—would seem a sufficient presidential to-do list for the next decade or so.

"A Harvard Student Again"

AT THE February news conference, Bacow was asked how he could possibly balance the contending, enormous demands that come with the job. "Time is our scarcest resource," he acknowledged. Drawing on his prior presidential experience, he observed that one could never know what each day would bring—but within that context, it was possible to prioritize internal needs and external obligations over time, and that once in Mass Hall he would do so, appropriately, as the circumstances dictate. The process, he said, was like asking "which blade of the scissors does the cutting."

In a conversation after the briefing, the president-elect pointed to his recent writings on higher education as a better guide to who he is today than his scholarly work, some decades ago, on negotiation and dispute resolution in the complex realm of environmental decisionmaking and policy. But given the challenges he has now determined

to assume again, perhaps that earlier work, from the first stage of his life in higher education, assumes relevance anew.

For now, it is hard not to sense the enthusiasm about Harvard and the energy about its mission, now *his* mission, that Lawrence S. Bacow, soon to be the University's twenty-ninth president, conveyed in concluding his remarks on February 11:

When our faculty and students and staff think of Harvard, I want them to think,

"This is the place where I can do my best work."

"This is the place where I can pursue opportunities beyond those that might be available to me anywhere else."

"This is the place that whatever my background, wherever I came from, whatever I look like, whatever my academic focus, whatever my point of view, that I can have the greatest chance not only to succeed personally, but, even more importantly, to make a difference in the lives of others."

I am enormously excited to be part of such an adventure. And for these next several months, I also look forward to being a Harvard student again. I still have much to learn, and I know from my prior life here that there is no better place to learn than at Harvard.

Those of us privileged to lead this University are invested with a precious trust. Working together, faculty, staff, students, and the governing boards, I promise to do everything within my power to prove worthy of that trust.

—JOHN S. ROSENBERG

News Briefs

Toward a Fossil-Fuel-Free Future

PRESIDENT DREW FAUST announced on February 6 that Harvard would "seek to become fossil fuel free" by 2050—meeting energy needs sustainably and setting goals for purchased services that "rely as little as possible on fossil fuels." As an interim objective, the University will "strive to become fossil fuel neutral by 2026" by reducing its own

emissions from fossil fuels and investing in "high-quality, off-campus projects that displace comparable amounts of emissions for any emissions that remain."

McArthur University Professor Rebecca Henderson, a co-chair of a University climate-change task force that developed the new policies, noted in a *Harvard Gazette* interview that apart from a broader University agenda of working to minimize climate change, Cambridge and Boston both have set zero-emission goals for 2050, making that a necessary target. Massachusetts is also directing utilities to boost supplies of

sustainably sourced electricity significantly (perhaps from Canadian hydropower and from offshore wind turbines), enabling customers to purchase supplies of power that have little or no climate impact.

Harvard's efforts will be overseen by a new sustainability executive committee, populated by faculty members, administrators, and students. Executive vice president Katie Lapp, another task-force co-chair, and vice president for campus services Meredith

Weenick will lead a planning process with the schools to identify opportunities to reduce reliance on fossil fuels in electricity purchasing, transportation, Harvard's district energy power plants, and future building projects.

Henderson (see *Harvard Portrait*, November-December 2011, page 58) also alluded to a recommendation that Harvard impose a surcharge on campus fossil-fuel consumption—a version of a carbon tax.

Yale experimented with a carbon-tax system, equivalent to \$40 per ton of carbon-dioxide emissions from energy use, from late 2015 through the spring of 2016. Following the trial, which was found to reduce energy use, as reported in *Nature* last November, Yale imposed the fee on more than 250 campus buildings, covering nearly 70 percent of carbon dioxide emissions, last July. Harvard's plan, Henderson said, would offset some, but not all, of the identified damages associated with fossil-fuel emissions.

For further information, see harvardmag.com/fossilfuel-goal-18.

~JOHN S. ROSENBERG

Advanced Standing Reduced

Following its December discussion of a proposal to eliminate Harvard College course credit for Advanced Placement (AP) and International Baccalaureate (IB) courses—thereby limiting students' ability to fast-track their A.B. or graduate with a simultaneous master's, typically in a sciences or engineering field (see "Overhauling Advanced Standing," March-April, page 22)—the Faculty of Arts and Sciences (FAS) accepted an amended course of action at a sparsely attended meeting on February 6.

Taking into account concerns raised in December, dean of undergraduate education Jay M. Harris introduced a scrubbed-down policy. Beginning with students entering the College in 2020, course credit would no longer be awarded "for work completed prior to their matriculation," except for credits earned at Harvard's extension or summer schools. This would extend the practice already in place in all departments except economics, mathematics, and psychology (which in effect recognize top scores in AP or IB classes as a *substitute* for introductory College courses in those disciplines). Departments would be allowed to continue using AP and IB examinations for course placement—and (the one exception) to satisfy the undergraduate foreign-language requirement. A separate committee would be formed to recommend rules and procedures for undergraduates hoping to pursue a concurrent master's degree in the Graduate School of Arts and Sciences; it would report within a year.

Harris observed that across most of FAS, AP and IB classes are regarded as not equivalent to the work required in College classes—so it makes no sense to al-

low students to count them toward earning an A.B. short of Harvard's "curated eight-semester experience."

Faculty members present raised several concerns. First, the change would eliminate the opportunity to graduate in six or seven semesters—an option that might appeal to a very few students with compelling personal or family financial or health concerns, or unique intellectual trajectories. Peer institutions permit accelerated undergraduate studies, so Harvard might unilaterally weaken its appeal to such applicants. The change also seems at odds with efforts nationwide to make college studies more flexible, affordable, and accessible. Finally, the proposal continues to let students circumvent the language requirement, at least in terms of instruction in the College.

Harris, a self-proclaimed "language hawk" (he is Wolfson professor of Jewish studies), said the final point merited further study—but added that foreign-language requirements have been reviewed in the relatively recent past and are governed by separate legislation. As for the other concerns, he emphasized the value of as complete an undergraduate experience as possible; the inappropriateness of "cheapening" the four-year degree; and the inequity of granting advanced standing to the minority, perhaps 30 percent, of undergraduates whose AP or IB credits make them eligible, while making it impracticable for those who do not.

With the promise of further study on accommodating concurrent bachelor's and master's degrees, the faculty members present approved the policy by voice vote.

~J.S.R.

Building Unabated

"HARVARD'S Historic Building Boom" (September-October 2017, page 14) reflects the fruits of the capital campaign, but it is now evident that contractors' good times will continue to roll on. Beyond the Graduate School of Design's expansive ambitions (Brevia, March-April, page 24), Harvard Divinity School has announced the biggest gift in its history: \$25 million, from Susan Shalldress Swartz, campaign co-chair, and James R. Swartz '64. The funds enable comprehensive renovation and reconfiguration of Andover Hall, the center of the HDS campus.

Separately, Harvard Law School—already erecting a 21,000-square-foot new office building at the corner of Massachusetts Avenue and Everett Street—has retained Deborah Berke Partners to redesign its Lewis International Law Center; the scope of work includes additional space, a new entrance, removal of library stacks, and increased office and teaching areas, with 2020 targeted for completion. (Berke, dean of Yale School of Architecture, is also designing Princeton's new residential college, aimed at a 500-student increase in undergraduate enrollment, and perhaps a second one; the latter would enable renovation of existing residences, followed by *another* increase in enrollment, the third Princeton might effect this millennium.)

As construction proceeds on the massive renewal of Lowell House, design has begun for the Adams House renovation, scheduled to begin construction in 2019. And the University's "Town Gown Report" to Cambridge also projects work this year on Robinson Hall, home of the history department (accessibility and fire-suppression sprinklers); Radcliffe's Schlesinger Library (renovation for interactive access to collec-

First-Gen Policies

Sadé Abraham, who is pursuing a master's degree in cognitive neuroscience at the Graduate School of Education, will direct the College's new summer orientation program aimed at entering freshmen who are the first members of their family to pursue higher education, or who come to Harvard from low-income settings or under-resourced high schools (see "Mastering the 'Hidden Curriculum,'" November-December 2017, page 18). The program is now named First-Year Retreat and Experience; a summary of its contents includes "navigating the transition from home to college life": how to relate to faculty members, use office hours, and learn about campus and community resources.

Archival Accessions

The Radcliffe Institute's Schlesinger Library on the History of Women in America has acquired the archives of feminist and countercultural activist Angela Davis. The accession was organized for shipment from Oakland to Cambridge by Kenji Phillips, the library's inaugural curator for race and ethnicity, who joined the staff in 2016; the materials are expected to be available for scholars by 2020....The family of the late Andrew F. Brimmer, Ph.D. '57, LL.D. '99, has donated his papers to Harvard Business School's Baker Library. Brimmer is best known as a Federal Reserve governor. Selections from the papers were exhibited as part of the celebration of the fiftieth anniversary of the school's African-American Student Union.

Arts Initiatives

The American Repertory Theater's A.R.T. Institute has taken a three-year "hiatus" on admissions into its graduate training pro-

Brevia



SMITH CENTER SERVICES: When it opens this fall, Smith Campus Center (née Holyoke Center) will provide both common spaces and calories. Food vendors on the first floor include Pavement Coffeehouse, Swissbäkers, Bon Me, Blackbird Doughnuts, Saloniki, Oggi Gourmet, and Whole Heart Provisions. Helpfully, a Pure Barre fitness center is opening at 114 Mount Auburn Street (about a donut's walk distant), a newish building housing Harvard administrative and other offices....To the southwest, Yale has hired Garth Ross, formerly vice president of community engagement at Washington's Kennedy Center, to direct programming for the Schwarzman Center, its new campus and performance venue shaping up in the renovated dining Commons and Memorial Hall.

gram, while it examines how it might begin to offer financial aid. Meanwhile, in an effort to encourage diversity, Brown University's M.F.A. program for acting and directing, a collaboration with Trinity Rep, the local theater company, will cover tuition for current and future students, beginning this

fall; the class size will be reduced from 15 to 10 to help make the cost manageable.... As the Hasty Pudding decided to open its casting to women (Brevia, March-April, page 23), Yale's Whiffenpoofs and Whim 'n Rhythm, heretofore its senior male and

female a cappella groups, also opened their next auditions to everyone, regardless of gender—and the Whiffs, the oldest collegiate ensemble of its kind, selected Sofia Campoamor as its first female singer. The Whiffs and Whims have also adopted a joint website, booking, and business team to promote themselves.

The D.C. Circuit

The University's agenda in Washington, already long, has only enlarged in recent months. President Drew Faust,

who has during the past year weighed in publicly and by lobbying members of Congress on such matters as funding research (a win) and the status of undocumented students (no decision, so far), now is focusing on other fiscal matters. On March 7, she and 48 peers sent a letter to Congress objecting to the new excise tax on endowment investment income (see "Endowments, Taxed," March-April, page 18). (A good indication of the politics involved came in February, when Congress enacted the two-year budget; Senate majority leader Mitch McConnell inserted language exempting Berea College, in his home state of Kentucky, from the tax, on the grounds that Berea does not charge tuition.) Separately, Faust has communicated opposition to the draft bill reauthorizing the Higher Education Act, citing a multibillion-dollar reduction in federal support for financial aid.

Downriver

MIT Intelligence Quest, an institute-wide initiative to conduct human- and machine-

intelligence research, was unveiled February 1; complementing an artificial-intelligence partnership with IBM launched last fall, MIT IQ and other programs involve more than 200 principal investigators.

Philanthropic Parade

Brown University's medical school has received a \$50-million gift (to endow chairs, research funds, and education) from its chancellor, Samuel M. Mencoff, and his wife, Ann S. Mencoff. Samuel Mencoff is a Harvard M.B.A. ('81)—something he has in common with Paul J. Finnegan ('75, M.B.A. '82), who is a Harvard Corporation member, University treasurer, and Mencoff's co-founder and co-CEO of Madison Dearborn Partners, the Chicago-based private-equity firm.... William H. Miller III, an investment manager and former Johns Hopkins doctoral student in philosophy, made a \$75-million gift to that department, enabling it to nearly double in size, while also supporting undergraduate through postdoctoral studies. It is the largest humanities gift in the university's history.

Nota Bene

COLLEGE CROWD. A record 42,749 applicants sought admission to the College class of 2022—up 8.2 percent from the prior year,

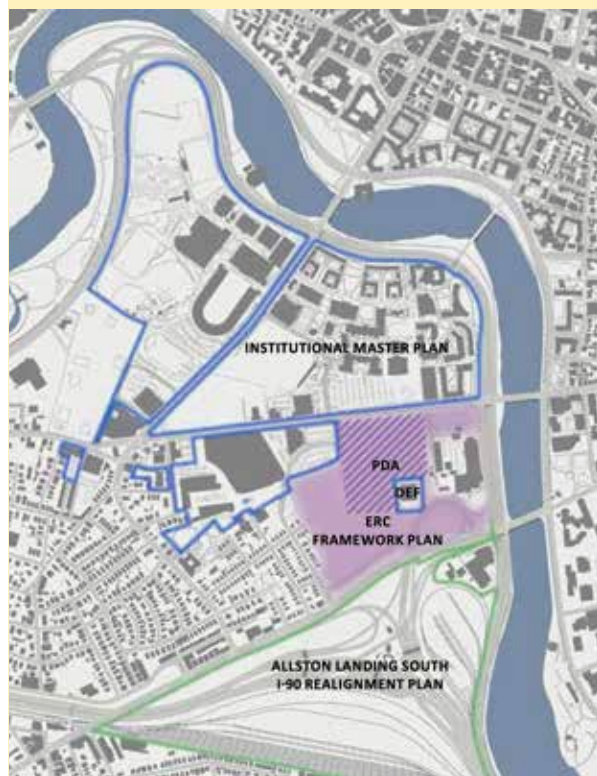
and consistent with peer institutions' robust increases. Some 1,962 (4.6 percent) were offered admission in a class whose size is being restrained to cope with overcrowding from prior, unexpectedly high yields. At a populist political moment, the College was at pains to note that 20.3 percent of those admitted are eligible for Pell grants—a doubling of admissions from this lower-income cohort since 2004. The new Harvardians face a nominal (before financial aid) term bill of \$67,580—up 3 percent, or \$1,971, from the current year's tab. A full report appears at harvardmag.com/2022admissions-18.

ONLINE OVERSEER VOTING. Although Harvard intends to move to online balloting, which might boost participation in the annual vote for Overseers and alumni association directors (see page 78), the switch did not occur this year, apparently because of security and other concerns.

HOPE FOR THE HUMANISTS? The latest humanities data published by the American Academy of Arts and Sciences (humanitiesindicators.org) show that engineering and STEM graduates *do* command higher starting salaries, but some of the gap diminishes over time—and long-term job satisfaction is roughly equivalent.... The nonsci-

entists may face less competition: the American Historical Association reported the number of positions advertised in 2016-2017 was the smallest since the Reagan administration. But higher-education enrollment in foreign-language classes, which had decreased nearly 7 percent from 2009 to 2013, sank an additional 9 percent from 2013 through 2016, according to the Modern Language Association.

SEAS SWELLS. Student enthusiasm for engineering jobs remains undimmed. The School of Engineering and Applied Sciences reported 1,013 undergraduates now concentrating in its disciplines—up from 943 in the prior year, continuing the uninterrupted progression from 291 in 2007-2008, the year it gained its identity as a distinct school. Computer science (451) and applied math (305) remain the dominant SEAS concentrations. Graduate enrollment has risen from 336 to 524 in the same period. Meanwhile, environmental science and engineering will become a full concentration within SEAS; faculty approval in a vote on April 3 was a mere formality, after prior, friendly debate. It will join two related concentrations: earth and planetary sciences (natural systems) and environmental science and public policy (focusing on social science and policy matters); details at harvardmag.com/fas-mtg3-18.



ENTERPRISE ZONE ADVANCES: Harvard's Allston "enterprise research campus" passed a regulatory hurdle on March 15, when the Boston Planning and Development Agency approved a master plan submitted last December (described at harvardmag.com/transit-of-fer-18). It covers 14 of 36 acres across Western Avenue from the Business School. (The 36-acre site is shown to the left, in lavender; the cross-hatched section was just reviewed.) The plan accommodates 900,000 square feet of construction plus three parking lots (shown below, with sites for two office/lab buildings, a hotel, and residences): the first stage of commercial facilities, on land leased from Harvard, to accommodate businesses that want to be near University researchers. Specific building



proposals will undergo further review. Development may take some time: the site lacks roads, storm drains, and other essential infrastructure; they will be expensive for a filled site with a high water table. Sorting out what costs Harvard and third-party partners each bear, and the lease terms, may shape the phasing of development on the 22 adjacent acres, and a much larger parcel that will become accessible after the Massachusetts Turnpike viaduct is rebuilt.

tions and exterior upgrades); the conference center in the Graduate School of Education's Gutman Library (added capacity); and—in time to welcome the new president (see page 14)—an exterior restoration and replacement of the heating and cooling systems at Massachusetts Hall. ~J.S.R.

Onward Online

THE Graduate School of Education and the Business School have unveiled an online certificate in school management and leadership (CSML) aimed at K-12 principals and aspiring principals. The program, offered on the HBX platform at an introductory tuition of \$399, is co-led by senior lecturer on education Mary Grassa O'Neill, a former principal and superintendent, and Allen S. Grossman, retired MBA Class of 1957 professor of management practice.

Coursera, the for-profit distributor of massive open online courses—MOOCs (as opposed to the nonprofit Harvard-MIT edX consortium)—is doubling down on *degree* programs with partner institutions. Its offerings, produced with schools such as the University of Michigan, Arizona State, and the University of Illinois at Urbana-Champaign, include nine master's degrees (in fields such as business, computer science, and public health) and now, a bachelor of computer science through the University of London.

A new analysis of Georgia Tech's huge online master of science in computer science degree found that it *enlarges* overall educational attainment, by serving older, mid-career students who would not otherwise pursue this level of learning. (This less expensive, nonresidential online version of the degree program, produced with the Udacity MOOC company, does *not* draw students away from Georgia Tech's traditional student cohort.) It also serves a cohort from colleges with a higher proportion of low-income students and with lower six-year graduation rates than the matriculants in the residential-degree offering—but blind grading showed online students slightly *outperforming* in-person learners. Associate professor of public policy Joshua Goodman, Julia Melkers of Georgia Tech, and Sack associate professor of political economy and social studies Amanda Pallais conducted the study. ~J.S.R.

Toward Preregistration?

THE FACULTY of Arts and Sciences (FAS)

may be moving away from undergraduates' "shopping week." Students have traditionally voiced support for the right to choose freely among courses at the beginning of each semester, even though some chaos ensues. At the March 6 faculty meeting, College dean Rakesh Khurana said that several faculty members had suggested adopting some form of preregistration. Those who spoke in favor noted that:

- "shopping" is short-term, consumerist behavior, and preregistration might encourage students to take long-term academic planning more seriously;

- at present, many faculty members don't know how many students to expect, leading to problems in lining up graduate students prepared to run sections (thus jeopardizing an essential part of *their* professional training), and often causing enrollment to be mismatched with room assignments;

- much of the first week of class time may be wasted; and

The faculty seems set on moving away from undergraduates' traditional "shopping week" for courses—and adopting some sort of preregistration.

- in the digital era, students can access the syllabus and other information in advance, making shopping less essential.

A few faculty members who noted from the floor that they generally supported some sort of preregistration—with a provision for students to add or drop courses (to preserve *some* flexibility while reducing problem-causing swings in class size)—also reminded colleagues that students enjoy, and are entitled to, their freedom to choose.

An advocate for preregistration said it would impose responsibilities on teaching faculty as well, to assure that students would have online access in advance to the current syllabus—and that they would not be lotteried out of preferred courses or encounter unprepared teaching fellows in their sections. Finally, an art historian who lectures and conducts hands-on sections

with materials in the Harvard Art Museums maintained that without knowing enrollment accurately, scheduling such essential exercises becomes impossible, making a mockery of the faculty's expressed commitment to the best methods of experiential learning.

No course of action is yet before the faculty, but one will be soon, Khurana suggested. Attention, shoppers: preregistration is drawing near. Read more at harvardmag.com/fas-mtg3-18. ~J.S.R.

Final Club Finality

THE CORPORATION having adopted a system of sanctions for undergraduate members of unrecognized single-gender social organizations (USGSOs: final clubs, fraternities, and sororities; see harvardmag.com/implementation-17), the Faculty of Arts and Sciences' final action—voting them into the *Harvard College Handbook for Students*—was a foregone conclusion. The enacting language was adopted by a voice vote on March 6, bringing to an end a bitter debate that consumed good parts of two academic years.

In their final form, the implementation measures step back from earlier proposals that incited controversy. Students who wish to be in a leadership position in a recognized College group, or to captain an athletic team, or seek the required endorsement for a fellowship, will *not* be required to make an oath-like affirmation that they don't belong to a sanctioned USGSO.

Nor will the College make efforts to identify students who are in violation of the policy, or require USGSOs to report on the demographic composition of their members. Instead, enforcement will proceed similarly to other misconduct issues (such as violations of the alcohol policy), which generally prompt a disciplinary process only when incidents have escalated enough to be brought to the administration. Nor will the College accept anonymous reports of alleged violations. Cases will be heard by the disciplinary Administrative Board, not the separate Honor Council (which investigates violations of academic-conduct standards). The rules apply to current freshmen and successor classes.

USGSO debate, *finis*—at least until the Corporation's promised five-year review.

Full details are available at harvardmag.com/usgso-oaths-18.

~MARINA BOLOTNIKOVA

A Retirement amid Harassment Allegations

MADERO PROFESSOR for the study of Mexico Jorge Domínguez, a member of the department of government in the Faculty of Arts and Sciences (FAS), will retire from his position at the end of the semester. He disclosed that decision in a letter to the chair of the department on March 6, a week after *The Chronicle of Higher Education* reported that 10 women had accused Domínguez of sexual harassment at various times across nearly 40 years. A *Chronicle* follow-up reported that eight additional accusers had come forward.

FAS dean Michael D. Smith announced on March 4 that Domínguez would be placed on administrative leave indefinitely, “pending a full and fair review of the facts and circumstances regarding allegations that have come to light.” In a subsequent statement, Smith said, “I want to be very clear that Domínguez’s forthcoming retirement does not change the...review that is currently under way.” Thus, he “remains on administrative leave until it is concluded”—and the outcome of the review may affect the rights and privileges normally provided to retired faculty members.

The women accusing Domínguez ranged from undergraduates to faculty members in the government department. In 1983, he had been found guilty of “serious misconduct”

and formally disciplined for sexually harassing Terry Karl, then an assistant professor, yet he subsequently served as director of the Weatherhead Center for International Affairs and as the University’s first vice provost for international affairs.

Government graduate students circulated an open letter charging that “Due to years of apparent negligence, the University and government department have burdened female students with impossible choices and unacceptably onerous responsibilities.”

“All of us...share a responsibility to...acknowledge this imbalance of power.”

In a message to the University community on March 2, Provost Alan Garber wrote, “Faculty, staff, and students work side by side in settings that vary widely, from 24/7 labs to residential communities. Within this complexity, working conditions and the frequent power asymmetries in working relationships can make it hard for people to know when and how to speak up. And worries that speaking up might have negative repercussions within one’s community or field, in the years to come, can

also prevent individuals from making a formal complaint, or speaking at all.” He encouraged prospective complainants to bring issues forward for formal investigation within University processes; many of the women cited in the *Chronicle* stories had not previously done so.

President Drew Faust, speaking at the March 6 FAS meeting, said, “I want to start by acknowledging the real sense of hurt, disappointment and upset that has been expressed about the situation and about Harvard’s response—articulated by students, faculty, other members of the extended community, and in an editorial in today’s *Crimson*....[L]et me repeat what Provost Garber, Dean Smith, and I have emphasized: sexual harassment has no place at Harvard and the community can rightly expect that Harvard will do all that it can to address this serious and enduring problem.”

She continued, “We need to acknowledge the profound influence members of the faculty have over junior faculty and students. Real consequences flow from that reality—the difficult place students and junior faculty find themselves in when a mentor crosses boundaries and the reluctance they understandably experience to come forward when concerns arise. All of us in this room share a responsibility to act in ways that acknowledge this imbalance of power.” A full report appears at harvardmag.com/dominguez-18. ~M.B.

THE UNDERGRADUATE

A Brain from a Blue Cooler Box

by TAWANDA MULALU

I AM STILL in high school in Botswana when I hear that physicists in Geneva flashed beams of particles round a town-wide circle, smashed them together, and found God. It isn’t God. What they actually found in the Large Hadron Collider is something called a Higgs boson particle. When we find out about it on the Internet, my best friend and I jump up, high-five, and hug each other like we contributed work toward this discovery, like we found something strange and new about the world around us. Three years later, I come to Har-

vard. I enroll in Physics 15a, “Introductory Mechanics and Relativity.” It feels as if I am leaping toward something. I fall. I fall very hard and I fall very fast.

I am a poor student when the romance disappears. I expect to see wonderful things in my professor’s blackboard scribbles, and I can’t. I want the numbers to be beautiful. I want them to make sense. I want to see. I simply do not possess the imagination. And when the equations fail to yield the interesting phantasms promised to me by Neil deGrasse Tyson space documentaries or

colorfully bound Stephen Hawking books, my body fails to hold up my head and I try my best not to snore during lecture. I am not even bored; I am simply exhausted after being up at Physics Night from the previous evening until the early blue hours of this morning.

Physics Night takes place every Wednesday in the Leverett House dining hall. It is typically populated by a small sea of clumsily dressed adventurers with their coffee cups and cookies, prepared by the dining staff specially for this night-long grind. I

hang around with them and as one of them, still haplessly convinced that I, too, can become a physicist. It is hard to tell whether I enjoy the togetherness of our struggle, with our mythical-looking equations and our approximations of cows as spherical objects. It is not hard to tell that I don't enjoy the work. At some point in the night, our laughter isn't enough to suppress our tiredness. My mind refuses to consider how trains can move at near-light speeds for the purposes of the second question of my eighth problem set. My mind instead travels elsewhere on its own and notices things.

I do not notice the things I am supposed to: say, how one kind of sum plays with how much force one object exerts on another. I look at other things—like paper, like thought. One of my classmates' solutions for his problem set is aligned elegantly, line after line like a perfect music score on his clean white sheets; my attempts jump from one scribble or diagram to the next in spectacular, nonlinear fashions. Some students stew in silence and stare at their books. Others, like me, fidget constantly and stumble away from our chairs, touch things and swivel pens and play with our hair and tap our fingers on the table. Why are we all so different? I decide to leave because I am paying more attention to people instead of particles. I walk back home to Wigglesworth C. It is 4 A.M. and dark and soft outside. I look up a little to see the stars burning and wonder how they do so. Maybe I can calculate it. I shower and go to bed.

FRESHMAN FALL feels long and hard, but Harvard begins to move unbearably quickly despite my mental protests. Freshman spring I take two astrophysics classes and shiver in the observatory atop the Science Center during lab nights. I look a lot at the mute-glowing campus below and fail to learn anything new about stars. Sophomore fall, I heap my shopping-week schedule full of courses that have nothing to do with physics. I shop classes violently, across whatever fields I can imagine myself in, maybe philosophy or literature or math. Nothing



quite fits. Laptop on lap after some class, I randomly click across the course-search tool on my.harvard.edu. The screen says that Psychology 2451, "Psychology of Racism, Prejudice, and Discrimination," is only a few footsteps away on the fourth floor of William James Hall. I make the walk.

The undergraduates say that William James is ugly. It is the tallest building on campus. It is white and consists of 14 stories of pale rectangle with long rows of windows. The departments here include social studies and sociology, but most of the building is occupied by psychology, which has offices and classrooms rising from the fourth floor to the thirteenth, and elsewhere. Its careful partitions of room and window into box and square reflect a particular dream of what the mind looks like to some cognitive theorists. They envision the mind as a perfect, mechanized machine, consisting of cogs and gears grinding toward thought. In William James, they don't think much of spirits, of souls, or of Freud. They don't think of our Selves as shadowy threads that can be pulled from our life histories like cobwebs from cabinets.

I like this building. I like this psychology class. I like the professor who teaches it, who says "Well, I think you'll be just fine," when I ask him about taking this graduate seminar without having done any of the prerequisites. I like the way he presents his theories that generalize racism into neat packages. In my past semesters I avoid classes in which I

must talk about my skin. I am angry enough. To know the details of the slave ships' wood, of how the hatred toward us is legalized and systematized to the banality of culture, of the bodies hanging on trees—no. I'd rather not. I already know too much without having learned much about it through books, through classes. Yet I am here. I am listening to my professor talk about my skin. He talks about the programs that we might have in our brains, developed through millennia of evolution, that lead us to say things like, "This person is black. This person is different. This person is not a Person," and I feel warily safe. I hope that maybe if we know why this all happens in the first place, we can fix it. Maybe I can't know about particles; maybe I can know about this. The professor's skin is like mine. Sophomore fall, I declare a concentration in psychology.

I LEARN THAT psychology is a young science. Psychologists have not yet acquired the fancy empiricism of physicists, though they try. In the place of large hadron colliders, they have statistics and sometimes MRI machines. Thinking about thinking is troublesome. It takes all sorts of tricks to try understanding people's heads. There is disagreement on how to use these tricks. Some psychologists are friends with the neuroscientists. They wish to split open our skulls and finger the folds of our brains—our wet pink mush—and know us by the lightning pulsing through the neurons of

our mental architecture. Some psychologists play with those few remaining philosophers who say that there's something transcendent about us. They claim that our Selves cannot be found in our brains. Others like to think about people as computers: our brain is hardware, our mind software. Maybe some people think like physicists because nature built their CPUs a certain way. Maybe people from different countries had different programs installed in their heads by their parents.

The brain-as-computer analogy seems dehumanizing to me. That, or I don't know how to process information the way I should. One night back in freshman spring I tried studying in Lamont, the main undergraduate library, and a familiar restlessness returned to my body. I fidgeted and walked around. I accomplished nothing. I noticed everyone else. They sat in their cubicles, in rows and rows, typing and paper-shuffling and nose-sniffing and eyebrow-furrowing and draining coffee cups: the small things that all sum up to the steam of academic concentration. Perhaps, inside themselves, they struggled, too. I could not see this. I saw them sit down and just do it: whatever they had to do. I left Lamont thinking of the red pods in *The Matrix* films where all of humanity is plugged in and bubbled into energy for maleficent artificial intelligences. And I thought of server-rooms in the basements of big corporations, each little computer whirling its CPU fans and hard drives to become fantasy thoughts that fly through the air into our little cellphones, on which we type up our own small fantasies.

Psychology is a good choice for me, since I can't seem to avoid seeing mind-body problems in the form of college students working in libraries. I care about people, I care about minds. Psychology is a useful way of organizing this care. It is now sophomore spring. Schoolwork still bothers me (midterms, deadlines; morning classes), but at least I'm now anxious and *interested* instead of just anxious. The psychology department decides that I need to take Science of Living Systems 20, "Introduction to Psychological Science," before I can do anything else in William James. Our lectures on Monday afternoons are fun, though a little long. On other days, we have small sections led by teaching fellows. My first one of the semester is held in Lamont. On my way to the second-floor classroom, I pass by the rows and rows of other students plugged into cubicles who

are silently and efficiently processing information and I think of *The Matrix* again. In section, our teaching fellow produces a human brain from a blue cooler box and we pass it among our black-gloved hands. That brain was a person once, maybe. Or not: the teaching fellow asks if all we are is our brains. We talk about what would happen if you put Person X's brain (an African boy) into

Person Y's body (an American girl). Would Person X be the same person? No, we think, and we somewhat all agree, but we're also holding a brain without a Person and hoping to find Someone there. ▢

*Berta Greenwald Ledecy Undergraduate Fellow
Tawanda Mulalu '20 is trying to have better feelings
about Lamont Library.*

SPORTS

Triple Play

For Quinn Hoffman, baseball is the family business.

QUINN HOFFMAN, a Harvard freshman on a 13-game hitting streak, stepped up to home plate at Fenway Park.

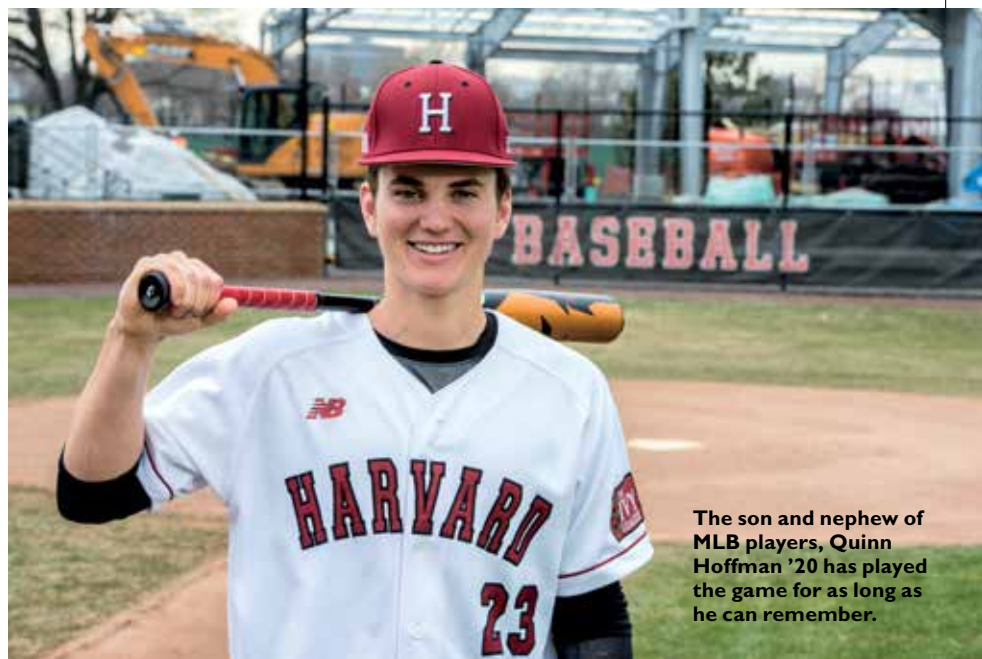
Batting second in the 2017 Beanpot baseball championship against Boston College, he looked out at the pitcher's mound, where his father, Trevor Hoffman, had pitched in the 1999 All-Star Game. Beyond the mound, the shortstop was standing where his uncle, Glenn, had played with the Red Sox from 1980 to 1987.

Now, with the first pitch, it was his turn. "I was just able to get a good pitch, and put

a good swing on it," he recalls, "and I didn't realize I was going to be able to hit it out." The ball shot off Hoffman's bat, over left field, toward Fenway's Green Monster—and cleared the 37-foot wall for his first college home run.

"To be in a place so special to Boston, and to be able to hit a bomb there, is something pretty special," he recalls. "I was running around the bases with a smile on my face, like I was in Little League again."

The son and nephew of major-league ballplayers earned his own reputation as a standout last season. Hoffman, the Crim-



The son and nephew of MLB players, Quinn Hoffman '20 has played the game for as long as he can remember.

son's starting second baseman, hit .288 across a team-high 41 games played. He was named Ivy League Rookie of the Week in March and twice made the league Honor Roll in April. "He's arguably one of the better middle infielders in the area, in the Northeast," says the Crimson's coach, Bill Decker. "He's got electric feet."

On first meeting, Hoffman seems quiet, but that's just because he speaks with an even tone. Soon it becomes obvious that he's eager and chatty about baseball, a quick talker with precise thoughts about his game, who acknowledges the unusual opportunities his family has given him without boasting or self-effacement. "He's competitive, but he doesn't do it with a growl," Decker says. "He's got that little confident look, not overconfidence."

This January 24, from Harvard's Bubble, the winter athletic practice dome inflated within the Stadium, Hoffman called his parents on FaceTime so he could witness a moment his family had awaited for years. Trevor Hoffman, the San Diego Padres' closer for 15 seasons and the first major-league pitcher to record 600 saves, was elected to the National Baseball Hall of Fame. In July, Quinn will travel to Cooperstown, New York, with some teammates and possibly some coaches, to see his father inducted into baseball's pantheon. "It's everything he's worked for," Quinn says. "That's the top of the game. That's the peak, the pinnacle."

A SHORTSHOP in high school, Hoffman switched to second base last season because senior Drew Reid held the starting job at short. "When you're a shortstop, you're more fluid, and throwing the baseball is more one motion," he says. "As a second baseman, you have more time. You don't have to be as fast with your throws, so you're able to be more relaxed."

The change also helped Hoffman focus more on batting, which paid off in his 14-game hitting streak, from April 1 to 19, culminating in his 2-for-2 performance at the plate in the rain-shortened Beanpot game (which Harvard lost to Boston College, 3-2, in four and a half innings). Hoffman says his timing and his mental game each played a role. "My foot was down early. I was seeing the pitches really well. Things started to click," he recalls. "Midway through the season, I was able to forget my bad at-bats and remember the good ones."

Playing for Harvard, Hoffman is starting

to fulfill the promise he showed very early, growing up in a major-league-ball-playing family. "I was given a ball, and I was given a bat, when I was... I can't even remember," he says. "It was handed down to me. It's kind of in my blood."

When he was six, his dad took him to the Padres' Petco Park, and, trusting his skills, left him in the outfield during batting practice. Someone hit a line drive that came straight toward him. His father "freaked out," Hoffman recounts. "I don't remember it—he tells me the story about it—but I guess I caught it."

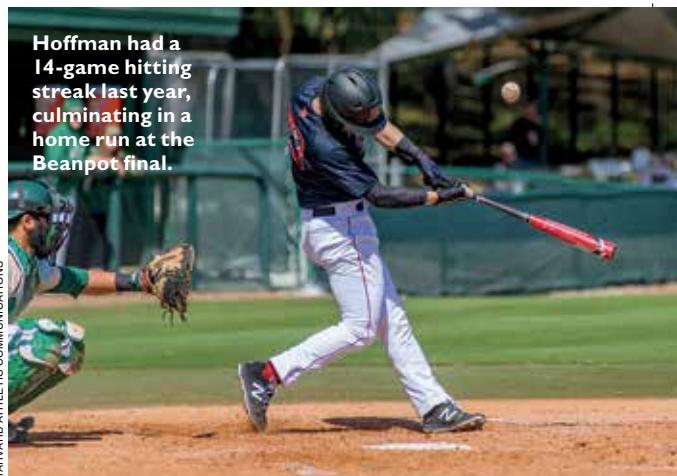
Even as a kid, Hoffman knew he wanted to play his uncle's old position. "I've always wanted to be a shortstop," he says. "I kept playing infield, enjoyed it, being able to get my uniform dirty and dive." He watched his dad's teammates play short and second base, soaking up their mechanics, their footwork, their arm action, how they turned double plays. Meanwhile, he watched his father—a bullpen leader famous for entering games in late innings to AC/DC's "Hells Bells"—lead by example with his work ethic. "[He'd be] showing guys, 'Hey, we're getting up early, going to work out, going to run,'" he recalls.

Trevor Hoffman pitched for the Padres from 1993 to 2008, then ended his career with two seasons in Milwaukee. His older brother, Glenn, has been the Padres' third base coach since 2006. While in high school, Quinn spent a couple of weekends a year with his uncle at the Padres' spring training in Peoria, Arizona, shagging fly balls during batting practice and taking part in infield drills. "He gave me a couple tips here and there: try to stay underneath the ball, be quick with your feet, let your hands do the work," Hoffman recalls.

Near Misses

The basketball teams fall short of the NCAAs.

THEY EACH had their shot. After a season that yielded some strong wins but also unfortunate losses for the men's and women's basketball teams, both came up just short



Hoffman had a 14-game hitting streak last year, culminating in a home run at the Beanpot final.

He was a standout as the shortstop at Cathedral Catholic High School in San Diego. His senior year, he was team captain and most valuable player. With younger brother Wyatt starting next to him at second base, the team won the California Interscholastic Federation's San Diego Section Championship, the top accomplishment for a high-school team in the metro area. The Padres picked him in the thirty-sixth round of the 2016 draft (a move the *San Diego Union-Tribune* described as a "courtesy" to his father). "As a kid you dream of getting drafted by a pro team," he says. "It was surreal. I was in shock. I was also committed to Harvard, so I couldn't go wrong with my decision."

The sophomore sociology major wants to follow his dad and uncle into professional baseball, either on the field or off. "If I'm not able to play," he says, "I'd like to do something that involves baseball, inside the game."

Meanwhile, he's been recovering from off-season shoulder surgery, undergoing twice-weekly physical therapy. As of press time, he was hoping to return to the Crimson lineup sometime this spring. When he does, he'll likely become the starting shortstop. "As soon as he's healthy, we become a better ball club," says Decker. —ERICK TRICKEY

of reaching the NCAA tournament.

For the men, the shot at the NCAAs was literal: with five seconds left in the Ivy League tournament championship game and his team trailing Penn 68-65, Justin Bassey '20 hoisted a three-point shot that would have tied the score. It caromed off the backboard, but the Crimson grabbed the rebound, leading to a corner three-



Seth Towns '20, the Ivy League Player of the Year, scored a game-high 24 points in the Crimson's 74-55 victory over Cornell in the Ivy tournament semifinals.

point attempt from Christian Juzang '20. That missed as well, and Harvard watched as the Quakers celebrated the tournament crown and the accompanying automatic NCAA bid. It was a sequence that embodied the season.

It was remarkable that the Crimson reached that game and had a chance to tie the score. During the year, the team had lost key players to illness and injuries—most notably point guard Bryce Aiken '20, the 2017 Ivy League Rookie of the Year—but still managed to finish with a 18-14 record overall and 12-2 in the league to earn a share of the regular-season Ivy title. The team then throttled Cornell 74-55 in the tournament semifinals to reach the championship, where, despite losing Ivy League Player of the Year Seth Towns '20 to a knee injury late in the second half, Harvard rallied from 10 points down to take the lead briefly and set the stage for those dramatic last-second shots.

But the execution on that possession showed the Crimson's youth and inexperience. After the game, Stenberg coach Tommy Amaker noted that Bassey showed impressive confidence and aggressiveness in attempting the shot—but he might also have rushed it slightly. Unlike Penn, which got 19 first-half points from senior Darnell Foreman, Harvard's lineup that afternoon—and throughout the season—consisted al-

most exclusively of freshmen and sophomores. The Crimson lacked the poise and maturity to play well throughout complete games and steady themselves in the biggest moments.

DESPITE THEIR YOUTH, the Crimson were picked to win the league in a pre-season media poll, narrowly edging out Yale and Princeton. The reasoning was that the sophomores' talent (they were rated the tenth-best recruiting class in the country in 2016) would outweigh their inexperience.

Harvard's non-conference slate demonstrated otherwise. After opening the season with victories at home over MIT and UMass, the Crimson dropped six of its next seven games and finished 5-10 against non-league competition. It did suffer some bad luck, including a stomach virus that sidelined players during a Thanksgiving tournament, as well as the injury to Aiken, who appeared in just four games after an early-December victory at Fordham. But the team also performed erratically. Against Manhattan in November, Harvard fell behind by 18 points in the first half before staging a second-half comeback that fell just short in a 73-69 defeat.

The Crimson found a steadier rhythm in conference play, winning 10 of their first 12 league games, led by stout defense: Harvard finished the year allowing a league-best 66.5 point per game. Juzang, who averaged 36.5 minutes per game in conference play, emerged as an iron man at point guard after the team lost Aiken. Center Chris Lewis '20, a first-team all-Ivy selection, anchored the inside-

Sophomore point guard Katie Benzan, a first-team All-Ivy selection, leads a strong returning nucleus for a Crimson squad that fell to Penn 57-52 in the Ivy tournament semifinals.

out offense with 12.8 points per game. Most important was Towns, who averaged 18.6 points per game and shot 49.3 percent from three-point range in Ivy play.

That firepower was on display on the final night of the regular season, when Harvard pasted Columbia 93-74 to earn a share of the conference title. After the final buzzer sounded, the team accepted the championship trophy at center court, and the typically reserved Amaker joined the celebration, prompting the entire team to cheer.

Still, work remained if Harvard hoped to reach the NCAAs for the first time since 2015: the following weekend, the Crimson traveled to Philadelphia for the Ivy tournament. A tie-breaker had earned the team the number-one seed over regular season co-champion Penn. Both squads won easily in the semifinals, setting up the championship showdown on Sunday.

At first, Harvard dominated, establishing a 30-17 lead behind strong interior play from Lewis and a flurry of three-pointers. Then that youthful inconsistency reemerged: shots stopped falling and the defense lapsed, leading to a 28-2 Penn run that put the Crimson in a 13-point second-half deficit. Despite losing Towns with just over eight minutes remaining, Harvard stormed back and briefly retook the lead, but couldn't quite put the game away.

Penn would go to the NCAA tournament, but because Harvard had earned a share of the regular season Ivy title and top seed in the conference tournament, the team received an automatic berth in the National Invitational Tournament (NIT), the second-most-prestigious postseason event. Lacking Towns and Aiken, though, the Crimson fell in the first round at Marquette 67-60, end-



ing their up-and-down season.

Looking to next year, a returning core of maturing players and the addition of several talented prospects (notably guards Spencer Freedman and Noah Kirkwood) will determine whether the Crimson can return to meaningful postseason play.

THE WOMEN'S TEAM—which finished the year 18-11 overall and 10-4 (third place) in the Ivy League—also had a chance to hit a big shot and advance in the postseason. With 26 seconds remaining in the Ivy tournament semifinals and the Crimson trailing Penn 54-51, first-team all-Ivy point guard Katie Benzan '20 attempted a three. (She had already drained six three-point shots, en route to a game-high 20 points.) But her attempt missed, and for the second consecutive year, the Crimson exited the tourna-

Scheduling inequity?

During the basketball season, *Harvard Magazine* covered concerns Kathy Delaney-Smith and other women's basketball coaches expressed about the scheduling of Ivy tournament games: favorable for broadcasters focusing on the popular men's contests, but disadvantageous to the women student-athletes whom the league also purportedly valorizes. Read the full report, "A Gendered Schedule," at harvardmag.com/ivy-scheduling-18.

ment in the semifinal round.

Because the team had a strong regular season record, the Crimson received an at-large bid to the women's NIT (also for the second straight year)—and, at first, the squad appeared poised to advance, seizing a 33-24 halftime advantage in the opening round at Fordham. But the Rams outscored the Crimson 41-14 in the second half, and Harvard headed home after a 65-47 defeat.

The women's team, like the men's, retains

many of its best players, including Benzan; center Jeannie Boehm '20 (a second-team all-Ivy selection); and a trio of talented junior guards in Madeline Raster, Nani Redford, and Sydney Skinner. But coach Kathy Delaney-Smith confronts the problem of replacing the production of starters Kirby Porter '18 and Taylor Rooks '18, an all-Ivy second-team honoree and the team's second-leading scorer behind Benzan at 12.5 points per game.

~DAVID L. TANNENWALD

Winter Sports

Track and Field

Sprinter Gabby Thomas '19 has been breaking program records since she joined the Crimson in 2015. This winter, she made history, becoming the fastest collegiate woman to run the indoor

200-meter. Her 22.38 mark in the final heat of the NCAA tournament meet—which won her an individual championship—is the fifth-fastest time ever run indoors at 200 meters by a woman worldwide.



Men's Hockey

For junior forward Ryan Donato, a big year kept getting bigger. In February, he competed with the United States national team in the Olympics. A bright spot in the Americans' seventh-place finish in South Korea, Donato scored five goals in five games—besting the four goals his father, Crimson coach Ted Donato '91, netted in the 1992 Games. In March, the younger Donato turned professional, joining the Boston Bruins, recording a goal and two assists in his debut with the team. One of three finalists for the 2018 Hobey Baker Award (the winner was announced after press time), Donato planned to finish his spring semester courses, and to return later for his degree. Three of his Harvard teammates, all graduating seniors, also signed professional contracts this year. The Crimson finished the season with a 15-14-4 record.

Squash

The top-seeded Harvard women's squash team closed out a 15-0 season with its fourth consecutive national championship,

beating Trinity College 9-0 to win the Collegiate Squash Association's Howe Cup. In individual competition, defending champion Gina Kennedy '20 fought her way back to the national title game, but lost there to Penn's Reedham Sedky. After a 13-3 season, the Crimson men were edged out in the national title game by Trinity, a perennial powerhouse that took home the Potter Cup for the second year in a row. But senior David Ryan clinched an individual national title, defeating Trinity's Kush Kumar, the overall top seed, in a come-from-behind win in extra points.

Swimming and Diving

Led by swimmers Dean Farris '20 and Brennan Novak '19, who between them broke five conference records at the Ivy League championships, men's swimming and diving defended its 2017 title and went on to the NAAs, where the team earned eight All-America honors and finished eighteenth, the top Ivy score in the tournament. The women's swimming and diving team also clinched an Ivy championship, its third in five years. Sophomore swimmer Miki Dahlke and senior diver Jing Leung went on to NCAA competition, two of the tournament's four Ivy athletes.

Fencing

Harvard sent 10 fencers to the NCAA championships in late March, including junior co-captain and 2016 Olympian Eli Dershwitz, who earned his second sabre title in as many years, a first for the program. Competing in épée, Cindy Gao '21 claimed an NCAA bronze. Men's and women's fencing teams won their respective Beanpot championships: for each, the eleventh straight title.

~LYDIALYLE GIBSON



A photograph of four people—two women and two men—engaged in a conversation outdoors. They are standing in front of a dense green background of trees and foliage. One woman on the left is wearing a purple jacket, another woman in the center is wearing a red shirt and holding a water bottle and a smartphone. Two men are on the right, one in a grey sweater and the other in a blue puffer vest over a white shirt.

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Targeting Cancer

The dawn of precision medicine



by Jonathan Shaw

LINNEA OLSON tells her story—of repeatedly facing death, then being saved by the latest precision therapy—articulately and thoughtfully, agreeing to discuss subjects that might otherwise be too personal, she says, because it could benefit other patients. She lives in an artist cooperative in Lowell, Massachusetts, in an industrial space, together with her possessions and artwork, which fill most of an expansive high-ceilinged room. Olson is tall, with close-cropped, wavy blonde hair, and dresses casually in faded blue jeans. Although she has an open, informal style, this is paired with a natural dignity and a deliberate manner of speaking.

Linnea Olson, shown with her dog, Kumo, has survived 13 years with lung cancer.

“I had a young doctor who was very good,” she begins. “I presented with shortness of breath and a cough, and also some strange weakness in my upper body. And he ordered a chest x-ray.” Years later, she saw in her chart that he had written, “On the off chance that this young, non-smoking woman has a neoplasm”—the beginnings of a tumor in her left lung. But he didn’t mention that to her, and “he ended up getting killed on 9/11—he was on one of the planes that hit the towers.”

The national tragedy thus rippled into Olson’s life. Never suspecting that her symptoms could be caused by cancer, she spent the next several years

seeking a diagnosis. A string of local doctors told her it was adult-onset asthma, hypochondria, then pneumonia. When antibiotics didn't clear the pneumonia, a CT scan showed a five-centimeter mass in her left lung: an infection? Or cancer? It was the first time she had heard that word. The technicians told her that at 45, she was too young for that. But a biopsy confirmed the diagnosis. "In 2005, when you told someone they had lung cancer," a doctor later told her, "you were basically saying you were sorry." Her youngest son was seven at the time. Olson wanted to live.

Now, 13 years later, she is alive and healthy, a testament to the potential of precision medicine to extend lives. But like precision medicine itself, her story encapsulates the best and worst of what medicine can offer, as converging forces in genetics, data science, patient autonomy, health policy, and insurance reimbursement shape its future. There are miraculous therapies and potentially deadly side effects; tantalizing quests for cures that come at increasingly high costs; extraordinary advances in basic science, despite continuing challenges in linking genes implicated in disease to biological functions; inequities in patient care and clinical outcomes; and a growing involvement of patients in their own care, as they share experiences, emotions, and information with a global online community, and advocate for their own well-being.

Precision medicine is not really new. Doctors have always wanted to deliver increasingly personalized care. The current term describes a goal of delivering the right treatment to the right patient at the right time, based on the patient's medical history, genome

"In 2005, when you told someone they had lung cancer," a doctor later told her, "you were basically saying you were sorry."

sequence, and even on information, gathered from wearable devices, about lifestyle, behaviors, or environmental exposures: healthcare delivered in an empiric way. When deployed at scale, this would, for example, allow doctors to compare their patient's symptoms to the histories of similar patients who have been successfully treated in the past. Treatments can thus be tailored to particular subpopulations of patients. To get a sense of the promise of precision medicine—tantalizingly miraculous at times, yet still far from effective implementation—the best example may be cancer, which kills more than 595,000 Americans each year.

Patient 4

IN SOME CASES, cancer can be driven by a small number of genes—even a single gene—that can be identified and then targeted. Even in cancers with many mutations, genetic profiling makes it possible to unambiguously distinguish between tumor cells and healthy tissues. That is a great boon in a disease that essentially hijacks the patient's own biology. Genome sequencing, by precisely defining the boundary between self and non-self, can even enable immunotherapies that kill cancer cells but not others. Still, state-of-the-art precision cancer medicine is something like the surgical airstrikes of the 1960s: vastly better than the carpet-bombing of chemotherapy, but not without risk of collateral damage.

In 2005, when Olson was diagnosed with lung cancer, surgery, chemotherapy, and radiation—so-called cut, poison, and burn therapies—were the frontline treatments. A friend's husband, a

surgeon, recommended that she go to Massachusetts General Hospital (MGH) for the lobectomy that would remove the lower lobe of her left lung. When she woke from surgery, an oncologist, Thomas Lynch, was standing at the foot of her bed. He was running a clinical trial of an experimental drug he'd helped develop, and she fit the profile of a patient who might benefit.

Lung cancer is rare before 45, and most common after 65: the average age of patients diagnosed with the disease in the United States is 70, and the cancers themselves are typically loaded with random mutations, caused by repeated, long-term exposures to airborne toxins, as might occur after a lifetime of smoking. But Olson was young and had never smoked. This meant that her cancer was likely being caused not by many mutated genes, but by a single "driver" mutation. There are now eight well-established driver mutations for the disease. Lynch hoped that Olson would have one called EGFR (epidermal growth factor receptor), the only one then known. But she didn't.

Lynch explained to her that cancer outcomes traced a bell curve. At one end were those patients who did poorly. Most were in the middle. But at the other end were the outliers, those who lived a long time. "Tell me about the outliers," she recalls asking him—"almost like it was a fairy tale." She was floundering, she says, as she faced post-surgical chemotherapy, dreading its cytotoxic effects. Lynch persuaded her not to give up. "We're going to take you to the brink of death," he told her, "but we're trying to cure you." She read Lance

Armstrong's book, *It's Not About the Bike*, as she went through four rounds of treatment. "It is horrible," she says, looking back on it. But "I'd get on my little exercise bike and say, 'I am Lance Armstrong. I can do this.'"

The tumor was unchanged by the chemotherapy. As months passed, Lynch referred to

the growing numbers of nodules in her lungs as "schmutz"—never as cancer. He was trying to keep her hope alive.

In 2008, her symptoms returned, and worsened. Her cancer had progressed to stage IV. In a last-ditch effort, Lynch put her on Tarceva, the targeted therapy for EGFR, anyway, "just in case the genetic test had missed something," he later explained. But as Olson recalls, "I experienced all of the side effects and none of the benefits." She asked him how long she had to live. "Three to five months," he told her. "Should I get my affairs in order," she asked? "Yes," he said. In distress, she told a social worker to whom she had been referred, "I need you to help me learn how to die." And instead, she's really helped me learn how to live."

It turned out that even though Olson didn't have the EGFR mutation, genetic testing done when she started taking Tarceva revealed that she had a *different* single-driver mutation, ALK, for which a phase 1 clinical trial had just begun. Lynch asked if she wanted to participate in this effort to determine optimal dose, side effects, and efficacy. Patient 1, he told her, had appeared to respond to the therapy, but then died—in part because of it. Olson didn't want to hasten her own death, but reasoned that doing nothing, she would soon die anyway. She signed on as Patient 4.

Within days, she felt better. The side effects were mild. At the seven-week mark, she saw Lynch to review scans of her lungs. What had looked like a blizzard was completely gone. "I went from accepting that I was going to die, to 'Oh my God, I'm going to live a little while longer,'" says Olson. "It was like a fairy tale." Lynch made it very clear

that this did not represent a cure, and that there was nothing after this. Eventually, he told her, there would be secondary mutations. But she'd been given another chance.

Professor of medicine Alice Shaw, a physician-scientist at MGH who has been working on ALK and its secondary mutations for 10 years, has been Olson's oncologist since 2009. Lung-cancer treatment has progressed substantially in the last decade, she says, so that molecular profiling of patient tumors is now standard care. Patients eligible for a targeted therapy skip chemotherapy.

EGFR, the first targetable oncogene (a gene with the potential to cause cancer), was discovered in lung cancer in 2004. "The EGFR gene is mutated in about 10 percent to 15 percent of lung-cancer patients in this country," Shaw says. Olson's ALK mutation (technically, a chromosomal rearrangement) discovered in lung cancer in 2007, is present in about 5 percent of patients. There are numerous driver mutations for this disease, seven of which can be turned off with new targeted therapies, which work for about 30 percent of U.S. lung-cancer patients—many of whom can return to their normal lives because the pills are fast-acting and don't cause as much collateral damage as chemotherapy.

That is something that should be considered, Shaw says, when weighing the costs of targeted drugs, which run about \$15,000 a month for as long as the patient is responding. "Obviously, \$180,000 a year is an enormous cost. The question is, how do you weigh these costs, in light of the life-saving benefits of these drugs?" Some of the newest treatments for lung cancer, such as immunotherapies (see "The Smartest Immunologists I Know," below) are as expensive as targeted therapies, she reports. And traditional chemotherapy often keeps patients out of work, and sometimes leads to hospitalization—costly outcomes. By contrast, targeted therapies allowed Olson to live relatively normally and raise her youngest son, now 20 and an undergraduate at MIT.

Finding Five Unknown Variables

MIRACULOUS as they are at their best, targeted therapies do not work forever. That's because genomic instability is one of the defining features of cancer. "I went a full glorious year before I started to have some progression," Olson recalls. At that time, in 2009, when the cancer began growing again, patients knew they would soon have to leave the ongoing trial. That could have been the end for Olson. But because she had no symptoms from the early progres-



Alice Shaw, Olson's oncologist

sion, and felt well, she was permitted to stay on the experimental drug for almost three years. Then a second ALK inhibitor opened in a phase 1 clinical trial. Fortunately for Olson, the drug was active against ALK S1206Y, the resistance mechanism that had developed in her cancer's ALK gene, and it bought her 15 more months (although she suffered gastrointestinal side effects as well as liver toxicity, for which she had to be briefly hospitalized). Her therapy has carried on this way, a continuing cascade of genetic analyses as the cancer adapts, and then a new therapy, just in time to save her. The alternative—standard chemotherapy and radiation—typically extends lung cancer patients' lives by just three to six months.

The development of resistance is less a reflection of the efficacy of targeted therapeutics than of the cancer's ability to evolve. Cancer cells proliferate through division, and mutate rapidly. If a single cancer cell among millions happens to be resistant to a particular therapy, that cell and its progeny eventually become dominant drivers of the patient's disease. Shaw studies these mechanisms of resistance; once pathologists sequence tumors, the scientists can identify the mutations and develop models of them, she explains. Working with pharmaceutical companies, the researchers test newer drugs against these mutations to see if the therapies are active. Now that there are several inhibitors for EGFR and ALK mutations, Shaw says, she and her colleagues are beginning to explore combination therapies, hoping to stop the cancer before it becomes more complex in response to single-drug treatments.

Combination therapies are critical against cancer, agrees Peter Sorger, Kraye professor of systems biology and director of Harvard Medical School's (HMS) Laboratory of Systems Pharmacology (see "Systematic Drug Discovery," July-August 2013, page 54). He and his postdoctoral fellow Adam Palmer find that many combination

therapies are superior to single drugs across a wide range of solid tumors because of tumor heterogeneity. Heterogeneity arises from genetic differences among cells in a single patient and among tumors in different patients; it likely explains why a particular anti-cancer drug can be effective in some patients but ineffective in others with the same type of cancer.

In fact, a graph of patient responses traces a bell curve with a long tail: many patients respond only partially, but some do very well (they lie out on the tail). Combination therapies improve rates of success in patient populations (and clinical trials) in this view simply by increasing the odds that a patient will lie out on the tail. In other words, combination therapy overcomes ignorance of which

drug will work best in a specific patient; this is true even when a targeted therapy is given to genetically selected populations.

Such bet-hedging is a case of the glass being half full, Sorger says: “existing combinations have taken untreatable disease in which a metastatic case means you die, to one in which a quarter or more of patients are doing well. At the same time, the large impact of unknown variables is the measure of how far we have to go in cancer pharmacology.”

How do we reconcile this statistical view of responsiveness to cancer therapy with the precise molecular experiments that Shaw and her colleagues are using to design combination therapies for cancers carrying EGFR, ALK, and other mutations? Sorger and Palmer propose that

high variability in response to anti-cancer therapy arises because multiple mutations are involved—perhaps six or more in each cancer cell—many of which are unknown. “If we knew all the relevant genes determining drug response in a particular patient, we could be highly predictive, and able to tailor a therapy for each patient,” Sorger says. The studies Shaw has underway are necessary to make such prediction possible in the future. Moreover, in some cases there is evidence that combination therapies can be much more effective than the sum of their parts; there is currently no systematic way to find such combinations at the moment, but they are well worth pursuing. Both Sorger and Shaw agree that, as precision medicine improves and scientists identify the spectrum of mutations involved in drug response, it will be increasingly possible for physicians to tailor therapy to an individual patient’s needs.

Todd Golub, professor of pediatrics and director of the cancer program at the Broad Institute of MIT and Harvard, is part of an ambitious project to find those several targetable genes—and an estimated 10,000 more like them. The aim of cancer treatment, he says, ought to be the use of molecular analysis to make predictions about what the best therapy should be for each patient, for all types of cancer—the ultimate goal of personalized, precision medicine. He and his Broad colleagues are at work on the “cancer dependency map.” Their goal is to identify all the genes that are unique to cancers, on which any cancer depends for growth—the “Achilles heels” of the disease.

Their first challenge is to gather the broadest range of cancer-tissue samples they possibly can. Paired with this effort to collect patient information is a laboratory project to create model cancer cell lines and to test all FDA-approved drugs and drugs that are in clinical development—on the order of 5,000 compounds—against them. “You can’t do that in a patient,” notes Golub. Seeing which compounds are effective against these cancers allows researchers to identify those Achilles-heel genes. “That allows us to create a roadmap for drug developers, so that eventually, we will have a full medicine cabinet to make this concept work,” he explains. Of course there are challenges: some ther-

“Is Precision Medicine for Everyone?”

DAVID JONES, Ackerman professor of the culture of medicine, is concerned that personalized medicine could lead to higher levels of inequality in health-care. Many people fear that drug prices will start to increase dramatically. “A lot of that fear is driven by oncology drug costs,” he points out. A new leukemia drug, for instance, has been priced at \$475,000 per year. “If increasing drug costs lead to higher Medicare and Medicaid costs, such that the government has to reduce access and shrink the pool of people who benefit from these programs, then these expensive new cancer drugs could actually cause harm, because they would have contributed to some people losing access to health care. And those are people who could suffer if their easily treatable diseases don’t get treated.” (For more about Jones’s work, see “A Cardiac Conundrum,” March-April 2013, page 25).

Jones is by no means arguing against research and deployment of new therapies. He believes that more medical research and better treatments are needed for nearly every disease. But from his historical perspective, he acknowledges that “something’s got to give....If healthcare costs driven by personalized medicine lead to decreases in healthcare access, that will be a terrible, unintended side effect. Someone needs to think about all of these issues.”

The best way to improve Americans’ health overall, he says, is to enable healthy lifestyles, because many of the important risk factors are “things that our hands put to our mouths: what we drink, what we eat, what we smoke. One that is not is hypertension,” but that is linked to diet and exercise). Facilitating change in these areas would require significant social restructuring, but there is no lobby for such public goods. The pharmaceutical industry, in contrast, is “the most profitable sector of the U.S. economy,” one that “manages to spend more money on lobbyists than nearly any other sector.”

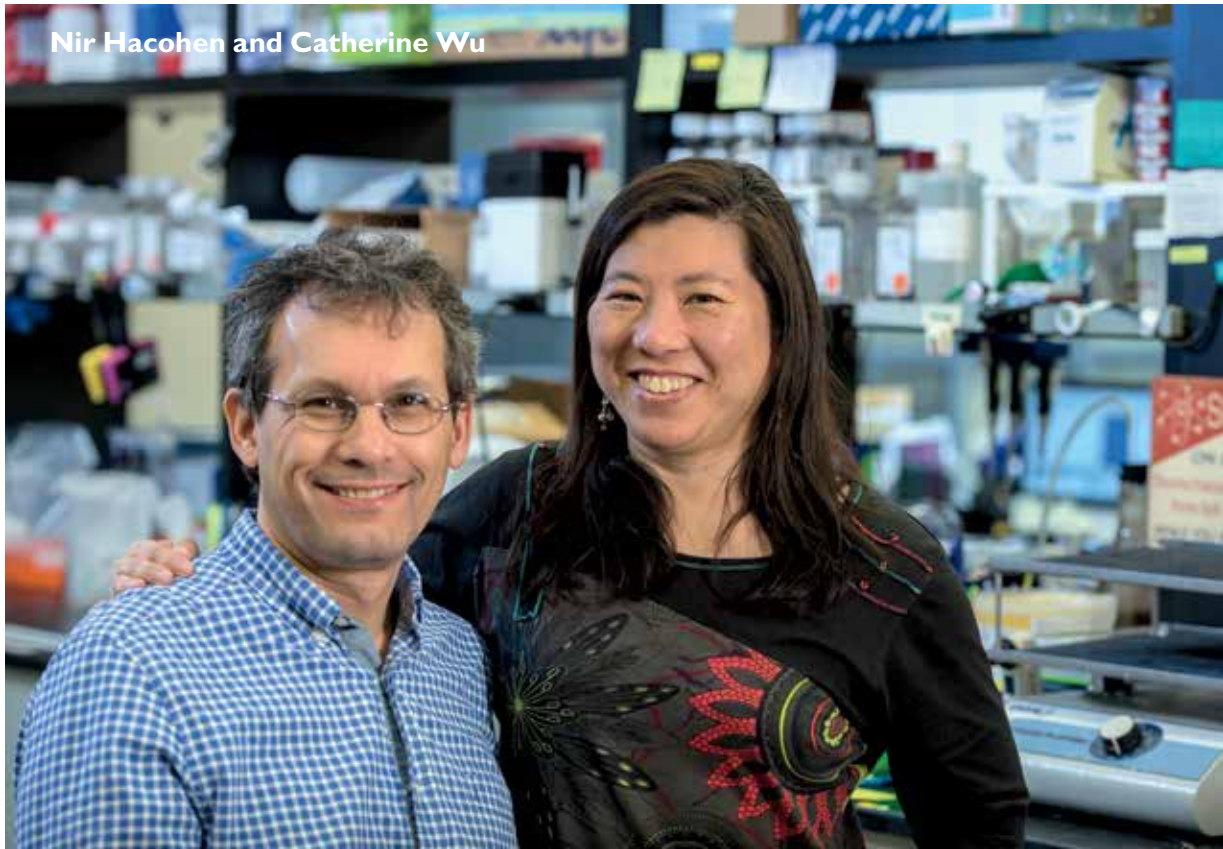
Jones also brings personal skepticism to his assessment of precision medicine. More than a decade ago, he was diagnosed with a gastrointestinal stromal tumor (GIST). There was tremendous excitement at the time, because doctors had just realized that most GISTs were dramatically susceptible to one of the first of the successful new targeted cancer therapies, imatinib (Gleevec). But Jones was among the 10 percent of patients who lacked the mutation that Gleevec targets. Since GIST is not susceptible to either chemotherapy or radiation, his only option was an ancient one: surgery. Luckily, that seems to have worked and he has been cancer-free since then. Although Jones was in the minority of GIST patients who could not benefit from imatinib, his situation is actually typical for cancer patients at present: most don’t benefit from the new personalized therapies, either because their cancer is driven by unexplained biology, or because a targeted therapy has not yet been developed for their form of the disease.

apeutic targets are critical for normal cells, too. “But we are learning,” he adds, “that in some cases, [inhibiting] the function of a target 24/7 can be horribly toxic, but when therapies are used transiently, tumor cells die, and normal cells don’t.”

The Broad effort is at the beginning stages, with just 500 cancer cell lines, heavily biased toward European ancestry. The fact that whole ethnicities are missing is a measure of how far they have to go. “We’re not going to get there in one fell swoop,” Golub explains. “We’ll get there by keeping people alive longer and longer, until eventually, it becomes a numbers game where the goal is to eradicate all the tumor cells and leave none

behind that have drug resistance mechanisms that allow them to escape.” With a complete cancer dependency map, and the molecular profile of a given cancer, physicians could “identify the five drugs predicted to be effective against that tumor. We would put together combinations of drugs that don’t share common susceptibilities to resistance, and unless you had a tumor the size of Manhattan,” there would be no way for the cancer to get around that combina-

Nir Hacohen and Catherine Wu



“We’ll get there by keeping people alive longer and longer, until eventually, it becomes a numbers game where the goal is to eradicate all the tumor cells and leave none behind that have drug resistance mechanisms that allow them to escape.”

tion. “We won’t get there during my career for most patients. But for the next generation, I think it is not crazy.”

What Golub is describing is a rational, systematic approach to building a complete arsenal of targeted drug therapies like those that have extended Linnea Olson’s life and the lives of many other patients. Instead of using them serially to extend life, though, he imagines combination therapies that would effect cures. But there is another approach that might yield results for some patients even sooner.

“The Smartest Immunologists I Know”

IMMUNOTHERAPY is the maverick of cancer research and clinical care, a relatively new strategy in treatment with the potential to *cure* certain types of cancer *now*. Harnessing patients’ immune

systems to fight cancer represents an approach radically different from that used in targeted drug therapy. There are three distinct techniques: training the immune system using personalized vaccines; reawakening immune cells by stimulating them to recognize cancers through the use of drugs; and engineering a patient’s T-cells outside the body so they will recognize cancer cells and then reinserting those T-cells in patients.

In what may turn out to be the ultimate precision medicine, married professors of medicine Catherine Wu, an oncologist at Dana Farber Cancer Institute (DFCI), and Nir Hacohen, director of MGH’s Center for Cancer Immunology and co-director of the Broad Institute’s Center for Cell Circuits, have together created personalized cancer vaccines that *train* the im-

mune system to recognize and destroy cancer cells. In a small clinical trial, they created personalized vaccines for each of six melanoma patients, and let their immune systems do the rest.

The process works by training T-cells, white blood cells that are the immune system’s weapons for identifying and destroying infected tissue, to recognize cancer. Instead of targeting *driver* mutations, as targeted therapies do, this approach teaches the immune system to recognize *random* mutations. As Hacohen explains, half of cancer tumors have defects in DNA repair, so tumors develop a lot of random mutations, and the mutated proteins are visible, on cell-surface receptors, to T-cells. “The fact that there is almost no overlap” in these mutations between patients, he explains, “is what makes this approach personalized.” Hacohen and Wu design the

vaccines by first analyzing a patient's immune system, then analyzing her tumor, and finally creating a vaccine that will stimulate her T-cells to bind to a set of perhaps 20 different mutated proteins on tumor-cell surfaces. The trick is to create a vaccine that mimics the mutated proteins. When injected into patients, the immune system recognizes these foreign invaders, and stimulates T-cells that proliferate, recognize, and attack those same mutated proteins on cancer cells. Normal cells, because they don't have such mutations, are spared.

In each case, radiology of these patients several years later shows no recurrence of disease. Hacoheh is reluctant to generalize about the success rate based on such a small sample, but he does note that two other groups (one based at Washington University in St. Louis, one in Germany) have had similar success in trials of cancer vaccines.

Because this approach targets mutations, it is ideally suited for tumors such as smoker's lung cancer, or melanoma, in which chronic exposure to carcinogens (UV light in the case of melanoma) has driven lots of mutations, creating a genetically noisy landscape. That is because the more genetically complex a tumor is, the more likely the immune system will recognize it as a foreign invader and try to eradicate it. Hacoheh's labs focus on basic immunology, genomics, and systems biology—what he terms “biological equations” that help distinguish cancer cells from healthy ones. Combining his three fields allows him to do the whole-body analysis necessary to distinguish healthy tissue from the foreign molecules on the surface of cancer cells that the immune system can recognize. But Hacoheh is a pure researcher; he doesn't see patients. Wu, an oncologist, does and can run FDA-approved trials with DFCI oncologists to test the vaccines in patients. The combined expertise of this husband-and-wife team is necessary

to complete these extremely specialized therapies.

Because this type of therapy is not yet commercially available, the eventual market cost of creating custom vaccines is hard to estimate. At the moment, Hacoheh explains, the sequencing of individual patients and their respective tumors costs about \$5,000 each, but that price is dropping rapidly. Even the computation required to design a tailored vaccine is relatively limited. What does cost a great deal right now, he says, is manufacture of the resulting vaccine, largely because of all the safety mechanisms that must be satisfied before any custom therapy is deployed in a human patient. That engineering alone might cost upward of \$100,000. But this price, too, could fall as personalized vaccine development becomes more widely practiced.

A second approach involves *reawakening* the immune system. In the same way that cancer evolves to resist drugs, it evolves to evade the body's natural defenses. As cancer begins in a patient, the immune system targets and kills any tumor cells it sees—but left behind to proliferate are the cancer cells that evade the immune system. Immunology researchers like Fabyan professor of comparative pathology Arlene Sharpe have therefore been working to elucidate how cancer disguises itself. Sharpe, who is interim co-chair of the microbiology and immunology department at HMS, heads the cancer immunology program at the Dana-Farber Harvard Cancer Center and co-directs the Evergrande Center for immunologic diseases at HMS and Brigham and Women's Hospital. She has collaborated with her husband, professor of medicine Gordon Freeman, a molecular biologist and DFCI researcher, to study those pathways.

A key mechanism for defeating cancer's evasion of T-cell attacks is “checkpoint blockade therapy,” on which Sharpe and Freeman have done much of the basic research. This approach reawakens

the immune system to the presence of tumor cells. The surface of cancer cells often display molecules that bind to the inhibitory receptors, known as checkpoints, on T-cells. This stops the T-cells from attacking and killing the tumor.

In normal immune function, Sharpe explains, these inhibitors are critical because they are, in effect, dials that modulate the immune response, turning its sensitivity to foreign objects up or down. Autoimmune diseases such as type 1 diabetes, in which T-cells destroy the pancreas after mistaking it for a foreign invader, illustrate why these inhibitory mechanisms



Arlene Sharpe

are so important biologically; they prevent the immune system from attacking healthy tissues. But cancer often cloaks itself in molecules that block the immune response. The result is that “the immune cycle often doesn’t work well in cancer patients,” says Sharpe. “Tumors are the smartest immunologists I know.”

But drugs can block these inhibitors, by targeting either their receptors on T-cells or binding partners on the surface of cancer cells. Then, the immune system can suddenly “see” tumors, enabling it to target and destroy them. This T-cell awakening therapy is now being combined with other types of cancer treatment, such as targeted therapies that focus on *driver* mutations, but Hacohen and Wu have also used it in combination with personalized vaccines that focus on random mutations, in order to make the vaccines even more effective.

A third type of therapy involves re-engineering the immune system by deploying chimeric antigen receptors (CARs): synthesized molecules that redirect T-cells to specific targets. CAR-T therapy, developed at the University of Pennsylvania, has proven highly effective against leukemia, a blood cancer. Assistant professor of medicine Marcela Maus, recruited from Penn, a world-renowned expert in the use of CAR-T therapies who also conducts research as director of the cellular immunotherapy program at MGH, is working to develop such therapies to kill solid tumors.

CAR-T cells are engineered immune cells that recognize specific markers on the surface of cancer cells and attack them. The process involves removing T-cells from a patient, engineering them to target a particular type of cell, growing them in the lab, and then injecting billions of them into the patient. The upside of CAR-T therapies is the “unprecedented elimination of tumors in the majority of patients,” Hacohen explains, “with the downside of toxicity....You’re killing billions of cells in the body in weeks,” a response that dwarfs anything the immune system could stage unaided. This can lead to “cytokine storms,” as huge numbers of cancer cells die almost simultaneously and have to be flushed from patients. Experts in this technique have developed methods for controlling these storms, but the high cost of the approach—as much as \$500,000 per patient—has made it the poster child for the troubling economics of modern cancer care (see “Is Precision Medicine for Everyone?” page 38).

Outliers No More

COST IS JUST ONE constraint on the aim of ensuring that the best therapies reach the largest possible number of patients. Professor of medicine Deborah Schrag, chief of the division of population sciences at DFCI, makes a distinction between a therapy’s efficacy in a lab or controlled setting such as a clinical trial, and its effectiveness in the population at large. It’s the difference between how well a treatment *can* work and how well it actually *does* work given real world conditions. “If a dairy farmer from Maine can’t make it to twice daily radiation treatment in Boston because he has to milk his cows,” that changes the real-world effectiveness of the therapy. Participants in clinical trials are likely to take their medications twice a day exactly as prescribed, but in the routine care context, adherence is imperfect, and that contributes to the efficacy-eff-

fectiveness gap. (Key to tracking any intervention’s performance are electronic health records, and Schrag is among the leaders of a cancer data-science effort to develop standards for records used in cancer care; see “Toward a Personal Biomap?” online.) “Historians of medicine and some prominent skeptics look at the bottom line, and ask what is happening at the population level,” she explains. The reality is that for most patients, advanced lung cancer remains fatal. Leading-edge therapies such as targeted medicine have helped only a subset of the population. “Cancer medicine is the furthest ahead” in the use of genomic analysis to guide therapy, Schrag says, “but it still has a long way to go.”

“You’re killing billions of cells in the body in weeks,” a response that dwarfs anything the immune system could stage unaided. This can lead to “cytokine storms,” as huge numbers of cancer cells die almost simultaneously and have to be flushed from patients.

But patients like Linnea Olson are no longer outliers. Alice Shaw, her oncologist, says Olson’s appearance on an ABC World News broadcast in 2009 made other lung-cancer patients realize that they ought to be genetically tested, too. One of those patients came to MGH, was treated by Shaw, and appeared on the same show the following year, and that led to another generation of patients realizing that they might have a treatable mutation, too. “Now they help each other,” she says. “This has allowed patients to gain access to therapies that they would never have known about otherwise, because even their doctors didn’t know about them. I have this whole tree of patients connected to each other through social media.” One MGH lung cancer patient recently climbed a peak above 20,000 feet in the Himalayas, and was featured in *The New York Times*. The comments from readers suggested that he must be “an outlier.” Not so, says Shaw: she has many patients who are performing incredible feats and living for years, now that targeted therapies are available. “These patients are not the rare outliers anymore.”

Olson is happy to have the company, but jokes that she needs to stay out front: “If I’m not, that means I’m dead,” she says, laughing. Now four years into her third targeted therapy without any apparent cancer progression, she has instead begun experiencing toxicity from the contrast agents used in the CT scans that are required every few weeks as part of clinical trials. “I figured out the other day that I have known I had cancer for 22.4 percent of my life,” and had more than 150 CT scans. “That is a huge amount. But it is very easy to put into perspective quickly. I am so lucky to have these problems, because I am alive.” Olson still allows CT scans of her lungs, to which her particular metastatic cancer is confined, but not of her abdomen. That means “I’m non-compliant” in the trial, she says. “But I’ve already donated my body to science, and I want to live. Nobody expected any patient like me to live this long.”



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Jonathan Shaw ’89, is managing editor of this magazine. He thanks HMS associate dean for executive education Stanley Yang Shaw (no relation), the husband of Alice Shaw, for his assistance in providing valuable background on precision medicine.

Eunice Kennedy Shriver

Brief life of a world-changer: 1921-2009

by EILEEN MCNAMARA

EUNICE KENNEDY ARRIVED at Radcliffe in November 1943 with a lingering British accent and a fading California sun-tan, remnants of her convent school days in London and her more recent undergraduate studies at Stanford.

The fifth of the nine children of Rose and Joseph Kennedy '12 came to Cambridge to complete the last few credits of her Stanford degree under the watchful eyes of her mother and father, the

former U.S. ambassador to the Court of St. James's, then on Cape Cod raising vegetables and beef cattle on a farm in Osterville. "We finally had Eunice transferred," Rose wrote her other children that fall. "I am very happy about it as...Radcliffe does not begin until the first of November [because of Harvard's wartime schedule] so she has an extra month with the farm food."

Like her older brother Jack, who had graduated from Harvard in



1940, Eunice was plagued by digestive and stomach problems. Within a few years, both would be diagnosed with Addison's disease and placed on a regimen of corticosteroids to compensate for malfunctioning adrenal glands. When Eunice arrived at Radcliffe, she stood five-foot-ten and weighed only 109 pounds, so skinny that her siblings called her Puny Eunie and her father cautioned her to prioritize meal time over study time.

It is a directive one cannot imagine him giving the equally scrawny Jack. "If that girl had been born with balls, she would have been a hell of a politician," Joe Kennedy once said of Eunice, his absence of ambition for his best-educated daughter less a reflection of her abilities than of his lack of imagination. Born only a year after American women secured the right to vote, Eunice came of age a

generation before the second wave of feminism expanded expectations and opportunities for women. In many ways her struggle to be seen—on the public stage and in her own family—mirrors the experience of the many women in mid-twentieth-century America who had to maneuver around the rigid gender roles that defined the era.

Nowhere were those roles more deeply ingrained than in the Kennedy family. Of the three sisters not lost early to tragedy, only Eunice broke out of the box to which her gender consigned her, finding her way around her father to secure her place in history.

Appearance to the contrary, there was nothing frail about the thin young woman who threw herself into campus life on the Radcliffe Quad. She studied classical music, conceding to her parents that, although she was "no Chopin, I think I know him better than he ever knew himself." She introduced to the Catholic Club the Reverend James Keller, a Maryknoll priest who would become a popular radio and TV personality. She took charge of the British booth at a campus benefit for Allied troops, telling her mother, "I think the Kennedys are becoming more British than the British themselves."

And she was becoming as much a Kennedy as any of her brothers, excelling in athletics, the one arena where skill trumped gender in her male-dominated family. She was the best sailor in a group of natural mariners, the best tennis player among siblings who had volleyed on the grass courts of Wimbledon. Trained by her father not to lose, she rarely did. But Eunice would turn on its head Joe Kennedy's dictum that first place is the only

finish that counts.

Two years before she arrived at Radcliffe, Joe had authorized the lobotomy of Rosemary, his eldest daughter, who had been born with intellectual disabilities. Eunice, three years younger, had been Rosemary's closest companion, teaching her to swim and sail and traveling with her as teenagers on their first tour of Europe. The experimental surgery left Rosemary unable to walk or talk, exiled to a Catholic nursing home in Wisconsin by the patriarch's decree.

It is uncertain when Eunice learned what had happened to Rosemary, but her sister's plight clearly inspired her life work. In 1968, she opened the first Special Olympics, welcoming 1,000 athletes with intellectual disabilities onto Chicago's Soldier Field just as she and her husband, R. Sargent Shriver, the first director of the Peace Corps, had welcomed 100 children with similar disabilities to a makeshift sports camp on their Maryland estate yearly since 1962.

In Eunice Kennedy Shriver's refusal to accept her physical limitations or her father's limited expectations, the seeds of more than the Special Olympics were sown. The same willful determination would chart her course for a half-century on behalf of those with intellectual disabilities who were denied a place on the playing field, a chair in the classroom, or a job in the workforce.

Ironically, it was also from Joe Kennedy that she learned how best to advance that cause. "It's not what you are, it's what people think you are," counseled the man who, in one generation, recast the Kennedys from Irish-American strivers into American royalty. Social acceptance, of a Catholic president or a child with intellectual disabilities, first required a change in public perception.

Eunice engineered that in 1962, when she invited photographers from *The Saturday Evening Post* to capture images of children on rope swings and in the swimming pool of her backyard; in 1968, when she recruited professional athletes as their coaches; and in 1972, when she convinced ABC's *Wide World of Sports* to televise their games.

Eunice Kennedy Shriver changed the world. This year, the fiftieth anniversary of the first Special Olympics International Games, more than five million athletes are participating in 100,000 competitions in 172 countries. That's a legacy at least as profound as any left by her more celebrated brothers. ▢

Pulitzer Prize-winner Eileen McNamara, a 1988 Nieman Fellow, is the author of Eunice: The Kennedy Who Changed the World (Simon and Schuster).



Woman in action: Shriver engaging young athletes (above), and racing brother Ted and others to kick off a 1975 Special Olympics fundraising coast-to-coast marathon



Our Towns

James and Deborah Fallows explore
“what the hell is happening in America.”

by **Lincoln Caplan**

HEADING WEST by small plane from the East Coast, writes James Fallows '70, “you have a sense of going uphill, and into drier air. Mile by mile you leave behind the forested hollows of the Appalachian slopes, the farms and gently hilly pastures of southern Ohio and Indiana, the flatlands and sweeping corn and soybean fields of Illinois, which are broken at regular rectangular intervals by north-south and east-west roads laid out when the land was being distributed to nineteenth-century settlers.

“Across the thick and slowly serpentine Mississippi River and toward the broad, brown Missouri, the land slowly rises, the vegetation becomes sparser and more burned-out-looking, until, as

you near the 100th meridian,” which is “the historic dividing line between the wet and dry parts of the American heartland, the only green areas in sight are the ones sustained by mechanical irrigators.”

The elevation climbs from “a few hundred” feet along the Mississippi’s banks to “more than five thousand feet in the Colorado and Nebraska plains.” To reach California by the southern route, it’s necessary to go over the Guadalupe Mountains in Texas and New Mexico, and through California’s Banning Pass, between the San Bernardino and San Jacinto Mountains. Much of the American West is mountain and desert, “before the strip of intense development” along the coast.

This is the view of a pilot who has flown around the country on many hundreds of trips during the past 20 years, since he joined the small set of first-rank writers who love flying. It’s also a noteworthy dispatch from one of America’s great journalists for the past 40 years, framing the subject at the heart of his reporting throughout his career: America’s culture and character.

The passage is from the new book *Our Towns*, the first Fallows has coauthored with his wife, Deborah (Zerad) '71, after nine books of his own, one he co-authored, and two books of hers. They alternate entries, with the writer of each identified by an elegant tiny graphic. His is a jewel of a plane flying west, the Cirrus single-engine marvel that has transported them around the country. (It’s known for its giant parachute, which can lower the whole plane with four passengers onboard safely to the ground if needed.) Hers is a lithe quill pen gliding east.

These ornaments reflect their respective contributions to the book: his, often conceptual, extend his exploration of the country’s nature and his curiosity about how a society, even as small as a town,

American prospects (left): Appalachian foothills, and the White River, Arkansas. (Above) Jim and Deb Fallows in his hometown, Redlands, California

gets things done; hers, often focused and distinct, show her ear for language and her fascination with manners and mores and with their influence on how people script their lives.





The book is a loosely knit narrative about people the Fallowses call local patriots and the broad variety of civic renewal they have helped spur—renewal animated by big plans and game execution, in far-flung places. The book revises Jim’s understanding of American culture. It’s also surprisingly personal. A central thread of the narrative is the flying adventure of exceptional partners who demonstrate, with the originality of their project, the kind of renewal it celebrates.

In 2009, when they were both 60, they returned to the United States after four years living in and writing about China. This chapter, while engrossing, was often dumbfounding for them, because China’s culture is so different from America’s. Jim wrote about it in *China Airborne* (2012). He explored the contrast between China’s success in building its economic hard power (he focused on its construction of 150 major airports) and its ineffectiveness in creating equally successful soft elements, like a reliable rule of law, consistent political standards, and sophisticated coordination among the society’s sectors.

Deb made sense of the experience in *Dreaming in Chinese* (2010)—about the formidable challenge to an adult English-speaker of learn-

ing to speak Mandarin Chinese (even for her, with a Ph.D. in linguistics), yet also about revelations the language yields regarding China and its people. The bluntness of the language—for instance, “Don’t want!”—is softened by what she calls “the grammar of politeness.”

They were happy to be back in the United States, even though they arrived when the federal government, other major institutions, and most Americans were reeling from shocks of the great recession. They expected the mood to be somber. What they found was much worse: bottomless pessimism about America’s future.

Before leaving for China, they had sold the Cirrus SR20 plane they had owned for six years. In 2010, they bought a Cirrus SR22, an upgrade of the parachute model and the bestselling small plane of its type in the world. They began to head off on excursions from a suburban airport outside Washington, D.C., their on-and-off home for almost five decades.

They were starting to explore the country “away from the big, hyper-publicized cities,” as Jim writes in *Our Towns*, looking for “places that had faced adversity of some sort, from crop failure to job loss to political crisis, and had looked for ways to respond.” This quest grew out of an unexpected stop at the airport in Red



Touching down: the approach to the San Bernardino airport in southern California

known troubles. That discovery—largely missing from public awareness—is unexpected, heartening news.

IN FEBRUARY LAST YEAR, *New York Times* columnist David Brooks wrote, “James and Deborah Fallows have always moved to where history is being made.” In addition to their move to China in 2006 to write about its re-emergence, he mentioned earlier moves: to Japan in the 1980s, “when the Japanese economic model seemed like the wave of the future,” and in the 1990s, back to Washington, D.C., “with James writing a series of essays for *The Atlantic* about what might go wrong if the U.S. invaded Iraq” after 9/11.

The example they provide, Brooks

Oak, Iowa, a small city in farm country where the population has dwindled from around 6,300 in 1990 to around 5,500 today.

In the airport building, they noticed a meeting of teenaged boys plus one girl who were learning how to navigate a plane as cadets in the Civil Air Patrol: the U.S. Air Force Auxiliary, whose members do most federal inland search-and-rescue missions by air in the United States. The students and their instructors told the Fallowses about “other efforts under way to add life and attract residents to what had been a declining small town.” It was one of a series of surprises they encountered in the form of civic activity “assumed to have vanished in the time of social-media silos.”

In 2013, they began their odyssey in earnest. It lasted, off and on, for nearly four years and covered almost 100,000 miles. They made several visits, totaling around two weeks, to each of 25 cities, and shorter visits to another two dozen. The smallest community, 100 miles beyond Mount Desert Island, which marks the end of the coastal gentrification that starts at Portland, was Eastport, Maine: population 1,400. The largest (an exception to their criteria of medium-sized or smaller cities and rural areas) was Columbus, Ohio, the state capital: population 860,000.

The great distinction of this work is that they traveled in their own small plane. They did so for edification (Q: Why do towns in South Dakota come every 10 miles? A: That was a comfortable distance for farmers to cover in the nineteenth century when they delivered harvests by wagon); for convenience (there are about 5,000 places scattered around the country for the public to land small planes); and for beauty (“from the unending fascination of watching the American landscape unfurl as you travel at low altitude”).

The upshot, as a map of America in *Our Towns* suggests, is a buoyant travelogue filled with quiet jubilation: at a time of malaise at the national level, the towns and cities they got to know provide bountiful evidence about the American capacity for local renewal. The map omits the boundaries for states. They are mentioned only as backdrops for the towns the Fallowses visited again and again from 2013 through 2016, from Eastport to Ajo, Arizona, in the remote southwest.

The United States they experienced is not the surly democracy that has dominated political conversation, sharply polarized between the largely blue coasts and the mostly red heartland. Their country is a big, open vessel of possibilities that divergent places are realizing wonderfully in their own ways, despite much-better-

went on, “has prompted what I call the Fallows Question...: If you could move to the place on earth where history is most importantly being made right now, where would you go?” The implication is that the Fallowses are reliable as early detectors of impending transformation. Adding a suggestion of glamour, Brooks wrote, “[Y]ou only go around once in life, so if you can swing it, you might as well be where the action is.”

From their days at Harvard, where they met 50 years ago on a blind date—Deb was an 18-year-old freshman, Jim an 18-year-old sophomore—and soon became a couple, they have dismissed any notion that they are glamorous. They think of themselves as capable strivers from middle-class families: Deb, growing up mainly in Vermilion, Ohio, in a Czech immigrant family that invested in the next generation, and with a father, she once wrote, “who insisted I learn to play the trumpet when I really wanted to play the flute because trumpets were more powerful and important instruments in the marching bands”; Jim, from Redlands, California, where he moved in first grade from Philadelphia, because his father (a doctor who was the first graduate of Ursinus College to go to Harvard Medical School) had discovered while in the navy that California was for him. “I lived for only eleven years in California,” Jim wrote once: “But I still say I am from Southern California, and I believe it, because moving there was the decisive experience in my family’s life and in my sense of how people can change their luck.”

Luck can also change people, or change the path they are on. In January 1968, Jim was advertising manager of *The Harvard Crimson*. He was hanging around the paper during reading period, when editors were scarce because they were cramming for exams. One day, there was an explosion at Harvard Medical School. The next, a midnight fire destroyed an economics department building. The following week, some “hoodlums” from a local gang beat up two Harvard students. Jim reported each event and loved it. Those were the first of 85 pieces he did for the paper.

By the start of his sophomore year, he had put aside his plan to become a doctor because he found American history the most interesting of the eclectic subjects he was studying. He concentrated in American history and literature, but from that January on, he majored in the *Crimson*. The following year, he was elected president (publisher and editor-in-chief). He skyrocketed as a campus leader—as a voice who wrote about everything with strik-

ing intelligence and often with moral force.

As a Rhodes Scholar, he arrived at Queen's College, Oxford, in the fall of 1970 with the American view that the best background for someone interested in public affairs was training as a lawyer. He discovered that in England, a lawyer is a tradesman, and found studying law drudgery, so he switched to England's version of training in law in the American sense, by studying economics. After his first year there, and after Deb graduated from Harvard, they got married at Oxford and lived there for a year.

As he was finishing up, the consumer advocate Ralph Nader, LL.B. '58, drafted him to co-write a quickie book about Congress as a corrupt and incompetent institution. On that job, in Washington, D.C., where Deb and he had moved, he heard that Taylor Branch, the future Pulitzer Prize-winning historian and biographer of Martin Luther King Jr., was leaving his position as an editor at the three-year-old *Washington Monthly*, already a launch pad for American thought-leader journalists. Jim went to see Charles Peters, the founder and editor, and left as Branch's successor. "It was kind of surprising to me, because I didn't realize how intent he was on being a journalist," Deb recalls.

At Harvard, she had liked the rigor of science and the richness of the humanities. Linguistics combined both. The field was taking a radical turn with Noam Chomsky's idea of an innate universal grammar and the theories of how humans learn their own individual language: "It was a really wild time to be studying that discipline and a lot of the particulars of the moment have since been dismissed," she says, "but it was incredible training because you had to get completely into the weeds of trying to understand how a language worked in order to think about the theory."

While Jim was happily working at the *Monthly*, Deb was unhappily working at a series of part-time jobs. She decided that she needed to get back to linguistics, and they set off together to visit universities with Ph.D. programs that seemed a strong match. The first stop was the University of Texas at Austin, which struck her as "absolutely perfect." In 1974, she enrolled in its program in theoretical linguistics. "Now, you'd say it was my turn to do something, right?" she continues. "But it was a big deal for Jim because he was leaving *The Washington Monthly*. He loved doing what he was doing. He was making this move for me, and he didn't know what he would do in Texas."

He found a job as legislative assistant to Lloyd Doggett, then Austin's new state senator and three years his senior (now a congressman): "For four or five months, I went to the Texas State Capitol every day and dealt with the likes of Mad Dog Mengden," a conservative who got his nickname by opposing stacks of proposed legislation. The new *Texas Monthly* asked Jim to join the staff. He decided, "Phew. It's

been fun being a legislative aide, but this will be more fun."

A piece of journalism he wrote caught the attention of aides to Democratic presidential candidate Jimmy Carter; in the spring of 1976, they offered him a job as a speechwriter and he took it. To his surprise, Carter won. At 27, Jim became chief speechwriter for two years, until joining *The Atlantic* as a correspondent in 1979. Except for two years when he was editor of *U.S. News & World Report*, and the following six months when he worked at Microsoft on a team designing the next version of Microsoft Word software, he has remained at the magazine ever since—in Washington, D.C., Austin, Tokyo, Kuala Lumpur, Sydney, Seattle, Berkeley, Shanghai, and Beijing. According to the magazine's archivist, he has almost certainly published more pieces under its banner than anyone else in its 161 years: counting articles online and in print, roughly 5,650.

He is best known for producing journalism and books that, in his words, answer this question: "What the hell is happening to America?" The first of these articles was unusually controversial and is now a classic example of the journalism of witness. "What Did You Do During the Class War, Daddy?" ran in *The Washington Monthly*

The Fallows Question: "If you could move to the place on earth where history is most importantly being made right now, where would you go?"

in 1975. In it, Jim argued that he and other privileged young men had been mistaken in believing they were undercutting America's participation in the Vietnam War by avoiding military service. Instead, he wrote, the class divide meant working-class youths fought and died in Vietnam, and middle- and upper-class youths generally did not. This class divide, he warned, would haunt the United States for years to come.

Nicholas Thompson, the editor-in-chief of *Wired* magazine, who was a *Washington Monthly* editor a generation after Jim, said Fallows had set the tone that the magazine still aspires to 46 years later: "In



Carry-on baggage: preparing for a cross-country flight out of Maryland

every piece, you got the sense of someone who truly cared about the topics he was writing about—but who was still able to think clearly and fairly about them. He was passionate, but not partisan.”

Jim described in the class-war article how he starved himself to get out of the draft: “My normal weight was close to the cutoff point for an ‘underweight’ disqualification, and, with a diligence born of panic, I made sure I would have a margin. I was six feet one inch tall at the time. On the morning of the draft physical I weighed 120 pounds.” When a doctor wrote “unqualified” on his folder, Jim confessed six years later, “I was overcome by a wave of relief, which for the first time revealed to me how great my terror had been, and by the beginning of the sense of shame which remains with me to this day.”

In 1980, Deb published an article in the *Monthly* that was as self-revealing as Jim’s class-war piece and even more controversial. “Mothers and Other Strangers,” bannered on the cover as “The Myth of the Superwoman,” grew into a book, *A Mother’s Work* (1985). After earning her Ph.D. in 1978, she worked full-time during the 1979-80 academic year as an assistant dean at Georgetown University and gave birth to their second son. That year, she, Jim, and their first son, who was three, learned that, for them, the inten-

Flying, they tune into radio channels like Road Dog Trucking and its “Worst Load Ever” show.

sity of “quality” time did not make up for the quantity lost. Her argument is about why “it was as important, as worthy, for me to spend my time with my small children as to study, do research, try cases, or invest a bank’s money” and why “it was worth it to the children to have me—not someone else—there most of the time.” The book helps explain her less traditional career path.

Deb recognized “that not everyone enjoys the luxury of choice.... But,” she continued, “I think a lot of people pretend they have less room for choice than they really do.” The choice was “not to be either a career woman or a dumb housewife”: that reflected “the enslavement to career that has been the least attractive aspect of masculine success.” For her, it was to build a life, as much as possible, around the conviction that “parents are the most important factor in their children’s lives.”

But, as she also wrote, she hadn’t foreseen a problem when she and Jim decided that he would be the traditional breadwinner, she would be a full-time mother, and they would share “night-tending, diapering, bathing, cooking, and playtime”: she still had “many of the interests and ambitions that I had before I had children,” so she had to change “the way I’ve been taught to think about myself and value the progress of my life.”

Our Towns is a reflection of the interdependence the couple developed in part as a solution to that problem. Long before this joint effort, Deb shared a lot of the work behind Jim’s reporting and writing, as “the key to everything I have done,” he acknowledged in *China Airborne*. He shared with her “many of the family responsibilities,” as she wrote in the *Monthly* and elaborated on in *A Mother’s Work*. He considered raising their two boys, she said in the book, “more important than his own work, or any other work.” *Our Towns* is dedicated to their four grandchildren.

OUR TOWNS READS like a series of old-fashioned letters that are keepers, not a traditional narrative. Deb’s opening entry begins: “Montgomery County traffic, Cirrus Four-three-five Sierra Romeo taking Runway one-four, VFR departure to the west. Montgomery. And with that, we were off.” She is not a pilot, but she knows a lot about flying the plane, including “how to pull the parachute,” which “eliminates night-before-flight worries.”

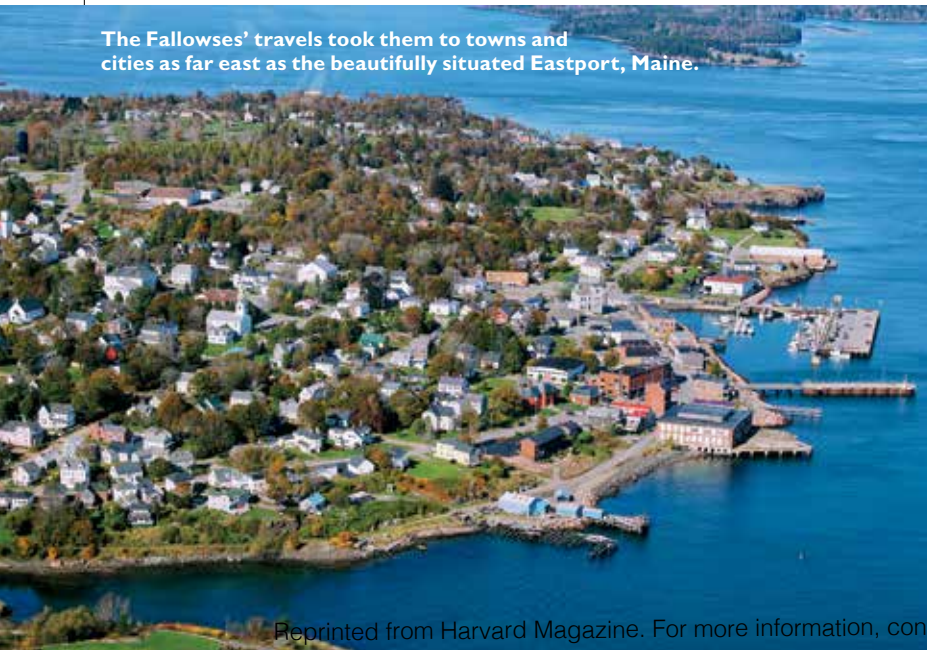
Air-traffic controllers calmly guide them through airspace, with the neat diction of controllers along the eastern seaboard giving way to southern draws as they fly south. When they cross the Mississippi, “Jim banked the plane to dip the wing for a good view from my right-side seat.” When there is no chatter from the air-traffic controllers, they listen to Sirius/XM radio, to channels like Road Dog Trucking (“Worst Load Ever” is a favorite show). Deb collects the five-letter names of waystations, where planes turn when on routes set by controllers, reflecting local pride (VOODO in Louisiana), sports mania (BOSOX near Boston), and self-deprecation (DUBYA near Andrews Air Force Base).

The Cirrus cabin, unpressurized but comfortable, is about as big as a small sedan’s. The view from it is panoramic. Deb writes: “Seeing Mount Rushmore from ground level almost defies belief. Seeing it from overhead, we agreed, was so great that we shouldn’t really tell anyone about it.” About two hours of flying time to the east of Mount Rushmore, the first *Our Towns* visit is to Sioux Falls, South Dakota, a city of about 200,000 people spread over about 75 square miles.

Arriving on the summer solstice, and their wedding anniversary, they go to a brew pub to celebrate and fall into conversation with a group of nursing students. Jim recounts their view of the city: “It was big enough to have everything—especially with a growing medical community—and small enough to be approachable and easy. ‘It’s a big small town,’ the first but not the last time we heard that.”

“The profound impact of the *local* circumstances—the farm economy, its position as capital of this part of the prairie, its central location within the continent—were ingredients in the economic strategy that made Sioux Falls work”: a counternarrative to the prevailing story about the hollowed-out, left-behind cities and

The Fallowses’ travels took them to towns and cities as far east as the beautifully situated Eastport, Maine.



Sioux Falls, South Dakota, a “safe place,” may surprise visitors with its economic and demographic diversity.



small towns in middle America, Jim explains. John Morrell's pig slaughterhouse in the city's downtown was "a high-wage unionized employer for half a century" after World War I and "part of the road to the middle class for people in the area." Though now Chinese-owned, it still plays a similar role in the local economy.

Since the 1970s, the city has also been a major processing center for Citibank and other major credit-card companies. In the 1970s as well, U.S. government security agencies sought a central place for satellite imagery of Earth and located it north of the city in a corn field. EROS—Earth Resources Observation and Science Center—is the world's largest repository of those digital images.

"We weren't surprised to find that Sioux Falls had become the move-to town for aspiring residents of many of South Dakota's rural towns," Deb writes. "What we hadn't expected was the great number of people in another group, those who were instantly distinguishable from South Dakotans of German and Scandinavian heritage. These are the foreigners, of so many different colors and ethnic groups." Take the public schools as a proxy: nearly 10 percent of all students were English Language Learners, native speakers of 60 other languages, with their parents working in the meat plant and surrounding community.

What they saw clearly—as observers arriving from above, by air, and equipped, thanks to their experiences outside the United States, to perceive their home country afresh—was a city providing "strong, textured" support for newcomers in health services, housing, jobs, churches, and sports. It was also managing serious cultural challenges, like one related to gender: boys from other countries were used to going to school, but girls often came with scant education or none. Yet among the words and phrases Deb heard regularly in Sioux Falls, the most significant were *safe*, *safety*, and *a real safe place*, for "the homegrown teenagers and their parents, who felt the kids could have the run of the town," and for "recently arrived refugees who were either assigned to Sioux Falls or who had found their way there as a second resettlement town, after hearing on the refugee-grapevine that Sioux Falls was a safe place."

AFTER A YEAR, they developed a pattern for their reporting. They would usually start at the local news outlet, check out a local brewpub or distillery and the art zone, and ride on bike trails or walk in parks. Deb went to the public library, the schools, civic clubs, and the YMCA or sports center. Jim went to the town's office of economic development, community college, and tech start-up zone.

They also developed "a checklist of the traits that distinguished a place where things seemed to work." The 10-item list begins with what was *missing*. "Given the places we were traveling, I imagine that many of the people we interviewed were Trump supporters," Jim writes. "But it just didn't come up": "*Divisive national politics seemed a distant concern*." The list ends with what was missing at the national level yet effervescent in the towns and small cities: "*They have big plans*. For the United States as a whole, the very idea of ambitious 'national greatness' projects seems preposterous. There's no money; the only big efforts the government can undertake are military: it now counts as a victory simply to keep funding for the national parks,

for NASA or NOAA, for health or science research from being cut."

The most interesting items in between are about stories and leaders. Each place had a civic story to tell, which may not have been "precisely accurate" but gave "citizens a sense of how today's efforts are connected to what happened yesterday and what they hope tomorrow will bring." For Allentown, Pennsylvania, for example, it was "walkable manufacturing," building manufacturing and white-collar workspaces near the downtown. When they arrived in a new place, they would ask, "Who makes this town go?" The answers varied a lot (a folk musician, in a West Virginia city; the commanding officer at a military base, in another southern city), but there was always an answer: a local patriot, heavily invested in helping make a viable future for the place.

OUR TOWNS IS NOT NAÏVE. In the May 2018 issue of *The Atlantic*, Jim writes about the book: "Everyone knows how genuinely troubled the United States is at the level of national politics and governance. It is natural to assume that these disorders must reflect a deeper rot across the country. And indeed, you can't travel extensively through today's America...without being exposed to signs of rot, from opioid addiction to calcifying class barriers."

But he also explains the sources of their optimism.

The obvious one is what he and Deb have been doing in their reporting: "[B]y showing up in Mississippi and Kansas and South Dakota and inland California and Rust Belt Pennsylvania, we saw repeated examples of what is happening in America's here and now that have important and underappreciated implications for America's future."

Less obvious yet just as important is his "own form of American nationalism, intensified both by living outside the country and by travels within it," which "arises from love of the American idea: inclusion, expansiveness, opportunity, mobility, the open-ended struggle to make the nation a better version of itself."

He goes on: "After living in Japan during its amaze-the-world era of the 1980s, I wrote a book arguing that the proper U.S. response was not to try to be more like Japan but instead to be 'more like us'—which was the book's title." He concludes: "America is becoming more like itself again—or more Americans are trying to make it so, in more places, than most Americans are aware."



In the national narrative, Allentown, Pennsylvania, is a statistic in the tally of battleground states and electoral votes; on the ground, *Our Towns* depicts another kind of story.

When *More Like Us* was published in 1989, Jim's understanding of America started "with the act of immigration—choosing to become an American," and continued "through the choices and changes that make American life so different." From going away to college and breaking away from their parents' class, values, or religion, to having nose jobs and changing their names, Americans, he wrote, did what people in other countries do less often or gleefully. This "peculiar genius" accounted for "some of the bad in America but also for most of the good. This country is the world's demonstration of how people behave when the usual limits are removed." Immigrants, he reported after surveying the data, had long helped expand the American economic pie for everyone.

But, he warned, "America will be in serious trouble if it becomes an ordinary country, with people stuck in customary, class-bound roles in life." And he saw signs of "cultural danger" in "the three forces that now most significantly affect the sense of possibility—of upward mobility—in America": immigration, education, and the nation's democratic character.

Immigration was straining American politics because of "Fear of the Other," as Jim called it. Language posed the most obvious threat. Half of America's immigrants were said to be Spanish-speakers, leading to charges they were "diluting the sense of Americanness." There was no evidence they were doing that any more than Europeans did when they were almost nine of every 10 immigrants to the United States in the century between the mid 1800s and the mid 1900s, when America "emerged as the strongest, most dynamic, and most open society in the world." But because of the anxieties that immigration stirred, it threatened to undo this element of the American experiment.

Education—its purpose as well as quality—was also a major advantage of America over other countries. It was about self-definition through self-improvement. One of the country's great achievements was the creation of colleges and universities that generated knowledge as well as educated and skillful graduates. Another was the creation of corporations that turned that knowledge into innovation, in Silicon Valley, around Boston, and elsewhere. Yet by the time Jim arrived at Harvard in 1966, "the formula for success and mobility" had changed. The education system was now a status-conferring system, too, "implying that people with more brains and more schooling are *better* people" and corroding that

foundational democratic character.

Jim concluded, "The idea that people on the top of a society are better than others—not just richer or luckier but *better* inside, because they're white or smart"—discouraged people at the bottom and made people at the top risk-averse: "It isn't the American way." He warned against sorting Americans by who they are in terms of race, wealth, religion, ethnicity, family, and so on, and emphasized the importance of judging individuals by what they do, say, contribute, and aspire to, not by the circumstances they were born into.

A generation later, *More Like Us* reads like a prophecy. America is far more beset by these fundamental woes, leaving far too many people to doubt they have a fair chance to improve

their lots in life. By and large, the Trump administration, playing on the resulting tensions that Jim foresaw, is doing, or seeking to do, the opposite of what has long struck Jim as in the country's best interests.

OUR TOWNS PROVIDES a lot of anecdotal evidence that, despite this oppositional effort and the serious threats it poses to the United States, towns in this country are renewing this sense of possibility from the ground up. That's happening because many Americans are renewing themselves, in ways the Fallowses, as they approach 70, demonstrate in their own lives in *Our Towns*. When Jim wrote about

“...if it’s on cable news, don’t ask about it. Instead, ask about what is happening right now in...the schools, the businesses, the downtowns.”

American progress before now, the nation was the community. He focused on the need for the national government to provide motivation and opportunity for self-improvement. Now, it's small communities and the individuals in them showing the ingenuity, resilience, and self-sacrifice that have typified America during great crises.

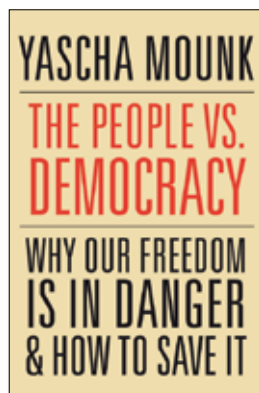
"Suppose that you are skeptical of this fundamental claim, about the ongoing health of local American society," Jim writes in *The Atlantic*. "I suggest the following test...: Through the next year, go to half a dozen places that are new to you, and that are not usually covered by the press. When you get there, *don't ask people about national politics*...if it's on cable news, don't ask about it. Instead, ask about what is happening right now in these places. The schools, the businesses, the downtowns, the kind of people moving out and the kind moving in, and how all of this compares with the situation 10 years ago. See where that leads you. This process, repeated again and again," led the Fallowses to the optimistic conclusion they reach in their book. ▢

Contributing editor and journalist Lincoln Caplan '72, J.D. '76, who is a senior research scholar at Yale Law School and the senior editor at the Knight First Amendment Institute of Columbia, is a longtime friend of James and Deborah Fallows. "The Justice Gap," his feature on legal services, appeared in the November-December 2017 issue.

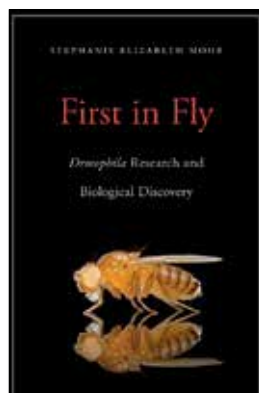


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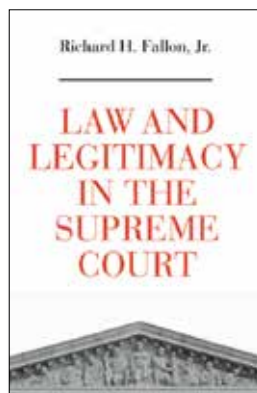
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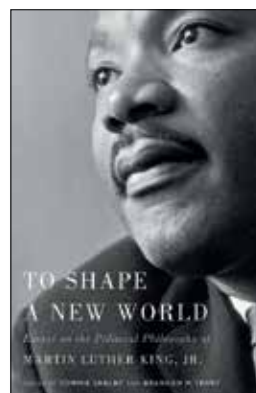
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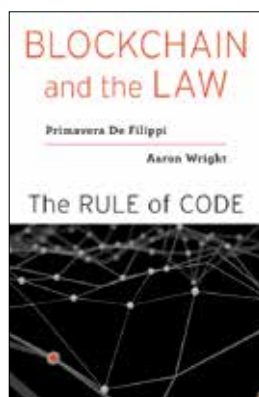
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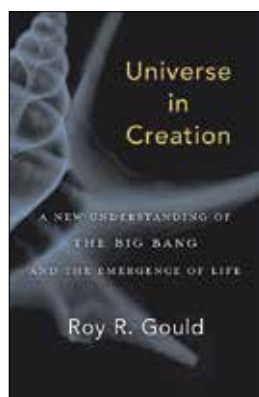
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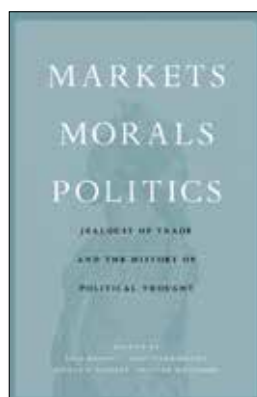
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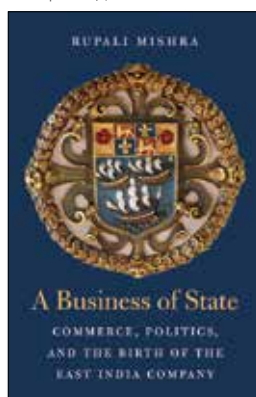
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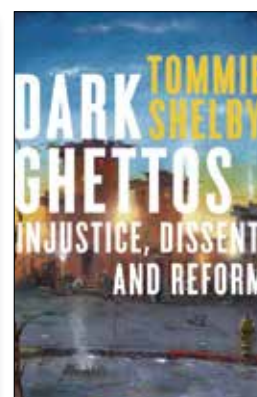
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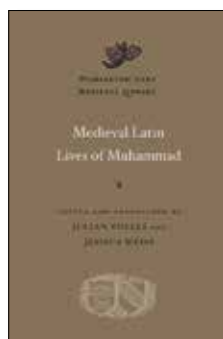
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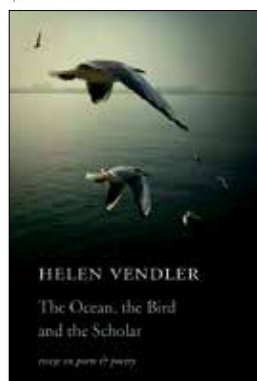
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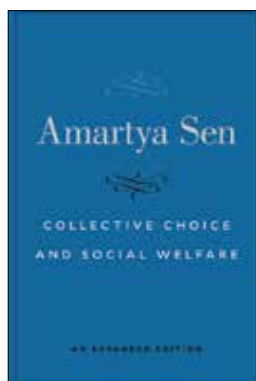
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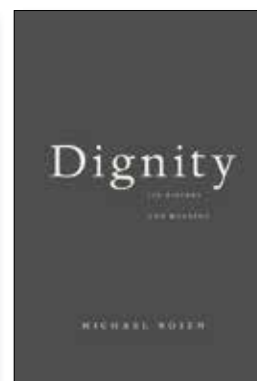
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Last of the Seafarers

In Indonesia, the Bajau fishermen's way of life is under pressure.

Photographs by David Hu | Text by Lydialyle Gibson



“I FULLY EXPECTED to find a place where survival depends on the whims of the ocean, where the line between hungry and full rests on what you can hunt and gather,” wrote photographer David Hu '16 in a progress report during his stay with the Bajau of Sampela, a seafaring community off the coast of Kaledupa Island in southeastern Indonesia.

“The reality is that this line is growing even thinner.”

IN THE spring and summer of 2017, Hu lived with Bajau who are one of the last remaining communities of an ocean-faring people—sea nomads, or sea gypsies, they are still sometimes called—whose way of life stretches back hundreds of years. And in this century, it is increasingly threatened. At one time, the Bajau were fully nomadic, roaming parts of Indonesia, Malaysia, and the Philippines and living in dugout houseboats, called *lepa lepa*, made from teak. A few still do, but most Bajau, including those in Sampela, a village of about 1,000 people, now live in huts built on stilts that stand a few hundred yards from land, connected to each other by a series of piers and walkways. Depending on the tides and the time of year, the water beneath the village's homes can be anywhere from several inches to about eight feet deep.

Hu is a photographer and a scientist whose work in both fields has taken him to remote corners of the world. At Harvard, he concentrated in organismic and evolutionary biology and volunteered as an EMT; his long-term

A Bajau elder (left) navigates the shallows surrounding the village to gather urchins and conchs to eat or sell. Satellite TV dishes (right) have begun appearing outside Sampela homes, a marker of some residents' wealth and the increasing presence of technology.

plans include medical school and a career as a physician. (He currently researches craniofacial development in associate professor Eric Liao's plastic surgery laboratory at Massachusetts General Hospital.) But, Hu says, "I have always loved photography." He first picked up a camera as a teenager and got serious about it a couple of years ago. He has traveled to Rwanda to research the country's trauma and prehospital care, and to photograph its mountain gorillas: arresting, sensitive portraits of endangered animals. In the Congo he and his camera shadowed local porters hired to carry trekkers' gear up to the summit of Mount Nyiragongo, an active volcano. Last February, he accompanied research fellows from Massachusetts General Hospital's wilderness medicine division to Nepal, where he helped gather data on altitude illness and photographed people in the Himalayas (see "Medicine in the Middle of Nowhere," November-December 2017, page 43). Closer to home, Hu has chronicled the ice-climbing exploits of the Harvard Mountaineering Club, of which he was also a member.

His trip to Indonesia—a country he visited first as a tourist, intrigued enough to return—was funded by a George Peabody Gardner Traveling Fellowship from Harvard, which provides postgraduate support for immersion in a foreign culture. While he was there, he lived and ate and worked with a host family in

Sunset in Sampela (left), a village standing a few hundred yards from land in southwestern Indonesia. The nearest sizable island with an airstrip is a two-hour boat ride away. Most residents still use manual or sailing canoes, like the woman (upper right) cleaning and charring the hull of her hand-built canoe. Several men (right) fix a broken electrical cable by matchlight during a monsoon storm—an improvised repair to a previous improvised repair. As these men worked, the lights of the nearest house, and of the other houses connected to it, flickered on and off every time the two bare wires—each containing 240 volts—touched.





one of Sampela's stilted homes. His purpose was to learn the Bajaus' techniques for fishing, cooking, sailing, making boats, and gathering food. And to begin to answer a question whose seeming simplicity belied its depth: "What does it mean to be Bajau?"

THE BAJAU get most of their food from the ocean: all the men in the village are fishermen. Every day they take boats out to the fishing grounds—the locations are often tightly guarded secrets—where they dive down with goggles and spearguns (both traditionally made of wood, though now sometimes modern gear). Holding their breath for minutes at a time, they hunt triggerfish, parrotfish, and other reef fish—some to eat and some to sell. Boys begin diving as young as five or six, and they will fish for as long as they are physically capable. Meanwhile, closer to the village, women, girls, and the elderly gather octopuses, sea urchins, and sea cucumbers. (Other necessities, such as rice and fresh water, are brought in by boat from the mainland.)

But there are new pressures. Climate change brings stronger and more frequent storms—Hu recalls whole days spent sitting inside his hosts' home, listening to the wind and rain, waiting for the weather to pass so they could fish again. "In the weeks that I have been here," he wrote in his late May progress report, "the number of days with storms strong enough to shake my stilted cabin have far outnumbered days of calm

A young woman (top) harvests food—octopuses, urchins, conchs, sea cucumbers—at low tide near Sampela. Although spearfishing is most traditional, some Bajau fishermen also use other methods. With a lure made from a plastic bag (left), two men go longlining for houndfish. Some Bajau communities are still fully nomadic and live year-round in *lepa lepa* houseboats (below). Sampela residents use these boats for long journeys to distant fishing grounds and to travel to other Bajau communities in Malaysia and Indonesia.





and sun.” The number of fish available has also declined sharply in recent years. Overfishing is part of the problem, but dynamite and cyanide fishing in the Sampela area—practices now banned, though the bans are not always enforced—have also taken a toll. “In some places, you would dive down into the water and find these massive craters in the coral from years back,” says Hu, who first learned freediving as a teenager in Florida and went fishing most days with the Bajau men. The scarcity of fish, he says, drives spear fishermen deeper and deeper in search of large enough fish to catch, risking stronger ocean currents and blackouts from a lack of oxygen.

Meanwhile, technology has added convenience and complexity to life in Sampela, fusing tradition and modernity. Electricity arrived three years ago; the power is usually on from about 5:30 to 10 each evening. Houses are connected by thin, often exposed wires, and when one house loses power, so do all the others after it on the circuit. Newly installed PVC pipes have begun to bring fresh water to the village, although the water pressure can be unstable. But most homes still use bucket showers, and toilets are simply holes cut in the floor through which waste drops into the ocean. Many people have cell phones, though the service is spotty, and some—including Hu’s hosts—have satellite television. What do they watch? With a smile, Hu says, “WWE is very popular.”



Using a homemade speargun and wooden goggles, an older man hunts for triggerfish in the reef. During days-long fishing trips, recalls photographer David Hu, all meals are fish. “You’d shoot a fish, get back on the boat, clean it—though you don’t even really gut it—you just cut pieces off and eat it raw. Then go back for more fish.”





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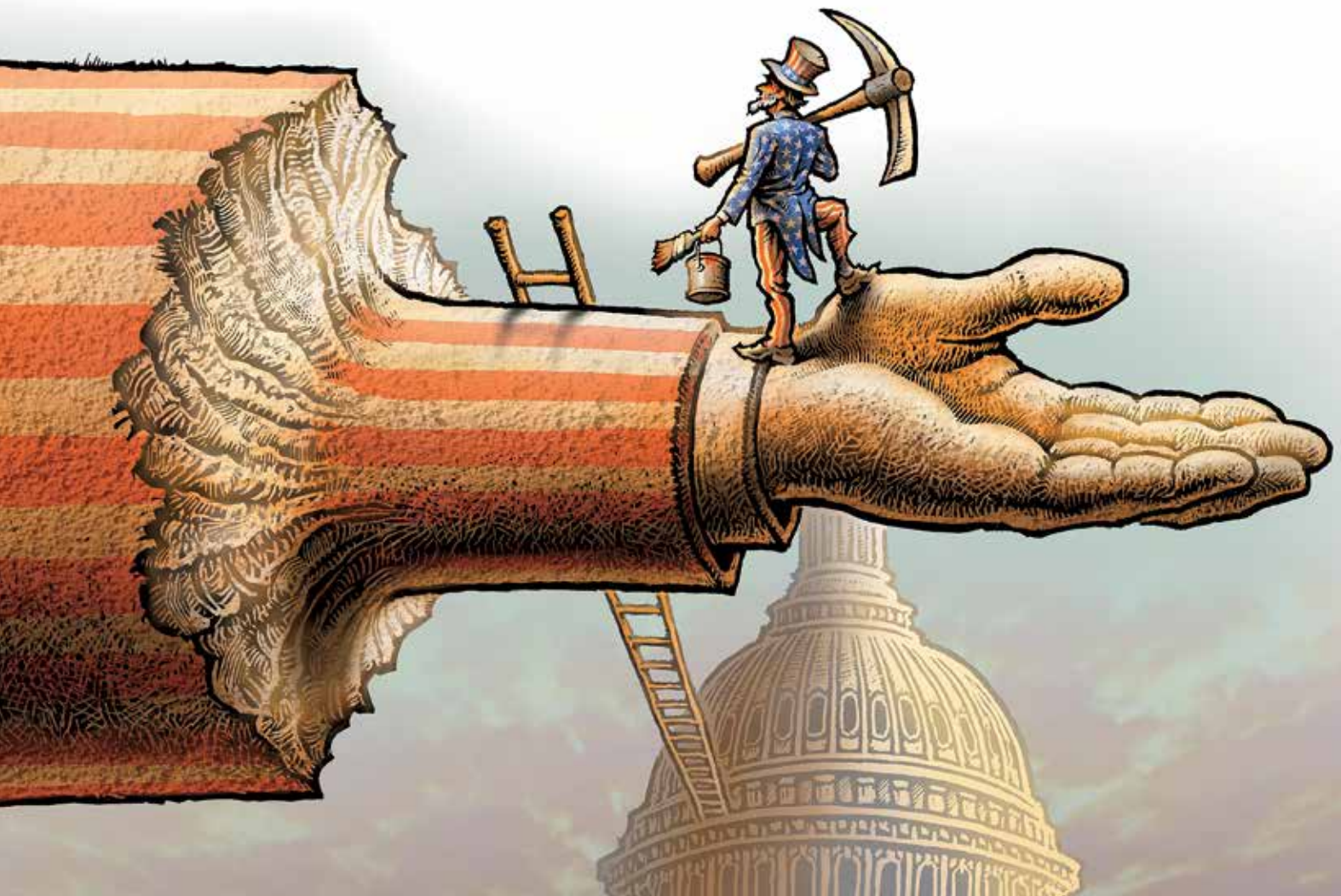
On May 25, 2018, the Radcliffe Institute will award the Radcliffe Medal to Hillary Rodham Clinton.

As an attorney, a first lady, a senator, a secretary of state, and the first woman nominated by a major party for the US presidency, Secretary Clinton has worked tirelessly over the course of decades in the public eye, often under unprecedented scrutiny, to make meaningful change.

The day's program will feature a personal testimonial from former Secretary of State **Madeleine Albright**; a keynote conversation between Secretary Clinton and Massachusetts Attorney General **Maura Healey** '92; and a panel on America's role in a changing world, featuring **Nicholas Burns**, **Michèle Flournoy** '83, **David Ignatius** '72, **Meghan O'Sullivan**, and **Anne-Marie Slaughter** JD '85.

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Tax Reform, Round One

Understanding the real consequences of the new tax law

THE TRUMP ADMINISTRATION'S successful efforts at tax legislation stand out as the primary achievement of its first year. But the hurried, largely furtive drafting, and rush to passage at the end of 2017, have helped obscure the new tax regime's real impact. Much of the reporting and debate has focused on the politicking that went into passing the bill, and the purported effect on the federal budget deficit. That has diverted attention from the true significance of the Tax Cuts and Jobs Act (TCJA). Instead of simply changing rates and addressing loopholes, the TCJA represents a structural change to the income tax and, consequently, will lead to major changes in behavior. Teasing out those details reveals that the new law is likely to generate different incentives for economic growth than commonly claimed, unwanted complexities that invite still further gaming of the tax code (which the reforms themselves were intended

to minimize), and larger deficits than forecast. If the past is a guide, and we can hope it is, the TCJA will be a precursor to further reforms that correct these shortcomings and address important distributional and fiscal concerns.

In the context of other legislation during the past 40 years, the magnitude of this tax reform is unremarkable when framed relative to gross domestic product. Indeed, the 1981 tax bill reduced federal revenue by an amount equaling more than twice the share of the estimated reduction in the Trump edition. But no reform during the last four decades approximates the scope and depth of the TCJA's changes to the overall structure of the tax system.

The unwieldy legislation is best understood by separately considering its impact on corporations, pass-through entities (businesses that are taxed not as entities, but rather at the individual or proprietor level, to whom income is "passed through"), and individuals. The congressional Joint Committee on Taxation has estimated the

by Mihir A. Desai

These changes improve corporate investment incentives in the United States, but they vary by type and economic sector—contradicting the simple view that a rate reduction greatly helps investment.

TCJA's revenue cost to be \$1.5 trillion over 10 years, distributed among individuals (60 percent), corporations (22 percent), and pass-throughs (18 percent).

These are *net* figures, reflecting tax *cuts* offset by tax *increases*. For example, for individuals, the legislation creates \$3.2 trillion of cuts and \$2.4 trillion of increases, resulting in a net revenue loss of \$862 billion. The total revenue lost through the corporate provisions is \$329 billion, representing \$1.85 trillion of cuts and \$1.52 trillion of increases. As such, the scope of the provisions is far larger than net numbers reveal, and there will be sizable numbers of winners *and* losers.

Revolutionizing the Corporate Tax: Domestic Effects

ANY OF THE five major changes to the corporate tax code described below would constitute a significant reform if examined separately. Taken together, they constitute a revolution in the way corporations are taxed (see Figure 4)—a revolution that was long overdue. The corporate tax featured the worst of all worlds: a relatively high marginal rate that created incentives for companies to move income around the world through various techniques, and enough loopholes to allow for the average rates actually assessed to be considerably lower. The U.S. regime of taxing corporations' international income, earned in other jurisdictions, was problematic because it was out of step with the practices of comparable countries around the world. These effects were visible in the tax-motivated efforts of U.S. corporations to move their headquarters abroad, and in the large piles of cash—most recently estimated to exceed \$2.0 trillion—they held in offshore jurisdictions.

The first reform is to *reduce the statutory corporate tax rate* from 35 percent to 21 percent, a reduction that easily eclipses any undertaken by a developed country during the last several decades. The second is to *liberalize the tax treatment of capital expenditures on equipment*; previously, such investments were deducted over time according to depreciation schedules, but now they can be deducted entirely in the year they are undertaken (so-called expensing)—resulting in lower reported income, and therefore a lower tax bill, in the year of the expenditure. Third, rather than taxing corporations on their income realized around the world and then providing credits for taxes already paid abroad, the United States will now move to an emphasis on taxing only domestic profits (*transitioning from a world-wide to a territorial regime*). As part of that transition, the stockpiles of foreign profits, previously held abroad in order to defer tax obligations, will be taxed. A fourth set of reforms introduces *three new international tax instruments* that are completely novel on the global scene. Finally, the *deductibility of interest at the corporate level will be limited to 30 percent of a corporation's operating profit*.

A major rationale for the corporate reforms is to incentivize corporate investment, prompting gains in productivity and, ultimately, greater wages for workers. How well will the TCJA perform? That turns out to depend on the interaction of the statutory-rate reduction, the implementation of full expensing, and the limits on interest deductibility. Far from being uniform, these features are likely

to interact in surprising ways for different types of investments. In general, the rate reduction and the move from depreciation to expensing improve investment incentives, but the limitation on interest deductibility raises the cost of investment.

For investment in *equipment*—a key element in the productivity equation—expensing is the critical factor. In fact, expensing allows the tax rate on new investment to become irrelevant. Under expensing, the firm gets tax relief at the time of investment and then later gives up profits—meaning the government is effectively functioning as a joint-venture partner with an ownership level that corresponds to the tax rate. As such, the pretax and post-tax rates of return are the same, ensuring no distortion to investment decisions. This improves investment incentives, but only slightly: the government was already providing accelerations of depreciation that yielded some of the benefits of expensing. At the same time, the lower tax rate and limits on interest deductibility *decrease* investment incentives because they make debt financing less beneficial than before. Curiously, in fact, firms now will also have incentives to locate debt-financed investment abroad, where these limits on interest deductions don't bite. Overall, investment incentives for equipment are improved, but not enormously because of these offsetting effects.

For structures and real property, with expected long lives and limited TCJA changes in depreciation, the reduction in the tax rate is critical—and those improved incentive effects from the new law are only partially offset by the limits on interest deductibility, so the incentive to invest in structures will increase significantly. Along with some of the changes to pass-through taxation described below, these changes amplify generous pre-existing benefits to the real-estate sector.

Finally, some investment incentives for intellectual property (research and development, patents) are actually *reduced* under the TCJA, because of the switch away from expensing toward amortization over time for these investments, plus the fact that a lower tax rate reduces the value of interest deductibility. Other changes (for example, limiting the use of net operating losses) are major deterrents to investment and offset these improved incentives across all investment types.

Taken together, these changes improve corporate investment incentives in the United States, but they vary by investment type and economic sector of the economy—contradicting the simple view that a rate reduction greatly helps investment. And, some fraction of these corporate-tax reductions will flow to workers, although the magnitude of that benefit has been considerably exaggerated. Indeed, the primary effect of the rate reduction alone is to provide a windfall to investments already in place that were undertaken with the expectation of a higher tax rate.

Taxing Corporations' Overseas Activities

THE MORE NOTABLE corporate changes relate to the taxation of overseas activities. First, taxing profits previously warehoused abroad will raise significant revenue—and the transition from a worldwide

regime to a territorial one removes the perverse incentives to store future profits abroad. Combining those two changes will raise a serious challenge for corporations as they consider how to allocate their capital. When and how should cash be distributed to shareholders, or invested? If cash is to be distributed, are dividends or share buybacks preferred? If companies invest, do they prefer organic investment or mergers? The value creation (or destruction) associated with these decisions will ripple through the economy for the next decade and, given the sheer size of the stock of cash held overseas, may dominate the TCJA's effects on the economy.

Going forward, the shift to territoriality and the reduction in the corporate tax rate will make the United States a more hospitable domicile for corporations, reducing their incentives to leave (or be acquired by a foreign company) and to transfer profits abroad through convoluted structures. So far, so good.

But as with so much surrounding the TCJA, that simple story is complicated—in this case, by three novel tax instruments that are embedded in the law. Each is motivated by the fear that a move to territoriality will provide incentives for firms to move profits out of the country to lower-tax jurisdictions, given that the United States now attempts only to tax profits within its borders. The already sizable operations and profits of multinational firms in low-tax countries, such as Ireland, may now grow considerably because firms would no longer face a U.S. tax on foreign profits.

First, a minimum tax attempts to ensure that corporations pay a minimum tax (effectively at 13.125 percent) on their profits abroad. This provision is meant to discourage moving profits to ultra-low-tax jurisdictions, as that income will still face a 13.125 percent rate at home. Unfortunately, this mechanism has several perverse effects. It strongly encourages governments around the world to change their rates to 13.125 percent, shifting all revenue from this tax to foreign governments. Indeed, this supposed *floor* on taxes paid around the world may well become a *ceiling*. Such a minimum tax will effectively vitiate the transition to a territorial system. In reality, the TCJA creates a new worldwide regime at a 13.125 percent rate without the historic advantages of deferral—undoing many of the benefits of moving to territoriality. The actual operation of the minimum tax also provides an incentive to move investment abroad—and its complexity and unresolved details have created havoc for multinational firms as they struggle to understand how it will actually work. One example of this complexity: firms will not benefit domestically from expensing fully because of this minimum tax abroad.



Second, in an effort to ensure that intellectual property is not moved abroad—a favorite tax strategy of various technology giants—the legislation provides a preferential rate (also 13.125 percent) on income from intellectual property domiciled domestically that is associated with exports. This provision aims to make the United States a more competitive location for intellectual property, an imperative created by the spread of preferential regimes for intellectual property called “patent boxes” around the world. Unfortunately, the emphasis on exports means this provision may not comply with international agreements. And again, its actual workings may make firms want to move real investment abroad in order to maximize the benefit of the provision.

In a final effort to curtail profit-shifting out of the United States, the new “base-erosion anti-avoidance tax” (BEAT) tax presumes that services transactions by multinational firms with related parties are motivated by tax-avoidance. Both the presumption of avoidance and the willingness to tax transactions rather than profits

are novel, making this provision a signal challenge to current international norms and treaties, suggesting that it may not withstand scrutiny. While it remains on the books, it will create havoc in the global supply chains of multinational firms.

The Corporate Change in Context

IN MANY WAYS, the corporate provisions are the best part of the TCJA: the shift to territoriality and the rate reduction were long overdue and had enjoyed bipartisan support. Unfortunately, that core of the corporate provisions was spoiled by several decisions. The desire to get the rate to 21 percent was enormously expensive, as every percentage point reduction represented a

\$100-billion cost over 10 years—and created a larger windfall to older investment. To offset that revenue loss, the tax treatment of research expenditures was made less generous, interest limitations were introduced, and a host of international taxes were created that undo the benefits of the shift to territorial taxation. A rate reduction to 25 percent and a simpler move to territoriality would have been preferable.

The actual legislation has created noteworthy winners and losers. As one example, multinational firms that employ intellectual property widely were previously able to pay global tax rates in the low teens or below; they now face a new world of tax complexity and potentially *higher* rates. In contrast, domestic firms that invest in real estate and have moderate debt will be clear winners.

Most ambitiously, the reform can be viewed as retreating from the idea of taxing income itself, given the mobility of income in a

The most significant individual-tax changes are the new rates and brackets. Collectively, they are large tax reductions and, unsurprisingly, largely accrue to high-income individuals.

global setting with lots of intellectual property. The base for corporate taxation is becoming consumption rather than income: witness the preferential regime for exports, the denial of deductions for imported services from related parties, and the expensing of investment and limiting of interest deductibility—all of which move toward a cash-flow tax that gives up on taxing something as mobile as income in favor of taxing consumption. While other countries tax consumption via a value-added tax, we may be transitioning to a consumption tax effectuated through the corporate sector.

Who Am I?

THE REDUCTION in the corporate tax rate prompted so-called “small business” interests to advocate for comparable relief. These interests typically employ pass-through entities, so named because there is no taxation at the entity level (as with corporations); instead, all income is passed through to, and taxed at, the individual level. During the last 30 years, the share of business income that is associated with pass-through entities (partnerships, limited-liability corporations, and Subchapter S corporations) rose from less than 20 percent to more than 50 percent.

The 2017 legislation creates a new regime for pass-through entities by granting them a 20 percent reduction in their tax rate: an individual facing the new top 37 percent rate on labor income, for example, will now face a 29.6 percent tax rate on pass-through income. This new regime for pass-through income creates a host of tax-planning opportunities of mind-numbing complexity. For the first time since the tax reforms of the early 1980s, individuals will have to confront existential tax questions: Who am I? Do I want to be a corporation, a pass-through entity, or just an individual?

The legislation creates a large gap between corporate tax rates and top personal marginal rates, a gap not present in the tax code during the last 40 years. Such a gap can make a corporation a tax shelter for individuals who want to avail themselves of the lower 21 percent rate. As an example, an individual could corporatize and provide consulting services to clients and pay herself

only a small amount of that income. Wealth saved in the corporation could also grow and pay that lower tax rate. (This opportunity is limited in two ways. First, there are accumulated-earnings and personal-holding-company taxes designed to deter such opportunism, but they have not been used widely and pose significant implementation issues. The bigger limitation is that distributing the cash from the corporation will incur additional taxation as it is delivered to the individual.

Absent reaching tax nirvana—the ability to exempt historic returns from taxation by dying (the step-up basis for inherited assets)—the combination of corporate and individual tax can make this strategy less desirable.)

The TCJA’s new pass-through regime will also provide an incentive for some corporations and individuals to become pass-through entities. Corporations that don’t want to pay both the corporate tax and shareholder-level taxes can avail themselves of one level of taxation by becoming pass-through entities.

Similarly, individuals who would rather pay at a 29.6 percent rather than a 37 percent rate can stop being employees and contract with their employers as pass-through entities. Indeed, it may become commonplace for similarly situated workers to find that they are paying very different taxes because some are pass-through entities and others are employees. (Taking advantage of these provisions is easiest for families earning less than \$315,000. Higher-income earners will need to be more savvy about this, as many engaged in “services” activities will not be allowed to take advantage of this provision easily. What is a service? The legislation ensures that some services are specifically identified but leaves much more to be articulated. At a minimum, one can imagine that firms that are service providers might find it advisable to split into separate services and technology branches so that part of the firm can avail itself of the advantageous rate.)

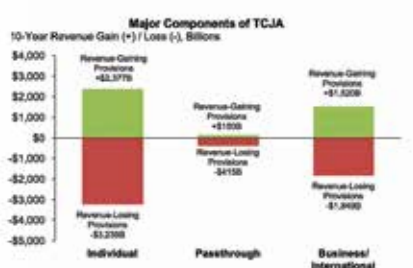
Taken together, the TCJA’s pass-through provisions are enormously complex, create numerous tax-planning opportunities, and will create windfalls to those best positioned to navigate that complexity. As such, they represent some of the worst parts of the legislation—and will likely cost the federal government far more revenue than projected, given the myriad behavioral responses to this new regime. The pass-through regime was designed to limit the incentive to corporatize by reducing the relevant gap from 16 percentage points (37 percent versus 21 percent) to 8.6 percentage points (29.6 percent versus 21 percent). It would have been wiser to police the corporatization margin more effectively, rather than create an entirely new regime with its own difficulties.

Individual Taxes: Simplification and Redistribution

AT THE INDIVIDUAL LEVEL, the changes are somewhat less structural. New brackets and lower rates are typical in “reforms,” and this one lowers the top marginal tax rate from 39.6 percent to 37 percent and raises the income level at which this top bracket begins.

The structural change occurs in the way zero-tax brackets—ranges of income where no income tax is due—are accomplished. Historically, personal exemptions and a standard deduction combined to create a zero bracket. Now, exemptions are gone; the standard deduction has increased considerably; and an expanded, more refundable child credit has been created. Overall, the changes to exemptions, child credits, and standard deductions add up roughly to a zero effect on tax revenue; they are structural changes that help simplify the individual code by enabling more people to avoid item-

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composition and magnitude of all
the tax changes.



izing. The increased refundability of the child credit, along with the phase-out of the credits for higher-income taxpayers, mean that these changes are moderately progressive.

The other notable changes limit the deductibility of state and local taxes to \$10,000 and reduce the limit on interest-deductibility on mortgages and home-equity loans from \$1.1 million to mortgages alone of \$750,000. These changes adversely affect higher-income individuals and, notably, individuals in high-income-tax states with high property values. Although these provisions can be viewed as targeting coastal Democratic states, it's also the case that those individuals are the cohort most likely affected by the Alternative Minimum Tax; its bite is lessened under the TCJA. Taken together, these changes should amplify the incentives for high-income individuals to relocate from high-income-tax states; absent some remedies, they will also create fiscal pressure on state governments.

The context of this sweeping overhaul has eclipsed the importance of otherwise important reforms. In particular, a variety of miscellaneous business deductions have been limited, the scope of the estate tax was reduced considerably, and the tax penalty that underpinned the mandate of the Affordable Care Act was repealed. Each of these provisions will have major impacts on the self-employed, the estate-planning industry, and the healthcare market.

In economic terms, the most significant individual-tax changes are the new rates and brackets. Collectively, they are large tax reductions and, unsurprisingly, largely accrue to the largest tax payers: high-income individuals. But the share of all taxes paid across the income spectrum is distributed similarly before and after the tax reform.

One key difference is that most individual tax changes are *phased out* over time; the TCJA's corporate changes are *permanent*. Because corporate tax changes are thought to accrue mostly to higher-income taxpayers, the long-run effects are regressive: they appear to shift a greater share of taxes paid to lower-income individuals after the individual changes are phased out. Of course, it is not clear that the individual tax cuts will be allowed to phase out, nor is it completely true that corporate tax changes don't benefit workers across the income spectrum.

The Challenge to Universities

DURING THE LAST DECADE, several ideas that take aim at the tax-exempt status of universities have percolated through legislative hearings. Two of them came to fruition as part of the recent legislation. First, a 1.4 percent tax on the returns of large endowments has been enacted; it is forecast to raise \$1.8 billion for the federal

government over 10 years. Harvard has suggested that its annual taxes due will be greater than \$40 million, an estimate that corresponds to the University's contributing more than 20 percent of the revenue raised by this provision (see "Endowments, Taxed," March-April, page 18). Second, \$3.8 billion will be raised by prohibiting universities from offsetting the profits and losses of their unrelated businesses (hotels and conference centers, for example), making more of their income subject to taxation.

These efforts are notable for three reasons. First, although they are relatively small in the scope of the overall legislation, they should be

understood as the first step in a continuing effort to challenge the tax-exempt status of elite universities. Second, they are quite targeted: the endowment tax will apply to fewer than 50 institutions, with the vast majority of tax revenue coming from a handful of universities. Along with the limitations on the deductions of individuals, these steps represent the "weaponization" of the tax code—a particularly problematic development. Finally, they go to the core of universities' tax-exempt status. Taken together, these efforts represent the culmination, for now, of long-simmering doubts about the degree to which

elite institutions are conducting themselves in a manner consistent with the expectations created by tax-exempt status.

Missed Opportunities...and What's Next?

THE CORE of the TCJA is a long overdue modernization of the corporate tax. The desire to reduce the rate below 25 percent, and Congress's inability to pass a pure corporate tax reform, required additional changes, including new international taxes that undo some of the benefits of those core improvements. Changes in pass-through taxation have added remarkable complexity and scope for gaming the tax system, with few associated benefits. Finally, in pursuit of a headline trumpeting middle-class tax cuts, individual changes were included that dramatically increased the fiscal cost of the legislation.

That stated fiscal cost of \$1.5 trillion is likely severely understated because it envisions future reversals of tax cuts that, once granted, are in fact hard to reverse. The complex international and pass-through provisions open the door to tax-reducing strategies that we can only begin to imagine. And that fiscal cost, in the context of current federal-budget deficit realities and an economy near or at full employment, will likely be associated with interest-rate increases that partially undo the economic benefits associated with the law's improved investment incentives.

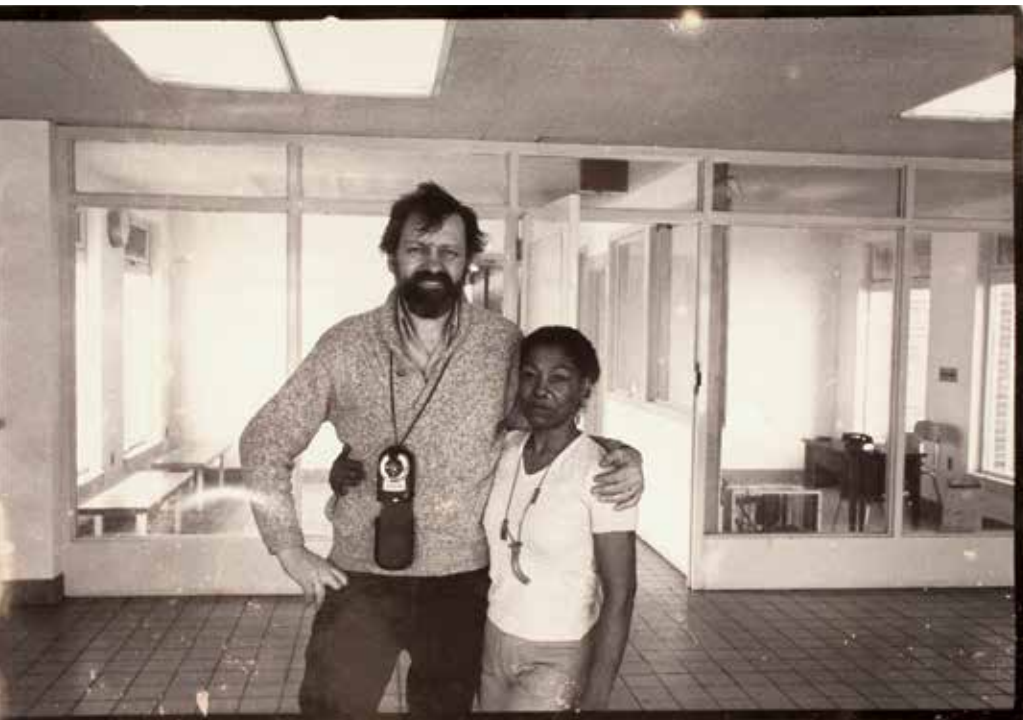
The most noteworthy missed opportunities in this legislation relate to the inability to make the in-

(please turn to page 87)



Montage

Art, books, diverse creations



Visiting Hours

Portraits of the imprisoned, seen anew

by OLIVIA SCHWOB

“MAGIC” is what Jack Lueders-Booth calls it: In careful darkness, a photographer immerses paper in a chemical brew and agitates until shadows blossom. But if that process is a kind of alchemy, then instant film is sorcery, trapping a moment behind a pane of plastic—10 discrete layers of chemicals in a precise chain of reactions. The resulting image cannot be reproduced, and proves challenging to preserve.

But when Lueders-Booth, Ed.M. '78, uncovered a set of four-by-five-inch Polaroid photographs he had taken 40 years ago, they were improbably intact. Today, the images still pulse with deep-water blues and

heart-blood reds. The young women depicted meet the camera's gaze unflinchingly, emissaries from their time, a group portrait of easy confidence. On display at the Aperture Foundation gallery in New York and Gallery Kayafas in Boston this spring, only the wall text gives them away: “Women Prisoners.” Lueders-Booth initially went to MCI-Framingham, a Massachusetts state women's prison, as a teacher. But from 1978 to 1985, what began as a gesture of service became a passion project involving dozens of instant and other cameras and hundreds of sheets and rolls of film—the students, and his own.

His scientist father had been an amateur

photographer, but an “intimidating” one, who mixed his own darkroom solutions from powdered chemicals. Lueders-Booth was 30 before he jumped in with both feet, hungry for creative expression and hooked on the process and gear. In 1970, he left his job as an office manager at an insurance company—despite three dependent children and the security of a career track—to pursue photography.

The Boston photography scene included staff of the nascent Harvard photography program, who invited him to manage it and teach a few classes. Eventually, Lueders-Booth enrolled at the Graduate School of Education, in need of a piece of paper to confirm what the department already knew about his pedagogy. (In his 30 years of teach-

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For seven years, Jack Lueders-Booth (far left) visited the Massachusetts Correctional Institution-Framingham to teach a photography workshop several days each month. Roaming the grounds, he took the women's portraits with Polaroid, Leica, and medium-format film cameras, documenting scenes from daily life.

"Prison Nation" exhibition, much of the other prison photography makes for bleak documentation of a dehumanizing process. But there are no striped jumpsuits in Lueders-Booth's pictures; the women wear their own clothing, and their cells are decorated with photographs, drawings, greeting cards, crocheted blankets, figurines, radios. Windows are covered with gauzy curtains, and window bars, when

as much film as the class could use. Lueders-Booth built out the space, fitting sinks and installing donated enlargers; he brought along his 18-year-old daughter, Laura, as an assistant. Progressing from camera obscuras to photograms to paired portraits, each exercise proved more entrancing to the prisoners than the last.

Meanwhile, Booth roamed the grounds with his 35-millimeter Leica, becoming, he says, "sort of the school pho-

tographer of MCI-Framingham," or like the prisoners' uncle: a familiar but slightly removed presence. Though he had preconceptions about the people he would meet there (and had sworn off documentary photography) he was soon "smitten" by his project, and became involved in his students' lives. In one of his favorite shots (above left), a prisoner who served as a teaching assistant is photographed with her father, who visited her every day on his way home from work. Lueders-Booth is equally taken with the photo's composition—the curve of their entwined arms, the rhyming tilt of their faces—and the obvious devotion on display.

In the Aperture Foundation gallery's

visible, are horizontal and sheathed in aluminum to imitate Venetian blinds. "They really look more like UMass dorm rooms than prison cells," Lueders-Booth says now.

He credits the prison's softer touch to then-governor Michael Dukakis, LL.B. '60 (who was attacked for his humane approach during the 1988 presidential election). One photograph depicts the graduation ceremony from a high-school equivalency program. Though far from picturesque—one graduate smokes, another leans on crutches, another picks her nose—there is a sense of possibility. One young woman lounges on a blanket on the grass, her face hidden behind the baby she cradles. A tennis court is visible in the background.

Lueders-Booth's freedom to photograph was also a product of the time. "I had too much access, really," he says. "But I took the responsibility of that to heart." He witnessed it all. One young woman, another teaching assistant, extends her forearms toward the camera, showing raised scars marking her struggles with bipolar disorder; others wear their hard lives on their faces. Lueders-Booth recalls how some women returned to prison mere months after being released, looking ill-fed and roughed-up by their time on the streets, and oddly the better for being back at MCI-Framingham.

ing at Harvard, he has earned 12 commendations for distinguished teaching, and been nominated three times for a University-wide teaching prize.)

He'd been bringing photography to people confined to institutions, volunteer teaching at a chronic-disease hospital in Boston Harbor, when, for his master's thesis he proposed continuing the work at MCI-Framingham, the oldest women's prison in the country. (It was founded in the 1850s to punish women guilty of "begetting": bearing children out of wedlock.) Prison administrators gave him the run of an empty wing for a dark room, and Polaroid provided a dozen cutting-edge cameras as well, plus

This unlikely access could not last. At first, Lueders-Booth hadn't intended to share the photographs with the outside world, but when hints of interest from publishers inspired panic among administrators, he left the prison behind, and lost all contact with the women he had photographed. In the 1980s, hoping to discuss publication of his images (and the resulting royalties for the women), he wound up walking the streets of Boston after dark, appealing to sex workers, drug users, and homeless people for help. Tracking his subjects through the night, with a stack of photos for identification, was like chasing ghosts.

Eventually, Lueders-Booth and his camera moved on to vastly different environs, ranging from postindustrial New England cities to Central American garbage dumps. But outside interest in the worlds of prison-



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ers has only intensified recently. As greater knowledge of "mass incarceration" reaches the mainstream, artists, writers, and curators alike are documenting the generations lost to an unjust system. Yet his photographs are a category apart. Many other photographers mobilize images of incarcerated peo-

ple—mostly men, mainly black, in jumpsuits and uniforms, toiling on prison farms or enclosed by heavy walls—to illustrate the system's crushing weight. Lueders-Booth's portraits catch unlikely personal moments, protecting vulnerability and individuality as if behind a pane of glass.

"The Art, the Play, and the Rigor"

Flutist Claire Chase marks a key change for Harvard music.

by LUCY CAPLAN

DURING her first week of teaching at Harvard, the flutist Claire Chase was arrested while blocking traffic on Massachusetts Avenue—part of a protest last September prompted by the Trump administration's announcement that it would end the Deferred Action for Childhood Arrivals (DACA) program. The demonstration was organized by and mostly comprised faculty members from the history department; having a new professor of the practice of music in their midst might have seemed unusual. For Chase, it was anything but. A commitment to rethinking the social role of the artist is at the core of her creative work.

Chase is among the most important figures working in classical music today. Her eclectic repertoire, centered upon music of the present and very recent past, augments the sonic possibilities of the flute through the use of extended techniques and electronics; she delights in works that require

her to act, vocalize, and otherwise heighten the drama of a performance. In 2001, on a \$500 budget, she launched the International Contemporary Ensemble (ICE), which now stands at the zenith of the new-music scene—widely admired for its adventurousness and seemingly limitless aesthetic capacities. Its 35 members perform in various configurations, from intimate chamber groups to all-hands-on-deck endeavors, and have given more than 500 premieres. Their performances, which often feature multimedia and electro-acoustic compositions, have a vividly theatrical feel. The group is committed to a collective, artist-led structure in which



Claire Chase

many musicians also take on staff roles, and all ensemble members have a say in administrative and programmatic decisions.

Because she has achieved remarkable suc-

cess by unorthodox means, Chase is often described as an “arts entrepreneur.” The label reflects a broader state of affairs in classical music: a dismal job market, anxieties about cultural irrelevance, and a general sense of precariousness have transformed once-reliable goals (like landing a tenured orchestra position) into near-impossibilities. But Chase says she doesn’t identify too closely with “entrepreneurial” thinking. She is less interested in expediting individual success than in what she calls “the politics of organizing a group of people to make music.”

When she was 15, and had just won “some silly flute competition,” a friend said, “You know, Claire, it doesn’t matter what you do. It matters where you’re needed.” The advice was revelatory: articulating a clear connection between her musical and her social-activist endeavors. (As a teenager, Chase was involved in numerous causes, including LGBT advocacy and immigrant rights.) It also showed her how much she could learn from her peers. This “life-changing, heart-

Chase delights in works that require her to act, vocalize, and otherwise heighten the drama of a performance.

expanding moment,” she recalls, catalyzed an enduring commitment to a musical practice that rejects hierarchy for its own sake, fosters self-direction, and emphasizes the social significance of artistic work.

At Harvard, Chase cultivates an environment where peer-to-peer learning thrives. In “The 21st-Century Ensemble Workshop,” for instance, each class meeting begins and ends with collective music-making. All of her classes culminate in concerts, and students are responsible for each element, from concept to publicity to the performance itself. Prior musical training is not required. “I actually find it incredibly liberating to work with people who are coming at the practice of music from so many different angles,” she remarks. “What I’m able to do is to open more pathways for people to think of themselves as artists, whether that translates into a professional manifestation or...just a more fulfilling life.”

Historically, the University’s institutional

O P E N B O O K

Tyrant Tales

into *Wrongdoing*,” September-October 2017, page 60) comes a study of how the Bard portrayed the powerful. From chapter one of his new book, *Tyrant* (W.W. Norton, \$21.95):

From the early 1590s, toward the beginning of his career, all the way through to its end, Shakespeare grappled again and again with a deeply unsettling question: how is it possible for a whole country to fall into the hands of a tyrant?

“A king rules over willing subjects,” wrote the influential sixteenth-century Scottish scholar George Buchanan, “a tyrant over unwilling.” The institutions of a free society are designed to ward off those who would govern, as Buchanan put it, “not for their country but for themselves, who take account not of the public interest but of their own pleasure.” Under what circumstances, Shakespeare asked himself, do such cherished institutions, seemingly deep-rooted and impregnable, suddenly prove fragile? Why do large numbers of people knowingly accept being lied to? How does a figure like Richard III or Macbeth ascend to the throne?

Such a disaster, Shakespeare suggested, could not happen without widespread complicity. His plays probe the psychological mechanisms that lead a nation to abandon its ideals and even its self-interest. Why would anyone, he asked himself, be drawn to a leader manifestly unsuited to govern, someone dangerously impulsive or viciously conniving or indifferent to the truth? Why, in some circumstances, does evidence of mendacity, crudeness, or cruelty serve not as a fatal disadvantage but as an allure, attracting ardent follow-

Can high-level literary criticism be, you know, relevant? Count on Cogan University Professor Stephen Greenblatt, the formidable Shakespeare scholar, to enter the fray. Close on the heels of his volume about the Adam and Eve myth (see “Always Leaning



Richard III

ers? Why do otherwise proud and self-respecting people submit to the sheer effrontery of the tyrant, his sense that he can get away with saying and doing anything he likes, his spectacular indecency?

Shakespeare repeatedly depicted the tragic cost of this submission—the moral corruption, the massive waste of treasure, the loss of life—and the desperate, painful, heroic measures required to return a damaged nation to some modicum of health. Is there, the plays ask, any way to stop the slide toward lawless and arbitrary rule before it is too late, any effective means to prevent the civil catastrophe that tyranny invariably provokes?

environment has had little in common with that of an artist-led collective, which has sparked what Chase calls a “productive and wonderful” tension with her ideas. At the same time, her appointment contributes to a major shift within the music department

itself, which in recent years has fundamentally rethought its mission and last year overhauled its undergraduate curriculum. The former system effectively privileged students with prior training in the classical tradition, but the new curriculum is designed

to appeal to students with diverse musical backgrounds and aspirations. Requirements for concentrators, previously anchored in theory and Western music history, have become significantly more flexible. And in a department that previously offered few performance-focused courses, Chase is among a newly arrived cluster of eminent faculty performers, including pianist and composer Vijay Iyer (Harvard Portrait, March-April 2015, page 23), saxophonist Yosvany Terry

(Harvard Portrait, January-February 2016, page 25), and vocalist and bassist Esperanza Spalding. Significantly, none of these performers—including Chase—is a Western canon traditionalist; both their substantive expertise and their methods offer the department something new. For Chase, this shift is fundamentally about “embracing the practice and not just the scholarship around the practice.” In the concert hall and in the classroom, she is equally attuned to “the art

of doing, and also the play of doing and the rigor of doing,” she explains. “I think about those three things—the art, the play, and the rigor—as inseparable.”

The relationships among aesthetic experimentalism, music pedagogy, and social change can be tricky to pin down. Assertions of music’s transformative potential sometimes have a quixotic ring. But Chase’s practice and her department’s paradigm shift reflect a broader rethinking of what it means to

Off the Shelf

Recent books with Harvard connections

The Efficiency Paradox: What Big Data Can’t Do, by Edward Tenner, JF ’72 (Knopf, \$27.95). The author, a longtime contributor to these pages and now an independent scholar associated with the Smithsonian and Rutgers, reminds those agog about algorithms, AI, etc., that efficiency is “wonderful, until it isn’t.” Carrying the mania too far backfires (“even an excess of water can be lethal”), especially if good old-fashioned human judgment is overshadowed.

Metamorphosis: How to Transform Punishment in America, by Robert A. Ferguson ’64, J.D. ’68, Ph.D. ’74 (Yale, \$35). The late, multi-talented Woodberry

professor of law, literature, and criticism at Columbia looked beyond changes in sentencing, solitary confinement, and more to challenge the entire basis of the U.S. penal system. The argument seeks to pivot from retribution and humiliation toward reform and change—hence the resonant title, from Ovid.

When-government-worked department: **The Fears of the Rich, The Needs of the Poor: My Years at the CDC**, by William H. Foege, M.P.H. ’65, S.D. ’97 (Johns Hopkins, \$24.95 paper). Narratives about public health refracted through the Centers for Disease Control, by its former director (who is not stained, like a recent successor, by trading tobacco stocks). In **A Blueprint for War: FDR and the Hundred Days that Mobilized America**, by Susan Dunn, Ph.D. ’73 (Yale, \$27.50), the Massachusetts professor of humanities at Williams recounts how a masterly lead-

er rallied the nation for strategic leadership of a world threatened by catastrophic war—without engaging in a single Twitter contest with the fascist opposition.

Not Enough: Human Rights in an Unequal World, by Samuel Moyn, J.D. ’01 (Harvard, \$29.95). The author, professor of law and of history at Yale (and previously at Harvard), traces the origins of the notion of human rights—and its simultaneous decoupling from socioeconomic justice and equality in an age of ascendent neoliberal capitalism. An important argument about how “Human rights became our highest ideals only as material hierarchy... worsened”—an “immense reversal” in “an unequal world.”

Beethoven’s Symphony No. 9, by Alexander Rehding, Peabody professor of music (Oxford, \$14.95 paper). Forget the sedate title. This reinterpretation for a new millennium takes off from Norwegian conceptual artist Leif Inge (who knew?) and his *9 Beet Stretch*, and includes photos, inter alia, of flash mobs doing their thing.

From the wards: **You Can Stop Humming Now**, by Daniela J. Lamas ’03 (Little, Brown, \$28). Exceptionally humane, and well-crafted, essays by an instructor in medicine and critical-care doctor at Brigham and Women’s Hospital—a medical reporter before training for her current career—who recounts how it feels when, for instance, “my patient told me that he was done” and set a course to die peacefully at home. In **Indefinite Postponement** (Pressed Wafer, \$15, paper), psychiatrist John P. Williams ’90 presents,

Battle hymn: surmounting the Berlin Wall, November 10, 1989, to the tune of “Ode to Joy,” a setting Beethoven scarcely imagined



PETER KNEFEL/AP IMAGES

study music at Harvard, who can do so, and why it matters. From this perspective, music is not only a potential resource for social change, but a model of social relationships.

This idea is perhaps more easily experienced than explained. On a chilly evening in early spring, the organizers of the September protest held a concert in Memorial Church. Part of the DACA Seminar, an event series convened to educate the University community about U.S. immigration policy,

the concert was intended as a celebration of solidarity after a day of workshops and talks. Chase's contribution included a brief live performance, followed by a 2016 composition by Iyer called *Flute Goals: Five Empty Chambers*. The piece upended the expectation that the soloist is the primary focus of a solo performance. In a subtly symbolic inversion of the composer-performer relationship, Iyer created the piece using an array of improvised sounds that Chase pre-

recorded on five flutes. Uncanny and riveting, these sounds careened, collided, and whirled with propulsive energy. Chase introduced the piece from the stage, but as the recording played, she went to join Iyer in a pew. Most people listened quietly, while a few children chattered, and conversations floated in from the entryway; everything became part of the sonic mix.

This was music that noisily forged togetherness.

with commentary, the anonymous suicide-recovery diary of one of his adolescent patients. Haunting reading, published in the hope of heading off other suicides.

In **Hype**, by Nina Shapiro, M.D. '91, with Kristin Loberg (St. Martin's, \$26.99), a UCLA surgeon draws on her training and her interactions with anxious patients ("informed" by the Internet and media accounts) to sort out the medical wheat from the considerable chaff among competing claims, miracle cures, and just plain rotten advice. From within biomedical science, **Cancerland: A Medical Memoir**, by David Scadden, Jordan professor of medicine and professor of stem cell and regenerative biology, with Michael D'Antonio (Thomas Dunne/St. Martin's, \$27.99), recounts doing the work of discovery during much of the era of the "war on cancer." For a current battlefield report, see "Targeting Cancer," page 35.

Universe in Creation, by Roy R. Gould, associate of the Harvard College Observatory (Harvard, \$24.95). A sweeping overview of how the universe came to be the way it is, by a gifted expositor. For example, recalling a childhood brush with morning glories, he writes, "We can at least fathom how a seed might create a living sculpture of flowers and leaves" (cells, DNA). But how did "the infant universe," devoid of experience and structure, a "jumble of disorder and chaos," come to organize and array itself—and create us?

Urban prospects. In **Uneasy Peace** (W.W. Norton, \$26.95), Patrick Sharkey, Ph.D. '07, professor and chair of sociology at New York University, thoroughly deconstructs the real causes of "great crime decline"—the transformation that, bloody-shirt political rhetoric to the contrary, has

made cities so much safer and magnetic to so many—and dispels other myths about policing, its benefits (most often to the poor who are crime victims), and more. A landmark analysis. **Building and Dwelling**, by Richard Sennett, Ph.D. '69 (Farrar, Straus and Giroux, \$30), in a way sums up a lifetime of studying and thinking about cities—and again, why the great ones are great, in this era of humans' most intense urbanization. The author now professes at the London School of Economics.

You Don't Own Me, by Orly Lobel, S.J.D. '06 (W.W. Norton, \$27.95). Intellectual-property law made vivid, via an engaging narrative about the litigation surrounding, of all "people," Barbie.

Calm Clarity, by Due Quach '00 (Tarcher, \$17 paper). A recovered management consultant and private-equity investor applies her business savvy to neuroscientifically informed ways to "rewire your brain for greater wisdom, fulfillment, and joy" (to adapt the subtitle), which she helps effect through a social enterprise with the same name as her book. On a less organizational basis, **The Two Most Important Days**, by Sanjiv Chopra, professor of medicine, and Gina Vild, associate dean for communications and external relations, Harvard Medical School (Thomas Dunne Books, \$24.99), is a book on inspiration and inspired living (subtitled "How to Find Your Purpose—and Live a Happier, Healthier Life")—a contribution to a popular genre by an atypical pair of authors.

A More Beautiful and Terrible History, by Jeanne Theoharis '91 (Beacon Press, \$27.95). A passionate reinterpretation of civil-rights history ("the endless misuses of Rosa Parks" jumps off the page),

An unheralded role for Barbie, in intellectual-property litigation

the "uses and misuses" to which it is put, by a distinguished professor of political science at Brooklyn College-CUNY. **May We Forever Stand**, by Imani Perry, J.D.-Ph.D. '00 (University of North Carolina, \$26), drills down deep into "Lift Every Voice and Sing," the de facto black national anthem—ignorance of which in other quarters tells something about divisions among Americans. The author is Hughes-Rogers professor of African American studies at Princeton.

Law and Legitimacy in the Supreme Court, by Richard H. Fallon Jr., Story professor of law (Harvard, \$39.95). An argument for good faith in constitutional interpretation, proceeding from elements that underlie "originalism" to the rationale for justices making refinements arising from the challenges presented by new cases. This work of jurisprudence and legal philosophy resonates in the era of highly politicized rulings and weaponized confirmation processes.

The Transformation of Title IX: Regulating Gender Equality in Education, by R. Shep Melnick '73, Ph.D. '80 (Brookings, \$35.99 paper). How did a law aimed at gaining girls and women equal access to sports (and other programs) become the determinant of sexual-harassment and transgender-rights programs? The author, a Boston College political scientist, analyzes, and critiques, the evolution of "equal educational opportunity" against a backdrop of heated culture wars.



ISTOCK

The Academic Heights

Hanna Holborn Gray on university leadership

ANY Massachusetts Hall presidential transition—like the current one from Drew Gilpin Faust to Lawrence S. Bacow (see page 14)—naturally brings to mind questions about University leadership: who is best equipped to chart Harvard's course, in the prevailing circumstances, to the age that is waiting before? So the arrival of *An Academic Life* is fortuitous and timely. The memoir of Hanna Holborn Gray extends from her youth and development as a scholar of Renaissance intellectual history trained at Harvard (Ph.D. '57), through her seriatim roles as dean of the College of Arts and Sciences at Northwestern, Yale Corporation fellow/provost/interim president, and University of Chicago president.

Those who have observed segments, or

all, of Gray's leaderly career from afar will recognize her simultaneously plain-spoken and formidable manner in her title. (Further insight comes from the austere citation accompanying her 1995 Harvard honorary degree: "Powerful in judgment, humane in values, profound in learning, incisive in wit. She has lifted American education ever higher.") She has chosen to construct a record that focuses almost exclusively on her life in and of academe—and to reveal little about her adult, inner life otherwise, apart from a couple of affectionate sections about her late husband, Charles Gray '49, JF '56, Ph.D. '56, himself a scholar of legal history.

ONE WAY she lifted higher education ever higher was by forcing its eyes and doors open—the latter, literally. In an important

respect, *An Academic Life* is the tale of an outsider, told after she has been admitted to formerly forbidden precincts. Women (and men) in the academy now would do well to remember the conditions under which Gray and her few fellow peers labored. To focus only on the Cambridge years of her memoir, the Radcliffe where she enrolled as a graduate student in 1951 "while separate...was not equal." Indeed, "It was sometimes said that Radcliffe was coeducational and Harvard was not, or, as President [James Bryant] Conant remarked, that Harvard was 'coeducational in practice but not in theory.'" The same—great, in other respects—Conant confessed that "when

it comes to the education of the fairer sex, I throw up my hands in complete despair and consternation...it is very much like asking a Christian Scientist to speak at the fiftieth anniversary of a medical school."

The Faculty of Arts and Sciences had one female full professor in 1951, Helen Maud Cam. (Her portrait, hung in University Hall's Faculty Room in 1995, was precedent-setting in the same way; see "First Swallow of Summer," May-June 1995, page 62.) Cam became the first woman to attend Morning Prayers, instituted in 1638, Gray writes, "simply by virtue of going and sitting down in the chapel each day." One conceives of her, and Gray, as daunting—every bit as much as the "very lively group" of political scientists, including Henry Kissinger, Samuel Huntington, and Zbigniew Brzezinski, to whom Gray was introduced by her brother, Fred, concurrently studying at Harvard's school of public administration.

As the first female tutor in history and literature, Gray found that the Signet Society "was reluctantly forced to let me attend the obligatory tutors' lunches....There the waiters, if not the members, made me feel at home." Then again, as an assistant professor of history attending departmental lunches, "Women were not allowed through the front door of the Faculty Club, only through a side door (and not, of course, in the main dining room)." Perhaps channeling her inner Cam, Gray "took to going through the front door" and "the prohibition gradually faded away." She first entered Lamont Library (coeducated in 1967) as a member of the Harvard Corporation.

Was the construction, or at least reinforcement, of a carapace an adaptation to her times? What was lost when women were relegated to the side door—and gained when they pried open the front? And who remains "outside" today?

THE SECOND sterling takeaway from Gray's "academic life" is a crystalline understanding of the academy's essence and role. For her, that likely arose from primal memories and family accounts of her father's crushing experience of the Nazi destruction of the Hochschule für Politik, in Berlin, where he was appointed Carnegie professor of international relations and history in 1931. A

An Academic Life: A Memoir, by Hanna Holborn Gray, Ph.D. '57, LL.D. '95 (Princeton, \$29.95)



Hanna Holborn Gray

SPECIAL COLLECTIONS RESEARCH CENTER, UNIVERSITY OF CHICAGO LIBRARY

private, independent institution, it was politically neutral, diverse in views and party affiliations, and committed to education for citizenship, training for public service, and scholarly research. Within two years, as Hitler ascended, "Students were to play, and were asked by the party to play, a central role in the 'purification' of universities and in the public displays of book burning in 1933." After that April, he—and half the entire Hochschule faculty—emigrated in the wave that brought to the United States, particularly, a formidable generation of German scholars.

It is unsurprising that, embedded in American universities, those emigrant intellectuals and their academic children recoiled from the (leftist) student uprisings in the late 1960s. What is revealing in her narrative is Gray's telling of the University of Chicago's trauma—seemingly decisive in the shaping of her own views. The "nonreappointment" of a female assistant professor prompted a sit-in, complete with a 16-day takeover of the administration building by as many as 400 students, in the winter of the fraught year of 1969. The president, Edward Levi, kept the police off campus, and waited the protest out. Crucially, in Gray's telling:

He made the crisis an occasion to offer a kind of running seminar on the questions of what a university was for, why it mattered, and why the activists' views, demands, and actions threatened its integrity and most important purposes by attempting to make the university an instrument of social and political change, confining the freedom of its members, and promoting an anti-intellectual spirit where the free life of the intellect should be paramount. His eloquent speeches and communications constitute some of the best statements on the fundamental nature and role of universities that I know.

(Coincidentally, Gray chaired a committee to review the contested nonreappointment that ignited the protest, and found that there had been no irregularities. As for the protestors, 81 were suspended and 42 expelled: "Amnesty was not the rule at the University of Chicago as it more commonly was elsewhere.")

On the final page of her memoir, Gray underscores the message. "The belief that universities should be, above all, the homes

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of searching and critical intellectual vigor and thought needs recurrent renewal and reaffirmation,” she writes. “Universities have always been vulnerable to outside influence and to the threat of control and manipulation, and they have been vulnerable, too, to conformities imposed from within.” That, in the abstract, is the essence of the research-university leader’s core responsibility today. And lest anyone forget the stakes:

My parents and their fellow refugees survived the most extreme assault ever launched against universities from a totalitarian regime bent on reconfiguring...universities, and the disciplines they taught and studied, into its own ideological image, distorting their purposes to serve its own ideological ends. The academic refugees had witnessed also the passivity and widespread complicity of the professoriate from which they had been dismissed. These émigrés brought with them to America a faith in the prospects of academic freedom and its goals. They were hopeful about the potential of the still-youthful universities of their new country to

Gray’s intellectual, pointed humor is a reminder of the humanity at the base of a successful leader in the quirky community of scholars.

be freer, more democratic, and more open than the rigid and conservative institutions they had known at home even in better days, and they found those hopes in many ways fulfilled.

THUS HANNA GRAY was annealed into a champion of the academy. But it would be wrong to miss a third theme running through her narrated life, harking back to that citation about her “incisive wit.” She displays throughout the book exactly the kind of intellectual, pointed humor that is a reminder of the humanity within, indeed at the base of, any successful leader—in this case, in the quirky community of scholars.

At her own expense, she recalls a Bryn Mawr professor thus: “Proud of a paper I had written, I looked eagerly for her comments and found only this: ‘I have checked all your footnotes and found them accurate.’ Crushed, I consulted another profes-

sor about what this indicated and was told it was actually a compliment.”

Or this, from Charles Gray’s encounters at MIT, his first professorial home: “After they met in the hall one day, and after some conversation, Mr. [Norbert] Wiener asked Charles, ‘What direction was I coming from when we met?’ Charles pointed out the way. ‘Ah,’ said Mr. Wiener, ‘then I’ve had lunch.’”

Or, from her own Hist and Lit experience, an insight into the relatively callow College denizens of the day, some of whom “actually managed to do almost nothing”: “The orals often provided entertaining moments of student chutzpah. I remember one elegant young man who, when asked his view of the impact of social Darwinism, responded that it was like the vermouth in a very dry martini.”

Or, on the other hand, at the most rarefied level of scholarly attainment: When French medievalist Charles Taylor presented his completed dissertation to Charles Homer Haskins “at the great man’s Widener office on Christmas Eve, Haskins kindly said to him, ‘Very good, Taylor. Why don’t you take tomorrow off?’”

Rewards like these aside, connoisseurs of Harvard gossip will be disappointed by Gray’s discretion in concluding her life essentially at the end of her Chicago presidency, in 1993. That decision necessarily keeps veiled her Corporation service, from 1997 through 2005; she earlier served as an Overseer from 1988 to 1994. (Her reportedly central role in selecting Lawrence H. Summers as president, in 2001, thus remains to be excavated decades hence, given the length of time the governing boards’ records are sealed.)

Nor will readers learn how this intellectual historian came to chair the board of trustees of both the Andrew W. Mellon Foundation, the nation’s leading source of philanthropic support for humanities scholarship, and the Howard Hughes Medical Institute, ditto for biomedical research. That in itself indicates what kind of a leader she became during the course of an academic life—in turn a reflection of the toughness, clarity of vision, and inner humanity that university leadership at its best requires.

—JOHN S. ROSENBERG

Chapter & Verse

Correspondence on not-so-famous lost words

John Endicott asks whether Le Corbusier did in fact declare that “Democracy is a great system, as long as there is a dictator at the top.”

Kit Kennedy hopes someone can place a bleak poem, possibly set during World War I or around 1900, in which the narrator is writing to the woman he loves toward the close of the year. One line, she recalls, runs something like: “My love only to you this late year date.”

“Every time a physician is called a provider...an angel dies” (March-April). Eliot Kieval suggested a June 1999 column by Ellen Goodman containing a variant of the sentence, and Henry Godfrey unearthed a version quoted by Donald M. Berwick, who attributed it to an unnamed surgeon, in a 1997 article.

Neither Goodman nor Berwick knew of a more specific citation when queried (and Berwick no longer quite agrees with the sentiment). The nearest answer, from Dan Rosenberg, comes from a 1982 article, “What Is Wrong with the Language of Medicine?” (*New England Journal of Medicine*, 306:863f), by the late health economist Rashi Fein, who wrote: “Several years ago a physician friend told me that he had a James Barrie concept of what was causing the loss of humaneness or humanity in medicine. In his view, whenever a physician or a nurse was called a ‘provider’ and whenever a patient was called a ‘consumer,’ one more angel died.”

Send inquiries and answers to “Chapter and Verse,” *Harvard Magazine*, 7 Ware Street, Cambridge 02138 or chapterand-verse@harvardmag.com.

Sellers at the John Brown Fort, at Harpers Ferry National Historical Park



ALUMNI

Harvesting History

William Sellers aims to expose a new generation to America's origins.

by NELL PORTER BROWN

WALKING THROUGH Harpers Ferry, West Virginia, William W. Sellers '90 stops at the brick guard house where abolitionist John Brown was captured in 1859. Brown had raided the federal armory there, intending to arm local slaves and lead an insurrection. He failed: seven people were killed, others injured, and he was hanged for treason and murder. But historians agree the event and Brown's divisive impact helped tip the nation into a civil war.

"Was he a terrorist, or was he a revolutionary fighting for what's good and right?" asks Sellers, president of a national heritage organization that includes Harpers Ferry and hundreds of other sites seminal to the formation of the United States. "In many ways Brown was both—and more," he adds. "Even to contemporaries, he was a martyr, an extremist, a hero, a lawbreaker, or a saint....It's a very American story."

And it's among the complex topics he expects high-school students to take up dur-

ing his inaugural National History Academy this summer. Sellers developed the five-week residential program to address what he terms the current "crisis in historical and civic literacy" and to provide future leaders with a "multidimensional, contextual understanding of history and its figures."

The 100 academy students, chosen from top-performing candidates across the country, will learn American history, from the Native American settlement era through the civil-rights movement, with an emphasis on significant events and figures between 1765 and 1865. The group will alternate between classroom studies and visits to 42 sites within the Journey Through Hallowed Ground National Heritage Area. The 180-mile corridor west of Washington, D.C., designated by Congress in 2008, runs from Gettysburg, Pennsylvania, and Harpers Ferry south to Charlottesville and Monticello, in Virginia, and east to the Manassas National Battlefield Park. It counts more than a thousand historic places—including nine presiden-

tial homes and sites and 18 national and state parks—along with the "symbolic and spiritual heart of the Appalachian Trail," according to Sellers. A lawyer and history-lover, he joined the organization in 2015 after five years as president of Wentworth Military Academy, founded by his great-great-grandfather in Lexington, Missouri.

"Everyone I've talked to" about the academy thinks it is "exactly the right kind of program at exactly the right time," he says. "Half the adults in this country can't name the

three branches of government." In their first week, during a visit to the National Archives, students will hear about the Magna Carta and the U.S. Charters of Freedom (the Declaration of Independence, the U.S. Constitution, and the Bill of Rights) from private-equity executive, philanthropist, and history advocate David M. Rubenstein. (The Harvard Corporation member owns the copy of the Magna Carta on display at the Archives.) They'll also tour the Smithsonian's National Museum of American History with its former director, Brent D. Glass, a Sellers friend who is a primary adviser on the academy project.

Teachers of the academy's "place-based, experiential" learning program will use the case-method "History of American Democracy" curriculum created by Cherington professor of business administration David A. Moss (see Open Book, January-February 2017, page 63). Moss himself will teach the first case, on James Madison, the making of the U.S. Constitution (1787) and the 'Federal Negative,' (a proposal, supported by Madison, to enable Congress to veto laws passed by state legislatures) on site at Montpelier, Madison's home in Orange, Virginia.

Sellers concentrated in history at Harvard and last winter sat in on Moss's new training sessions for high-school teachers, which featured the Madison case. "You take this very discrete issue, but you have to examine the context surrounding it," Sellers explains. "Under the Articles of Confederation, many states placed tariffs on neigh-



PHILIP SCALIA/ALAMY STOCK PHOTO

Thomas Jefferson's Monticello, a site within *The Journey Through Hallowed Ground*

boring states, were cutting their own trade deals with European countries and, because each state printed its own money, Rhode Island was doing it around the clock and its paper dollar was only worth 16 cents in gold. The federal government had no taxing authority, and only half the states were contributing to support the central government. Inflation was rampant. So, basically four years after the Treaty of Paris, the entire country was falling apart before it even was firmly established."

The 1787 debates boiled down to states' rights versus a strong federal government: "The same things we're dealing with now," Sellers continues. "There are always historic prologues to things we are dealing with now. But people don't look back enough to how the country started."

IN DEVELOPING the academy, Sellers is also motivated by the "assault on facts" and "willful ignorance" pervading the current political climate. And he's attuned to the often-facile dismissal of historic figures, an issue he's also tackling as a father.

During a recent trip to the National Portrait Gallery with his 13-year-old daughter Elizabeth, Sellers asked her who the worst president has been. She named Andrew Jackson, because of the Trail of Tears. "Well, Jackson was responsible for what he did in the 1830s," he says he told her, "but we had governmental policies that harmed the Native Americans from the time of European set-

tlement until well into the twentieth century. You can assign a part of the blame to Jackson, but his actions were part of a larger, more complex story. You have to look at the greater context." Then he laughs. "Elizabeth still thinks Jackson is our worst president!"

Interpretations of historic figures do shift with the times: Sellers recalls reading Arthur Schlesinger's *The Age of Jackson* in college—"and he was a New Deal hero for the Democratic Party." Continuing reexaminations can be healthy and constructive, he certainly agrees, yet he's also troubled by what he sees as people's inability or unwillingness to explore the whole picture.

Sellers is frustrated, too, by young people, and even many adults, who balk at learning history, and ask, "Why is it relevant to me?"

That question never occurred to him at his daughter's age—or since. He grew up in an 1830s house on the Wentworth Military Academy campus and remembers digging in the backyard and roaming through abandoned homes looking for artifacts. In 1976, at age eight, he met President Gerald Ford at a campaign stop, and began reading the newspapers to follow the race. Soon, he was also consulting a stack of *World Book* encyclopedia volumes by his bed. "It was the '70s," he says, "so there was Watergate, and we were exploring race relations in the country, and I was trying to figure out what had happened in the last 20 years to make these events occur, and then what happened 50 years before that led to those events, and then I thought, 'I need to go back to the start and work forward.'"

At Wentworth, he was first in his class all four years, captained the football, basketball, and track teams, and was editor of the school newspaper. He chose Harvard (over Yale, where his father and brothers went), and was soon soaking up history lectures by David Herbert Donald, Alan Brinkley, and Bernard Bailyn, who taught a course Sellers still finds particularly inspiring: "History 1610: The Constitution of the United States: Origins, Formation, Intention, and Character." Students read Montesquieu and John Locke, and studied thinkers dating to the ancient Greeks. It was akin to "going to Monticello or Montpelier and looking into the libraries of Jefferson and Madison. They were so unbelievably smart," Sellers says. "And then you think of Harry Truman, who never went to college but read voraciously and loved history. That's where he got his education."

A resident of Eliot House (where he met his wife, Lori J. Curcio '89), Sellers was a gregarious undergraduate with a wide range of friends. He was proud to make the football team, as much to play as "because I love the history of football, too." But he was far from a star. "Coach Leo Fanning once told me, 'Billy, you got all the desire and determination, if you only had the talent, you'd be at Notre Dame,' which he meant as a compliment," Sellers says, laughing.

After graduating, he taught and coached at Wentworth, and in 1992 ran the re-election campaign for then-congressman Ike Skelton, a Wentworth alumnus and family friend. He earned a J.D. from the University of Missouri Law School in 1997—Curcio, now a practicing attorney, had earned hers from the University of Virginia in 1996—and they married a year later on Boston's North Shore. The church was topped with a bell cast by Paul Revere, Sellers notes, and they held the reception at Woodman's, a beloved fried-seafood joint in Essex.

Sellers's passion for regionalism and the vernacular also extends to churches, graveyards, and "libraries that look like libraries and fire stations that look like fire stations," he says. On family trips, he can't resist stopping to pose for photos in front of vintage gas stations: "They're eccentric and fun. They tell the story of American travel in the early part of the century that we have lost in the age of the big chains that make much of our landscape appear the same whether you're in the Northeast or the Midwest."

The couple settled in Kansas City, Mis-

souri, where Sellers practiced law for nearly a decade, focusing on complex litigation and class-action suits. But he was restless, finding the work too sedentary and socially isolating. By 2008 Wentworth, where he served on the board of trustees, was ailing financially. Because of the family legacy, he stepped up. “I’d rather be sitting in the chair when it does close,” he recalls thinking, “but I also thought I could get out and raise more money and recruit more kids to get it to turn around.”

He moved his family into his own childhood home, and spent the next five years stabilizing the institution: expanding the affiliated community college, adding new degree programs like homeland security, reintroducing athletics, and recruiting more foreign students. The reprieve was temporary, though; Wentworth closed last May. That was painful, but his service had opened up a new professional path in strategic development, fundraising, and education. He worked for a nonprofit consulting firm in Kansas City between 2013 and 2015 before taking on the challenge of reorganizing and further developing the Journey Through Hallowed Ground National Heritage Area.

THE AREA includes affluent Loudoun County—the wealthiest in the country, anchored by Leesburg, Virginia, only about 40 miles from the National Mall. Driving from Harpers Ferry to Leesburg, near the organization’s headquarters, Sellers points out horse farms and old stone barns and estates, rolling hills, and croplands, along with the commercial wineries that have grown up during the last 15 years. “A lot of this area is pristine,” he explains, with large tracts under conservation easements. Scenic byway Route 15 is an unofficial demarcation line in the county between the more rural landscape and the sprawl encroaching from Washington, D.C.

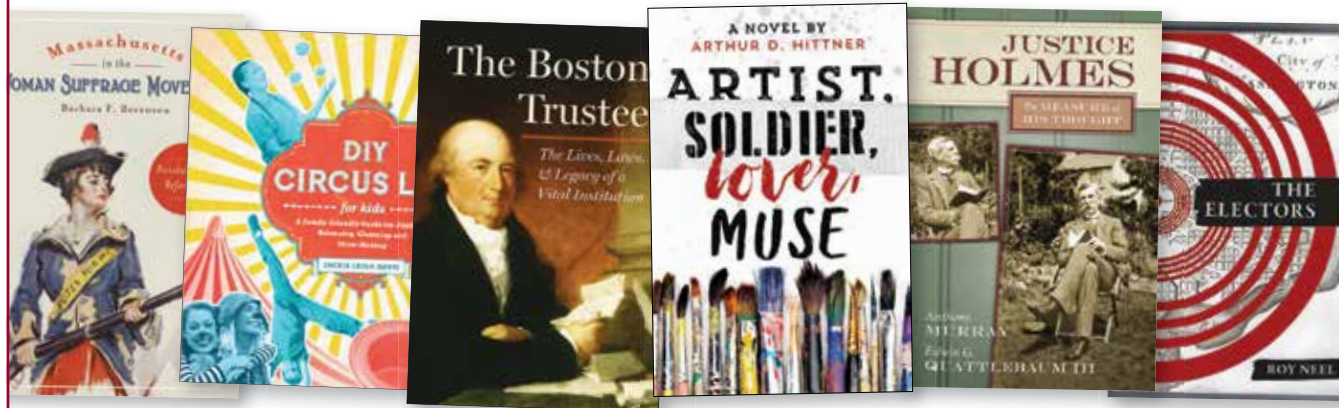
The preservation movement coalesced quickly in 1993 when the Walt Disney Company announced its plan to build an American history-themed amusement park about



Major General John Buford is honored near Gettysburg National Military Park.

five miles from the Manassas battlefield. “People thought, ‘Why do we need all this fake history right in the middle of all this *real* history?’” says Sellers—and were justifiably concerned about the impact of associated commercial development. The theme park was canceled, but the threat helped push lawmakers to designate the heritage area, which is a nonprofit private-public partnership: about \$300,000 of its \$1.5-million budget comes from the National Park

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The fight to conserve open space and cultural sites, to limit growth—and for careful, *controlled* growth—continues, however, as the region's population rises. Sellers speaks often on issues like proposed housing developments and highway expansions. "The seventh-generation Virginians know how important this place is," he says. "The question is, how do we ensure that the thou-

sands of people who have moved into this area in recent decades know why this is a cultural landscape worthy of preservation? Too many people don't know about what happened here."

Or about the history still unfolding. Two days before the 2016 presidential election, Sellers and his family—"as a sort of sociological observation of the Trump phenomenon"—went to a local fairground where

Donald Trump was expected to speak at a midnight rally. "You couldn't even get into the arena. It was packed with crowds and lines of people waiting to see him," he reports. "There was an immigrant couple behind us and, and we overheard their conversations. They went through the formal immigration and naturalization process and were saying, 'We support Trump because he supports what we did, and those who don't

Overseer and HAA Director Candidates

THIS SPRING, alumni can vote for new Harvard Overseers and Harvard Alumni Association (HAA) elected directors. Ballots (mailed out by April 1) must be received at the indicated address by 5:00 P.M. Eastern Standard Time on May 15 to be counted. All holders of Harvard degrees, except Corporation members and officers of instruction and government, are entitled to vote for Overseer candidates. The election for HAA directors is open to all Harvard degree-holders.

Candidates for Overseer may also be nominated by petition. Eligible voters may go to www.harvard.edu/board-election for more information. (The deadline for all petitions was February 1.)

The HAA Nominating Committee has proposed the following candidates in 2018.

For Overseer (six-year term):

Geraldine Acuña-Sunshine '92, M.P.P. '96, Manila, Republic of the Philippines, and Boston. President, Sunshine Care

Foundation for Neurological Care and Research.

Philip Hart Cullom, M.B.A. '88, Gaithersburg, Maryland. Vice Admiral (retired), U.S. Navy.

Catherine A. Gellert '93, New York City. Director, Windcrest Partners.

Meredith L. "Max" Hodges '03, M.B.A. '10, Boston. Executive director, Boston Ballet.

Marilyn Holifield, J.D. '72. Miami. Partner, Holland & Knight LLP.

John C. Lechleiter, A.M. '80, Ph.D. '80, Indianapolis. Retired president, CEO, and chairman, Eli Lilly and Company.

Diego A. Rodriguez, M.B.A. '01, Palo Alto. Executive vice president, chief product and design officer, Intuit Inc.

Yvette Roubideaux '85, M.D. '89, M.P.H. '97, Washington, D.C. Director, Policy Research Center, National Congress of American Indians.

For elected director (three-year term):

Eric R. Calderon, M.B.A. '13, Houston. President and CEO, L-K Industries.

Collette Creppell '82, M.Arch. '90, Providence and New Orleans.

University architect, Brown University.

Sid Espinosa, M.P.P. '00, Palo Alto. Director of philanthropy and civic engagement, Microsoft.

Natosha Reid Rice '93, J.D. '97, Atlanta. Associate general counsel, real estate and finance, Habitat for Humanity International; associate pastor, historic Ebenezer Baptist Church.

Krishnan Namboodiri Subrahmanian '03, Minneapolis. Attending

pediatrician, Hennepin County Medical Center and the University of Minnesota; maternal child health specialist, Partners In Health (COPE Program).

Rita Pang '96, Hong Kong. Co-founder and counsel, Bridgeway Prime Fund Management Ltd.

Matthew Temple '86, Los Angeles. Director, alumni career and professional development, Kellogg School of Management, Northwestern University.

Bella T. Wong '82, Ed.M. '91, Weston, Massachusetts. Superintendent/Principal, Lincoln-Sudbury Regional High School.

Rashid Muhammed Yasin, S.B. '12, Nashville. Ph.D. student, Vanderbilt University.



Eric R. Calderon



Collette Creppell



Sid Espinosa



Natosha Reid Rice



Krishnan Namboodiri Subrahmanian



Rita Pang



Matthew Temple



Bella T. Wong



Rashid Muhammed Yasin



Geraldine Acuña-Sunshine



Philip Hart Cullom



Catherine A. Gellert



Meredith L. Hodges



Marilyn Holifield



John C. Lechleiter



Diego A. Rodriguez



Yvette Roubideaux



Manassas National Battlefield Park

follow those rules don't belong here.' I found that viewpoint informative and understood that perspective. But then you saw little kids starting the 'Build the wall' and 'Lock her up' chants, and adults thinking it was funny. It was disturbing." Then, that January, he and his daughter were among the throngs in D.C. for the inauguration, and then for the next day's Women's March. "Those experiences gave my daughter especially a real lesson of our democracy in action."

Sellers, who says he grew up a "Harry Truman Missouri Democrat," now finds himself at an unusual cultural and political intersection. He has friends and contacts through Wentworth, "a lot of whom are very much on the Trump side, and I've got my Harvard friends who are majority anti-Trump. I'm a social liberal and a fiscal conservative who grew up at a military school," he says. "That background gives me insight into what is going on in the country. I hate the fact that there is no longer an ideological overlap between the parties, that each side has created echo chambers and we are not really talking to one another today if we differ politically."

Among his friends is Roy Blunt, a fellow trustee of the State Historical Society of Missouri and the Republican senator who chaired the Trump inauguration. "He gave an excellent speech about how inaugurations are not celebrations of victory, they are celebrations of democracy and show the peaceful transfer of power. It was well-balanced, and I know he loves history," Sellers says. "But a democracy is a fragile thing and we have to stay vigilant and really understand the foundations of our government to protect it. History education is essential. And our country's history—even with all its warts and flaws—is inspiring," he adds, holding out his palms, almost wondering if it's too corny to say what he feels: "I love the United States." □

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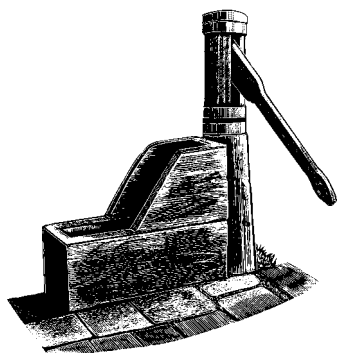
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A Chaucer Tale



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

YEARS AGO, if memory serves, a *New Yorker* newsbreak (those column-ending items harvested from other media) captured this community's braininess by relating one side of a telephone conversation overheard in the Radcliffe registrar's office: "No, that's 'D,' as in Dostoevsky." *Plus ça change*...Primus recently called at Widener's circulation desk to collect some requested volumes. The staff member who fetched the stuff was wearing a lurid Boston Celtics jersey; Primus complimented her; she replied (the lads were playing in London that week), "I heard there's a story about the team in today's *Guardian*."



THE LIBERAL ARTS' VALUE. The Memorial Minute on the late Philip A. Kuhn, Higginson professor of history and of East Asian languages and civilizations, presented to the Faculty of Arts and Sciences on February 6, strongly connected seemingly obscure scholarly discoveries with matters of broad, worldly moment. Thus, as Kuhn worked "to help students interpret seemingly incomprehensible texts," he told them, "There are lies, there are damn lies, and then there are documents" from which truths emerge. In the case of his most popular book, *Soulstealers*, "based on a case of supposed witchcraft" in Qing China in the mid 1700s, Kuhn re-

counted the tale of a suspicious court, "a telltale example of imperial overreach and insecurity," mass hysteria, and the death of many innocents in "the mystical madness" of the time—because, as he wrote, "the empowerment of ordinary people remains, even now, an unmet promise."



CHAUCEER OVER COFFEE. For anyone who forgets, or is too young to remember, how differently the genders were treated not so long ago, this vivid note, from a lovely obituary of Radcliffe board chair Amey Amory DeFriez '49, crafted by Bryan Marquard and published in *The Boston Globe* on January 15:

"Two of her brothers were at Harvard, and she attended Radcliffe when some advanced classes had become coed.

At times, however, the class material was different for courses segregated by gender. Mrs. DeFriez and one of her brothers each took a Chaucer class from the same professor.

'At 10 A.M. I attended the expurgated version. My brother at 9 had heard the original with the salacious details,' she noted. 'Our 11 A.M. coffee gave us the chance to compare.'"



PANAMERA POPULISM? At a populist moment in American discourse, one pauses to wonder at the public response to the February announcement that Porsche has be-

come the Ivy League's official car, entitling it to display its logo at championship tournaments and on Ivy media channels. (It also becomes the sponsor of Penn Athletics.) Given other recent Ivy deals, one imagines fans driving to the Palestra with a Coke in the cupholder, and wearing Nike shoes and Under Armour duds—but is still left, overall, with a rather up-market impression.



SYMBOLISM DEPARTMENT. When the appointment of Drew Faust as Harvard's twenty-eighth president was announced on February 11, 2007, the Barker Center's Thompson Room was set up so that Daniel Chester French's bronze bust of John Harvard, perched on the mantelpiece of the fireplace behind the lectern, peered down on Faust and the other speakers, and a stone VERITAS crest backed up the bust: a symbolic conferral of Crim-son cred at a moment of great change in the University.

Scroll forward to this past February 11. Senior fellow William F. Lee and president-elect Lawrence S. Bacow spoke before a crimson Harvard University backdrop rotated 90 degrees from the fireplace. Behind it (not visible to viewers of the Facebook broadcast) hangs Joseph DeCamp's monumental portrait of Theodore Roosevelt, A.B. 1880, LL.D. 1902, an Overseer from 1895 to 1901 and from 1910 to 1916—and, let it not be forgotten, a Republican U.S. president of different persuasions, from a different era. ~PRIMUS VI



Warm, witty ageless Cambridge widow. Passionate about the arts (collects everything from student works from the School of the Museum of Fine Arts to the art of primitive cultures: African, Oceanic, Precolumbian). Active with museum & university art advisory committees. Architecture buff. Heroes: Mies van der Rohe and Louis Kahn. Career in architectural remodeling & interiors. Loves to travel & is frequently in New York. Politically engaged. Would like to meet an interesting, lively man, 60-75. cammandell@yahoo.com.

Blond, fit, pretty Washington, D.C. lawyer/mediator seeks guy, 65-75, to hang out with in D.C. area. You are good company, thoughtful, funny, warm. booklvrdc@gmail.com.

NYC Attractive, Asian-American, slim, 42 y.o. Ivy League-educated doctor. Divorced with school-aged daughter. Seeking 35-50 y.o. man for LTR. jadesky2015@gmail.com.

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LETTERS

(continued from page 7)

biography is the first full-length study of Locke's life.

CHARLES MOLESWORTH
New York City

Editor's note: We know the book and have it in house. Adam Kirsch proposed his customary essay on Locke's ideas and writing, into which he worked this new, and in his view comprehensive, biography. Neither he nor we conceived of it as a book review per se, so much as an overview of Locke. We did not mean to suggest there was no prior work.

SEARCHING INSIGHTS

READING John Rosenberg's suggestion (7 Ware Street, March-April, page 6) that Harvard institute an exchange program so undergraduates can spend a semester at a "fly-over-state" institution and counterparties come for a Crimson immersion, reminds me of the late Ford professor of social sciences David Riesman, author of *The Lonely Crowd* and unequalled commentator on higher education.

I once asked Riesman, a great supporter of the Peace Corps, what advice he might give to someone aspiring to be a school su-

perintendent or a college president. "Spend time in a different culture," he said. And he went to explain that a different culture might exist in the next street; you didn't have to go to a distant country.

Harvard undergraduates who exchanged with students at a community college might be surprised by the quality of the best teaching at some of those institutions; similarly, faculty and students at Harvard might be gobsmacked by the sheer intelligence of the best community college students.

JONATHAN M. DAUBE, Ed.D. '68
Northampton, Mass.

DIVESTMENT ENCORE

I HOPE THAT Harvard's new leadership will reexamine policies related to its investments in fossil fuels. The old and tired argument that it is enough for the University and its institutional colleagues to "engage" with the industry grows less credible every year. Engaging for what? After so many years, can any results be measured?

The clock has run out on shareholder "engagement" and further talk about fossil fuel investments. At a minimum, it is now time to allow Harvard's publics (constituencies) to be able to look at the University's portfolios

and investment strategies, and at the policies and decisions (apparently non-existent) that conform investment policies with all the other climate commitments of the University.

At a time when Harvard accurately boasts of major commitments to reduce the University's climate footprint—e.g. research, teaching, greater building efficiency, broader community action and more—the University still stubbornly refuses to subject its investment portfolio to the same tests of modernity and climate relevance. Despite a growing and fruitful flow of promising ideas and models, the University's governance boards seem terrified of conventional fossil-fuel wisdom—from what are these people hiding? What world do they think we are entering? President Faust even continues to offer the preposterous argument that Harvard remains so dependent on fossil-fuel use for its operations that it cannot begin to examine the climate impact of its sprawling investment portfolio.

Fortunately, many pathways to new thinking are opening up, and I hope that the new Harvard team challenges the thinking of the Harvard Investment Corporation, and shows a glimmer of the leadership that Harvard used to provide to the rest of the

world. Despite Harvard's dreadful investment performance, the world still watches and cares about what Harvard does.

Such a glimmer would not be hard to find. For example, the world is awash in fossil fuels, with reserves at a level four times higher than can ever be used if the world is to stay below the two-degree warming ceiling increase agreed in Paris; more is being found all the time. Harvard could simply decide that the University was no longer going to invest in the research for or development of further, new resources of fossil fuels (which can never be burned anyway if we hope to maintain the globe as a sustainable habitable environment). Further decisions for squeezing down fossil-fuel use would follow, including but not limited to difficult decisions concerning the extensive travel of its faculty.

While some critics have suggested that even such an evolutionary approach to fossil-fuel use would signal an unwanted "politicization" of University decisions, to the contrary, Harvard would simply be working to right-size all its actions for the challenges of our climate-challenged world.

New leadership always brings new promise. I hope that Harvard's transition will also bring fresh thinking about the responsibilities

that accompany the management of the University's sizable endowment.

TIMOTHY E. WIRTH '61

*Former Harvard Overseer; Chair of University
Committee on the Environment
Former Congressman and Senator, Colorado
President emeritus and vice-chair of
The United Nations Foundation
Washington, D.C.*

ENDOWMENT TAXES

I NOTE A FEW letters about the negative impact on Harvard of the tax on its endowment income in the new tax bill, but I strongly disagree with the idea that all is forgiven as long as the stock market, in part because of this bill, goes up. A writer's statement that Harvard should thus welcome the new tax bill "by embracing the greatest innovation in the history of mankind, namely capitalism itself" (March-April, page 4), is misguided.

Such a one-dimensional notion could be countered with a similarly one-dimensional idea: that capitalism's primary focus on making money may lead to the destruction of the planet as environmentally harmful but profitable enterprises see their stock prices soar.

Capitalism isn't the last word in economic theory, and the stock market isn't the only

relevant consideration when evaluating investments. I'd like to think the future of mankind itself merits at least a little consideration in evaluating the impact of any tax bill.

HUGH R. WINIG '65
Lafayette, Calif.

IT'S (STILL) LATIN TO THEM

"YESTERDAY'S NEWS" reports, under 1963, the large number of A.B.s in the Peace Corps (March-April, page 25). Harvard ceased granting A.B.s in favor of B.A.s in 1961, the bitter year English replaced Latin on our diplomas. "Latin Si, Pusey No!"

ARKIE KOEHL '61
Honolulu

Editor's note: Harvard *did* drop Latin diplomas in 1961, but the degree is still listed as A.B. The 2017 Commencement book states: "Harvard still uses the abbreviations for degrees in the Latin order rather than in the English, for example: A.B., *Artium Baccalaureus*; A.M., *Artium Magister*; and Ph.D., *Philosophiae Doctor*."

MISCLASSIFICATION OF SPELT

"BREW'S CLUES" (March-April, page 50), called spelt gluten-free. Andy Robin, M.B.A. '80, let us know it is not. We regret the error.

TAX REFORM, ROUND ONE

(continued from page 61)

dividual tax considerably more progressive to address current appetites for redistribution. Specifically, a large increase in the earned-income tax credit (EITC) for the lowest-income Americans could be financed by a new top bracket and a repeal of the step-up basis for inherited assets. The EITC provides good work incentives but is currently undersized and an expansion enjoys bipartisan support. Additionally, the population in the top bracket has grown to capture 1.0 percent of taxpayers; historically the top bracket captured 0.1 percent of taxpayers. The growth of the population in the top bracket is problematic, because very different taxpayers are being treated similarly and because such a populous top bracket makes raising the rate on the very wealthy difficult. Creating a new top bracket for taxpayers with income above \$2 million, associated with a higher tax rate, on the other hand, could help finance an expansion of the EITC, as suggested above. And the step-up basis for inherited assets

continues to benefit the wealthiest and provides incentives to hold on to assets all too long—reasons this benefit for the most privileged Americans might productively be subjected to taxation. More ambitiously, the relatively broad support for carbon taxes remains an untapped opportunity.

What comes next? We should expect a significant response from other nations in the form of challenges and policy moves in reaction to the TCJA provisions that have tenuous underpinnings under international agreements and treaties. These legal challenges may be particularly problematic at a time when the U.S. government seems eager to turn its back on international treaties and norms. The consequential moves by the United States to slash the statutory corporate tax rate and try to enact a minimum worldwide tax rate will narrow the corridor of desirable tax rates for other countries to between 13 percent and 21 percent—a dynamic that could lessen the tax competition that was present under the previous regime, in which corporations sought ever-lower tax rates with their overseas income.

Domestically, the TCJA is most reminis-

cent of the 1981 tax cuts. That legislation was followed by a 1982 reform that reversed some of its effects, and additional annual reforms that further patched and improved the initial act. Ultimately, these more minor fixes prompted the transformational reform of 1986—a genuinely comprehensive simplification and rationalization of the tax code.

If the next five years follow suit, the TCJA will have accomplished much by beginning that process. Of course, skeptics will quickly point to the differing political dynamics between and within parties today relative to the 1980s—and to the resulting general inability to pass any meaningful legislation. But those same skeptics, including me, would have argued that the TCJA would never have passed in the first place. Given current fiscal realities, we should all hope that the TCJA represents the beginning of tax reform, rather the end. ▢

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Hard Lives, in Wax

Artifacts of embryology



AT THE 1893 World's Columbian Exposition in Chicago, Adolf Ziegler won a prize for illustrating the theme of "progress" with a "cabinet of wonders" neatly displaying wax models of human embryos alongside those of frogs, chicks, and electric fish. Comparative developmental anatomy was a thrilling field at the time, and modeling a key research method. Scientists would write descriptive articles and make initial wax figures, sending them to "plastic publishers" like Ziegler and his son Friedrich, who manufactured the copies to promote the research. The Zieglers' clientele included competing embryologists Ernst Haeckel and Wilhelm His; it was His's drawings that formed the basis for the Zieglers' best-selling models of human embryos, exported throughout Europe and to the United States.

The set below, purchased by Harvard Medical School professor Charles Sedgwick Minot, is only part of the Warren Anatomical Museum's holdings in embryology. There's also an

edition of *Icones Embryonum Humanorum*, an atlas-sized 1799 tome by Samuel Thomas Soemmerring, whose fine engravings of the first stage of human life depict a leafy pod peeled open to reveal an embryo like a curled-up bean. Later representations look more geological, as in the specimen above by William Overton Heard, using the "stacked-plate method" considered state of the art in the early twentieth century. Then there are the 3-D stereopticon slides—instead of a scenic vista of Niagara Falls, though, viewers gazed upon a photographic image of a developing embryo, looking like an eruption on a primordial planet. Most recent, and most abstract, are the teaching models used in the late twentieth century by embryology professor Elizabeth "Betty" Hay. The biggest and friendliest is two feet wide: a hard plastic dome, with foam parts inside, painted in cheerful primary colors; fuzzy pom-poms dot its surface.

The Ziegler embryos in Harvard's set aren't especially rare, but they have, in a way,

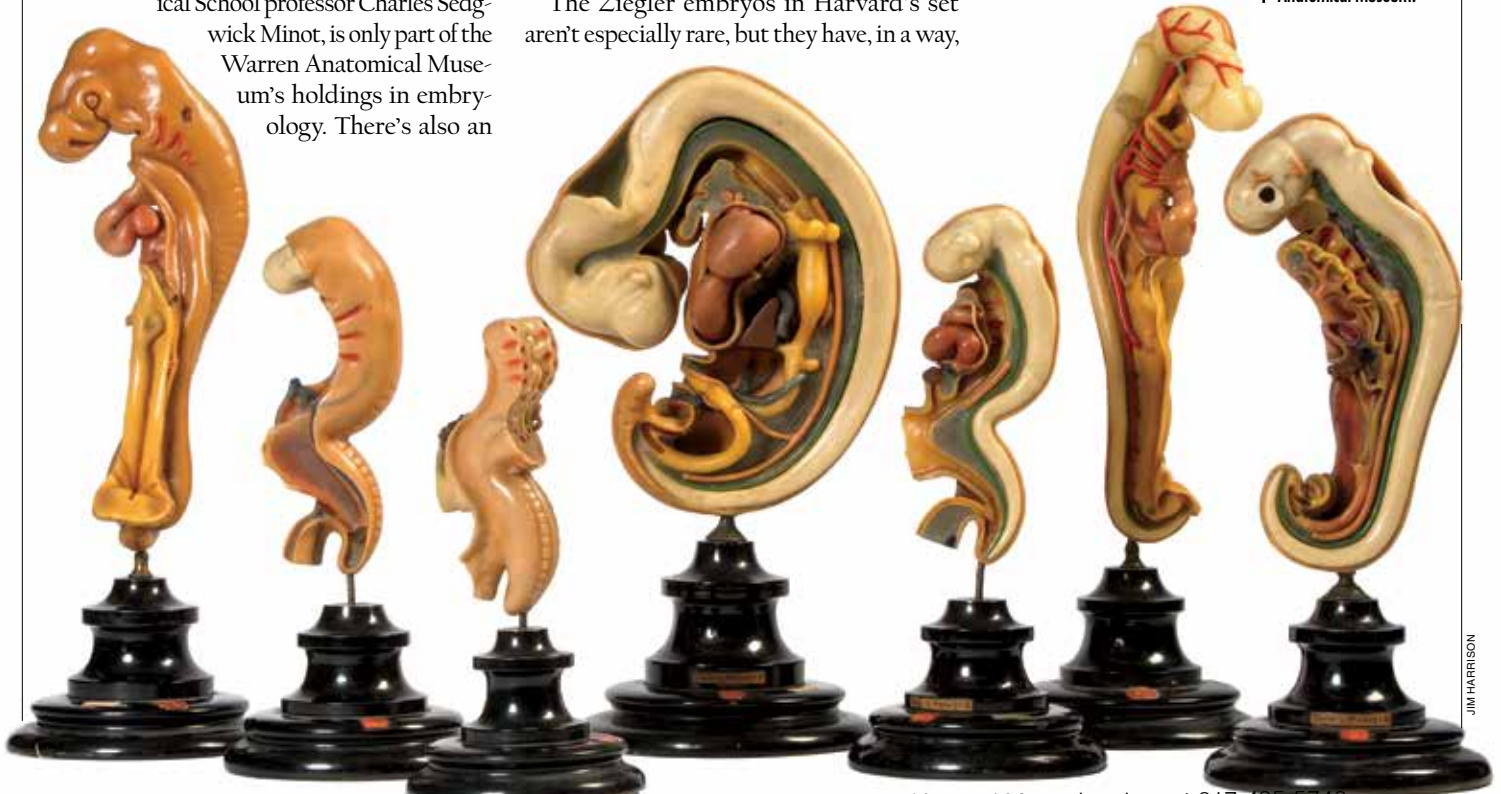
been rendered individual over time. "They've all had hard lives," says Dominic Hall, the museum's curator.

"They've been chipped and used and glued together." Generations of hands have worn features away, or broken them off with rough handling. Across the centuries, models have been thought to "discipline the eye," helping students learn by touch what can't easily be seen: making ideas graspable. But they also obscure some phenomena in favor of others. The Ziegler waxes, for example, lack anatomical context. Notably vague: the womb, or even the umbilical cord. They embody a particular idealized notion of life—free-standing and man-made.

—SOPHIA NGUYEN



Visit harvardmag.com to see more examples from the Warren Anatomical Museum.



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