

Philip Deloria • Ethics and AI • Ulysses S. Grant

# HARVARD

MAGAZINE

JANUARY-FEBRUARY 2019 • \$4.95

## After the ICU

Daniela Lamas, caring for  
the chronically critically ill





# BUILDING A LEGACY: FAMILY OFFICE WEALTH MANAGEMENT

## DESIGN A FAMILY OFFICE THAT PERFORMS—AND SOLVES PROBLEMS

Conflicting family priorities. Intergenerational transfers. Complicated investment decisions. These are among the many factors that make wealth management for high-net-worth families so challenging. **Building a Legacy: Family Office Wealth Management** helps solve for these problems and provides a best-in-class model for governing and structuring the family office. As a participant, you will discover how to design a family office and wealth-management strategy that fulfills the goals, priorities, and principles of families.



**HARVARD  
BUSINESS SCHOOL**

Executive Education

**Building a Legacy: Family Office  
Wealth Management**

23–26 APR 2019

**Learn more** [www.exed.hbs.edu](http://www.exed.hbs.edu) →



# HARVARD

MAGAZINE

## FEATURES

- 38** What It Means to Be OK | *by* LYDIALYLE GIBSON  
ICU doctor and writer Daniela Lamas probes survivors' "chronic critical care"
- 42** Vita: Ulysses S. Grant | *by* ELIZABETH D. SAMET  
Brief life of the image of a hero: 1822-1885
- 44** Artificial Intelligence and Ethics | *by* JONATHAN SHAW  
Human dilemmas at the advent of decision-making machines
- 50** Native Modern | *by* MARINA BOLOTNIKOVA  
Historian Philip J. Deloria on American Indians' past—and their presence in American culture



p. 33

## JOHN HARVARD'S JOURNAL

- 15** Arts in Allston, airing out admissions in the courtroom, an intellectual-property scholar, boosting medical research, another (bigger) budget surplus and endowment developments, the Law School on thin ice, National Academy and other honorands, Radcliffe Institute's worldly engagements, Arts and Sciences' faculty and finances, policing and student conduct—and other news, the design dean's departure, the Undergraduate on who belongs here, and a rousing finish to an entertaining football campaign



p. 76



p. 44

## DEPARTMENTS

- 2** Cambridge 02138 | *Letters from our readers—and a comment on admissions advantages*
- 6** Right Now | *Immigrant inventiveness and entrepreneurship, judging leaders by their face values, medical insights from AIDS-resisters*
- 12A** Harvard<sup>2</sup> | *Winter events, unraveling Incan quipu, the pleasures of Portland, Maine, sliding down snowy hills—on purpose, early-American bedding, and more*
- 56** Montage | *Finger Lakes varietals, the illustrated Genji, installation artist, an actor-focused playwright, iconic empress and acclaimed architect, uses (and abuses) of economic austerity, and more*
- 65** Alumni | *Cellist and teacher Laurence Lesser, and the Crimson congressional cohort*
- 68** The College Pump | *Replanting part of Harvard Yard*
- 76** Treasure | *The mystery of Argus Zion*
- 69** Crimson Classifieds



p. 60

On the cover: Photograph by Stu Rosner

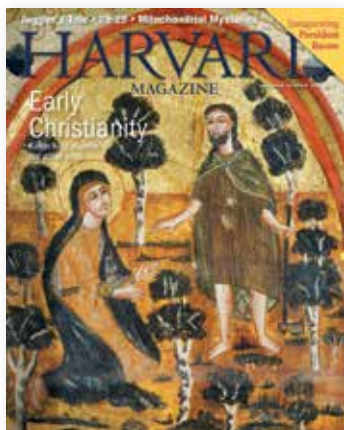
# Cambridge 02138

*Admissions, academic presses, the solicitor general*

## EARLY CHRISTIANITY

AT THE VERY END of the article (“The Bits the Bible Left Out,” November-December 2018, page 40), we read of “what is valuable about so-called heretical texts...[and] their closeness to the beginning...”

But these texts did not have a “closeness to the beginning,” which is precisely why they were rejected by the earliest followers of Jesus. In contrast, the texts that comprise the New Testament were written by the apostles of Jesus or the followers of the apostles. We have copies of these first-century texts dating from the early second century, and by the end of the second century, compilations of the four gospels and of Paul’s letters were in circulation. Later



texts—however sincere or pious—were not included with the canonical writings because their provenance was not assured. While the article leaves the impression that only “heretical” texts were not included, in fact, many early texts that were considered orthodox were also excluded. It was not the content that got a text

excluded, but the lack of a clear connection to the viva voce of the apostles.

The earliest disciples of Jesus were Jews living in Palestine whose neighbors had also heard Jesus teach, seen him perform miracles, and watched as he died in a very public crucifixion. Those who wrote the gospels and letters in such a period would not have manufactured new Jesus stories because of their allegiance to Christ.

The title “apostle” means “one sent with a message”; they were commissioned by Jesus to pass on what they had seen and heard. Moreover, even had they wanted to, they could not have made up new Jesus material because fellow Jews would have known that Jesus had never said or done such things. As the Apostle Paul said to a Roman official, “these things were not done in a corner.”

DR. TODD L. LAKE '82  
Vice president for spiritual development  
Belmont University  
Nashville

WHILE there are many things I disagree with in the article on

## With Our Thanks

WE ARE HONORED to recognize two artists for their outstanding work on readers’ behalf during 2018, and to confer a \$1,000 honorarium on each.

New York-based photographer Robert Adam Mayer is a distinguished and sensitive portraitist—as amply demonstrated anew in his cover and interior images of black-studies scholar Fred Moten, for the January-February issue.



Robert Adam Mayer  
COURTESY OF ROBERT ADAM MAYER



Phil Foster  
COURTESY OF PHIL FOSTER

Phil Foster conceived vivid, compelling illustrations to drive home the importance of the arguments made by business and law professor Mihir A. Desai about the new federal tax law, in the May-June issue.

Our warmest thanks to these superb professionals. ~The Editors

## HARVARD MAGAZINE

EDITOR: John S. Rosenberg

SENIOR EDITOR: Jean Martin

MANAGING EDITOR: Jonathan S. Shaw

ART DIRECTOR: Jennifer Carling

ASSOCIATE EDITORS: Marina N. Bolotnikova, Lydialyle Gibson

DIGITAL MEDIA MANAGER: Oset Babür

ASSISTANT EDITOR/SPECIAL SECTIONS  
MANAGER: Nell Porter Brown

BERTA GREENWALD LEDECKY  
UNDERGRADUATE FELLOWS  
Isa Flores-Jones, Catherine Zhang

### CONTRIBUTING EDITORS

John T. Bethell, Lincoln Caplan,  
Dick Friedman, Adam Goodheart,  
Elizabeth Gudrais, Jim Harrison,  
Courtney Humphries, Christopher S.  
Johnson, Adam Kirsch, Colleen Lannon,  
Spencer Lee Lenfield, Stu Rosner,  
Deborah Smullyan, Mark Steele

### HARVARD MAGAZINE INC.

PRESIDENT: Margaret H. Marshall, Ed.M.  
'69. DIRECTORS: Ann M. Blair '84, Peter K.  
Bol, Scott V. Edwards, Ann Marie Lipinski,  
NF '90, Philip W. Lovejoy, Susan Morris  
Novick '85, John P. Reardon Jr. '60,  
Bryan E. Simmons '83

### BOARD OF INCORPORATORS

This magazine, at first called the *Harvard Bulletin*, was founded in 1898. Its Board of Incorporators was chartered in 1924 and remains active in the magazine's governance. The membership is as follows: Stephen J. Bailey, AMP '94; Jeffrey S. Behrens '89, William I. Bennett '62, M.D. '69; John T. Bethell '54; Peter K. Bol; Fox Butterfield '61, A.M. '64; Sewell Chan '98; Jonathan S. Cohn '91; Philip M. Cronin '53, J.D. '56; James F. Dwinell III '62; Anne Fadiman '74; Benjamin M. Friedman '66, Ph.D. '71; Robert H. Giles, NF '66; Richard H. Gilman, M.B.A. '83; Owen Gingerich, Ph.D. '62; Adam K. Goodheart '92; Philip C. Haughey '57; Brian R. Hecht '92; Sarah Blaffer Hrdy '68, Ph.D. '75; Ellen Hume '68; Alex S. Jones, NF '82; Thomas F. Kelly, Ph.D. '73; William C. Kirby; Bill Kovach, NF '89; Florence Ladd, BI '72; Jennifer 8 Lee '99; Randolph C. Lindel '66; Ann Marie Lipinski, NF '90; Scott Malkin '80, J.D.-M.B.A. '83; Margaret H. Marshall, Ed.M. '69, Ed. '77, L. '78; Lisa L. Martin, Ph.D. '90; David McClintick '62; Winthrop L. McCormack '67; M. Lee Pelton, Ph.D. '84; John P. Reardon Jr. '60; Harriet Ritvo '68, Ph.D. '75; Henry Rosovsky, JF '57, Ph.D. '59, LL.D. '98; Barbara Rudolph '77; Robert N. Shapiro '72, J.D. '78; Theda Skocpol, Ph.D. '75; Peter A. Spiers '76; Scott H. Stossel '91; Sherry Turkle '69, Ph.D. '76; Robert H. Weiss '54; Jan Ziolkowski.



# Veritas

ONE OF THE FIRST complaints I received after my election as president was a strongly worded email about a course being offered at Harvard College. It contained a link to an article, shared hundreds of times over, that simply juxtaposed the course description with an opinion piece about the instructor and a full-throated criticism of higher education. This so-called news was nothing new to me. What was new to me, however, was my correspondent's own admission that the information he had read might not be entirely accurate. "It appears," he wrote, "to be a true story." He rushed to judgment and decided it was more important to let me know how the University had failed in its mission than to scrutinize his source.

These are tough times for truth. The editorial function has been disintermediated by technology. In times past, it was difficult to publish widely without access to a distribution channel. One could not gain access to print or electronic media without first being reviewed by an editor. The internet has bypassed all such fact checking. As a result, anyone can spread misinformation and disinformation, sometimes without knowing that he or she is doing so. Even the shrewdest consumers of knowledge succumb to the lure of the likeminded crowd, and I will venture a guess that each of us has at least once failed to engage someone who thinks differently for fear of disagreement and discomfort. We are everywhere faced with the consequences of these actions—a society in which the appearance of truth is considered as good as truth itself.

None of us can afford to turn inward at this moment. We must defend truth and demonstrate its enduring power to do good in society. Harvard—and colleges and universities across the country—play an essential role in preparing citizens to read, watch, and listen to news actively; to question sources of information and their veracity; and to differentiate signal from noise in a cacophonous world. A broad liberal arts education—and its emphasis on critical thinking and rational argument—has never been more important, and our students grow intellectually in ways that will prepare them not only to seek truth and wisdom, but also to become sources of both. At the same time, faculty in nearly every field and discipline model these behaviors as they debate and marshal evidence in support of their ideas and theories, expanding what we know of the world as they enlarge our aspirations for what humanity might achieve in the years to come.

The arc of human achievement reveals that the greatest gains are often the hardest won. Overturning conventional wisdom and upending the status quo take a remarkable amount of grit and determination, as well as an unflagging willingness to welcome contrary views and to risk being proved wrong. We must appreciate



diversity in every possible dimension; we must invite to our campus those people who challenge our thinking; we must listen to them carefully and thoughtfully. Most of all, we must embrace the difficult task of being quick to understand and slow to judge. If we cannot achieve that aim at Harvard, where the freedom to speak one's mind and act on one's beliefs is a defining precept, then what hope can we have for the rest of the world?

Every day I have spent as president has been a powerful reminder to me of the role that Harvard must play in underscoring the value of truth and wisdom. Veritas persists only with perennial effort. It must be discovered and rediscovered with great patience and care, and it must be subjected often to the rigors of argument and experiment. We undertake that work at Harvard every day, and we will continue to strengthen our community in ways that demonstrate the power of bringing together people from all backgrounds. Our task now is to make sure that more people understand and appreciate the nature of our efforts—and the meaning of our motto.

Sincerely,

Professor Karen King, I will confine myself to comment about just one: it is in Lydialyle Gibson's report on the lecture that King gave at Williams College. About it she writes, "The worshippers whom Irenaeus called Gnostics... were silenced and marginalized. Their sacred texts largely disappeared from the world, 'at a considerable loss,' King said, 'to Christian thought and practice.'" Contrary to King, I believe that excluding Gnostic thought from Christian orthodoxy is a good example of the church's wisdom rather than simply the exercise of the power to silence.

While Gnosticism is a complex and sprawling subject, one of the central ideas that runs throughout its various expressions is that the material world (including the human body) is itself evil and must be escaped for salvation. If the Church had embraced this idea as orthodox, all sorts of mischief would have followed. Modern science grew in part out of the Jewish and Christian idea that God had created a good and ordered cosmos which could be studied and comprehended. The exclusion of Gnostic beliefs by Irenaeus and other theologians of the Patristic period led William Temple, archbishop of Canterbury (1942-44), to describe Christianity as the "most avowedly materialistic of all the great religions." Hence, some words of advice to King about Gnosticism: ideas have consequences; bad ideas always have bad consequences.

THE REVEREND DAVID MONTZINGO '71  
San Diego

THANKFULLY, there are other scholarly ways to consider the Christian canon of Scripture than through the lenses of Karen King's postmodern, feminist American Christianity.

ROB McKEE '74 ('75)  
Duncanville, Tex.

*Editor's note:* Peter Desmond '69 queried the identification of the Nag Hammadi facsimile shown on page 42 of the article as part of the Gospel of Thomas, given the large let-

ters on the left sheet referencing John. That is a postscript title placed at the end of the Apocryphon of John, Karen King explains. The text that follows is the beginning of the Gospel of Thomas.

#### ADMISSIONS

I TRUST the court in the admissions case ("Litigating Admissions," September-October 2018, page 17) will validate Harvard's admission policies as both legal and equitable.

However, we should also see this as an opportunity to make Harvard's admissions even more equitable by eliminating all legacy preferences. Legacy students are neither more accomplished nor better members of the Harvard student and alumni communities. In an era when mangled notions of loyalty and heritage are being used to embolden authoritarians and undermine democracy, we in the Harvard community can do better than rely on these concepts when building our future.

I do not expect my daughters to be chosen over other applicants when they apply to Harvard, and am confident that other fair-minded parents feel the same. Harvard has been a leading light of reform in higher education over the past decade on matters of tuition, curriculum, investments, and admissions. Let's continue that legacy, and stop giving an unearned boost to the children of alumni.

ERIC JOHNSON, J.D. '05  
San Francisco

HARVARD SHOULD promote diversity of cultures, not diversity of skin colors. Harvard should concentrate on class, not race problems. Harvard's racial preferences distract American people from the greatest issue—financial inequality—which affects all human races. The Harvard racial engineering is hypocrisy, a fig leaf on the crotch of America's corporate culture that pretends to be democratic but is definitely not.

ANATOL ZUKERMAN, M.Arch. '75  
Plymouth, Mass.

*Editor's note:* For more on the litigation, see pages 5, 15, and 30.

#### ACADEMIC PRESSES

THE ARTICLE on George Andreou's becoming director of Harvard University Press ("Taking a Page from Knopf," November-December 2018, page 32) illustrates the real biggest challenge facing academic publishing—the commercialization of academic presses! If the focus on marketing is to avoid

## HARVARD

MAGAZINE

PUBLISHER: Irina Kuksin

DIRECTOR OF CIRCULATION AND  
FUNDRAISING: Felecia Carter

DONOR RELATIONS AND STEWARDSHIP  
MANAGER: Allison Kern

DIRECTOR OF ADVERTISING:  
Robert D. Fitta

NEW ENGLAND ADVERTISING MANAGER:  
Abby Shepard

CLASSIFIED ADVERTISING MANAGER:  
Gretchen Bostrom

CREATIVE MARKETING DIRECTOR:  
Jennifer Beaumont

PRODUCTION AND DESIGN MANAGER:  
Lydia S. C. Rosenberg

WEB AND TECHNICAL SUPPORT SPECIALIST:  
Walter Augustine

GIFT PROCESSOR AND OFFICE MANAGER:  
Robert Bonotto


#### IVY LEAGUE MAGAZINE NETWORK


DIRECTOR OF OPERATIONS:  
Heather Wedlake, [Heatherwedlake@ivymags.com](mailto:Heatherwedlake@ivymags.com)

#### EDITORIAL AND BUSINESS OFFICE

7 Ware Street  
Cambridge, Mass. 02138-4037  
Tel. 617-495-5746; fax: 617-495-0324  
Website: [www.harvardmagazine.com](http://www.harvardmagazine.com)  
E-mail: [harvard\\_magazine@harvard.edu](mailto:harvard_magazine@harvard.edu)

 @harvardmagazine

 [facebook.com/harvardmagazine](https://facebook.com/harvardmagazine)

*Harvard Magazine* (ISSN 0095-2427) is published bi-monthly by Harvard Magazine Inc., a nonprofit corporation, 7 Ware Street, Cambridge, Mass. 02138-4037, phone 617-495-5746; fax 617-495-0324. The magazine is supported by reader contributions and subscriptions, advertising revenue, and a subvention from Harvard University. Its editorial content is the responsibility of the editors. Periodicals postage paid at Boston, Mass., and additional mailing offices. Postmaster: Send address changes to Circulation Department, Harvard Magazine, 7 Ware Street, Cambridge, Mass. 02138-4037. Subscription rate \$30 a year in U.S. and possessions, \$55 Canada and Mexico, \$75 other foreign. (Allow up to 10 weeks for first delivery.) SUBSCRIPTION ORDERS AND CUSTOMER SERVICE INQUIRIES should be sent to the Circulation Department, *Harvard Magazine*, 7 Ware Street, Cambridge, Mass. 02138-4037, or call 617-495-5746 or 800-648-4499, or e-mail [addresschanges@harvard.edu](mailto:addresschanges@harvard.edu). Single copies \$4.95, plus \$2.50 for postage and handling. MANUSCRIPT SUBMISSIONS are welcome, but we cannot assume responsibility for safekeeping. Include stamped, self-addressed envelope for manuscript return. Persons wishing to reprint any portion of *Harvard Magazine's* contents are required to write in advance for permission. Address inquiries to Irina Kuksin, publisher, at the address given above. Copyright © 2019 Harvard Magazine Inc. 

#### SPEAK UP, PLEASE

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



“turning the presses into a mere extension of the academic process by which scholars publish work to gain tenure”—what if that work to gain tenure is the best? Who needs academic presses whose decision to publish is based on marketing rather than innovative scholarship?

LAURA NADER, Ph.D. '61

*Department of anthropology, UC, Berkeley*

## THE S.G.

THE MAIN THRUST of Lincoln Caplan's "The Political Solicitor General" (September-October 2018, page 47) is that the SG should be a pure exponent of what the law is. There are several impediments to this idealized view:

1. Federal statutory and constitutional law are not religious dictates, but are derived from political processes and judgments; thus it is impossible to separate law from politics entirely. The most effective way to keep the politics out of legal interpretation is to be an originalist or a textualist, but that is not necessarily appropriate nor does it square with Caplan's progressive bent or the idea of the "Living Constitution" that he obviously favors.

2. In arguing that the president and the attorney general, both of whom rank above the SG, are too political to decide what the law is or should be and should therefore defer to the SG, Caplan is taking a position that there are areas of executive-branch activity and authority over which the president should not exercise any control or discretion. That is untenable politically except with independent agencies that are so organized with an explicit independence mandate from Congress. A venerable tradition surely counts for a lot, and the SG (please turn to page 75)

of learning for their progeny. Less happily, of course, in a society split socioeconomically, those fortunate elders have enormous means to bring to bear on the challenge, thus replicating inequality across generations.

How to reconcile these seemingly opposed forces? Before the Great Recession, William G. Bowen, president emeritus of Princeton (who later coauthored work with Bacow; the two men admired one another) and colleagues addressed these questions. In a book excerpt published in these pages ("A Thumb on the Scale: The case for socioeconomic affirmative action," May-June 2005, page 48), they acknowledged the institutional interest in nodding toward legacies and donors—and legacies' academic credentials. (They separately made the case for continuing affirmative-action policies.) But they also vigorously favored "giving some preference to well-qualified applicants from modest backgrounds": the academically excellent, lower-income applicants who are still dramatically underrepresented at selective institutions—at a now-evident cost to those institutions' fulfillment of their mission, and their public reputation. Accordingly, they urged a "thumb on the scale" equal in force to the legacy preference.

Would Harvard move in such a direction? Absent a larger student body (the route Princeton and Yale are now pursuing), doing so would seem to imply some other trade-offs, at a time of ever scarcer slots in every entering class. It may be awkward to conduct such a conversation while the current litigation proceeds. But over time, Harvard may want, or need, to examine its admission preferences—including those extended to athletes and its employees' children. Doing so would seem to present the University, again, the opportunity for leadership.

~JOHN S. ROSENBERG, *Editor*

## 7 WARE STREET

### What Legacy?

SOMETIME IN 2019, U.S. District Court Judge Allison D. Burroughs will rule on whether Harvard College impermissibly discriminates against Asian-American applicants, the claim brought by Students for Fair Admissions. Her ruling, if ultimately appealed to the Supreme Court, may significantly affect selective institutions' affirmative-action criteria and admissions processes (see page 15).

Meanwhile, the arguments advanced by the plaintiff, and the University's response, shone a light on *other* factors that go into Harvard's review of applicants, including consideration of legacy status (the children of alumni); athletic ability; family philanthropic support for the institution; and affiliation with faculty and staff members. The existence of such factors came as no surprise to close observers of admissions. But given the public's focus on the importance of winning a golden ticket to an elite college in an era of enormous applicant pools and single-digit admission rates, the practices detailed during the trial became fodder for news coverage in *The Boston Globe*, *New York Times*, and *Wall Street Journal*. The *Times* even ran an article headlined "Getting into Harvard Is Hard. Here Are 4 Ways Applicants Get an Edge"—a seeming blow to meritocracy.

And in an era of widening socioeconomic inequality—mirrored in growing gaps between public and elite private institutions (see "The College Chasm," November-December 2017, page 50, by Duke's Charles T. Clotfelter, Ph.D. '74)—and rising public resentment of the costs and culture of the elite schools, it would be fair to say that such institutions have a problem.

Is it a problem Harvard ought to do something about?

Lawrence S. Bacow inherited the lawsuit when he became president last July. He

brought to the job an affecting life story: growing up as the son of refugees, and, as a result of a superb higher education at MIT and Harvard, being presented with unimaginable opportunities. Access and financial aid were themes of his entire Tufts tenure. In mid September, on his first major trip as president, back home to Pontiac and Detroit, his core messages were access to higher education—whether at Harvard, the University of Michigan, or Wayne State University (where his father earned his degrees at night, paying his way by parking cars during the day)—and the resulting opportunities (see [harvardmag.com/michigan-trip-17](http://harvardmag.com/michigan-trip-17)). "Talent is flatly distributed," he said then. "Opportunity is not." His values could not be clearer.

Nor could his concern about the external environment. His Harvard presidency comes amid changing public perceptions of the value of higher education and populist criticisms of the kind of institution where he has studied and worked since 1969. The difficulty arises from the very factors that made them excellent—and elite. During a conversation at Mass Hall as the trial concluded, Bacow observed, "This place did not build itself." Prior generations gave of their resources and time "to create the institution that exists today," and is therefore able to advance understanding and educate new cohorts of students. "Each generation helps the next," he continued, and "it is important to continue to try to ensure that we have that kind of loyalty and resources....Is it surprising that we recognize people like that? I don't think so."

As for the preference given to legacies, Bacow said it is not pointed out often enough that "Legacies are, as a group, arguably the most qualified applicants...by any measure." That *should* be so: highly educated parents ought to be, and disproportionately are, interested in securing the benefits of that kind

## LETTERS

(continued from page 5)

must be scrupulously honest about what the law is and resign if the bosses disagree, but no one should expect them always to defer to the SG. To illustrate: many would have called for the previous administration's SG's head on a pike had he told the president flatly that there is no right in the Constitution guaranteeing same-sex marriage.

3. Caplan also tries to have it both ways on *stare decisis*. He decries Charles Fried's *amicus* brief urging that *Roe v. Wade* be overturned 16 years after it was decided and a few years after it had been affirmed by a narrower majority, yet applauds Archie Cox's recommendation to the Court to enter the thicket of reapportionment in 1962 only 16 years after characterizing the matter as non-justiciable. Caplan is mum on the Court's invention of a right to same-sex marriage equality even though it overturned a settled understanding that reaches back to the dawn of time. Cases like those, like *Roe v. Wade*, and like *Brown v. Board of Education* may be necessary as game-changers to reflect major societal developments and shifts—but, then, cases like *Citizens United* and *Janus* should be viewed

in the same light. My sense, though, is that in the Caplan world, *stare decisis* is designed only to protect gains that progressives achieve in the courts when they cannot get them at the ballot box. His is not a new theory, either. It was called the "ratchet theory" when Caplan and I went to law school in the years just after the Warren Court. Coming full circle, it is an attractive political theory which may be quite beneficial to us as a nation, but it is hard to support on neutral legal principles.

ROBERT KANTOWITZ, J.D. '79  
Lawrence, N.Y.

## ANTI-SEMITISM

I CAN'T LET slip Alex Bruner's off-target letter (November-December 2018, page 2) that conflates Judaism, the religion, with the government of the country of Israel. If you love your Jewish neighbors but despise the clearly brutal and apartheid policies of the Israeli government, you have a right to support the Boycott, Divestment, and Sanctions movement without being called anti-Semitic. Roman Catholics don't take offense when the Italian government is criticized, and Presbyterians have no stake in what the Scottish government does, so U.S. Jews also need to see that they are totally separate from the Israeli government. You can't have it both ways!

JOHN F. MILLAR '66  
Williamsburg, Va.

## ROE V. WADE

IN HIS LETTER (November-December 2018, page 4), Martin Wishnatsky states that "immoral mandates" like *Roe v. Wade* "facilitated... a holocaust of infant life." Leaving aside the loaded word "holocaust," two things: a fetus is not an infant; and the decision did not change the total number of abortions. It only made more abortions legal and safe.

According to Planned Parenthood, one in four women in the U.S. will have an abortion by age 45. Therefore, Wishnatsky is calling one-quarter of American women immoral. He has nothing to say about the men who played their part in these unwanted pregnancies.

I reject this kind of shaming. I got an abortion for the same reason most women do: I was not ready, financially or emotionally, to support a child. Like about half the women who get abortions, I was using birth control, but the contraception failed.

Nobody is happy about having to terminate a pregnancy. But I take motherhood seriously. When I did have children, I wanted to be able to keep them safe and healthy, and raise them

in a stable household. Bearing and then taking care of a child is a huge responsibility. Nobody should be able to force anyone else to do it.

If people like Wishnatsky who are so passionately against abortion would show any concern for children once they are born; if they fought for affordable childcare, housing, healthcare, and education; if they supported free contraception and sex education, which are proven to cut abortion rates; if they cared about the children and pregnant women killed by American bombs every day; then one might consider their claim to righteousness. Otherwise, they're just hypocrites.

JANE COLLINS '71  
Medford, Mass.

## 29-29

GEORGE HOWE COLT's piece on the 1968 Game ("The Players," November-December, page 58) notes the geographic transformation of Harvard in the 1960s from a bastion of Northeastern privilege to "something more attuned to the country at large." My experience of this process had nothing to do with football but reinforces Colt's thesis. Coming from a public school in western Virginia, I was matched in Eliot B-12 with a group of similar non-preppies from North Dakota, Alabama, Florida, and Kentucky. We became and remain fast friends. One can only imagine the "patrician" Master Finley's chagrin at having these outlanders thrust into his "handpicked" cohorts from St. Paul's, Groton and Exeter, but we drank deep from the Finley spring, and he remains a revered legend among us. If he was troubled by our pedigrees, it did not show in his storied letters of recommendation to graduate schools. Not at the stadium (which Master Finley might have preferred), but academically, we and no doubt throngs of others vindicated Harvard's outreach to the hinterlands.

WILLIAM C. WOOLDRIDGE '65  
Suffolk, Va.

*Editor's note:* A caption in "The Players" credited "an anonymous undergraduate" for the headline "Harvard Beats Yale, 29-29." We forgot that our March-April 2001 issue included letters from Thomas M. Zubaty '72 and William J. Clark '66, each claiming to be the source (see [harvardmag.com/29-29recap-18](http://harvardmag.com/29-29recap-18)). We thank Mr. Zubaty for pointing out our error.

STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION.  
Publication title: *Harvard Magazine*. Publication no. 0095-2427.  
Filing date: 9/26/2018. Issue frequency: bi-monthly. Number of issues published annually: 6. Annual subscription price: \$30. Complete mailing address of known office of publication and headquarters or general business office of the publisher: 7 Ware Street, Cambridge MA 02138. Contact person: Felecia Carter, 617-496-6694. Publisher: Irina Kuksin, Harvard Magazine, 7 Ware Street, Cambridge MA 02138. Editor: John Rosenberg, Harvard Magazine, 7 Ware Street, Cambridge MA 02138. Managing Editor: Jonathan Shaw, Harvard Magazine, 7 Ware Street, Cambridge MA 02138. Owner: Harvard Magazine Inc., 7 Ware Street, Cambridge MA 02138. Known bondholders, mortgagees, or other security holders: none. The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes have not changed during the preceding 12 months. Issue date for circulation data below: September-October 2018.

	Avg. no. copies each issue preced. 12 mos	Single issue nearest to filing date
A. Total no. of copies (Net press run) .....	263,408	264,709
B. Paid and/or requested circulation		
1. Paid/req. outside-county mail subscriptions stated on Form 3541 .....	260,868	262,726
2. Paid in-county subs .....	0	0
3. Sales through dealers and carriers, street vendors, counter sales, and other non-USPS paid distribution .....	425	365
4. Other classes mailed through the USPS .....	0	0
C. Total paid and/or requested circulation .....	261,293	263,091
D. Free or nominal rate distribution by mail		
1. Outside-county as stated on Form 3541 .....	173	173
2. In-county as stated on Form 3541 .....	0	0
3. Other classes mailed through the USPS .....	0	0
4. Free or nominal distribution outside the mail .....	276	0
E. Total free or nominal distribution .....	449	173
F. Total distribution .....	261,742	263,264
G. Copies not distributed .....	1,666	1,445
H. Total .....	263,408	264,709
Percent paid and/or requested circulation .....	99.83%	99.93%

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



# Right Now

The expanding Harvard universe

## ALIGNING THE PIPES

### The Innovation Engine

**W**HEN Harvard president Lawrence S. Bacow stressed the vital role of immigrants in both higher education and the economy during his October installation address, economist William R. Kerr's research team cheered. The D'Arbelloff-Class of 1955 professor of business administration, Kerr studies the future of work, with a particular focus on high-skilled immigrants and their impacts on the

U.S. economy. At a time when immigration provokes fierce debate in American public life, he argues in *The Gift of Global Talent* (Stanford) for reforms to streamline the U.S. immigration system and attract more overseas talent.

Using databases of Nobel Prize-winners, inventors, and college graduates, Kerr has found that immigrants contribute an outsized portion of U.S. innovation. Since 1901, for example, 33 percent of the country's No-

bel laureates have been immigrants. In 2014, 40 percent of America's doctoral degrees were awarded to noncitizens. Data from the Longitudinal Employer-Household Dynamic database suggest that more than a quarter of U.S. entrepreneurs were born overseas, this number having risen steadily since at least 1995. Such patterns are more difficult to discern among inventors (patents do not list the holders' immigration status), but Kerr uses algorithms to approximate inventors' ethnicities from their first and last names, yielding insights into workforce patterns within firms even when immigration patterns cannot be observed directly. Using this method, Kerr estimates

that likely immigrants accounted for roughly 29 percent of U.S. patents in 2017, up from just 9 percent in 1975. Immigrant output has increased faster than immigration itself, and this growth is clear across sectors.

Kerr writes that "powerful ideas are the main force behind long-term economic growth" and presents evidence that high-skilled immigration is crucial to this process. Such powerful ideas are especially likely to emerge in what he calls "talent clusters," places like



---

# CREATE THE FUTURE OF HEALTH CARE AT HARVARD MEDICAL SCHOOL

---

Harvard Medical School's executive education programs engage business leaders whose work impacts health care and exposes them to the real-world practice of medicine, cutting-edge trends in science, clinical workflows and health care delivery.

Join us in creating the future of health care.



## Programs for Business and Science Leaders

**Innovations  
in Digital Health:  
Technologies  
Shaping the Future  
of Health Care**  
March 12 - 14, 2019

**The Microbiome:  
Emerging  
Opportunities for  
Biopharma**  
April 18 - 19, 2019

**Inside the Health  
Care Ecosystem:  
Strategic Insights for  
Business Leaders**  
May 20 - 24, 2019

**Functional Genomics  
and Drug Discovery:  
New Approaches  
for Decision Making**  
June 4 - 5, 2019

---

**LEARN MORE:**  
[hms.harvard.edu/spring19](https://hms.harvard.edu/spring19)



**HARVARD**  
MEDICAL SCHOOL

Executive Education



Cambridge or Silicon Valley, where specialized industries congregate—and where immigrants often come to work. The “productivity of talent workers must be enhanced by proximity to other talented people,” he adds, and “immigrants make up about a quarter of the country’s innovation workforce.” These innovation centers benefit from their connection to the global talent market, and they are highly productive: Kerr estimates that inventors with Chinese or Indian ancestry in the San Francisco Bay Area alone accounted for no fewer than one in every 12 U.S. patents in 2017. (For context, neither the entire population of Massachusetts, nor that of New York, can boast the equivalent.)

The impact of these immigration patterns reaches far beyond the clusters themselves. In an interview, Kerr argued that “the economy as a whole becomes richer” in the long run as a direct result of high-skilled immigration. His research suggests that native-born residents also display more creativity in places where many immigrants work in innovation industries. There can be drawbacks, of course: older workers in information technology may face unemployment, for example, or an influx of innovation workers may price other residents out of the housing market. Nevertheless, Kerr’s economic models indicate that the trend’s overall effects are positive.

Although Kerr thinks the United States should be more welcoming toward immigrants in general, he specifically stresses the need to expand and streamline its procedures to attract and retain more talented immigrants, in order to drive economic growth. Likely candidates generally arrive through employment-driven programs like the H-1B visa program: employers sponsor prospective workers, and the visas are awarded by lottery. This system allows the economy to select for the workers it needs most, but the limited number of visas available and a chance-driven selection method muddle the process.

Suggesting that the country “could align the pipes a lot better,” Kerr proposes several reforms, including guaranteed work visas for non-citizen graduates of U.S. colleges, an increased H-1B minimum wage, better allocation of scarce visas through wage-ranking (prioritizing those immigrants who will receive the highest wages from their sponsoring compa-

## “The economy as a whole becomes richer”... as a direct result of high-skilled immigration.

nies), and a preference for immigrant entrepreneurs. “The responsibility for these reforms,” he suggests, “would lie with immigration services, the White House, and Congress,” and the results would be a clearer process, a higher-skilled immigrant pool, and greater economic output.

Polling data suggests many Americans would support such reforms: 60 percent of registered voters in a 2017 national poll by Politico and Morning Consult (a survey-research technology company) agreed that high-skilled immigration should be increased. Far fewer respondents currently endorse expanding the H-1B program specifically, but Kerr believes that increasing

the skill level required of H-1B visa holders could also strengthen support for broadening that program.

He sees an opportunity in these polling numbers—a hint that the United States can chart a path forward even amid the current moment’s contentious immigration debates. Only by doing so, he argues, can the country retain its edge in the world’s innovation economy.

~JOHN A. GRIFFIN

WILLIAM KERR EMAIL:

[wkerr@hbs.edu](mailto:wkerr@hbs.edu)

WILLIAM KERR WEBSITE:

[www.hbs.edu/faculty/Pages/profile.aspx?facid=337265](http://www.hbs.edu/faculty/Pages/profile.aspx?facid=337265)

### PLUSH-TOY JUDGMENT

## The Teddy Bear Effect

**M**OST FORTUNE 500 CEOs—roughly 95 percent of them, in fact—are white men. Line up headshots of these leaders and plenty of pronounced chins, square jaws, salt-and-pepper hair, and other physical features suggesting maturity, masculinity, and gravitas are also readily apparent.

But for the handful of African-American CEOs at Fortune 500 firms, portraits reveal

something very different in play, says social psychologist Robert Livingston, a lecturer in public policy at the Kennedy School. His research found that black CEOs often have so-called baby faces: large foreheads, big eyes, chubby cheeks, and button noses—features that call to mind Gary Coleman and Emmanuel Lewis, the diminutive African-American stars of 1980s sitcoms. “There is a leadership advantage for black male leaders



who appear more docile in physical appearance,” Livingston says. He calls this advantage the “Teddy Bear Effect.”

“Because black males are perceived as being hostile, aggressive, dangerous, hyper-masculine, and a threat, broadly construed, to white-male power,” Livingston explains, those with non-threatening facial features are more likely to climb the corporate ladder. In fact, he found that the more cherubic a black CEO’s face, the higher his salary—and even his company’s revenues.

Livingston’s work builds on results from more than 40 years of research by multiple scholars on the appeal of “babyfacedness”; data show that humans often respond positively to the high face-width-to-height ratio that characterizes the young of many species. His own data, first published in 2009 when he was at the Kellogg School of Management at Northwestern, reveal that although a baby face helps an African-American leader advance, chubby cheeks do not offer the same benefits to white male CEOs. Instead, “there was a negative correlation between babyfacedness and the size of the company and the amount of their bonuses and salary.”

The impact of a baby face was even more severe for white women. “It was a huge liability for women, the strongest effect size we obtained,” Livingston says. Even though women in the general population are more likely than men to have “neotonous” or rounded, child-like features, “women CEOs were much less baby-faced than either black male or white male CEOs,” Livingston explains. “Women are already ‘disarmed’ by virtue of their gender,” Livingston says. “What they need is to be ‘armed’ with physical features that signal competence and ability, rather than warmth and communality, which is already conveyed by their gender.” (With no black female CEOs at Fortune 500 companies at the time of his study, he could not study the effect of their features.)

A baby face is just one of an array of so-called “disarming mechanisms” that aid black leaders in appearing “less threatening and more palatable,” Livingston reports. These include wearing glasses to appear studious, smiling frequently, and speaking softly. “We’re wired to judge people very, very quickly,” he points out, “and people utilize physical appearance very heavily to form social judgments.”

He says some people misunderstand the aim of his research; he doesn’t suggest that



## READY TO GET SOBER?

McLean: the place for effective addiction treatment

[mcleanhospital.org/addiction](http://mcleanhospital.org/addiction)

**BEST HOSPITALS**  
US News  
NATIONAL  
2018-19

Ranked #1 in psychiatry  
by U.S. News & World Report

**McLean**  
HARVARD MEDICAL SCHOOL AFFILIATE



**TOPTIER**  
ADMISSIONS

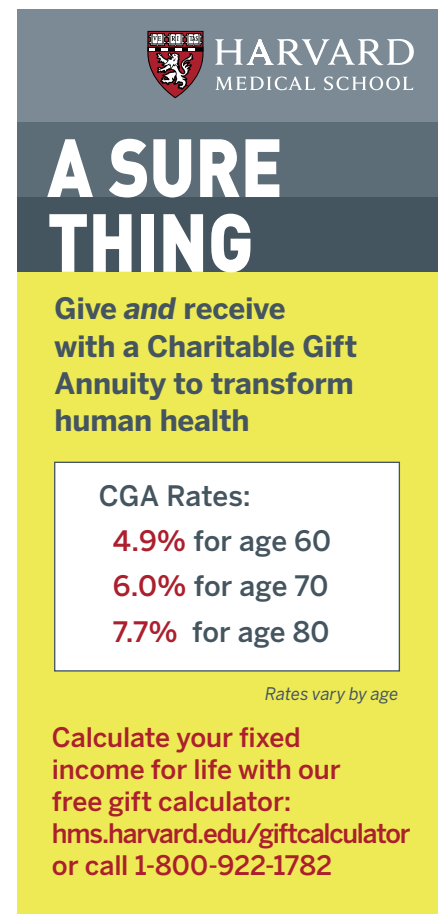
### STUDENTS AIMING FOR TOP COLLEGES:

Receive strategic advice, tools, and guidance from the nation’s premier college consultants, helping students for over 20 years.

- Unparalleled success rate
- Advising and facilitating every step of the way
- Lessen stress and increase college choices

Join us for personal admissions counseling.  
**Call now** for information.

[TopTierAdmissions.com](http://TopTierAdmissions.com)  
781.530.7088  
[info@TopTierAdmissions.com](mailto:info@TopTierAdmissions.com)



**HARVARD**  
MEDICAL SCHOOL

## A SURE THING

Give and receive with a Charitable Gift Annuity to transform human health

**CGA Rates:**

- 4.9%** for age 60
- 6.0%** for age 70
- 7.7%** for age 80

*Rates vary by age*

**Calculate your fixed income for life with our free gift calculator:**  
[hms.harvard.edu/giftcalculator](http://hms.harvard.edu/giftcalculator)  
or call 1-800-922-1782



African Americans undergo plastic surgery to look more baby-faced, or wear glasses if they have 20/20 vision, or make an effort to speak softly. He's not warning mature-looking black men away from C-suite roles. "I think we should focus on dismantling the hierarchical structures and systems that keep people out and produce phenomena like the Teddy Bear Effect," he explains. "I want people to realize that we don't live in a meritocracy, that we are judged by different standards. A quality that could be an asset in one group could be a liability in another." And because people make many choices and decisions "outside of awareness, intent, or control," prompted by cues they often don't notice consciously, Livingston says it might be helpful to change hiring and promotion practices to avoid such blind spots involving physical appearance.

He warns that many recommendations can seem "facile," given these complex problems, but notes that some studies show benefits to masking an applicant's identity during the hiring process. "There's research that shows that people named Jamal or Lakeisha get fewer callbacks than people named Greg or Becky," he says, which could be addressed, for example, by removing nonessential information such as job candidates' names or addresses from dossiers.

## HM Explore More



STEPHANIE MITCHELL/HPAG

### Genetics and the Human Revolution

Can advances in DNA sequencing help explain what makes us human?

[harvardmag.com/reich-18](http://harvardmag.com/reich-18)

For additional, online-only, articles on research, see :

### A New Plant to Enhance Memory

New research links a *Rhodiola rosea* extract to enhanced memory.

[harvardmag.com/rhodiola-18](http://harvardmag.com/rhodiola-18)



IDEAS\_STUDIO/ISTOCK

He also suggests assembling diverse hiring committees: "Make sure that you don't have groupthink." Companies might consider introducing additional metrics for assessing job candidates as well, such as their skill in handling diversity issues in their former jobs. "That way," he says, "you get away from physical appearance altogether. Hiring should be based on whether the candidate has done something that the company or society sees as important."

Livingston's distinct findings for white men, white women, and black men in the Teddy Bear Effect study led directly to his current research on the heterogeneous nature of social disadvantage. The data, he says, reveal nuanced differences in the way these groups are perceived: "black men are stigmatized" or regarded as conspicuous in a nega-

tive way; "white women are subordinated" or seen in a positive light "as long as they maintain their subordinate position in society"; and "black women are marginalized," seen as neutral but irrelevant. These nuances are important, but largely unnoticed, he emphasizes. "We know that black men, black women, and white women are all socially disadvantaged, but my research is looking at how those disadvantages are different," he says. One of his goals is to help organizations understand that people from diverse backgrounds might experience distinct and even opposing challenges, he explains. "One size does not fit all." ~ERIN O'DONNELL

ROBERT LIVINGSTON WEBSITE:

[www.hks.harvard.edu/faculty/robert-livingston](http://www.hks.harvard.edu/faculty/robert-livingston)

## CONFERRED IMMUNITY?

# People Who Don't Get AIDS

**I**N EARLY 1995, a hemophiliac walked into the clinic of physician-immunobiologist Bruce Walker and announced something astonishing: he'd been infected with HIV during a blood transfusion in 1978, had never taken any anti-HIV medications, and yet had never developed AIDS. Walker tested him and found no signs of the virus itself, only a robust immune response to it, confirming that the man was infected. In fact, Walker recalls, it was the most vigorous immune response he'd ever seen.

Walker discovered that the man was one of a small number of HIV-infected persons (one-third of 1 percent of all carriers) who remain healthy, without anti-HIV medications, even decades after infection. And he

began to wonder: could understanding how these "elite controllers" beat the virus on their own lead to a functional cure for the 37 million people who are infected worldwide?

The human immunodeficiency virus is a tough opponent. Different strains can vary genetically as much as 40 percent from each other and mutate rapidly. The virus not only attacks and cripples the immune system itself, undermining the body's own ability to fight back, but is also surrounded, Walker explains, by "a heavy sugar coating that blocks the access of immune-system-generated antibodies, which normally would clear this kind of infection."

But perhaps the biggest challenge is that HIV integrates into DNA, becoming part of

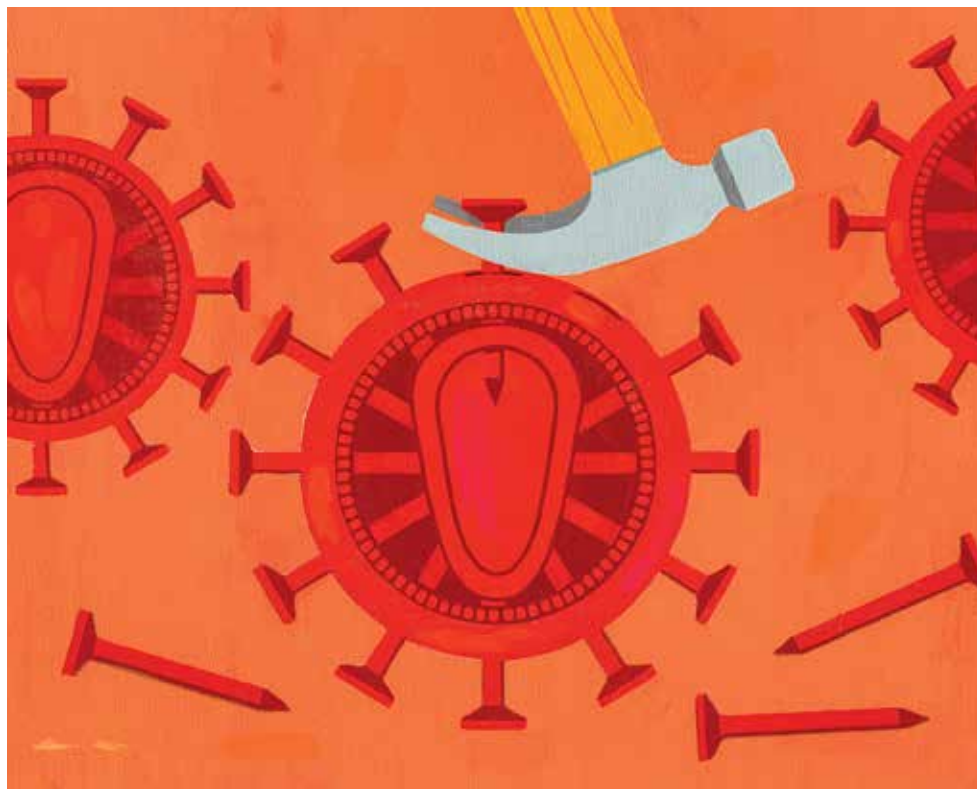
a host cell's genome. Here it lies silently, unaffected by the front-line medicines—antiretroviral therapy (ART) now used to control the infection—that have made HIV a treatable but not curable disease. Even years of treatment with the most potent ART cocktails won't eradicate latently infected cells. (These cells do die eventually, but so slowly that even after more than 40 years of treatment, only half will be gone.) As a result, if ART is withdrawn, activation of a single one of those infected cells turns the virus on and can lead to a renewed, full-blown infection within weeks. In stark contrast, Walker says, some elite controllers may be on the verge of eradicating their HIV altogether, because even the most sensitive tests now available fail

to detect the virus in their systems.

Walker, now Ragon professor of medicine and director of the Ragon Institute of Massachusetts General Hospital, MIT, and Harvard, has studied 1,500 of these HIV controllers for more than a decade. With initial support from entrepreneur Mark Schwartz '76 and his wife, Lisa, and continued funding from the Gates Foundation, he discovered that these patients' immune systems are able to keep the virus in check effectively in much the same way the chickenpox virus (VZV) is controlled: the virus remains alive but dormant. (Shingles may develop if the immune system stops controlling VZV.) In the case of HIV, this control is associated with targeting the most conserved (least mutable) part of the virus, the bullet-shaped core known as the capsid, rather than the rapidly mutating sugar coating that surrounds it. But that alone did not explain controllers' resistance to the virus, because some patients whose immune systems target the viral capsid became sick anyway.

Walker then tried a new tack, aided by computational biologist Arup Chakraborty, of the Harvard-MIT Program in Health Sciences and Technology (HST). They applied an analytical technique sometimes used in the stock market: "If one stock goes up or down, how does that affect other stocks? We did a similar analysis with HIV," Walker explains: "If one mutation occurs, how does that affect the ability of other mutations to happen?"

They looked at the amino acids—the building blocks of the proteins that make up the virus—to see how the mutation of



interface regions where the protein folded back on itself," and were therefore structurally important to its survival.

The researchers then applied social-network theory to better understand how these structures were created and maintained. In any social network, Walker explains, some people are more connected than others, and the same is true of amino acids. Although all have the same backbone structure, their chemical side chains range from small, as in glycine, to enormous, as in tryptophan. That means, Walker says, "that the tryptophan has the ability to make lots of connections, there-

Walker, Gaiha, and Rossin are now applying this knowledge to developing a vaccine that can induce natural immune control of HIV in persons already infected and protect against HIV transmission to those not yet infected. Walker believes the early stages of the infection may hold the key to elite controllers' unusual immune response. The first sign of illness typically appears about two to four weeks after the initial infection, when patients develop symptoms that resemble flu or mononucleosis; blood sampled during this period contains as many as 10 million viral particles per milliliter of plasma, and reduced numbers of immune cells. He is therefore studying the effect of rapid, early therapeutic interventions—before the initial flu-like stage—among a small high-risk patient population, to test whether this will allow the natural immune response to beat the virus, perhaps in combination with a vaccine that trains the immune system to target its most vulnerable parts.

Eventually, he hopes, it will be possible retrain the immune response of anyone infected with HIV—to make elite controllers of them all.

—JONATHAN SHAW

BRUCE WALKER EMAIL:  
[bwalker@mgh.harvard.edu](mailto:bwalker@mgh.harvard.edu)  
BRUCE WALKER WEBSITE:  
[www.ragon.org](http://www.ragon.org)

## The early stages of infection may hold the key to elite controllers' unusual immune response.

any one amino acid affected the ability of others in the chain to mutate. The result was striking. Among the thousands of sequences generated from patients' viruses, they found certain amino acids that could readily mutate individually, but were never seen mutated at the same time in a single virus. "That didn't make sense," Walker says, "until we looked at the three-dimensional structure of the protein." A string of amino acids forms loops when different amino acids interact, creating structures as the protein folds. "It turned out that these amino acids lay at the

by playing a bigger role in the network that forms when a protein folds." A pair of talented HST program physician-scientist postdocs in Walker's lab and at the Broad Institute, Gaurav Gaiha and Elizabeth Rossin, created a method to determine how networked each HIV amino acid is, and were able to show that elite controllers' immune systems target the *most* networked amino acids in the highly conserved viral core. As a result, when the virus mutates to evade this targeted immune pressure, it falls apart: the acids that mutate are critical to its structure, and thus its survival.



# Harvard<sup>2</sup>

Cambridge, Boston, and beyond



**I2E “Beyond Lobsters and Lighthouses”**  
*The joys of visiting Portland, Maine, in the “off-season”*

COREY TEMPLETON PHOTOGRAPHY



**I2B Extracurriculars**  
*Events on and off campus in January and February*



**I2D Remembering**  
*The MFA’s “Cecilia Vicuña: Disappeared Quipu”*



**I2F Snow Tubing**  
*Sliding down the slopes can be fun—at any age*



**I2J Sleep Tight**  
*Early American bedding, Wadsworth Atheneum*





# Extracurriculars

Events on and off campus during January and February

## EXHIBITIONS & EVENTS

### Houghton Library

library.harvard.edu

**Victorian Visionary: John Ruskin and the Realization of the Ideal**

marks the bicentennial of the artist and art historian through artwork, letters, and illustrated books, among other primary resources recently donated by R. Dyke Benjamin '59. (Opens January 14)

From left to right: *Woman with a Scarf at Inspiration Point, Yosemite National Park, California (1980)*, by Roger Minick, at the Addison Gallery of American Art; *Tell the Truth!* by Liz Alpert Fay, at the Fuller Craft Museum; and Ladysmith Black Mombazo, at Sanders Theatre

**The Bauhaus at Home and Abroad: Selections from the Papers of Walter Gropius, Lyonel Feininger, and Andor Weininger** celebrates the modern design movement's centennial. (Opens January 15)

### Carpenter Center for Visual Arts

carpenter.center

**Liz Magor: BLOWOUT**, co-organized with the Renaissance Society, features new sculptures featuring Mylar and objects, like toys, to explore "conditions of weakness

FROM LEFT: ADDISON GALLERY OF AMERICAN ART, PHILLIPS ACADEMY, ANDOVER, MASS.; BRAD STANTON; HARVARD BOX OFFICE

LBGreen.com

800.524.7336

*Like snowflakes...*



**LUX BOND & GREEN**

JEWELERS SINCE 1898

EVERY BOX



HAS A STORY

BOSTON WELLESLEY  
WEST HARTFORD MOHEGAN SUN GLASTONBURY WESTPORT



Independent and Assisted Living  
Specialized Memory Care

What do Harvard alumni  
have in common?

**Cadbury Commons**  
*An Uncommon Senior Residence*



The Harvard alumni who chose  
Cadbury Commons may have  
retired from work, but not from life.

Museum Visits • Play Reading  
Symphony Selections • Lecture  
Series • Yoga • Organic Gardening

Call (617) 868-0575 to arrange a personal tour,  
or visit [www.cadburycommons.com](http://www.cadburycommons.com)



66 Sherman Street, Cambridge,  
MA 02140 • (617)868-0575





# Gail Roberts & Team is now Gail Roberts, Ed Feijo & Team

There. Happy now?

When it comes to real estate, there's only one name to remember. Actually, make that two. Congratulations Ed, you deserve it. 617-245-4044 • [gailroberts.com](http://gailroberts.com)



and strength, agency, and the slow deteriorations” that often go unnoticed over time. (Opens January 30)

### Johnson-Kulukundis Family Gallery of Byerly Hall

radcliffe.harvard.edu

**Future Fossil.** Clarissa Tossin, RI '18, pairs plastic-recycling techniques with materials and practices of Amazonian peoples to speculate about our human imprint on a postapocalyptic landscape. (Opens January 31)

### Harvard Museum of Natural History

hmnh.harvard.edu

Developed with the Harvard University Center for the Environment, **Climate Change** offers current scientific information about our warming earth.

### Fuller Craft Museum

fullercraft.org

A juried exhibition of multimedia works

by regional artists who explore **Context: Language, Media, and Meaning.**

(Through February 24)

### Addison Gallery of American Art

addisongallery.org

**Contemplating the View: American Landscape Photographs** includes works by Ansel Adams, Lois Connor, Marcia Resnick, and Edward Weston, among others. (Through March 3)

## THEATER

### American Repertory Theater

americanrepertorytheater.org

A contemporary take on Shakespeare's *Othello*, directed by Bill Rauch and performed by the original company from the Oregon Shakespeare Festival. Loeb Drama Center. (January 13-February 9)

In the world premiere of **Endlings**, written by the emerging playwright Celine Song and

directed by Sammi Cannold, three *haenyeos*—elderly “sea women” who hold their breath while diving for food—spend their last days on the Korean island of Man-Jae. Loeb Drama Center. (February 26-March 17)

## LECTURES

### The Radcliffe Institute for Advanced Study

radcliffe.harvard.edu

Radcliffe Institute fellow Min Jin Lee, the author of *Pachinko* and *Free Food for Millionaires*, contemplates “**Are Koreans Human? Our Survival Powers, the Quest for Superpowers, and the Problem of Vulnerability.**” (February 12)

## FILM

### Harvard Film Archive

library.harvard.edu/film/index.html

**Poets of Pandaemonium: The Cinema of Humphrey Jennings and Derek Jarman.** Both British filmmakers employed audiovisual montage, amateur actors, and recited poetry—but at different times and to alternate ends. (January 25-February 11)

**The Outer Limits of the Real. Three Films by Véréna Paravek and Lucien Castaing-Taylor.** Screenings include *Leviathan*, which also features a poetry reading by Boylston professor of rhetoric and oratory Jorie Graham, and a conversation with Castaing-Taylor. (February 2-26)

## MUSIC

### Ladysmith Black Mambazo

boxoffice.harvard.edu

The leaders of *mbube*, a form of South African a cappella singing, have enthralled audiences with their resonant harmonies since the 1960s. Sanders Theatre. (February 2)

### Parker Quartet

boxoffice.harvard.edu

The performance by the Blodgett Quartet in Residence, hosted by Harvard's music department, offers works by Schubert and Beethoven. Paine Hall. (February 15)

### Boston Chamber Music Society

boxoffice.harvard.edu

Step out on a wintry afternoon for a concert of Bach, Beethoven, and Brahms. Sanders Theatre. (February 24)

Events listings are also found at [www.harvardmagazine.com](http://www.harvardmagazine.com).

## STAFF PICK: Information as Art

**What is a quipu?** A pre-Columbian device composed of delicately knotted cords used to keep records and transmit messages. There are only about 1,000 quipu (derived from the Quechua word for “knot”) left in the world; the majority have been traced to the Inca period, ca. 1400-1532 C.E. Formed like a necklace, quipu encompass a primary cord from which hang cords of different lengths and colors and varying numbers of knots. They both convey information and are beautiful to the modern eye. The multimedia exhibit “Cecilia Vicuña: Disappeared Quipu,” at the Museum of Fine Arts through January 21, features five of these artifacts that are on loan from Harvard's Peabody Museum of Archaeology and Ethnology (below, an example from Peru's Nazca Province), along with Andean textiles from the MFA's collection. (Quipu researcher Gary Urton, Dumbarton Oaks professor of pre-Columbian studies in Harvard's anthropology department, also collaborated on the exhibit.)

All these artifacts surround a central, giant quipu-like contemporary sculpture composed of tree-trunk-sized wool cords strung from the ceiling, onto which abstract video projections allude to lost languages, voices, and ghostly memories. Vicuña is a New York-based Chilean artist and poet who has spent years studying and interpreting quipu; she is intent on excavating their value as evidence of a sophisticated culture destroyed by Spanish colonization of South America, and of a universal human need for communication and connectivity. ~N.P.B.



Cecilia Vicuña:  
Disappeared Quipu  
MFA.org  
Through January 21



# “Beyond Lobsters and Lighthouses”

Enjoying Portland, Maine,  
in the “off-season”

by NELL PORTER BROWN



**F**ORGET lounging on the beach, and suit up instead to explore Portland, Maine, this winter. This dining haven and creative hub might be a lot quieter—and a lot colder—admits longtime resident John Robinson '90, a novelist and author of *A Concise History of Portland, Maine* (2008), but the arts and culinary scenes are thriving.

Theaters, museums, and music halls are all open, as are downtown's boutiques, cafés, and night clubs. There's also trekking along the scenic Portland Trails and ice-skating at Thompson's Point. “People gravitate to Portland in the winter to enjoy the lights, hit the art galleries on the First Friday Art Walks, check out the local microbreweries, and go skiing,” Robinson adds; the city offers anyone “a fun, romantic getaway.”

Or, just come to graze. Portland—rightly named “2018 Restaurant City of The Year” by



*Bon Appétit*—is packed with bakeries, bars, and restaurants, serving everything from South American *arepas* to fresh ale and oys-



**Clockwise from top right: a serene and snowy moment in historic Portland; among Sur Lie's elegant desserts; cookies, teas, and foot spas at Soakology; boats docked by the Maine State pier; a sampling of the treats on offer at Maine Restaurant Week's festive CRAVE event a year ago**

ters to five-course, farm-to-table feasts. “You can't even get a seat at most places in the summer,” Robinson reports, but “right now, through the end of March, you can walk in and sit at a bar, or get a table any time.”

Do plan ahead, however, for the tenth annual Maine Restaurant Week (March 1-11). The popular event draws crowds by offering specially priced menus, inventive cocktails, and impromptu parties; it's the perfect op-

CLOCKWISE FROM TOP LEFT: COURTESY OF MAINE RESTAURANT WEEK; COREY TEMPLETON PHOTOGRAPHY; COURTESY OF SUR LIE; COURTESY OF SOAKOLOGY; COREY TEMPLETON PHOTOGRAPHY



portunity to sample Greater Portland's finest fare.

THE YEAR-ROUND First Friday Art Walk—kicking off 2019 on January 4, February 1, and March 1—is organized by the nonprofit Creative Portland. The evening events take place primarily in the traditional downtown Arts District, where exhibits, readings, concerts, lectures, and performances spotlight the city's wide-ranging enterprisers.

But increasingly, First Friday also extends beyond the Old Port. Participating arts and incubation venues—like Fork Food Lab, New System Exhibitions & New Fruit, The Apohadion Theater, and Urban Farm Fermentory—have cropped up in the city's reenergized neighborhoods, like West Bayside and East Bayside, Woodfords Corner, and the East End: signs of an

**El Mundo desde abajo/Under View of the World (2015), by Juana Valdes, at the Portland Museum of Art (above); Maine Craft Portland's new downtown gallery; and a concert in the historic State Theater**

expanding creative economy.

The Maine College of Art (MECA), which redeveloped and moved into a former downtown department store in the late 1990s, has graduated hundreds of students, many of whom stay to work as artists and open businesses and nonprofits across the city, according to Robinson. And in



FROM LEFT: COURTESY OF THE PORTLAND MUSEUM OF ART; COURTESY OF MAINE CRAFT PORTLAND

2018, storefront space in the historic Maine Charitable Mechanics Association building, which formerly housed that artisans' guild, was renovated and opened by the nonprofit Maine Craft Portland as a retail gallery and arts-resource center. "Art-makers are fighting hard to stay in the city," he says, a result of the rising housing and living costs associated with the city's popularity.

The Maine Craft Portland project has been "a big, huge hit," says Dinah Minot, executive director of Creative Portland, which supports and "promotes the artistic talents and cultural assets of the city." In addition to anchoring institutions, like the Portland Symphony, Portland Museum of Art, and MECA, which established its The Institute of Contemporary Art (ICA) in 1997, Minot points to the smattering of smaller

and experimental arts and culture organizations, like SPACE, which "showcases some of the hippest output of local art." All of those, and dozens of others, open their doors for First Fridays and sponsor events year-round, but winter's a prime time to meet these artmakers and delve unfettered into the arts scene. Says Minot, "You're going to have 500 people out on the streets, instead of 3,000 to 6,000." (Check the website for details and a map of First Friday Art Walk events.)

On tap this season at The Portland Museum of Art are "Richard Avedon Portraits,

## ALL IN A DAY: Sliding Down the Slopes

**Need one good reason** to get outside and embrace the cold? Snow tubing. The slick rides are like sledding—on steroids. No special skills are required. And the colder it gets, the faster you'll fly down the slopes: at speeds of up to 20 miles per hour. "As the snow freezes more, it gets a little icier," says Alex Cole, a manager at Nashoba Valley Tubing Park, in Littleton, Massachusetts. There, 18 tubing lanes, each nearly a quarter of a mile long, are packed with man-made (and some natural) snow and extend along two sides of the hill, at a 100-foot vertical drop.

The park—the largest snow-tubing venue in New England—is part of the family-run Nashoba Valley Ski Area, founded in 1964. Tubing lanes opened on an adjacent hill in 2001, and quickly became a popular intergenerational winter activity. Families and kids come in droves, especially during school-vacation weeks, but so do groups of young adults and "the occasional older couple," Cole adds. "We have thousands of people

every week for tubing; in a season, we could see 50,000." Tips: go early or late in the day to avoid crowds; two-hour individual tickets are \$35; group-rate discounts are available; and night-time tubing, until 10 P.M., ups the thrill factor.

Other snow-tubing sites close to Boston include Ski Ward, in Shrewsbury, Massachusetts, and McIntyre Ski Area, in Manchester, New Hampshire. Those are smaller and perhaps tamer, but nonetheless offer fresh air and exercise, human contact, and a fun day out: all helpful combatants against winter doldrums.

—N.P.B.

**Tubing at  
Nashoba  
Valley Ski  
Area**



COURTESY OF NASHOBA VALLEY SKI AREA





© JOSHUA FRANCES

1952-1970" (through February 17) and "Relational Undercurrents: Contemporary Images of the Caribbean Archipelago" (opening February 1), which explores the fluid boundaries and themes in Latin American art.

The ICA's "Drawing Now" exhibit (opening January 17) features a mind-boggling array of works by members of the Drawing Collective, along with guest contributors Josefina Auslender, Kevin Townsend, and Michael Winkler.

On February 17, Creative Portland and the Merrill Auditorium present the inaugural performance-artist showcase "Hear, Here!" "It's an opportunity for families and everyone to come and see extraordinary talent that they might not have seen before," Minot says, "either because these artists are on the road during the summer season, or because they've recently moved here, attracted by this arts sector. Because this is a destination, beyond lobsters and lighthouses, for people interested in a rich cultural life."

For more music, check out the historic State Theatre—Walk The Moon, creators of the pop-tune "Shut Up and Dance," appears January 31—or celebrate Valentine's Day with a concert by jazz pianist Joey Alexander. More intimate is the Port City Music Hall, where AlSarah & The Nubatones, fronted by the Sudanese-American singer, songwriter, and ethnomusicologist, perform on January 17. Portland's bars, like The Thirsty Pig, Blue, and the Rí Rá Irish Pub and Restaurant, also host bands and other concerts, as does the Portland House of Music.

This season, The Portland Stage Company presents *The Importance of Being Earnest* (January 22-February 17) and *The Half-Light*, a new drama by Monica Wood about "the ghosts that live within us all" (February 26-March 24).

BETWEEN SHOWS, there's plenty of time to tuck in at Portland's excellent restaurants. Track the newest sites through <https://>

# The Bauhaus

February 8–July 28, 2019



# and Harvard

Harvard  
Art Museums

Fogg Museum  
Busch-Reisinger Museum  
Arthur M. Sackler Museum

#Bauhaus100

[harvardartmuseums.org/bauhaus](http://harvardartmuseums.org/bauhaus)

Herbert Bayer, Design for a Multimedia Trade Fair Booth, 1924. © Artists Rights Society (ARS), New York/VG Bild-Kunst, Bonn.



**LEADING EDGE**  
REAL ESTATE

[Myra@leadingedgeagents.com](mailto:Myra@leadingedgeagents.com)  
617.834.0838

[Amy@leadingedgeagents.com](mailto:Amy@leadingedgeagents.com)  
301.802.3284

**1888 Period Home:** One-third acre nestled on Hubbard Park Road, surrounded by white and green gardens featured in *Horticulture Magazine*. This renovated Estate is less than a half mile from Harvard Square in a quiet neighborhood. Over 7,200 sq ft of living space, with special appointments including an elevator, top of the line systems and a two-car garage. *Price Upon Request.*

**MYRA & AMY**

## HARVARD SQUARED

www.portlandfoodmap.com, or consider this short list of *Harvard Magazine's* favorite spots downtown or in the Old Port:

The vibrant **Central Provisions** offers fresh, eclectic small plates, like fried cauliflower, local swordfish, and a *foie gras* parfait (\$4-\$26), while **Sur-Lie** serves elegant tapas in a more reserved setting (\$7-\$16). At **Emilitsa**, try grilled eggplant and octopus and other rustic Greek fare (\$8-\$22), or step into the clean-lined Scandinavian-style décor at **Portland**



**Hunt + Alpine Club** and feast on Swedish meatballs and gravlax, or share the smörgåsbord: chef's choice of meats, fish, bread, and



FROM LEFT: KERI HERBER; COURTESY OF EVENTIDE

### Setting up at Central Provisions; fresh clam chowder at Eventide Oyster Co.

aquavit (\$5-\$48). For more casual dining and a happy late-night bar scene, **Taco Escobarr** serves super-fresh tacos, burritos, and the Mexican pork and hominy stew *pozole* (\$8-\$14), along with its inventive margaritas including strawberry jalapeño or toasted coconut). **Maiz**, opened by an entrepreneurial young couple, spotlights Colombian street food and specializes in stuffed *arepas*: soft corn-based dough cooked on a grill, filled with meat, cheese, or vegetables, and topped with salsa Rosado, chimichurri, or garlic sauce (\$6.50-\$8.50). For fresh shellfish—from raw oysters to clam chowder and lobster stew—dip into the hip boathouse-styled **Eventide Oyster Co.** (market-based prices). And don't miss the seafood and sake at **Miyake**, arguably the best Japanese restaurant in Maine; owner Masa Miyake (who also operates **Pai Men Miyake**) creates seasonal menus that incorporate vegetables, herbs, and meat from his own farm (\$13-\$19, or \$60, for a four-course meal).

Local craft breweries abound. You can't go wrong with any of them, but here are a few to note: **Allagash**, **Bissell Bros**, **Foundation**, **Oxbow**, and **Rising Tide**. Or, board the **Maine Brew Bus**, which offers a variety of tours in Portland and beyond, for a safe sampling expedition. For rotating craft beers on tap and other wintry concoctions—The Last Meow features catnip-infused gin (\$14)—try **Bramhall**, a candlelit, cave-like hideaway with hearty comfort food, like frito pie, cheeseburgers, and shoestring fries (\$8-\$12).

For noshing and drinking elsewhere in the city, the chic, airy **Drifters Wife** (Munjoy Hill section) offers a small, seasonal menu of "new American" food, e.g. bluefish with charred onion and aioli and homemade focaccia (\$7-\$30), and excellent, all-natural wines. The **Bao Bao Dumpling House**, a West End standout, is a cozy spot for these homemade Chinese staples, along with dim sum and a gingery pork and noo-

## VOX CAMBRIDGE COLLEGE CONSULTING LLC

We Help Students Navigate the College Process



Vox Cambridge provides highly personalized, custom college consulting with sensitivity and warmth. We help students gain insight into their true personality and character, then express it in a way that turns Admissions Officers' heads.

Contact **Kathleen Moore** 617-320-2724 // [www.voxcambridge.co](http://www.voxcambridge.co)

## As seen in HARVARD MAGAZINE

"Advertising in *Harvard Magazine* gives our clients' properties great exposure – and we love knowing that our partnership helps to fund the magazine and support the alumni community."



**Gail Roberts - REALTOR®**  
Harvard Magazine Advertising  
Partner for 15 years



Contact us to find out more about our audience and how advertising in *Harvard Magazine* can help your business.  
[www.harvardmagazine.com/advertise](http://www.harvardmagazine.com/advertise)



You never actually own  
a Patek Philippe.

You merely take care of it for  
the next generation.



PATEK PHILIPPE  
GENEVE

Begin your own tradition.



**LUX BOND & GREEN**

JEWELERS SINCE 1898

416 Boylston Street · BOSTON 617-266-4747



Twenty-4® Ref. 4910/11R



dle dish dubbed “ants climbing up a tree” (\$6-\$16).

How did Portland become a dining destination? “Maine Eats: The Revolution Starts Here,” at The Maine Historical Society through February 9, helps explain the stories behind iconic foods such as blueberries, potatoes, lobsters, and maple syrup—and the origins of whoopee pies, Moxie, and red hot dogs, while “Maine Brews” looks at the state’s prolonged Prohibition Era and the rise, since the 1980s, of more than 120 craft breweries (through January 26).

If trekking around and the chill become too much, hop into Soakology, a tea house and foot spa, or take a load off your mind at Float Harder Relaxation Center. There’s also a day spa at The Francis, boutique lodgings in a historic mansion downtown, al-



though Robinson (and any writer and lover of newspapers), would instead recommend The Press Hotel, located in the former home of Maine’s largest, and still thriving, newspaper, *The Portland Press Herald*.

ROBINSON, a self-described “failed” novelist who’s now a commercial real-estate broker,



FROM LEFT: COREY TEMPLETON PHOTOGRAPHY; COURTESY OF THE MAINE HISTORICAL SOCIETY

traces the current cultural renaissance to efforts that began in the late 1960s to save the Old Port and all “these brick buildings that are historic and which everybody loves so

## CURIOSITIES: Bedding Down in Early America

**A good night’s** sleep was likely hard to come by in early American homes. Privacy was rare—any beds were located in common spaces—and only householders with seniority got one; children,

servants, and guests were treated to pallets, or bare floors. Rope-strung supports tightened with a wooden peg (from which the phrase “sleep tight” derives) held mattresses stuffed with horsehair, straw, wool, and moss—or, at best, with goose feathers. Curtains mitigated cold winter drafts and helped shelter sleepers (or those engaged in other, personal nighttime activities). Beds and linens were labor-intensive to produce, or extremely expensive to

buy. As “Bed Furnishings in Early America: An Intimate Look”—at the Wadsworth Atheneum Museum of Art, in Hartford, Connecticut, further reveals: “Before the mid-twentieth century, a clean, comfortable bed was a luxury.”

Open through January 27, the show highlights textiles and furniture from the seventeenth to the early nineteenth centuries. An “English bed furnishing set” from 1650-1700, which was transported to America, features an enclosure made of fustian valances and curtains embroidered with crewel yarn in a flamboyant vine-and-flower pattern. A miniature, scaled version of a New England high-post bed (ca. 1750-1765) features historically accurate red-gingham bed furnishings (at left) made by Natalie Larson, an expert on historic textiles and reproductions based in Williamsburg, Virginia. Other exceptional handwork, which took artisans and homemakers countless hours to complete, is also on display in bed hangings and rugs, coverlets, and quilts.

All told, the exhibit concludes that despite the bed’s central role in reproduction, birthing, sickness, and death, holding apart “a space for comfort, warmth, and security” was largely a status symbol reflecting a homeowner’s financial standing and specific physical and emotional needs.

—N.P.B.



LOAN COURTESY OF NATALIE AND BRUCE LARSON



Wadsworth Atheneum Museum of Art  
thewadsworth.org  
Through January 27



**Visitors at the Wadsworth Atheneum admire a coverlet (ca. 1780)—also known as a “counterpane”—with impressive appliqué craftsmanship; at right is a Star of Bethlehem quilt (1842), made by Submit Gay, of Hartford.**

GIFT OF MISS FANNY GAY DAIROW. (1926.2804)





From left: The Francis, a mansion turned hotel; Maine Historical Society highlights craft breweries; skating on Thompson Point

much” from destruction during the urban-renewal movement.

After World War II, when the Atlantic convoys and an AT&T node left, “the bottom fell out of Portland,” he says, and by the 1960s, “the entire Old Port area was abandoned to motorcycle gangs and a really rough crowd. This place could have been the setting for a good crime novel in the 1970s!” Businessman and landlord Frank Akers (a son of Frank G. Akers Sr., Harvard class of 1925) is credited with buying up the first derelict buildings and claiming that a law prevented “historic buildings from being torn down if they were occupied,” Robinson reports. “He ran newspaper ads in Boston promising ‘Artist Studios’ for \$1 per month (no heat!). He strung electric cords with light bulbs through the windows of the open buildings and prevented the buildings from being bulldozed.”

The city government did raze structures—including the old U.S. Post Office, constructed of “the finest Canadian marble,” Robinson adds, to build a parking lot in the heart of the city (now a pocket park). But preservation and redevelopment activism, combined with other factors—The Clean Water Act of 1972, which spurred anti-pollution measures in Casco Bay, and federal investments funneled into the city under then-U.S. senator George Mitchell, among others—helped keep Portland afloat.

Then, in the late 1990s, Maine Medical Center began expanding and MECA opened downtown. “Funky restaurants moved in to take advantage of the Fisherman’s Co-op. The bars in the Old Port cleaned up their acts,” he continues. “The city went from becoming a gutted New England port town to a vibrant center for creative-arts people, chefs, lawyers, and doctors. It is truly an astounding recovery.”



## LEADING EDGE REAL ESTATE

Myra@leadingedgeagents.com  
617.834.0838

Amy@leadingedgeagents.com  
301.802.3284

**Historic 1893 Victorian:** Handsomely restored, Queen Anne filled with modern features. Built by Peabody & Stearns. Located just off Brattle, this home offers a flexible floor plan and over 8,000 sq ft on an over-sized lot. Rare three-car garage and ample off street parking. Beautiful light-filled rooms, nine working fireplaces, a grand period staircase with Palladian windows, and room sized baths are just some of the notable features. First floor layout is ideal for entertaining. State of the art systems make this historic home updated for modern living and comfort. \$10,800,000

**MYRA & AMY**

Real Estate Agents, Homeowners and Attorneys; we solve problems!



Providing you with solutions for how to sell things from a home, for an individual client who is moving, or an entire estate; we help you sell household goods, artwork and collections, through private sale or an estate sale. We can help you connect with honest, professional appraisers and auctioneers. We specialize in New England.



1-833-EMPTIED | [www.emptyyourhouse.com](http://www.emptyyourhouse.com)

## Fresh Pond Ballet



**2019**  
**Now enrolling!**  
*New Students Welcome*

Age 3, youth,  
teen-adult-pointe

Visit us at:  
**[freshpondballet.com](http://freshpondballet.com)**

Nina Alonso, Director, FPB  
1798a Mass Ave, Cambridge  
617.491.5865

### THE RESIDENCES AT 20 MARLBORO STREET #1, BELMONT ONE UNIT LEFT!



Impeccably renovated in 2018. 3 bedrooms and 3 bathrooms. Private entry home office or family room. Separate guest room and bath. Back porch. Generous rooms with sunny exposures. State of the art systems. Garage parking plus storage rooms. Ideal location 2 miles from Harvard, convenient to transportation, shops, restaurants and the universities. *Exclusively Offered - \$945,000*

**[WWW.BARBARACURRIER.COM](http://WWW.BARBARACURRIER.COM)**



THE CURRIER TEAM  
Coldwell Banker  
171 Huron Ave, Cambridge, MA  
Call or text 617.593.7070  
[barbaracurrier50@gmail.com](mailto:barbaracurrier50@gmail.com)

BARBARA CURRIER • RYAN FERRO • SISY QU

## THE PERFECT STORM: Why Resolutions Work Best in Winter

**The parties are over**—champagne flutes drained, holiday decorations tucked safely away for next year. Now it's time for a clean slate. Whether you seek a fresh financial start, want to embark on a wellness plan, or spice up your social life, here are tips from the experts to inspire and motivate.



Just as you clean your home once the guests pack up, winter is a natural time to get your financial house in order, too.

"This is a good time for fresh starts. It's a line in the sand," says Jody King, vice president and director of financial planning at Fiduciary Trust Company.

She advises clients on six key topics once the new year arrives: income tax planning, such as changes in tax rates and itemized deductions; gift planning, education planning, and funding trusts; charitable giving; estate planning; long-term financial planning, with an eye on retirement; and financial check-ups, focusing on tactical investment changes.

Consider each, but realize that not every topic applies to every person. Regardless of your own situation, though, one universal mantra resonates year-round.

"Save lavishly. Indulge yourself and save," she says.

January also finds many people at the gym, eager to burn holiday calories. It's a worthy goal but one best achieved with a mindset shift.

Instead of sweeping resolutions—eating better, exercising more—Christina Reale of Reale Wellness prefers specific goals. She often works with clients on "new year, new you" sessions in January, helping them to implement realistic plans.

For instance, instead of vowing to eat healthfully, start with one clear modification, such as swapping a soda per day for sparkling water. "Breaking down goals into smaller steps makes them manageable. Laying out a detailed, multi-step plan broken down into achievable mini-goals helps to create lasting change," she says.

Of course, winter isn't merely about self-improvement. If reconnecting with friends tops your resolution list, consider throwing a party. Experts say that it's a relaxed (and affordable) time to socialize, without the lofty expectations and high price tags of holiday soirées. In fact, event planner Nicole Guilmartin says it's far easier to make reservations and secure discounts on prime venues.

"You get the benefit of the full attention from planners and vendors, along with the potential to have more invitees available to join the festivities once the holidays have passed," she says. A winter backdrop also fuels creativity: she's coordinated Chinese New Year-themed dinners, a cozy lodge party, and a retro ice-skating soirée.

Plus, off-season parties are a mood-lifter. "It gives people a reason to get out," she says.

Wedding planner Janie Haas even encourages couples to consider winter weddings. After the holidays, it's easier to book a dream venue and negotiate a favorable rate—leaving more room for creative seasonal touches like mac-and-cheese or hot chocolate bars.

"The magic of winter beauty lends a romantic backdrop, and it takes the pressure off outdoor space getting ruined by weather. Winter menus can be delicious comfort food without breaking the bank, and brides and grooms feel more relaxed after the holiday madness," she says.

Better financial health, streamlined fitness goals, and affordable socializing? We'll toast to that.

~ KARA BASKIN



COURTESY OF BEACONBLIND.COM

MAX FLATOW PHOTOGRAPHY; NICOLE GUILMARTIN.COM





# JOHN HARVARD'S JOURNAL

**ARTS ARRIVE IN ALLSTON.** Though attention rightly focuses on the engineering and applied sciences complex taking shape on Western Avenue, its smaller cousin, the 9,000-square-foot ArtLab maker space (sited around the corner, on North Harvard Street; see [harvardmag.com/artlab-plans-17](http://harvardmag.com/artlab-plans-17)), is also well under way, as shown in these November views. As the fine print always cautions, these images are not to scale: the billion-dollar science facility appears to the right, and its humanistic neighbor—at roughly one-hundredth the investment—above. But as a harbinger of other potential arts and related facilities in the vicinity, the ArtLab looms large.

## IN THIS ISSUE

- |    |  |    |   |
|----|--|----|---|
| 16 | Harvard Portrait                                 | 24 | FAS: Faculty and Fisc   |
| 18 | Accelerating Medical Research                    | 26 | News Briefs: <i>Policing and Students, Title IX, Public Attitudes toward Higher Education</i> |
| 19 | Surplus Surprise...and the Endowment's Evolution | 27 | Brevia  |
| 20 | Yesterday's News                                 | 30 | The Undergraduate   |
| 21 | University People                                | 33 | Sports  |
| 22 | Engaging Radcliffe with the World                |    |   |

## Admissions on Trial

*The lawsuit that could determine the fate of affirmative action*

HARVARD'S undergraduate admissions process was on trial in October and November, in a federal case that could ultimately change the shape of college admissions nationwide. At issue is whether the College's "holistic"



## HARVARD PORTRAIT



Ruth Okediji

**Ruth Okediji**, Smith professor of law, traces her enthusiasm for intellectual-property law to a childhood love of literature and storytelling. When she was seven, her family immigrated to New York City from Nigeria. “I had never heard the word ‘race’ and had never been described as a black person,” she recalls. “I just kept feeling this hostility in the private school that my parents sent me to. When I couldn’t make sense of it, I started going to the New York Public Library. The books raised me.” She returned to Nigeria for college, then earned her S.J.D. from Harvard Law School in 1996; she joined the faculty in 2017 and became co-director of the Berkman Klein Center for Internet & Society. Intellectual-property law may sound arcane, but its machinery shapes the most intimate details of our daily lives, Okediji says. Everything from “the moment you wake up—the music on your alarm clock is under copyright—to singing in the shower, to forwarding email,” she explains. “You might watch a movie on Netflix and decide, ‘Oh, I really like this character, maybe I should make a video game of this character.’” Copyright law “transforms who we are as a people.” Okediji is concerned with how intellectual-property law nourishes some types of creation but erases others. “Copyright law is intimately bound up in the invention of the printing press. If you look at indigenous groups all over the world, their lifestyles and works of art and poetry are often not captured by the intellectual-property system,” she says. “It’s as though we’ve created a system that says, ‘It’s only when you come from a Western literary culture that your work matters.’ I feel profoundly moved by that injustice.” —MARINA N. BOLOTNIKOVA

admissions practices—which evaluate students not only for grades and test scores, but also for personal traits such as character—discriminate against Asian-American applicants. But the trial also provided the plaintiff, anti-affirmative-action group Students for Fair Admissions (SFFA), a platform to publicly dissect other Harvard practices that weren’t directly challenged in the case, including preferences for athletes and for children of donors and alumni. Such policies have been widely examined before—but the trial proceedings revealed new details about their use, and brought them under renewed public scrutiny.

The lawsuit, originally filed in 2014, is organized by SFFA’s founder and president, Edward Blum, a well-known political activist and opponent of affirmative action, who previously initiated *Fisher v. University of Texas*. In that case, ultimately decided in 2016, the Supreme Court upheld the university’s policies in a ruling specifying that college affirmative-action programs must be tailored narrowly and show that they accomplish a specific goal, and also that colleges must prove that race-based admissions policies are the only way to meet diversity goals.

The SFFA case was heard in Boston’s federal courthouse by U.S. District Judge Allison Burroughs, who is not expected to issue a ruling for several months; Harvard and SFFA will file additional documents in the case in December and January, and provide additional arguments in February.

Burroughs has already dismissed SFFA’s claim that race should not be a factor in college admissions, deferring to Supreme Court precedent on the issue; instead, she will rule more narrowly on whether Harvard’s admissions process discriminates against Asian Americans. Nevertheless, the legality of affirmative action may be considered by a higher court if the case is later appealed, as it may well be. Blum may anticipate a favorable audience, given the new majority on the Supreme Court, which he hopes will rule the use of race in admissions unconstitutional. Last summer, the U.S. Department of Justice withdrew Obama administration guidelines on the use of race in college admissions, and filed a statement of support for SFFA in the case. All the other schools in the Ivy League, plus nine other private universities, have filed a joint friend-of-the-court brief this summer defending the use of race in admissions.

On the trial’s first day, the courtroom was





**Supporters of affirmative action protested in Harvard Square the day before SFFA v. Harvard went to trial...**

that diversity is central to the University's educational mission. Applicants' "personal" ratings, he said, were determined by information conveyed to admissions officers through sources like teacher and guidance-counselor recommendations. He also stressed that race is never

pared to the College's current overall admission rate of less than 5 percent). The connection between these policies and the question of discrimination against Asian-Americans is not straightforward—but they were likely intended by SFFA to cast doubt on the fairness of Harvard's admissions process overall.

Throughout the trial, SFFA's and Harvard's arguments relied on conflicting testimony from two expert witnesses: for SFFA, Peter Arcidiacono, a Duke economist who analyzed admissions data and concluded that Harvard's process discriminates against Asian Americans through its use of a personality score for applicants; and for Harvard, David Card, a Berkeley economist who concluded that the data show no evidence of discrimination. The economists' models differ in a few key ways: Card's includes applicants' "personal" scores, while Arcidiacono's does not, because SFFA believes the scores are arbitrary and illegitimate. Card's model also includes "ALDC" applicants: students who are recruited athletes, legacies, relatives of major donors, or children of faculty or staff members, while Arcidiacono's does not. Because admission rates for these groups are dramatically higher than for other applicants, SFFA argues, they essentially go through a separate admissions process.

Another area in which SFFA and Harvard had opposite interpretations of the same set of facts was the recent increase in the num-

packed with journalists and members of the public, reflecting intense interest in elite institutions' admissions, and strong public feelings about the consideration of race in their decisions. The plaintiffs argued that affirmative action was *not* at issue in the trial: "The Supreme Court has held that race can be used in a narrowly tailored way to unlock the benefits of diversity in education," argued SFFA attorney Adam Mortara. Instead, he said, SFFA aimed to prove that white students were given an advantage over better-qualified Asian-American applicants through ill-defined "personal" ratings that invited implicit bias and discrimination: "Harvard is pushing down Asian Americans on this all-important, subjective 'personality' rating." Asian-American applicants on average perform better than whites on other measures used by the admissions office—academic and extracurricular—he said, but they receive substantially lower personality scores.

Mortara also argued that University officials have long known about the "statistically significant penalty on Asian Americans applying to Harvard." Reports by Harvard's Office of Institutional Research in 2012 and 2013, which were included in court documents filed by SFFA last summer, found that Harvard's admissions process had "negative effects" for Asian Americans. University officials have said those reports were "preliminary and limited."

In the University's opening statement, William F. Lee '72, Harvard's lead lawyer in the case (and senior fellow of the Harvard Corporation), argued that SFFA's claims of discrimination were unsupported; that Harvard's admissions process has been upheld as exemplary by the Supreme Court in the 1978 case *Regents of the University of California v. Bakke* (by using race only as a "plus" factor, and evaluating each applicant as an individual); and

the sole or determining factor in an applicant's admissions decision: "Instead, the evidence will confirm that, as permitted by the Supreme Court, race is considered as one factor among many in the Harvard admissions process; that when it is considered, it is considered flexibly; and that it is always used as a 'plus' factor."

In the weeks that followed, University officials—including former president Drew Faust, College dean Rakesh Khurana, director of admissions Marlyn McGrath, and others—provided testimony about the goals, processes, and priorities of the College's admissions system. Faust said that "there is no place for discrimination of any kind at Harvard," and stressed that one of her top priorities had been to improve access to Harvard for groups not previously represented—for instance, through the financial-aid initiative that makes attendance free for undergraduates whose families earn less than \$65,000.

SFFA, meanwhile, used Harvard's internal admissions data and emails to highlight the disparities in admission rates among different groups and the preferences given to applicants with ties to the University. The "Dean's Interest List" and "Director's Interest List," for example, include applicants linked to notable donors and alumni, or who are of special interest otherwise. Court documents showed that such applicants made up about 9 percent of the College classes of 2014 through 2019, and were admitted at a rate of 42 percent (com-



**...as across the river, in Copley Square, supporters of SFFA gathered for an opposing rally.**

ber of Asian Americans at the College. Mortara argued that beginning with the admissions cycle for the class of 2019, coinciding with the time the lawsuit was filed, "the Asian penalty [went down] substantially"—Harvard began admitting a higher share of Asian-American students. "Why is that? That's because when Harvard knew that someone was go-

ing to be looking into what's going on, they dialed down the Asian penalty. This is powerful, circumstantial evidence of discrimination." Lee later forcefully refuted that claim: "From the class of 2006 to the class of 2019, the percent of Asian Americans in the admitted class increased from 16.5 percent to almost 21 percent—an increase of approximately 25 percent.... Last year—for the class of 2022—Asian Americans were almost 23 percent of the admitted class. The idea that being sued by SFFA is the reason these numbers have gone up is simply not true."

Whatever the outcome of the trial and its subsequent appeals, the case has produced wide-ranging discourse about what

the point of a college-admissions process ought to be, and what criteria are legitimate in achieving it. Watson professor of law Jeanie Suk Gersen has contributed regular commentary to *The New Yorker* on the subject. As SFFA did, she compares Harvard's current admissions policies with its efforts to limit the number of Jewish students enrolled in the 1920s. "[O]ne outcome of this month's trial," she wrote in October, "has been to heighten awareness of implicit racial biases. And, win or lose, Harvard's Asian problem, recalling the experience of Jews, will be a piece of the social history of an American minority group on its way to eventual, if not always enthusiastic, acceptance."

Elsewhere, students and other observers have argued that SFFA has used discrimination against Asian Americans to obscure its real aim in the case: to dismantle affirmative action and harm the disadvantaged groups who benefit from it. "[R]ecognizing that racism can affect how Asian Americans are perceived in college admissions cannot, and should not, be a referendum on the entire structure of race-based admissions policies," argued Elyse Pham '22 in *The Harvard Crimson*, in one of several op-eds by students on the subject. The questions of race, identity, deserts, and fairness that have been amplified by the trial are sure to live beyond the litigation. ~MARINA N. BOLOTNIKOVA

## Accelerating Medical Research

NETFLIX has thrived in part because it knows what movies subscribers have watched—and which films similar viewers have enjoyed. Is there an analogy to this powerful recommendation protocol applicable to medicine? Nelson professor of biomedical informatics Isaac Kohane thinks so. During a Harvard Medical School (HMS) symposium on November 8, he outlined a tool that would encourage cancer "superresponders"—the patients who achieve gains in longevity not of a year or two, but of many times that—to share their health and therapeutic histories,

cancer treatment, making current miracle cures the standard of care by 2030.

That vision may now have a better chance of becoming reality. The symposium celebrated a \$200-million gift, the largest in HMS history, focused on four priorities:

- investments in the infrastructure and technology for basic and clinically applicable research;
- faculty appointments focusing on biomedical informatics (see "Toward Precision Medicine," May-June 2015, page 17) and data science, among other fields;
- grants to seed collaborations among HMS researchers and those at its 15 affiliated hospitals and other research institutions—an important step toward harness-

ing the latent power of the Greater Boston biomedical ecosystem; and

- a Longwood Medical Area "life lab," a counterpart to the facility in Allston, to support nascent biotechnology and life-sciences enterprises.

The gift, from the Blavatnik Family Foundation, builds upon prior support for biomedical re-

search from Len Blavatnik, M.B.A. '89, who has been a benefactor of science around the globe. A \$10-million gift to Harvard in 2009 split evenly between cancer-vaccine research and a "biomedical accelerator fund," to encourage development of ideas with commer-

cial potential, was followed by a \$50-million gift, in 2013, in support of translating basic science into therapies and a Harvard Business School fellowship program for life-sciences entrepreneurs. Those were mere preludes to the newest philanthropy, summarized in the news announcement this way:

School priorities supported by the gift include deepening fundamental discovery; accelerating the development of new treatments; spurring applications of data science toward the comprehension, diagnosis, treatment and cure of disease; recruiting data scientists, computational biologists, bioengineers and other experts; and catalyzing collaborative discovery across the broader Harvard life sciences ecosystem.

The presentations by Kohane and others illustrated some of the scientific and therapeutic potential. A separate panel discussion, moderated by MIT president emerita Susan Hockfield, a neuroscientist, demonstrated some of the leverage from bringing the expertise resident in Boston-area institutions—with their thousands of basic researchers, academic clinicians, and skilled technicians—to bear on common problems. Laurie Glimcher '72, M.D. '76, president and CEO of Dana-Farber Cancer Institute, and professor of systems biology Eric Lander, the president and founding director of the Broad Institute of MIT and Harvard (a leading center for genomics research), said it mattered not at all whether scientists conducted research at one venue or another. Both hailed the growth of an intellectually integrated "community" of life scientists. Glimcher also cited the collaborations



**Coming together: Greater Boston biomedical and life-sciences panelists (from left) Eric Lander (Broad Institute), Vasant Narasimhan (Novartis), and Laurie Glimcher (Dana-Farber Cancer Institute), with moderator Susan Hockfield (MIT)**

genomic data, lifestyle indicators, and more, so clinicians will know what drugs to try when they meet new but similar patients. Harnessing such patient data with therapeutic information and possible clues to further research, he said, would radically advance

search from Len Blavatnik, M.B.A. '89, who has been a benefactor of science around the globe. A \$10-million gift to Harvard in 2009 split evenly between cancer-vaccine research and a "biomedical accelerator fund," to encourage development of ideas with commer-



among academic medical centers and pharmaceutical companies as “a marriage made in heaven,” noting the relationship dating to 1982 between her enterprise and Novartis, which has a vast research center in Cambridge. Novartis CEO Vasant Narasimhan, M.D.-M.P.P. ’03, cited the advantages of scale in bringing discoveries to patients’ bedside: his company performs 550 clinical trials per year, he said, and its compounds treat a billion people annually (the sort of data that, ultimately, Kohane and his bioinformatics colleagues hope to harness).

President Lawrence S. Bacow hailed the gift as an endorsement of “curiosity-based research” and a powerful statement of support for the “unique ecosystem” of life and biomedical sciences in Greater Boston, where “We have the capacity” to transform health and reimagine health care. He thanked Blavatnik for “supporting the very best people in the very best places,” especially in the life sciences, raising the odds for discoveries of fundamental importance.

An ebullient HMS dean George Q. Daley proclaimed this a “pivotal moment in the history of medicine,” and said the new gift would have a “transformative impact and outcomes.”

**With Len Blavatnik ironically laid low in London following surgery, Dean George Daley (left) and President Larry Bacow conferred an HMS jacket on his brother, Alex Blavatnik—a sign of membership in the Medical School community.**

Stressing the importance of collaborating with community institutions and scientists, he said it was “not a gift just to Harvard but to biomedicine through Harvard,” igniting a “new era of discovery.”

The gift, which has been in the works since earlier in the year, underscores a fundamental strengthening of HMS, which has been operating at a deficit for several years (not unusual among institutions which conduct expensive “wet” lab science; the fiscal year 2018 red ink was \$39 million). It follows the school’s successful capital campaign, which realized \$789.4 million in gifts and pledges (much of that for research, as was noted in a November 8 evening celebration at Fenway Park), and the recent sale of a leasehold interest on an HMS research building (which brought in another \$272.5 million).

In a hard-to-believe moment, the donor himself was absent from the gala celebration



of his stupendous gift: a resident of London, Len Blavatnik was recuperating in a hospital there following an appendectomy, occasioning some rueful humor about expedient medical care; he watched the proceedings by a live video link. For a detailed report on the Blavatnik gift and HMS, see [harvardmag.com/hms200mgift-18](http://harvardmag.com/hms200mgift-18).

Separately, Harvard’s science aspirations were advanced by another nine-figure gift, this one to the Faculty of Arts and Sciences (FAS). On October 12, *The Harvard Gazette* unveiled an anonymous \$100-million gift, by an alumnus and his wife, designated to keep the Science Center in shape as a core undergraduate teaching facility; support mathematics research; and provide unrestricted funding for use at the discretion of the FAS dean. The donor is described as a 1990s College graduate; his interests, in collaborations with Israel and in mathematical finance, perhaps provide grist for budding applied mathematicians to develop an algorithm to try to peel back the cloak of anonymity from one of the most generous donors in Harvard history.

—JOHN S. ROSENBERG

## HM Explore More

**Harvardmagazine.com** brings you continuous coverage of University and alumni news. Visit to find these stories and more:



### A Quantum Science Initiative

Harvard thinks bigger about the odd realm of matter at the very smallest scale.  
[harvardmag.com/quantsci-18](http://harvardmag.com/quantsci-18)



### A Culinary Tour of the New Smith Campus Center

Six new vendors supply the Harvard community with coffee, cocktails, wraps, and much more.  
[harvardmag.com/smithcenter-food-18](http://harvardmag.com/smithcenter-food-18)



### Allston Land Company Leads Harvard Commercial Development

A new, wholly owned subsidiary will direct Harvard’s commercial district plans in Allston.  
[harvardmag.com/allstonlandco-18](http://harvardmag.com/allstonlandco-18)

visit [harvardmagazine.com](http://harvardmagazine.com)

## Surplus Surprise... and the Endowment’s Evolution

THE UNIVERSITY’S financial report for the fiscal year ended June 30, 2018, published on October 25, revealed a fifth consecutive budget surplus—nearly \$200 million—in part reflecting continued U.S. economic growth and the benefits accruing from the \$9.62-billion Harvard Campaign (which wrapped up on June 30; see [harvardmag.com/campaigntotal-18](http://harvardmag.com/campaigntotal-18)). The report included an annual message from Harvard Management Company (HMC) chief executive

FROM TOP: COURTESY OF JOHN DOYLE/HARVARD RESEARCH CENTER FOR QUANTUM OPTICS; KEN RIVARD; HARVARD PLANNING OFFICE

## Yesterday's News

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

**1934** The College funds five \$1,000 fellowships for prospective freshmen who live and attend school in the Midwest: an experiment by President James B. Conant to attract "the most promising young men throughout the whole nation."

**1939** "The Undergraduate Week," by William R. Frye '40, reports: "If Harvard ever was composed solely of the 'upper crust' of society, it is not so composed now": the Student Employment Office, organized to provide jobs for men facing financial difficulties, is serving nearly one-third of the undergraduate body.

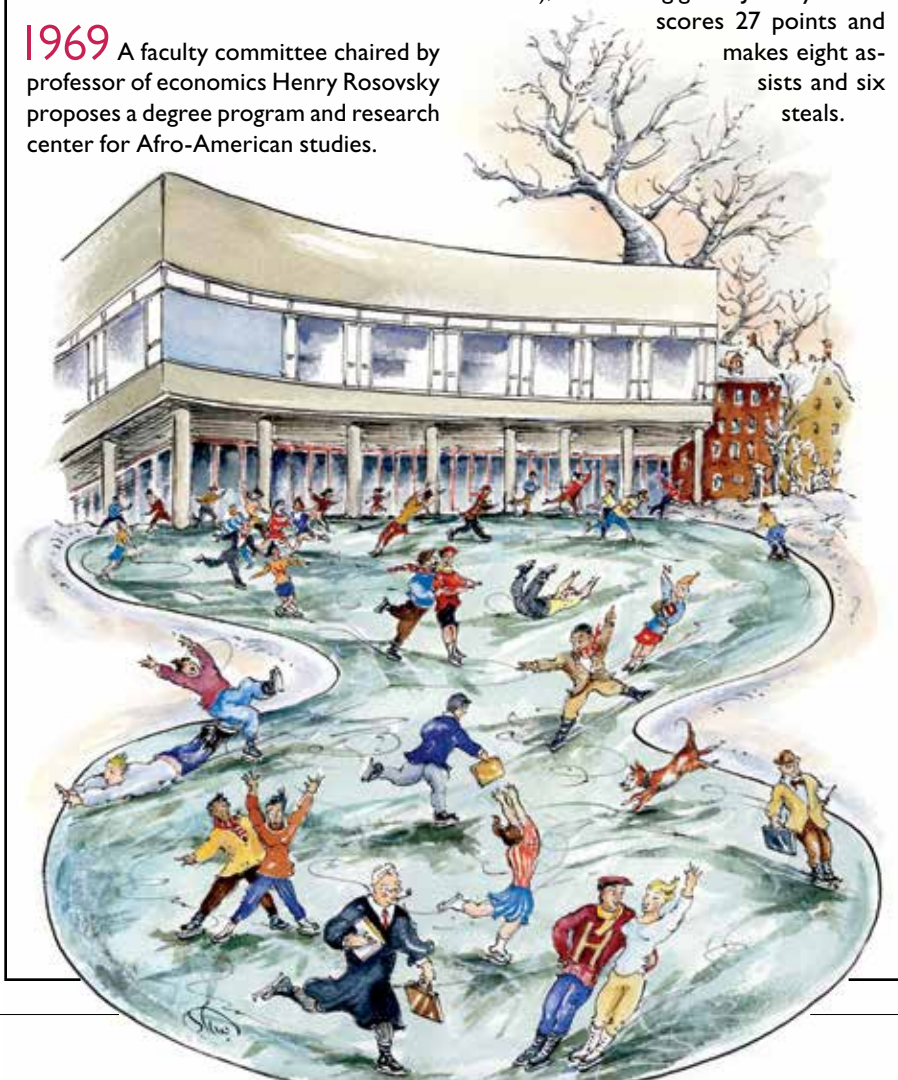
**1964** Harvard opens a housing office; its first task is assigning apartments in one section of Peabody Terrace that has been finished nine months ahead of schedule.

**1969** A faculty committee chaired by professor of economics Henry Rosovsky proposes a degree program and research center for Afro-American studies.

**1984** The Law School faculty approves a pilot program to provide about \$125,000 in loans to supplement the earnings of first- and second-year law students who take low-paying, law-related jobs in the public-service or public-interest sector during the summer.

**2004** Dean of the Law School Elena Kagan decides on the spur of a frozen January moment to flood the field by Harkness Commons to form a skating rink that will remain open, she says, "until it melts."

**2009** Harvard men's basketball records its first win over a nationally ranked opponent, Boston College (which had beaten the nation's top team only a week before), as shooting guard Jeremy Lin '10 scores 27 points and makes eight assists and six steals.



N.P. Narvekar, in which he shed more light on the endowment, following the September news of a 10 percent investment return during fiscal 2018 (details at [harvardmag.com/endowment-18](http://harvardmag.com/endowment-18)).

The financial results, plus Narvekar's comments on his progress in overhauling HMC to boost returns, help clarify both Harvard's prospects during favorable conditions and President Lawrence S. Bacow's perspective, at the outset of his administration, on how to be ready for whatever lies ahead. Having led Tufts during the financial crisis at the end of the last decade, he offers some cautions about how the University with the largest endowment should be on its guard.

### Harvard's Finances

DURING FISCAL 2018, revenue increased nearly \$217 million to about \$5.2 billion (growth of 4.3 percent): close to the 4.6 percent growth in fiscal 2017, despite restrained endowment distributions—Harvard's largest source of revenue.

The growth was driven by *executive and continuing education*, up more than \$47 million (about 12 percent—faster than the 8 percent growth logged in the prior year), to \$458 million; and *non-federal sponsored research grants*, up an aggregate \$21.5 million (8 percent), to nearly \$289 million. (Unfortunately, federal research support was essentially flat, at \$453 million for direct costs—and up about \$7 million for indirect costs: reimbursement for facilities, overhead, etc.)

The *endowment distribution* rose by \$34 million (just 1.9 percent), to a bit more than \$1.8 billion. In light of earlier weak investment returns, the Corporation held the distribution flat (per unit of endowment owned by each school) for fiscal 2018, and suggested that distributions could increase within a range of 2.5 percent to 4.5 percent annually for fiscal years 2019 through 2021, beginning with 2.5 percent in the current year. The increases realized in fiscal 2018 reflect gifts: new endowment units as a result of largess from the campaign. *Current-use giving* rose, too, by \$17 million (3.7 percent), to \$467 million—another testament to the socko finish of the fundraising drive.

*Other revenue*, a catch-all category, also chipped in, increasing \$50 million (7.9 percent), to \$689 million. A notable contributor was royalties from commercial use of intellectual property (up about \$18 million, or 50 percent, but those results can be very volatile from year to year).

Illustration by Mark Steele



Expenses rose by \$134 million to just more than \$5 billion (2.7 percent)—continuing a moderating trend (up 3.9 percent in fiscal 2017 and 5.3 percent in the prior year). Although some one-time factors affected the results, it appears that deans, expecting level endowment distributions, reined in their spending.

Compensation—salaries, wages, and benefits—accounts for half of expenditures, and rose only 2 percent: less than half the rate of growth in fiscal 2017. Salaries and wage ex-

pense increased 3 percent, also decelerating from the prior year; and employee-benefit costs were unchanged.

There is a bit of accounting noise in that number. Expenses for employee benefits such as retirees' defined-benefit pensions and healthcare costs are adjusted annually for changes in the prevailing discount rate. In fiscal 2017, those adjustments increased costs significantly. In fiscal 2018, the interest-rate adjustment (and favorable claims experi-

ence) decreased costs, a significant swing in results. In both years, health-benefits costs for active employees—the major benefits expense—rose a reported 4 percent, reflecting more people covered and higher claims costs.

All other expenses increased by an aggregate 3 percent. Space and occupancy costs rose an apparent 10.5 percent, to \$410 million. Some of that reflects the University's torrid construction program (see below) and larger facilities, such as the expanded

## University People

### National Academy Members

Among the 75 new U.S. members of the National Academy of Medicine are a dozen from Harvard: professor of medicine **Richard S. Blumberg**; Gamble professor of biostatistics, population, and data science **Francesca Dominici**; Canellos professor of medicine **Benjamin L. Ebert**; Rosenkrantz professor of the history of science and professor of African and African American studies **Evelynn M. Hammonds**; professor of genetics **Robert E. Kingston**; Austen professor of surgery **Keith Douglas Lillemoe**; professor of biostatistics and of statistics **Xihong Lin**; professor of pathology **Matthew Langer Meyerson**; professor of pediatrics and of education **Charles A. Nelson III**; Loeb professor of chemistry and chemical biology **Stuart L. Schreiber**; Fabyan professor of comparative pathology **Arlene H. Sharpe**; and Chandler professor of ophthalmology **Janey L. Wiggs**.



**Matthew Langer Meyerson**

DANA-FARBER CANCER INSTITUTE



**Francesca Dominici**

KRIS SNIBBE/HPAC

### NIH Notables

Seven Harvard scientists are among the 89 newest beneficiaries of the National Institutes of Health's programs to encourage pioneering biomedical research through high-risk, high-reward grants: assistant professor of biological chemistry and molecular pharmacology **Justin Kim**; professor of stem cell and regenerative biology, and of medicine, **Richard T. Lee**; assistant professor of medicine **Po-Ru Loh**; John Harvard Distinguished Science Fellow **Sergey Ovchinnikov**; Stillman professor of developmental biology **Norbert Perrimon**; Forst Family professor of stem cell and regenerative biology **Amy Wagers** (who chairs that department); and professor of systems biology **Peng Yin**. Their projects range from investigating the repair of damaged tissues to using DNA and RNA as scaffolds to help manufacture biomolecules.



**Richard T. Lee**

JON CHASE/HPAC



**Justin Kim**

SAM OGDEN



**Amy Wagers**

JON CHASE/HPAC

### AAAS Honorands

Count 10 faculty members among the newly elected fellows of the American Academy of Arts and Sciences: professor of genetics **Susan M. Dymecki**; Stanfield professor of international peace **Jeffry Frieden**; Richards professor of chemistry and professor of materials science **Cynthia Friend**; Zwaanstra professor of international studies and economics **Gita Gopinath** (now serving as chief economist of the International Monetary Fund); Vallee professor of molecular pathology **Wade Harper**; McArthur University Professor **Rebecca Henderson**; Thomas professor of history and of African and African American studies **Evelyn Brooks Higginbotham**; McGuire lecturer in comparative politics **Pippa Norris**; Hessel professor of biology **Naomi E. Pierce**; and Bulard professor of pediatrics and neurology **Christopher A. Walsh**.



**Wade Harper**

COURTESY WADE HARPER



**Cynthia Friend**

ROSE LINCOLN/HPAC



**Evelyn Brooks Higginbotham**

COURTESY OF EVELYN BROOKS HIGGINBOTHAM

### Honor Roll

The Royal Institute of British Architects has conferred its 2018 Stirling Prize on Foster + Partners' European headquarters for Bloomberg LP. **Hanif Kara**, professor in practice of architectural technology, and his firm, AKT II, served as engineers and design director for the project....The Library of Congress has conferred the biennial Bobbit National Prize for Poetry on Boylston professor of rhetoric and oratory **Jorie Graham** for her 2017 collection of poems, *Fast*; the magazine's 2001 profile is available at [harvardmag.com/joriegraham-18](http://harvardmag.com/joriegraham-18)....Charles River professor of engineering and applied sciences **Robert Wood** has received the Max Planck-Humboldt Medal for his pioneering work on robotics—covered recently in "The RoboBee Collective" (November-December 2017, page 56).



**Jorie Graham**

STEPHANIE MITCHELL/HPAC



**Kristine E. Guillaume**

AMY Y. LITTHE HARVARD CRIMSON

### Crimson Chief

THE HARVARD CRIMSON announced in November that **Kristine E. Guillaume '20** has been elected president, effective January 1, making her the first black woman to serve as leader in the newspaper's 145-year history.

Kennedy School campus. But the fiscal 2018 figures apparently reflect one-time costs for environmental abatement.

A continuing saving occurs on the “interest” line. Following the refinancing of Harvard’s debt in October 2016, interest expense declined \$33 million in fiscal 2017. Now, that benefit has been in place for a full financial year, resulting in a further \$15-million reduction (to \$188 million) in fiscal 2018. Those savings persist in the future. (Following the

financial crisis in 2008, Harvard was forced to borrow \$2.5 billion to stabilize its balance sheet and secure access to liquid funds, driving annual interest costs to \$299 million; that cost has since decreased by more than 37 percent. This reduction in interest expense has contributed significantly to the University’s five-year run of surpluses.)

The result was an *operating surplus* of more than \$196 million—contradicting, in all the ways that make financial officers happy, the

message sent last year that the \$114-million surplus reported then might well be the “high-water mark for the foreseeable future.” This fifth consecutive surplus means that the schools have accumulated resources which may come in handy as reserve funds when conditions are less favorable—or may be applied to their teaching and research missions in coming semesters.

Finally, the *balance sheet and capital spending* merit mention. As noted, expenses for oper-

## Engaging Radcliffe with the World

**For Tomiko Brown-Nagin**, Paul professor of constitutional law and professor of history, spending a year conducting research as a Radcliffe Institute fellow during the academic year 2016-2017, when she was newly arrived at Harvard, was a unique opportunity to marry her research interests. “I am a profoundly interdisciplinary scholar,” she says. “I study law and history, and it can often be difficult to move between two distinct scholarly worlds—I certainly have felt that throughout my career. When I got to Radcliffe, it felt like home. It felt comfortable.”

In July, Brown-Nagin moved into the dean’s office at Fay House, and has since been using her new position to emphasize Radcliffe’s role as a place for members of the Harvard community to convene and collaborate with one another. Her efforts include continuing to enlarge the Radcliffe Research Partnership Program, which enables undergraduates to work with Radcliffe Institute fellows on their projects in the arts, sciences, public policy, and humanities. The program “is invaluable to the undergraduate population because it gives the students the chance to see Harvard in a more intimate setting, which is what they long for,” she says. “The students here really want to have engagement with professors and fellows in a smaller setting.” In the same vein, she is also pursuing opportunities for local high-school students to convene at Radcliffe and be mentored by undergraduates with similar academic interests.

Turning to the institute’s flagship fellowship program, Brown-Nagin says that even as she welcomes humanists, artists, and social scientists to apply, she also hopes that scholars interested in applied research in fields like medicine and public health will consider the Radcliffe residency a particularly attractive option. “I look forward to making it clear that we are a part of the world, and we are engaged with the world. Students and faculty who are predisposed in that matter have a home at Radcliffe.”

While assuming the deanship, Brown-Nagin continues her academic affiliations with both the Law School and the Faculty of Arts and Sciences. “I really enjoy being a mentor to students, and I am continuing with graduate-student advisees,” she says. “I am also teaching an IL reading group, and I’m really, really happy that I decided to do that. I wasn’t sure if I should, because



**Tomiko Brown-Nagin**

I was a little nervous about continuing to teach in the first semester of my deanship, but it’s just so rewarding.”

Atop those demands of a packed work schedule, her first months as dean have been made busier by major campus-renewal projects. The Schlesinger Library on the History of Women in America, the preeminent collection in its field, is closed through early September 2019 as it is renovated and reconfigured—a project that will add classrooms, an updated reading room, and a gallery space. (Researchers can still access the library’s collections, by appointment, in a temporary reading room in Fay House.) And the Knafel Center, Radcliffe’s main space for public lectures (a significant element of its programming), was renovated this past summer; it now incorporates user-friendly technological updates and additional classroom space.

During her own fellowship, Brown-Nagin worked on her forthcoming book on the life of Constance Baker Motley, LL.D. ’00, the civil-rights lawyer and federal judge who also became the first female Manhattan borough president. Storytelling to amplify the voices of marginalized communities, typically unheard and underrepresented, Brown-Nagin says, is a critical part of her scholarly interests that will shape future programming at the institute. “I think it’s true for all deans that the deanship takes on a character that is consistent with whatever issues the dean was interested in, in her scholarly life,” she says. “For me, that means that I really look forward to increasing Radcliffe’s engagement with the world.”

—OSET BABÜR



ating and occupying buildings have risen as Harvard has conducted the largest capital-spending program in its history, reaching a record \$908 million during fiscal 2018. The highlight projects are the Smith Campus Center and Klarman Hall at Harvard Business School (HBS), now open (operating costs for which will show up in the fiscal 2019 results); the Allston science and engineering center and power plant, coming on line in the fall of 2020; Lowell House's renewal and successor projects; and the renovation of the Soldiers Field housing adjacent to HBS.

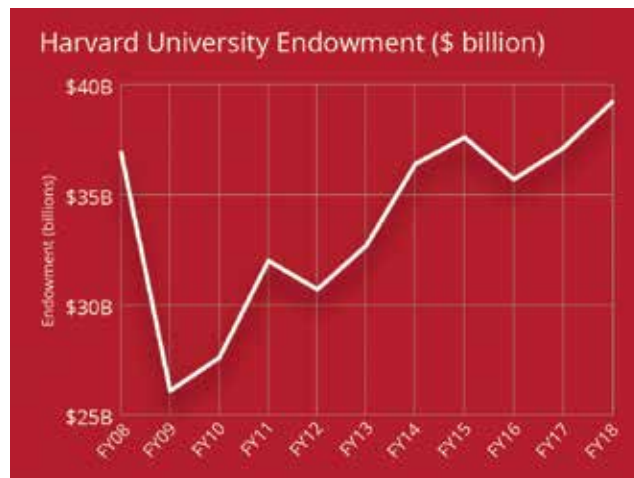
The completion of some of those major projects, and further House renewals, likely mean that the University will borrow more funds soon. Interest rates have been rising. Hence the importance of managing down debt outstanding (currently \$5.3 billion, down from \$5.4 billion in fiscal 2017) and refinancing higher-cost obligations when possible during the past several years.

### The Endowment: Risk and Return

IN HIS REPORT on the endowment, valued at \$39.2 billion last June 30, Narvekar pro-

vided some of the asset-class information HMC had published annually before his arrival in late 2016. Although he emphasizes the unified, generalist way HMC now makes investment decisions for the endowment as a whole (in contrast to the siloed, by-asset-class model he has discontinued), he published rough allocations and returns by category, as shown here.

Narvekar disclosed last year that HMC had taken significant losses on its natural-resources portfolio, disposing of assets and marking down others. It also sold various real-estate and private-equity holdings then—and continued to do so in fiscal 2018. A review of this year's financial-report footnotes reveals within the general investment account (which includes the endowment) an appetite for foreign, global, and emerging-market stocks, compared to the end



Source: Harvard University Fact Book

of fiscal 2017; decreased holdings of U.S. and high-yield bonds (not surprising with rising domestic interest rates); and a multibillion-dollar increase in hedge-fund investments and commitments to invest in the future, plus a lesser increase in private-equity assets.

Assessing the results, Narvekar wrote: "First, there are certain parts of the portfolio that need work," now under way (notably: managing the downsized natural-resources

## We open more doors than Casanova.

With MRT you're not just superbly informed by leading experts, you're guaranteed privileged moments in unforgettable places.

Our cultural tours have the edge with unrivalled access to little-known and rarely-seen locations. In Venice, for instance, we visit some outstanding private *palazzi* by arrangement with their owners, and enjoy St Mark's Basilica all to ourselves on an out-of-hours visit.

Our tours with special arrangements include:  
Venetian Palaces | Connoisseur's Prague | Le Corbusier  
Moscow & St Petersburg | Danish Castles & Gardens

*'One highlight after another. The private visit to St Mark's could almost justify the tour by itself.'*

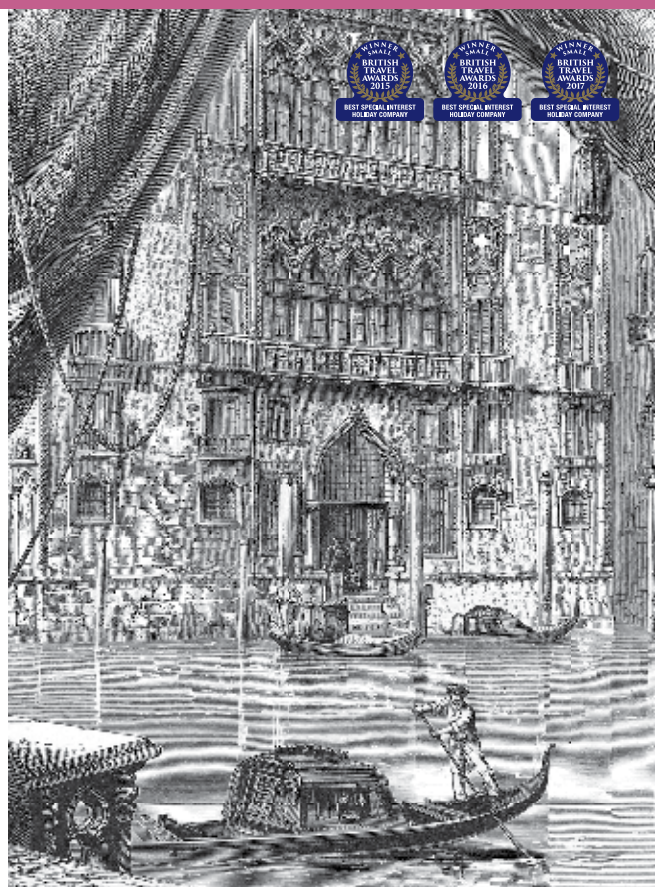


LEADING EXPERTS IN CULTURAL TOURS

MARTIN  
RANDALL  
TRAVEL

Contact us:  
1 800 988 6168  
[martinrandall.com](http://martinrandall.com)

ATOL 3622 | ABTA Y6050 | AITO 5085



portfolio and perhaps tweaking some private-equity holdings; and, presumably, repositioning the cohort of hedge-fund managers). “Second, looking beyond the returns of individual asset classes, asset allocation—or risk level—was the dominant factor in the overall returns. In general, the higher the risk level, the higher the return.” That might suggest HMC’s portfolio, in transition, suffered on a relative basis because its assets were not yet allocated ideally, in his view. (Many peer institutions reported returns higher than HMC’s 10 percent fiscal 2018 result; their risk profiles and investment objectives differ, of course.)

He observed, further, that “as sophisticated investors well know, there are very limited conclusions that we can draw from a single year of either manager performance or asset allocation.” Thus, “Had this past year’s return been significantly higher or lower, it still would not be reflective of the work we are undertaking, nor change the path we are pursuing. This is a reality that will apply to the remaining years of our transition as well.”

Refining his description of that transition, Narvekar wrote that those significant changes

“require a five-year timeframe to reposition the organization and portfolio”—a message he has underscored continuously. But he added a phrase about “subsequent strong performance.” For those who may have missed the subtlety, that suggests that re-making HMC and activating its new investment disciplines; refining its risk framework (involving at least a two-year collaboration with HMC’s board and the University, to begin soon); reestablishing relationships with superior external fund managers; and getting them money to invest, are all encompassed within that five-year transition—*after which* the harvesting of presumably superior results should show up. That is the nature of investing in long-term, illiquid assets, where those higher risks and returns reside over time. But it is also the nature of achieving superior returns *over the course of an entire investment cycle*. Doing so is critical to the definition of HMC’s aim, as he put it, to “ensure that Harvard University has the means to continue its vital role as a leader in teaching and research for future generations.”

HMC’s generalist team is in place (perhaps a couple of dozen people: senior lead-

ers, investment specialists, and supporting analysts), and Narvekar cited as an “especially welcome discovery” that “HMC has an extraordinarily talented, skilled, and dedicated team on both the investment and support sides,” making it “well within our capacity to effect this turnaround and generate long-term success for Harvard.”

In the near term, it would not be surprising if there are more bumps in the road, perhaps in the runoff natural-resources portfolio. Those discussions with the University about its appetite for risk are crucial, too. Is Harvard’s traditional expectation of an 8 percent annual return attainable (see [harvardmag.com/distribution-16](http://harvardmag.com/distribution-16))—and if so, at what level of risk? Is a single pool of assets appropriate for separate Harvard entities when their dependence on endowment distributions varies from 85 percent of annual operating revenues to 51 percent to 17 percent (the Radcliffe Institute, the Faculty of Arts and Sciences, and the public-health school, respectively)? How does the University sort that out, given its autonomous schools? And how does managing the endowment to profit from robust markets

## FAS: Faculty and Fisc

**At a** November 8 reception in University Hall, the Faculty of Arts and Sciences (FAS) celebrated Michael D. Smith for his 11 years of service as dean, concluded last August, conferring on him an amusing rendering of all the faculty’s leaders, from the inception of the position in the late nineteenth century through his tenure. (Mark Steele, who conceives and creates the art for Yesterday’s News, page 20, won the FAS commission.) A pair of separate tributes to Smith, lastingly important to the faculty as a whole, were embedded in the annual report issued by his successor, Claudine Gay, covering Smith’s final year—and his cumulative impact.

First, the faculty data reveal that during Smith’s deanship, FAS appointed 364 ladder (tenured and tenure-track) members. Of this cohort, 312 remain at Harvard: 43 percent of FAS’s 734 faculty members as of the beginning of this academic year. Thus, even though the census remained largely steady in the wake of the financial crisis and recession (it was 709 when Smith began as dean, and

has remained at 731 or slightly more since 2014), the faculty ranks have been substantially renewed, and become much more diverse.

The faculty has also continued to evolve in disciplinary terms. In the fall of 2007, arts and humanities positions accounted for 29.3 percent of the ladder faculty; that share has declined two percentage points. The social scientists held 34.3 percent of positions—a percentage-point more than now. Scientists held 26.7 percent of the positions—and now occupy 27.4 percent of the total. And the engineers and applied scientists have increased from 9.7 percent to 12.0 percent of FAS’s ranks (and will likely grow further after the facilities rising in Allston open in the fall of 2020, creating room for expansion).

Second, FAS closed its fiscal year 2018 books with a surplus under its version of Generally Accepted Accounting Principles (GAAP)—a stupendous result for an endowment-dependent organization that was hammered during the financial crisis and has subsequently been stretched by the costs of renovating its undergraduate Houses (for which the Corporation had authorized spending of \$873.9 million as of last June 30—with work in prog-

### Ladder Faculty Members





while minimizing losses during downturns line up with the shorter time horizons of individual deans?

### Being Prepared

USEFULLY, those questions will be addressed under the ultimate direction of a leader who has lived through the severest investment cycle in memory.

During a conversation at Massachusetts Hall on November 2, President Bacow outlined some of his perspectives on these issues. In general, he said, universities fortunate enough to enjoy endowments take risks in their budgets that turn out to be highly correlated with the risks in their investment portfolio. Thus, when the economy is weak and the value of assets depressed, schools relying on endowment distributions typically have to spend *more* on financial aid, cope with *less* current-use giving, and face *reduced* support for sponsored research. And of course, if they seek to rein in costs, half or more of which are for their people, there is resistance to layoffs; attrition diminishes as employees have fewer opportunities elsewhere; and retire-

ments slow because those eligible worry about diminished savings.

In other words, all the enormous benefits derived from endowment distributions mean that “endowments are not a cushion in tough times.” And in general, Bacow said, at most universities, governance of the endowment is separate from governance of the operating entities and functions. That makes it easy, and dangerous, for administrators and deans to

## Endowments confer enormous benefits—but they “are not a cushion in tough times.”

proceed without appreciating the correlation. (Hence the importance of that discussion about risk that Narvekar highlighted.)

Moreover, the more heavily endowed the institution, the *greater* the mismatch. Thus, Tufts derived 12 percent of its revenues from endowment distributions during the 2008–2009 financial crisis and recession: a 25 percent decline in its endowment translated, roughly, into a 3 percent adjustment to revenue—a haircut about one-third as severe as that faced by Harvard and Yale, which were

three to four times as endowment-dependent. Bacow rebooted the Tufts budget in one year. In contrast, he said, the multiyear process of smoothing out the losses at Harvard protracted the period of constraint, even as external conditions improved. That was challenging for morale—and perhaps tangibly, too: Tufts was able to get back in the hunt sooner to hire faculty members from institutions that were still cutting back.

Bacow was an Eagle Scout before he was a university president. Unsurprisingly, he wants to be prepared, so he is working with the deans, he said, on planning scenarios for the economic downturn that will surely come.

Similarly, vice president for finance Thomas J. Hollister, Harvard’s chief financial officer, and treasurer Paul J. Finnegan, a member of the Corporation and chair of HMC’s board, were relatively restrained in their letter accompanying the annual financial report

ress on Lowell House, and yet to proceed on Adams and the huge Eliot-Kirkland complex).

A review of the detailed financial report is rewarding. Fiscal 2018 turned out as well as it did, despite the flat rate of endowment distributions, for several reasons. Capital-campaign largess helped to enlarge FAS’s endowment (pledges receivable decreased from \$768 million to \$657 million as donors fulfilled their gifts), so the absolute endowment distribution, which accounts for nearly half of revenue, rose some \$12 million. (FAS’s endowment is now valued at \$17.0 billion: the first year-end result nominally above the fiscal 2008 level of \$16.7 billion—but worth some \$3.3 billion less in real terms, adjusting for inflation.) And current-use giving, impelled by the campaign’s close, rose nearly \$18 million for the year, to \$115.7 million. Expenses rose just 2.3 percent, as FAS keeps a tight rein on its workforce.

Looking at capital items and the balance sheet, FAS reported spending \$19.3 million fitting up faculty members’ laboratories, studios, and the surrounding buildings—a continuing expense to enable professors to do their research and teaching, and in fact less than the typical annual bill for such improvements. Long-term debt increased \$149.3 million, to \$1.06 billion, driven by House renewal, and reflecting the continuing strain of footing FAS’s construction bill. Importantly, its cash position was enhanced by \$27 million during the year—giving Dean Gay some opportunity to make strategic investments—as the result of a restructuring of about \$700 million of internal debt with the University at the end of fiscal 2016. That transaction, effected by levelling the debt-repayment schedule to lessen what would have been larger near-term obligations otherwise,

means that FAS will owe bigger payments, especially toward the end of the two-decade agreement. In the meantime, however, it provides a modest cash cushion, without obligating the dean to further de-capitalize endowment funds.

In effect, that represents a resetting of the generational balance. Under Dean Smith, FAS began addressing its largest deferred-maintenance item from prior decades (renovating the undergraduate residences), at a cost to current and future programs—during a period when endowment investment returns lagged Harvard’s expectations. Now, restructuring the debt creates a little current breathing room. In the future, as gift pledges are fulfilled, and (one hopes) endowment performance strengthens, that reset debt obligation should weigh less heavily.

FAS’s financial managers can, and will, fret about sustaining the fiscal 2018 results: the endowment distribution will rise this year, but current-use giving might fall. Strong royalty and nonfederal sponsored research revenues may turn out to be one-time phenomena. The cash benefits from the debt deal have peaked. A new president and dean may, rightly, have ambitions to do more or better. Negotiations with the graduate-student union could raise costs. And the new federal excise tax on endowment income looms over Harvard, beginning last July 1.

Withal, Michael Smith concluded his time in University Hall on a high note, on the metrics that matter most to him and the faculty he led: FAS’s intellectual strength, and its financial underpinnings. Small wonder that Dean Gay began her tenure noting, “I am enormously grateful for the strong foundation that his leadership has provided.”

—JOHN S. ROSENBERG

(which reflected performance prior to the beginning of Bacow's presidency). In light of Harvard's surpluses—a good problem to have—they gently reprised their warning from the prior year, that “higher education has matured as an industry. Revenues are under pressure as the number of students has plateaued, tuition costs have reached limits of affordability, federal research support is uncertain, and expectations for returns in

the investment markets are muted.”

The University, they noted, “is well positioned to manage through this period due to a healthy balance sheet, modest recent operating surpluses, established financial discipline, and Harvard's primary strength—faculty and staff—who create one of the world's most exciting learning and research environments. Nonetheless, the University is cognizant of economic pressures” and of

the need to prepare “for an inevitable economic downturn, particularly in light of the current extended economic expansion—one of the longest in history.”

Many visitors to Harvard Yard delight in the antics of the resident squirrels. Within the surrounding buildings, a squirrel's-eye perspective on the wisdom of storing up acorns is very much in fashion.

—JOHN S. ROSENBERG

## News Briefs

### Police—and Student—Conduct

THE COMMITTEE appointed by President Drew Faust last spring to review the April 13 off-campus arrest of a black undergraduate by Cambridge police—video evidence showed the physical force used to restrain him—completed its report on November 9.

The committee recommended clearer communications from the Harvard police department (HUPD) to the University community about what members should expect in emergency situations, and about off-campus incidents. It also recommended that the University health services (HUHS) and HUPD consider the viability of including mental-health professionals as first responders when mental-health crises arise. HUHS was encouraged as well to promote awareness of its alcohol and drug services, and the College and schools, and HUPD and HUHS, were variously charged with doing a better job of training for multicultural competence, explaining how to report incidents of racial bias, communicating the amnesty program for seeking help during alcohol crises, and, generally, working to build a closer relationship with students.

In an email to the community, President Lawrence S. Bacow endorsed the committee's principles concerning safety for all concerned, and its detailed recommendations.

Toward the end of his message, he focused on an element of the report that figured repeatedly in his addresses to entering freshmen at Tufts, where he was previously president: the effects of alcohol use, and community members' responsibilities to one another (see “The Pragmatist,” September–October 2018, page 32). The committee noted that the arrest occurred during Yardfest, the spring undergraduate concert—and that 17 students had to be medically transported for intoxication or overdose, far more than in prior years. The concert and that need

for assistance generated unprecedented demand on first responders (and area hospitals). Bacow focused on how those “behaviors...not only put the students involved at risk, but...also compromised the capacity of emergency medical personnel to respond.” Beyond the committee's recommendations to reconceive Yardfest and similar events, the president observed that the report is “an essential reminder about how interconnected any community is—how one person's actions can have profound implications for others—and underscores the need for all of us to be cognizant of our responsibilities both to ourselves and to the broader community.”

Read the report at [https://www.harvard.edu/sites/default/files/content/Review\\_Committee\\_Report\\_20181113.pdf](https://www.harvard.edu/sites/default/files/content/Review_Committee_Report_20181113.pdf).

—JOHN S. ROSENBERG

### Title IX Rebooted

SECRETARY OF EDUCATION Betsy DeVos in mid November unveiled draft regulations governing campus sexual assaults. If put into place after public comment, they would be the first formal regulations on how education institutions must proceed to address such assaults under Title IX, the 1972 law prohibiting sex discrimination in education programs receiving federal funds. In 2017, DeVos set aside guidance (not formal rules) issued under the Obama administration; that regime led to much more reporting of alleged incidents of sexual assault, but also to objections from those accused of perpetrating the assaults, who claimed that, among other faults, the evidentiary standard employed in hearing assault cases (the “preponderance of evidence”) was unfair.

The proposed regulations allow institutions to choose what standard to employ, including a more rigorous one (“clear and convincing” evidence that abuse or harassment occurred). The regulations also appear to limit institutions' liability to incidents

that occur on campus, or in the context of an educational program (as opposed to, say, in an off-campus residence), and that are more formally reported to an investigatory officer who has authority in such cases. Most significantly, the regulations narrow the definition of offenses from “unwelcome conduct of a sexual nature” to “unwelcome conduct on the basis of sex that is so severe, pervasive, and objectively offensive” that it denies someone equal access to an educational program. And they guarantee those accused the right to cross-examine the accuser, in a live hearing, although not face-to-face.

Advocates for those accused of campus sexual assault have generally favored such changes. Victims' rights advocates were quick to denounce the regulations for likely inhibiting reporting of assaults or harassment, and for outlining procedures that would, in effect, punish victims anew. What changes in procedures and policies, if any, Harvard would make must of course await formal adoption and promulgation of the regulations.

—J.S.R.

### In the Public Arena

AS LAWRENCE S. BACOW works to address public skepticism about the value of higher education, populist critiques of elite institutions, and disparagement of the search for truth—a major theme of his presidency—survey research sheds light on divided opinion about colleges and universities. Americans appear supportive of education, but they are polarized along familiar partisan lines—for example, about whether schools are hospitable to conservative opinions. One issue on which respondents seem united is their dismay over the costs of educating their children—a concern that Bacow has also highlighted.

“Americans' Views of Higher Education as a Public and Private Good,” with lead authorship by Noah D. Drezner, associate



**MOHSEN MOSTAFAVI**, dean of the Graduate School of Design since January 2008, will conclude his service on June 30. During his tenure, the school's faculty expanded significantly; to accommodate it and new teaching technologies, work is under way to plan an expansion of Gund Hall. Mostafavi helped create the undergraduate architectural-studies

curriculum, and joint master's degrees with the public-health and engineering and applied sciences schools. President Lawrence S. Bacow and Provost Alan Garber will direct the search for a successor. Read more at [harvardmag.com/mostafavi-18](http://harvardmag.com/mostafavi-18).

### Computer and Data Science

MIT has unveiled a \$1-billion program to expand and reflag its work in computer science and artificial intelligence, to be known as the Stephen A. Schwarzman College of Computing. Schwarzman, M.B.A. '72, gave a \$350-million naming gift, and MIT has raised \$300 million more; the initiative is meant to address research and teaching on computer science and AI institute-wide, and to incorporate work on the ethical and social dimensions of adapting these technologies (see "Artificial Intelligence and Ethics," page 44). ...Berkeley has unveiled a campuswide Division of Data Science and Information, designed to engage faculty members and students from all fields in computational and data-driven research and learning. ...Boston University has filed a letter of intent seeking regulatory approval to build a 350,000-square-foot, 19-story tower to house data-sciences faculty, including its departments of mathematics, statistics, and computer science. ...Yale's department of statistics and data science (DS2), founded two years ago, reported that student concentrators have doubled; new courses like an undergraduate introduction to data science, YData, will debut in 2019; and faculty expansion is proceeding apace.

### Labor Relations

In October, the University and the Harvard Union of Clerical and Technical

## Brevia



**MOHSEN MOSTAFAVI**, dean of the Graduate School of Design since January 2008, will conclude his service on June 30. During his tenure, the school's faculty expanded significantly; to accommodate it and new teaching technologies, work is under way to plan an expansion of Gund Hall. Mostafavi helped create the undergraduate architectural-studies curriculum, and joint master's degrees with the public-health and engineering and applied sciences schools. President Lawrence S. Bacow and Provost Alan Garber will direct the search for a successor. Read more at [harvardmag.com/mostafavi-18](http://harvardmag.com/mostafavi-18).

Workers (HUCTW) reached a tentative three-year contract agreement after seven months of negotiations; the union's 5,100 members were preparing to vote on it as this issue went to the printer. Under the contract, members who have been employed for at least one year will receive an average salary increase of 3.8 percent on December 5. In the second and third years of the contract, the average member with at least one year of service will receive raises of 3.5 percent. The new contract also includes changes to the University's policies governing the use of contingent workers, a

contentious issue for the union. According to an HUCTW analysis, Harvard's reliance on contingent workers—including temps, independent contractors, and less-than-half-time workers—has grown substantially in the last few years, often exceeding

what is allowed by the current contract. The new contract aims to more closely monitor and strictly limit the use of such workers.

### Ed-Tech Nexus

As part of Amazon's much-ballyhooed announcement of its second headquarters sites, in Long Island City, New York, and Crystal City, Virginia, significant investments are being made in related high-tech higher education. With \$250 million in seed funding from the state, Virginia Polytechnic Institute and

State University announced a plan to build a billion-dollar Tech Innovation Campus in Alexandria, two miles from the Amazon site. The million-square-foot complex aims to enroll 750 master's-degree students and hundreds of doctoral candidates and post-docs. George Mason University, in Fairfax, said it would triple its computer-science enrollment (to 10,000 undergraduates and 5,000 graduate students) during the next five years, in part by creating a new school of computing and adding a 400,000-square-foot Institute for Digital Innovation to its campus, again with significant state help. In New York, Amazon is close to LaGuardia Community College, and just across the river from the Cornell Tech campus, on Roosevelt Island.

### On Other Campuses

**Michael R. Bloomberg**, M.B.A. '66, LL.D. '14, former New York mayor and founder of the eponymous financial-information and media firm, has given \$1.8 billion—the largest higher-education donation in U.S. history—to his alma mater, Johns Hopkins, making undergraduate admissions need-



**Michael R. Bloomberg**

PUBLIC DOMAIN

blind. His previous benefactions led to the naming of the public-health school there. At Harvard, he is memorialized at the Business School's Baker Library/Bloomberg Center.... Yale's Swensen professor of economics, Steven Berry, is the inaugural faculty director of the Tobin Center for Economic Policy, an interdisciplinary entity aimed at articulating data-driven economic and social-science policies that can be applied to alleviate problems in society; it is funded with more than \$60 million in recent gifts.... In October, three months



**Brittany N. Ellis**

STEPHANIE MITCHELL/HFAC



STEPHANIE MITCHELL/HFAC

**Jin Kyu Park** **Nota Bene**

**RHODES ROSTER.** Seniors Brittany N. Ellis and Jin Kyu Park were awarded Rhodes Scholarships—the latter, the first DACA (Deferred Action for Childhood Arrivals) designee to be so honored. Twenty-one of the 32 recipients were women. Duke, Princeton, and Yale each had three scholarship winners this year.

**HMC COO.** Sanjeev Daga has been appointed chief operating officer of Harvard Management Company, beginning in February; he comes from Columbia University Investment

Management Company, where he worked with N.P. Narvekar, now CEO of HMC, for more than a decade. Daga will succeed Bob Ettl, who joined HMC as COO in 2008, served as interim CEO in 2016, and will remain through 2019 to complete the transition. Kevin Shannon, HMC's chief financial officer, will retire at the end of 2019, completing a decade of service; he will work with Daga and Ettl to determine whether to appoint a successor CFO, or to distribute the responsibilities to others.

**IMAGING VISIONARY.** Arnold professor of science Xiaowei Zhuang—a Howard Hughes Medical Institute Investigator and member of the department of chemistry and chemical biology—has been awarded a \$3-million Breakthrough Prize in Life Sciences for her work developing imaging techniques that reveal molecular-scale interactions and processes within cells.

**LEADERSHIP LEADER.** Gray professor of health economics and policy Meredith B. Rosenthal has become faculty chair of the Advanced Leadership Initiative (see “Advancing Leadership,” March-April 2014, page 38), succeeding founding leader Rosabeth Moss Kanter, who remains Arbuckle professor of business administration.

**DUDLEY HOUSE REDUX.** Effective July 1, Lehman Hall will be devoted to programs for Arts and Sciences graduate students—perhaps the University's most prominent but invisible cohort. Undergraduate Dudley House functions (for those who live in the Co-op or off campus, or are in residence during the summer, or participate in the visiting undergraduate scholars program) will transition to the new “Dudley Community,” directed by a Faculty Fellow and overseen by a full-time assistant dean. The decision by Dudley House faculty deans James and Doreen Hogle to step down on this coming June 30 led College dean Rakesh Khurana and Graduate

**HMC COO.** Sanjeev Daga has been appointed chief operating officer of Harvard Management Company, beginning in February; he comes from Columbia University Investment Management Company, where he worked with N.P. Narvekar, now CEO of HMC, for more than a decade. Daga will succeed Bob Ettl, who joined HMC as COO in 2008, served as interim CEO in 2016, and will remain through 2019 to complete the transition. Kevin Shannon, HMC's chief financial officer, will retire at the end of 2019, completing a decade of service; he will work with Daga and Ettl to determine whether to appoint a successor CFO, or to distribute the responsibilities to others.



HARVARD MAGAZINE/IC

**DUDLEY HOUSE REDUX.** Effective July 1, Lehman Hall will be devoted to programs for Arts and Sciences graduate students—perhaps the University's most prominent but invisible cohort. Undergraduate Dudley House functions (for those who live in the Co-op or off campus, or are in residence during the summer, or participate in the visiting undergraduate scholars program) will transition to the new “Dudley Community,” directed by a Faculty Fellow and overseen by a full-time assistant dean. The decision by Dudley House faculty deans James and Doreen Hogle to step down on this coming June 30 led College dean Rakesh Khurana and Graduate School dean Emma Dench to rethink the organization.

**School dean Emma Dench to rethink the organization.**

**LEGAL LEGROOM.** Harvard Law School has opened its new building, at 1607 Massachusetts Avenue (on the corner of Everett Street), a home to several clinical programs, faculty offices, and research centers. Professor in practice of urban design Alex Krieger designed the facility.

**MISCELLANY.** Robert Cashion, formerly senior associate vice president of development and senior associate dean of development for the Faculty of Arts and Sciences—and thus a leading figure in the recent capital campaign—has been appointed New York University's vice president for university development and alumni relations.... The Debra and Leon Black Family Foundation has given \$7.5 million to create up to 25 fellowships annually for U.S. veterans and active-duty military personnel pursuing graduate education at the Kennedy School, Business School, or Law School.... Dumbarton Oaks and JSTOR, a digital library for research and teaching, have received three-year grants from the Andrew W. Mellon Foundation to develop a program in “plant humanities,” enabling



professor at Columbia's Teachers College, found that 76 percent of adults consider public spending on higher education an excellent or good investment, with women more favorable than men; black and Hispanic respondents more favorable than white and Asian-American ones; and liberals more likely to consider it an excellent investment (56 percent) than conservatives (32 percent).

A Pew Research Center survey found that 61 percent of Americans think higher education is going in the wrong direction (including a majority of Democrats and those leaning Democratic); some 84 percent of those respondents who feel higher education is off track cited high tuition costs; two-thirds said students were not acquiring work skills. As for partisan differences, about half said colleges and universities were too concerned about protecting students from offensive views, or that professors imparted their sociopolitical views in the classroom—frequent criticisms raised on the political right (79 percent and 75 percent of Republicans cited these concerns, vs. 17 percent and 31 percent of Democrats, respectively).

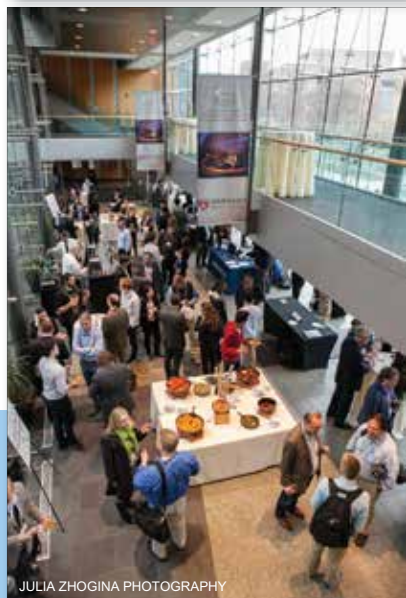
“Fulfilling the American Dream: Liberal Education and the Future of Work,” based on research sponsored by the Association of American Colleges & Universities, assessed business executives’ and hiring managers’ perspectives on graduates’ job qualifications. Nearly two-thirds of both cohorts were confident about the value of colleges and universities, and larger majorities thought that graduating was very important or essential: more positive attitudes than those among the public at large. Majorities also thought graduates had good skills for entry-level positions—but only a minority found that those new hires had the skills required for promotion. Encouragingly for advocates of liberal education, the employers ranked skills such as communications, critical thinking, ethical judgment, and motivation highly among the attributes they seek.

WGBH, the Boston public radio station, and ABT Associates conducted a national survey that found 67 percent of respondents had a strongly to somewhat favorable view of higher education, with 22 percent somewhat to strongly unfavorable. Respondents were 17 percentage points more favorably

disposed to public than to private institutions, and 23 percentage points more likely to find Ivy graduates elitist than graduates at large. Although 78 percent of respondents would be concerned about reduced state funding for public colleges, those surveyed opposed, by a small margin, raising taxes to support public higher ed. And although 70 percent favored basing admissions decisions on a “variety” of factors, rather than exclusively on grades and test scores (just 27 percent supported that), 72 percent *opposed* using race as a factor in making admissions decisions—which perhaps explains the political and legal problem Harvard and other selective institutions face today (see page 15).

Finally—the polling business appears to be booming—a Gallup survey found 48 percent of Americans expressing “a great deal” or “quite a lot” of confidence in higher education—down from 57 percent in 2015. The decline was particularly pronounced among Republicans (down 17 percentage points)—making for a 23-percentage-point gap in attitudes between party partisans, 11 points wider than in 2015.

—J.S.R.



JULIA ZHOGINA PHOTOGRAPHY

## THE JOSEPH B. MARTIN Conference Center AT HARVARD MEDICAL SCHOOL



### Research the possibilities...

Host your next event in the contemporary  
New Research Building at Harvard Medical School.

- Distinctive conference center in a unique location
- Elegant Rotunda Room with views of the Boston skyline
- State of the art amphitheater with seating for up to 480
- Catering provided by **Restaurant Associates**

77 Avenue Louis Pasteur  
Boston, MA 02115  
617-432-8992  
[theconfcenter.hms.harvard.edu](http://theconfcenter.hms.harvard.edu)



THE JOSEPH B. MARTIN  
Conference Center  
AT HARVARD MEDICAL SCHOOL

# Who Belongs at Harvard?

by CATHERINE ZHANG '19

THE HARRY ELKINS WIDENER Memorial Library houses 3.5 million books and 400 million documents in its cavernous limestone chambers. It is the largest university repository of books and manuscripts in the world, and it sits in the middle of Harvard Yard, where it serves as the sweeping backdrop for thousands of starry-eyed tourist Instagrams and glossy brochure photos. Widener functions synecdochally, a grand, imposing metaphor for one of the most powerful brands in the world. It is the centerpiece of the University, the axis around which Harvard grinds and whirs, churning out computational problem sets, completed bleary-eyed at 3 A.M., or scribbled annotations on the Frankfurt School, piled on top of secluded carrels: dog-eared relics that'll remind us, when we've made it, that once we doubted we could.

For the past three years, I've avoided it. Its magnificence recalls an old Harvard, a

centuries-old eliteness that, until recent years, didn't accommodate individuals like me. Walking by, you see crowds of excited Asian tourists peering inside—and although I know my public-radio tote bag, white Birkenstocks, philosophy books, and Harvard ID will allow me to float through the entrance freely, the wry symbolism feels heavy at a time when Harvard is being sued for supposedly anti-Asian admissions policies. But at the beginning of this school year I found myself walking there with a lanky Leverett junior named Ben, trailed by 10 wide-eyed first-years who chattered animatedly about whether to take Economics 10. Together Ben and I led our kids up the staircase of Widener, past the murals painted by John Singer Sargent, into the Loker Reading Room. There, the new University president, Larry Bacow, and the dean of the College, Rakesh Khurana, welcomed our kids, the inaugural class of FYRE, to Harvard.

THE FIRST YEAR Retreat and Experience, or FYRE, is a two-year pilot, a pre-orientation program designed to help students from “historically marginalized communities” transition to Harvard. It caters mainly to first-generation and low-income students, assisting them as they navigate the dizzying array of acronyms on campus: BCS, OIE, OCS, CAMHS, FAO. There are icebreakers and academic panels, hip-hop yoga and silent discos. All of the slippery, intangible “skills” that Harvard’s upper-middle-class majority takes for granted, which its members believe makes them uniquely deserving of success, are covered: how to cold-email professors, request a tutor, or seek mental-health care. As are the struggles that the majority doesn't seem to face. Students ask how to get along with roommates whose Canada Goose jackets may cost more than their own entire financial contribution toward attending the College, or how to grapple with “survivor’s guilt,” like how to eat full meals in the dining halls knowing that their families back home don’t have food.

FYRE is the result of years of concentrated activism by first-gen students. Blueprinting for a pre-orientation program began when Primus (originally the First Generation Student Union, FGSU) was founded in 2013. Two years later, Savannah N. Fritz '17 faced “resistance” from Dean Khurana, as she told *The Harvard Crimson*, when she proposed an eight-day “Freshman Enrichment Program” that she developed with the help of a \$3,000 planning grant from the Undergraduate Council. But the efforts and rejections continued: last year, Khurana and the administration were the subject of widespread anger ([harvardmag.com/firstgen-17](http://harvardmag.com/firstgen-17)) when they rejected another bridge program for first-gen and low-income students—a “First Year Institute” proposed by Katie Steele, then of the Freshman Dean’s Office (now senior director for student engagement and leadership in the Dean of Students’ Office), and modeled on Fritz’s initial proposal.

But finally, after months of exhaustion and unpaid labor by student advocates, a program materialized—and was recorded by the *Harvard Gazette* photographers hovering around our first-





years as they unwrapped new books that had been recommended personally for them by professors. On stage, President Bacow slipped a FYRE T-shirt over his button-down. Watching my first-years at Widener, enraptured by this display—the motivating speeches by Dean Khurana outlining the mission of the College, before they'd become a trite punchline—I remembered what it was like standing on the steps of Widener during my Freshman Convocation, intoxicated by the potential of my whole life ahead of me.

But after the kids shuffled back to Wigglesworth to sleep or share a few late-night revelations with friends, I began to worry I was selling my kids a dream of Harvard it could not live up to. A few days later, I saw my FYRE family featured in the *Gazette*, front and center on the page—the face of the diversity statistics, the face of thousands of high-school students' wildest dreams.

"Harvard belongs to you," Khurana had told us. In the moment, we believed him.

LATELY, we've all been thinking about who Harvard should belong to. A lawsuit against the University alleging discrimination against Asian-American applicants has produced bruising details about the College's confidential admissions process, and forced many of us to reckon with our place here.

Harvard is a college where a visit from Colin Kaepernick or the Secretary of Energy is just another event you blow off for a problem set; where your journalism professor is the former managing editor of *The New York Times*; and where your section mate is an Obama or a Kennedy. To be one of the 5 percent of applicants admitted to Harvard is to be catapulted automatically into the elite. To say that all of this is deservedly ours because of the choices we made before we turned 18—no one, not even the international-science-fair champions, can prove that with certainty.

IN HIGH SCHOOL I was one of those self-righteous students who derived significant esteem from not being like *the other Asians*: for having white friends who'd drive me into Dallas, to the Deep Ellum entertainment district, for live jazz and spoken-word poetry; for writing songs as my assignments; for caring about local elections and municipal policy. I liked to insert myself into conversations I didn't belong to, an outspokenness my teachers interpreted as showing inde-

pendent thinking and bravery. "Asianness" was so tightly circumscribed in the suburbs of Dallas that the only way I knew how to be my own person was to disavow the whole. So I railed against the never-ending race of skipping math levels that placed seventh graders in pre-calculus, and the SAT prep centers that constituted their own industry. There were 1,556 seniors in my graduating class and I wanted to be an *individual*.

I received my acceptance letter from Harvard in March, despite an SAT score below 2300 and several Bs, not to mention dozens of high-school classmates more disciplined than I. At the time, it was evident to me that

Harvard wanted *personality*, and from the warm, chipper note my admissions officer wrote praising my activism, I undeniably had it.

I deserved it. Harvard wanted *personality*, and from the warm, chipper note my admissions officer wrote to me praising my activism, I undeniably had it. Anyone who wonders whether they should be here gets reassured that the masterminds in the admissions office *don't make mistakes*—they can detect hidden potential; they can whiff out inauthenticity. For most of my time in Cambridge, I believed in Harvard's infallibility.

Freshman year was magical, a dazzling rotation of things I had never encountered. In high school I knew only one gay classmate, but at Harvard all of my male friends had their nails painted and preferred the term "queer." We hung out in large groups, sharing greasy scallion pancakes on a comically large plush beanbag, and screamed along to Carly Rae Jepsen's *EMOTION*. I took the T into Chinatown for soup dumplings with a former circus performer who loved European languages, and scream-whispered Paramore lyrics in Lamont with kids in the punk division of the college radio station. Diversity, the backbone of the University, for me was no longer a suburban dream.

Until this year, Harvard made it easy for me to avoid reckoning with the most difficult parts of my identity. In my hometown, Asian boys would make fried-chicken jokes and complain that they'd automatically be admitted to the Ivy League if they were black: this always struck me as not only offensive but *unthinking*, as if blackness is merely a veil that can be disposed of when it has

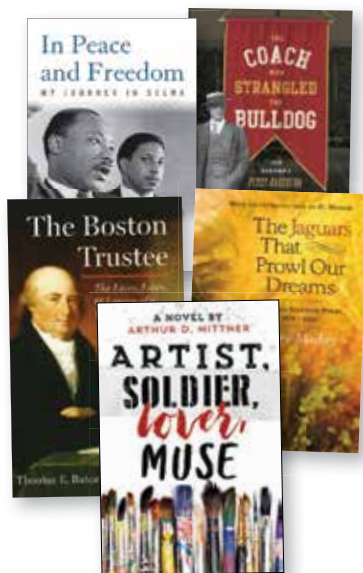
exceeded its utility. In college, the people around me were unlikely to make these mistakes. The majority of my close friends were multiracial—half black, one-eighth Hawaiian, all somewhere on the spectrum of "progressive"—and thus unlikely also to see this close-minded view of "Asianness" as constituting me. Even as I've begun to realize, since freshman year, how much diversity at Harvard can be cosmetic, I still look around the room at parties, where my black roommate is getting sloppy to Katy Perry in a velvet top they borrowed from me, and feel sentimental about the realization, albeit temporary, of my post-racial dreams.

The brutal reality is that I still derive most of my esteem from being "not like the other Asians." Only now, the "other" Asians are not in my classroom solving calculus problems faster than me. They're the ones outside of the red-brick confines of Harvard, arguing for a race-blind vision of equality. The Asian Americans supporting Students for Fair Admissions view equality as entitlement to the privileges, the fullness, of whiteness—there's so much about the lawsuit that feels selfish. But it's easy to criticize when—as a Harvard senior—this fullness has already been afforded to me.

ONE OF THE first lectures I attended at Harvard was the introduction to "Money, Markets, and Morals," an Ethical Reasoning general-education course taught by Bass professor of government Michael Sandel. As the University's reigning moral philosopher, Sandel has been instrumental to projecting the image of a progressive, socially enlightened Harvard into the online stratosphere. His course "Justice" was the first Harvard course made publicly available for millions online. Standing in front of hundreds of eager undergraduates, Sandel posed a question: how would we feel if 10 percent of the seats at Harvard were reserved for the children of wealthy donors? The majority of us sitting in Sanders Theatre were aghast. Did that not undermine the foundation of meritocracy, the idea that we got here because we *deserved* it?

But it turns out the question wasn't really hypothetical. Internal documents released

# Harvard Authors!



**Showcase your book  
in the Harvard  
Authors' Bookshelf -  
Summer Reading List.**

**THE DEADLINE IS:  
MARCH 14, 2019**  
Reach 258,000 Harvard  
alumni, faculty, and staff.

Your book ad will include:  
a book jacket photo, your  
name and Harvard class year,  
and a short description –  
totaling 8 lines of text.  
Your ad will appear both  
in print and online.

For information about pricing  
and ad specifications, go to:  
[harvardmagazine.com/hauthors](http://harvardmagazine.com/hauthors)  
contact Gretchen Bostrom  
at 617-496-6686, or e-mail  
[classifieds@harvard.edu](mailto:classifieds@harvard.edu).

## JOHN HARVARD'S JOURNAL

during the admissions trial illuminated special privileges for applicants related to wealthy donors, who are often placed on a confidential “Dean’s Interest List” or “Director’s Interest List” that has an acceptance rate of 42.2 percent—eight times the regular admissions rate. More than 10 percent of my class of 2019 are members of the special lists. But this fact does not seem so egregious when you consider Harvard has always skewed wealthy. Two-thirds of Harvard students, myself included, come from families in the top 20 percent of the income distribution. The median household income of Harvard undergraduates is *three times* the

**Harvard’s prestige depends  
in part on its ability to keep  
people believing.**

national average. Even then, the sheer wealth and elitism present at Harvard can be so suffocating that even those normally considered privileged feel excluded. I identify as neither first-gen nor low-income, but I applied to team-lead for FYRE because I was tired of the exclusionary culture of the arts community. My public high school didn’t have much arts programming, which made me feel constantly behind during my first two years in Cambridge. I wanted to help other people who didn’t go to private school or performing arts academies to be able find *their* voices in creative writing or comedy also.

Slowly, after my first year, I learned about the corners of the University where I didn’t belong. There was that dystopian night I’d spent at a final club, watching silently as broad-shouldered men slipped their arms around girls and disappeared to places where the regular guests were forbidden. Rowdy partygoers gyrated to Kendrick Lamar’s “Alright” on wooden tables and popped yet another bottle of champagne. I had a hard time remembering I was in my own body. Within 20 minutes, I had slipped out the door.

An upperclassman I knew was a member of *The Harvard Advocate* had been there, flirting with me. “Isn’t it such a strange experience being in final clubs as Asian people?” I asked him later, walking with my friends down Mount Auburn Street toward late-night pizza, past the party. He agreed: “So different from the world I grew up in.”

We were almost at Pinocchio’s when I reminded him. “You went to Exeter.”

“THE MISSION of Harvard College,” as Dean Khurana likes to remind us, “is to educate the citizens and citizen-leaders *for our society*.” On social media, the College features activists with cystic fibrosis, global nonprofit founders, and recent graduates teaching in underserved communities. In speeches, Khurana emphasizes that Harvard has more Medal of Honor recipients than any other institution of higher education except the U.S. military academies. The 5 percent of applicants accepted by Harvard are supposed to steer the globe toward a better future, hence the need for moral signaling. The University’s prestige, not to mention the justification for its exclusivity, depend in part on its ability to keep people believing.

It’s often said that Harvard’s acceptance of wealthy students provides greater opportunities for its low-income students. But the presence of low-income students protects opportunity for the wealthy, too. I remember Savannah Fritz’s righteous anger when the First Year Institute was denied: “Dean Khurana, you brought us here. You flaunt us in your diversity statistics.”

“Diversity,” as I’ve come to understand it, is the apparatus which sustains the preservation of the elite. It keeps us believing that the system is fair and that we’re here because we *earned* it. The past few months I’ve grown uneasy knowing that the bargain that students of color at Harvard must make to protect affirmative action is to pretend that “diversity” has always been a top University priority. After half a century of student activism, Harvard still doesn’t have a multicultural center. FYRE’s undergraduate co-chairs had to request compensation for the hundreds of hours they spent organizing it. Change often comes at a cost to student activists who help make it. A *Crimson* feature published after the release of the College’s Working Group on Diversity and Inclusion report in 2016 understated a grim reality: “Here, change doesn’t happen overnight.”

“Harvard belongs to *you*,” Khurana had said. I’m reminded of the disconnect between the Harvard I envisioned, standing for the first time on the steps of Widener, and the Harvard I know now in its flawed actuality. That belonging is not only a privilege, but an extraordinary responsibility. ▢

*Berta Greenwald Ledecy Undergraduate Fellow  
Catherine Zhang ’19 is still waiting for a multicultural center.*



# Finishing with a Flourish

*A resilient, crowd-pleasing football season,  
with talented sophomores surfacing*  
by DICK FRIEDMAN

IT'S THE 135th playing of The Game, Fenway Park, midway through the third quarter. Yale has scored 10 unanswered points to take the lead for the first time, 24-21. Nevertheless, the Harvard sideline exudes confidence. "There was no 'woe-is-me,'" Crimson coach Tim Murphy later recalled. "The offense couldn't wait to get out there."

The spearhead of that attack is senior quarterback Tom Stewart. Six weeks before, Stewart was not on the radar to be in this spot; a career backup, he had assumed the starting job in midseason. Now he is the man of the moment. Starting at the Harvard 25, he needs only seven plays, the final one a 15-yard touchdown hookup with junior receiver Jack Cook, to recapture the lead.

At the final whistle Harvard had pulled away to win 45-27, and Tom Stewart had completed his inspirational if improbable rise from benchwarmer to team MVP and All-Ivy Honorable Mention. The victory was Harvard's third straight to end the season and gave the Crimson a 6-4 overall record and a 4-3 mark in the Ivy League, good for a third-place finish (see "Final Standings," below). The triumph also broke a two-game losing streak for Harvard in The Game and gave Murphy, who now has completed 25 sea-

sons on the Crimson sideline, an 18-7 record against Yale.

Though 2018's record was only one game better than the disappointing 5-5 mark of 2017, it felt a lot better than that. Part of the reason was the strong finish, a contrast to the fades of the previous two seasons, when the Crimson lost its final two games. But the superior vibe was earned all season long. Even in defeat, Harvard played a crowd-pleasing, resilient brand of ball.

Accordingly, Murphy was very proud of this group. "There was considerable adversity and to our team's credit, our kids never batted an eye," he says. "And somehow we

got not just physically stronger but mentally stronger as the year went on. It seemed like we gained momentum in every game."

THE HAPPY CONCLUSION had seemed unlikely a few weeks earlier. In the fourth game, at Cornell on October 6, the Crimson had been KO'd by a one-two combination: a 28-24 defeat in which Harvard not only coughed up a 10-point, fourth-quarter lead, but also lost its most dynamic offensive player, senior receiver/returner Justice Shelton-Mosley, who was hurt when he was tackled by two Big Red defenders while bringing back a punt. The injury to his left leg was so severe that it concluded his scintillating Harvard career.

A two-time All-American, Shelton-Mosley departed with his name festooning Harvard's record book. He has the longest punt return for a touchdown (91 yards, against Georgetown in 2017) and the two best single-season averages for punt returns: 19.0 yards in 2015 and 18.8 in 2017. As a pass-catcher, Shelton-Mosley is third all-time in receptions with 148. "His absence wasn't just about losing one of the best skill athletes in the league," says Murphy. "It was also about losing a kid who was a great motivator on our team through his work ethic and his ability and his dependability. It took us



**Cook's tour:** Harvard wideout Jack Cook leaves Yale's Deonte Henson in the dust on a third-quarter, 15-yard touchdown. The score gave the Crimson a 28-24 lead, which it would not surrender.

a while to get our equilibrium back offensively, especially with our wide receivers.”

Losing Shelton-Mosley was only one of Murphy’s problems. He was enduring a two-game losing streak; the meat of the league schedule loomed; and he had a team that was struggling to score in the red zone. Harvard’s attack was not without weapons, including a battle-tested offensive line, a speedy sophomore running corps that included breakout star Aaron Shampklin, and a cadre of resourceful receivers. The question mark—a big one—was Stewart, who had supplanted sophomore Jake Smith during the Cornell game.

In his first start, against Patriot League foe Holy Cross, Stewart began supplying

snared a game-high seven catches (one for a touchdown). “We knew the kid had talent but he was untested under pressure,” says Murphy of Adams. “But when he broke out, you could see this was a kid who embraced the moment.”

This also proved true of Stewart. With 3:34 left, the Crimson got the ball at its 29. In nine plays Stewart dinked-and-dunked Harvard to the Crusader 35. With a little over a minute left, he went deep, throwing to Adams, who was being covered too closely by Holy Cross’s John Smith. The referee threw the flag—interference. Adams caught the ball anyway, at the five. Two plays later, junior Jake McIntyre stepped back for a 25-yard game-winner. The kick was up...it was

sophomore linebacker Jordan Hill and senior tackles Stone Hart and Richie Ryan, did a marvelous job of holding down Princeton quarterback John Lovett, limiting him to 45 yards on the ground and 207 passing. Hill, particularly, was everywhere, with a game-high 11 tackles. “He’s so efficient, so consistent and so tough that even as a sophomore you tend to take him for granted,” says Murphy.

In the fourth quarter, with Princeton leading 22-7, Stewart took the Crimson on a 10-play, 75-yard drive that ended with a 29-yard toss to senior wideout Henry Taylor. McIntyre kicked the point after. Princeton 22, Harvard 14. There was hope. All depended on the successful execution of an onside kick. Freshman Jonah Lipel banged it to the left. Princeton covered it at midfield. Two plays later, from the 49, Tiger back Charlie Volker turned right end and dashed upfield—all the way to the end zone. Princeton 29, Harvard 14. In never-say-die fashion, Stewart got the ball back and this time needed only six plays to get the ball in the end zone. The scoring play was a 32-yard pass to Adams. McIntyre again kicked the point. Princeton 29, Harvard 21. Amazingly, the Crimson was still in it. But what followed was another onside kick by Lipel and another Princeton recovery to ice the game.

The next week, at Dartmouth, the Crimson committed four first-half turnovers and left the field at the break behind 21-0. Like most successful coaches, though, Murphy teaches his teams resolve, and that is what Harvard displayed at the beginning of the second half. A long drive paid off in a seven-yard touchdown run up the middle by Shampklin; the score had been set up by two Stewart completions to Adams. After a Big Green field goal early in the fourth quarter, Stewart brought the Crimson closer with a touchdown on a 22-yard quarterback draw. With 1:38 remaining, McIntyre booted a 28-yard field goal that made the score Dartmouth 24, Harvard 17. But after Lipel’s onside kick rolled out of bounds untouched, that’s how it ended.

AT THIS JUNCTURE, Murphy admits, the rest of the season could have slid downhill. Instead, Harvard responded with its three best games. First came a 52-18 demolition of banged-up Columbia at the Stadium. On the Crimson’s first play from scrimmage, Stewart threw caution to the winds—as well as one of the sweetest passes you’ll ever see.



**One hand, two points: Tight end Adam West fended off Holy Cross’s Cullen Honohan with his right hand and caught the ball with his left for a conversion catch that made the list of Top 10 plays on ESPN’s SportsCenter.**

some answers. Under Friday-night lights at Harvard Stadium, the Crimson suffered another fourth-quarter collapse that turned a 30-14 lead into a 31-30 deficit. The implosion threatened to obliterate a solid outing for Stewart (20-of-36 passing for 272 yards and two touchdowns with no interceptions) and a 57-yard touchdown run by Shampklin. The evening also brought the formal introduction of three other sophomores, tight end James Batch, whose first career catch was a 35-yard touchdown, tight end Adam West, whose one-handed grab on a two-point conversion was featured on ESPN’s Top Plays, and wideout Tyler Adams, who

good! No time remained. McIntyre’s fourth field goal of the evening had given Harvard a 33-31 victory. “They set me up in a good position,” said humble hero McIntyre afterward. He would finish the season with 13 field goals (in 15 attempts), tying the Harvard single-season record. Says Murphy: “If I needed a field goal in an Ivy League game, an SEC game, an NFL game under 50 yards, I’d take him against any kicker on the planet.”

The next two weeks brought Princeton and Dartmouth, both nationally ranked. In rollicking games, Harvard went toe-to-toe with these heavyweights before succumbing. The contests played out similarly: the Crimson dug itself into an early hole but then hung around. The Tigers entered Harvard Stadium on a rampage, scoring 52.0 points a game and surrendering an average of 8.6. The Crimson gave them all they could handle. The Harvard defense, led by



Dropping back, he launched a Scud missile some 65 yards in the air that hit the streaking Cook in stride. In a twinkling Cook was over the goal line for a 92-yard touchdown—the longest TD pass in Crimson history. Two more touchdown passes, a 75-yarder to Adams and a 74-yarder to Shampklin, followed in the first 12 minutes alone. Stewart finished with five touchdown passes, tying the Harvard single-game record.

The following Saturday at Philadelphia's blustery Franklin Field, the Crimson offensive and defensive lines—the latter pulling off a stirring goal-line stand—dominated unexpectedly bumbling Penn in a 29-7 bludgeoning. When Stewart was knocked out of the game by a Penn tackler during the second quarter, Smith came in and played solidly, going 7-for-11 passing and tossing for two touchdowns to senior wideout Brian Dunlap. Harvard's runners plowed for 215 yards behind holes created by their interior linemen: senior left tackle Tim O'Brien, sophomore left guard Eric Wilson, senior center Ben Shoults, senior right guard Larry Allen Jr., and junior right tackle Liam Shanahan. The defense, meantime, held Penn to 58 yards rushing on 32 attempts. The Quakers also committed four turnovers (two fumbles lost, two interceptions).

Finally, The Game. This year's venue was Fenway (though it was nominally a Harvard

**Harvard senior defensive back Tyler Gray (3), senior defensive tackle Alex White (38), and junior linebacker Cameron Kline (52) halt—however briefly—Dartmouth quarterback Jared Gerbino, who rampaged for a game-high 183 yards.**

home game), before a sellout crowd of 34,675 and an ESPN2 audience. This was the first year since 1894 that the Game was not played at either a Harvard or Yale facility. Never a great place to watch football, Fenway received lukewarm reviews from the faithful. (Some female spectators did appreciate having better restrooms than those at Harvard Stadium.) The contest turned out to be one of the hottest and most contentious of the ancient rivalry. Stewart's injury raised doubt about whether he would face Yale; in the days before the game, he did not practice. But at kickoff, he was ready to go. He performed magnificently, completing 18 of 27 passes for 312 yards and three touchdowns.

The first came in the opening quarter, a 22-yard dart to Taylor, to make it 7-0 Harvard. After Yale tied it up, the Crimson struck again, using some trickery. The Harvard offense came out in the Wildcat formation, with the snap going not to a quarterback but to sophomore running back B.J. Watson. Watson handed the ball to Adams, who was steaming from left to right. The play was, essentially, an old-fashioned end-around. Adams sped to the right flank, turned upfield, and outran everyone to the end zone. Harvard 14, Yale 7.

**Hold that Tiger: Harvard linebackers Jordan Hill (55) and Joey Goodman (59) put the clamps on Princeton's Charlie Volker. Hill had a game-high 11 tackles. In his clutches: Having beaten Princeton's Christian Brown, Harvard sophomore wide receiver Tyler Adams prepares to gather in a fourth-quarter touchdown pass.**



But shortly thereafter the Elis tied it again on a 16-yard pass from quarterback Griffin O'Connor to wideout JP Shohfi.

Right before halftime, Stewart took the Crimson 77 yards in 45 seconds. The final 19 came when Stewart flipped a little pitch to Taylor, who was running a short pattern from right to left. Taylor caught the ball at about the 12 and then got up enough steam to drag would-be Yale tackler Noah Pope to the end-zone pylon. Harvard 21, Yale 14.

Early in the third quarter came the first controversial call of the day. O'Connor briskly directed the Elis from their 25 to the Crimson eight. There, on third-and-goal, he threw a pass in the right flat to running back Zane Dudek. Harvard defensive back Wesley Ogsbury got to Dudek at the same time as the ball did. His smash hit, which looked to be at Dudek's shoulder level, caused an incompleteness. But hold the phone! An official threw a flag and charged Ogsbury with targeting—taking deliberate aim at the receiver to inflict injury. Instead of being faced with fourth-and-goal from the eight, Yale was awarded a first down at the four-yard-line; Ogsbury was ejected.

After the game, Murphy was having none of it. "It's hard to be diplomatic here," said the coach, who is usually diplomatic (in public, at least). "I watched it several times on replay. I just can't believe that was anything other than a form [i.e., legal] tackle. Honest to goodness, it was such a bang-bang play." (Clearly Ogsbury's teammates held him harmless; see Tidbits, below.)

The effect of the penalty was two-fold. The immediate upshot was to give Yale a pathway to a touchdown instead of having to settle for a field goal; O'Connor would wedge the final yard for six points, and Alex Galland added the point after touchdown.







**Green (and Crimson and Blue) Day: No stranger to football or big events, Fenway Park was decked out in its finest for its first Harvard-Yale game.**

mainder of the 15 yards to the goal line. Harvard 28, Yale 24.

Again the Elis retaliated, holding the ball for more than five min-

physical football team.' You could absolutely see that in 2018, and the epitome was the last three games, where we just dominated the last quarter against every team we played."

The Stewart-led attack proved unstoppable. Harvard covered 75 yards in three plays: a 32-yard pass to Cook, a 16-yard run by Adams, and finally a 27-yard touchdown dash by sophomore back Devin Darrington. As he reached the three-yard-line, though, Darrington wagged his index finger at a Yale defender and was flagged for taunting. The touchdown was erased and the ball brought back 15 yards to the 18. After the game, Murphy did not defend Darrington the way he had Ogsbury. "The bottom line is, he was wrong," said the coach. "He got overwhelmed by the moment." The incident soon went viral. The Crimson even-

tually had to settle for a 36-yard McIntyre field goal. Instead of Harvard 35, Yale 27, it was Harvard 31, Yale 27.

On its ensuing possession Yale went three-and-out. A good punt return by Taylor coupled with an unsportsmanlike-conduct call on Yale gave the Crimson the ball at the Eli 45. A 12-yard Adams

run was followed by three rushes by Darrington. On the last, he squeezed through a tight hole into the end zone. McIntyre kicked. Harvard 38, Yale 27.

Now the Elis looked worn down. Again they went three and out. A punt gave the Crimson excellent field position and Harvard began driving for the coup de grâce. On first and 10 from the Yale 17, Stewart took the snap and ran to his right. Seeing Eli tacklers, he went into the slide that quarterbacks are permitted as a protective measure. His right leg appeared to get stuck under him and, the play over, he lay on the ground in agony. The stretchers were summoned and Stewart was carried out like a gladiator on his shield. Taken to a hospital, he was released that evening and was expected to make a full recovery.

Thus concluded one of the more as-

**Down goes Eli: After beating Yale blocker Sterling Strother, Harvard defensive lineman Scott Garrison tackles quarterback Griffin O'Connor. The third-quarter sack forced the Elis to settle for a field goal.**

#### FINAL STANDINGS

	Ivy	Overall
Princeton	7-0	10-0
Dartmouth	6-1	9-1
Harvard	4-3	6-4
Columbia	3-4	6-4
Pennsylvania	3-4	6-4
Yale	3-4	5-5
Cornell	2-5	3-7
Brown	0-7	1-9

Harvard 21, Yale 21. The longer-term impact was to deprive the Crimson of its best secondary ball hawk (six interceptions, tied for second-most in the Ivy League in 2018) and most aggressive coverage man.

On its next possession Harvard went three-and-out. Taking over at its 27, Yale drove all the way to the Crimson six, courtesy of a 48-yard pass from O'Connor to Shohfi. (It's possible that Ogsbury would have been the cover man had he remained in the game.) But here the defense showed its mettle. On first down, senior defensive tackle Scott Garrison broke through to sack O'Connor for an eight-yard loss. (Upon reflection, maybe the game's biggest play.) Two incompletions followed. On fourth down, Galland's 32-yard field-goal try sneaked inside the left upright. Yale 24, Harvard 21.

Now Harvard had to dig deep. Right back came Stewart on a 75-yard touchdown drive, completing four passes and even running for 12 yards. On the final toss, he found Cook with a short flip and Cook legged it the re-

minutes while driving 67 yards to the Crimson eight. The fourth quarter had just begun and Yale was faced with fourth-and-two. Decision time: go for it and keep the possibility of a touchdown alive, or take the three points with the hope that you'll score again? Yale coach Tony Reno called a time-out, then opted for the latter. Galland booted a 25-yard field goal that narrowed the score to a very narrow Harvard 28, Yale 27.

The rest of the fourth quarter was Crimson-colored, with the veteran offensive and defensive lines asserting their power. "They were the strength of our team," says Murphy. "At the very first team meeting of 2018, I said, 'It's a line-of-scrimmage game. We've got to become a bigger, stronger, tougher, more





tonishingly meteoric careers in Crimson annals. “Tom and I had a lot of conversations along the way over four years,” says Murphy. “He grew so much as a person here. Like a lot of young quarterbacks, he really wasn’t ready. He could always throw the football, but he didn’t understand the mental part of the game—the emotional part and the leadership part. Between his sophomore year and his senior year he improved as much as any quarterback I’ve been around.”

In came Smith. On his first snap, he merely handed to Darrington, who gamboled through a large hole into the end zone. (No finger-wagging this time, though Darrington did take a long look into the Yale section along the third-base line.) McIntyre kicked the final point of the 2018 season. Harvard 45, Yale 27. The 45 points tied the Harvard high for The Game. The 72 combined points were the most ever in a Harvard-Yale game. Harvard’s 578 total yards were a record against Yale—zooming past the 518 amassed in 2012.

As he looks to 2019, Murphy has some big holes to fill, most notably on the offensive and defensive lines. But the skill positions are deep and talented. The running-back troika of Shampklin (who led the Ivy League in rushing with a 105.3-yard average), Darrington, and Watson all will get “tons of reps,” Murphy promises. McIntyre and punter Jon Sot, who as a freshman topped the Ivy League with a 41.1-yard average, will continue to handle the kicking. Jake Smith will have a shot at regaining his starting job at quarterback but he will be pushed by several promising candidates. Maybe one of them will emerge, just the way Tom Stewart did.

**TIDBITS:** With Harvard’s victory, the series now stands at Yale 67 wins, Harvard 60 wins, and eight ties....Five Harvard players were named to the All-Ivy first team: senior offensive lineman Larry Allen Jr., senior defensive lineman Stone Hart, sophomore running back Aaron Shampklin, senior defensive back Wesley Ogsbury, and freshman punter Jon Sot. Four others were named to the second team, and three more were Honorable Mentions....Rising fifth-year senior Wesley Ogsbury was elected the 146th captain of Harvard football. Ogsbury, a defensive back from Denver, is a resident of Leverett House and an economics concentrator....The first game of Harvard’s 2019 football season will be on September 21 at San Diego. ♡

# BRIDGE

## Their Future

**Tuck Business Bridge** is a total immersion business program designed to prepare top liberal arts, science, and engineering undergrads for challenging careers in business and beyond.

In just a few weeks, the Tuck Business Bridge Program®, held at the Tuck School of Business at Dartmouth College, delivers a comprehensive **business curriculum** taught by Tuck’s top-ranked MBA faculty, a **capstone team project, recruiting**, and **one-on-one career guidance**, to give students the tools they need to get a job and succeed.

Scholarships are available!

### 2019 Tuck Business Bridge Program\*

Session 1: June 9–July 3

Session 2: July 7–31

\*Program dates subject to change

### 2019 December Bridge Program

December 1–20



**TUCK  
BUSINESS BRIDGE  
PROGRAM**

Dartmouth College · Hanover, NH

603-646-6459

[tuck.biz.bridge@dartmouth.edu](mailto:tuck.biz.bridge@dartmouth.edu)

[bridge.tuck.dartmouth.edu](http://bridge.tuck.dartmouth.edu)





# What It Means to Be OK

Daniela Lamas  
and the practice of  
post-ICU care

by LYDIALYLE GIBSON



**T**HE DOCTOR asked the man to tell her what he remembered, and so he took a breath and began to speak. In the months since he'd left the intensive-care unit where he nearly died, he had been over these events again and again, searching his own memory and the recollections of his wife and daughter, trying to make the puzzle pieces fit. They never quite did.

But today was a different kind of exercise. The doctor, Daniela Lamas '03, is a pulmonary and critical-care physician at Brigham and Women's Hospital, where James (though that's not really his name) had been transferred from another hospital when his condition went from bad to worse. After he'd returned home and settled back into daily life, Lamas reached out to ask if he'd be interested in a follow-up appointment, part of a still-evolving clinic she helped start four years ago, for former patients of the Brigham's ICU. The idea is to see how these patients are faring in the aftermath of critical illness, to identify needs or difficulties, to talk about quality-of-life goals, and to answer any questions they might have about what happened to them in the hospital—because often, like James, they don't fully remember. ("Why do I have this small hole here?" a woman once asked Lamas, pointing to the spot where a chest tube had been inserted and later removed.)

Occasionally patients request tours of the ICU, to see, with a clearer head, the place where they may have spent weeks or months. After each clinic appointment, Lamas types up detailed notes and recommendations to share with the patient's primary-care doctors and makes referrals to other specialists as needed—social workers, often, or mental-health counselors. "We know that after the ICU, people suffer issues they didn't have before," she says. Some experience depression or anxiety or lingering delirium; as many as one-third have post-traumatic stress disorder. Others go home with cognitive changes—minds slowed by the medicines they took or the ordeals they endured. Until recently, ICU physicians have known little about any of this. After patients leave their care, Lamas says, "we don't see them."

Making sure those patients are seen—in every sense of the word—has become a driving passion for Lamas. She is also a researcher in the serious-illness program at Ariadne Labs, a joint project of Harvard and Brigham and Women's, started by Brigham surgeon Atul Gawande. And she is a medical journalist who writes for *The New York Times* and *The Atlantic* and published her first book last spring: *You Can Stop Humming Now: A Doctor's Stories of Life, Death, and In Between*. It is a memoir of a decade's work in intensive-care units, but also an immersive exploration of what patients' lives are like afterward.

"She's mining a space we haven't opened up very effectively," says Gawande, Thier professor of surgery at Harvard Medical School and of health policy and management at the Harvard T.H. Chan School of Public Health. "What Daniela's ended up really recognizing is that six million people go into intensive care, and five million people are later discharged home. And what it is to return home after often incredible trauma and devastating illness, sometimes lingering difficulties and conditions—we haven't explained or begun to uncover what that bridge is like, or what the gaps and challenges are. We're helping people survive who never survived before, and it's their struggles she's given voice to."

In a 2013 essay in *The Atlantic*, Lamas wrote: "As more adults survive intensive care, we've inadvertently created a new world populated by the walking wounded....I've come to fear that our best interventions are less meaningful, and our counsel to families shallow, if

we don't fully understand what happens to our patients after they leave our units' doors."

## After the ICU

AND SO, AT TWO O'CLOCK on a November afternoon, Lamas and James, who is in his sixties, sat down for their appointment. They spoke by video conference call, an arrangement that saved him a journey to the hospital. He was at his desk at home, wrapped in a blanket; Lamas was at the Brigham, squeezed into a tiny office with three colleagues: critical-care physician (and post-ICU clinic co-founder) Gerald Weinstein, social worker Stacey Salomon, and psychiatrist Nomi Levi-Carrick.

James and Lamas traded narratives about his time in the ICU. Her version, taken from hospital records (she was not one of the doctors who treated him), went like this: he was first hospitalized in early summer, after feeling weak and falling down at home. The doctors at his local hospital soon realized he was very sick—his blood pressure was dropping and his kidneys malfunctioning, indicating that his body was in shock, likely from an infection. He was transferred to another hospital and then a few days later to the Brigham, where doctors discovered an area in his intestines that had burst open, and operated to repair it. They also found a clot in one lung and administered blood thinners. The passageways from his kidneys to his bladder were blocked. After several days in the ICU and two weeks on the hospital's regular floor, James was released to a rehab facility. The breathing tube his doctors had inserted was removed. His health improved, and he went home.

James's version of the story was more fragmentary, and much more frightening. He remembered the breathing tube; in fact, he said, "I was absolutely certain I had pulled it out." (He hadn't, Lamas assured him, though the sense of having done so is common and entirely normal.) He remembered hearing—or perhaps hallucinating—strange noises outside his room, "and I just knew I had to get out of there." He also recalled wild, awful dreams that seemed as vividly real as any experience he'd ever had, about being taken against his will to different parts of the hospital, about being told by medical staff that his behavior was erratic and they were worried, about being stranded alone in a strange wing of the building.

"These are all things that make sense, even though they seem like they don't," Lamas said, reassuring him again. "Your mind was trying to make sense of your situation."

The fear set in once James arrived home and realized how close he had come to dying. Pain and sleeplessness set in, too. His kidneys were still being drained by tubes attached through his back, which were uncomfortable and sometimes excruciating. He longed for the tennis court, where he and his wife had been a doubles team, and for the pub where he used to go for a pint and some conversation. Both were off-limits for now, and he was stuck at home for most of the day, alone, waiting for his wife to come back from work or his grandchildren to come over to visit. He cooked dinner and cleaned up around the house. He watched TV. When it wasn't too cold out, he took short walks. "I'm OK; it's nothing I can't live with," he kept saying—of the pain, of the broken sleep, of the isolation, of the fragility and fear. "I'm OK. It's OK."

But 20 minutes into the conversation, he paused. "You know," he said, "sometimes the feeling I get is, what am I doing here? I'm sick of just sitting here sometimes. And I do get depressed....The big positive for me is that I'm still alive, and I'd rather be alive than

dead. But once you get past that, I mean—what am I doing?”

His voice trailed off, and then Lamas spoke. “Everything you’ve told us,” she said, “it all gets to the issues we wanted to talk to you about.” She thanked him for his openness. “These are entirely normal things to deal with after what you’ve been through.” She was speaking slowly, choosing words carefully. “Thank you,” he said. He’d have a follow-up appointment with Levy-Carrick and Solomon. Lamas would speak to his regular doctor about the pain and sleep and other issues: “I’m really very hopeful that we can help you.”

## The Walking Wounded

THE PAGES OF *You Can Stop Humming Now* are full of people like James. Lamas devotes one chapter to an artist who narrowly survived a tear in her aorta—the surgery involved an incision that wrapped around her torso from her navel to her upper back. She left the hospital harrowed by nightmares and post-traumatic stress. Her artwork, and years of therapy, helped her re-enter life.

But the book, and Lamas’s post-ICU clinic, also address another kind of “walking wounded”: the chronically critically ill, who, even after they leave the ICU, remain caught in an overwhelming orbit

seeming miracles also make possible long-term traumas, and life-saving interventions often turn out to be only the starting point for further interventions and quality-of-life concerns that are, Lamas says, far too little understood. “We’re talking a lot about the end of life these days,” she says, “but this sort of not-dead and not-alive moment of illness and recovery—that story is not as present.”

“The impact Daniela is having on the profession is profound,” says Bruce Levy, chief of pulmonary and critical care at the Brigham. “As physicians, we make decisions at a time of stress and crisis. And she’s opened windows to educate us on the downstream ramifications for patients.”

## Not an Achievable Goal

LAMAS’S INTERESTS were always split between medicine and writing. She was born at the Brigham—her father is former Harvard cardiologist and surgeon Gervasio Lamas, who now practices in Miami. Medicine was always Lamas’s eventual destination, but she loved writing from childhood. She was a high-school-newspaper reporter and in college she joined *The Harvard Crimson*. “That was my world, that office,” she says. “I felt like I had a very important job.” One summer she interned at an alternative weekly newspaper in Miami, and the following summer, at *The Miami Herald*, which later hired her as a full-time reporter. She spent a year driving around the city in her Volkswagen Beetle, looking for stories.

After that, she went to medical school at Columbia. “I felt at first like I had made a devastating decision, leaving writing,” she says. Medical school felt like a strange version of college, where the only assignment was to memorize science, “and then when you were done memorizing, you were supposed to be really enthusiastic about playing beer pong.”

During residency, though, she fell in love with critical care. The patients in the ICU were the most compelling she saw, and she remembers watching the doctors there navigate decisions and communicate with families in moments of acute stress. “I wanted to be them.”

She also returned to writing. She took medical-reporting assignments for *The Boston Globe* and began writing in *The Atlantic*, *The New Yorker*, and *The New York Times* about her patients and her ICU experiences—thoughtful, affecting, humane essays on the profundities of her daily work: last wishes, home hospital care, the limbo between life and death. She wrote about smuggling a beer in to a dying patient and about spending Christmas in the ICU. A few years ago, when a literary agent urged her to write a book, she started seeking out stories from ICU survivors.

Her experience with those survivors has begun influencing Lamas’s work inside the ICU. She notes, for instance, that the ventilator is often a demarcation point for the critically ill, something patients and their families don’t always realize when they are crossing it. “I’ve become better at discussing the tracheostomy decision,” she says, referring to the surgical procedure that creates an opening in the neck that allows a breathing tube to be attached to the trachea. “Before, I really framed it as, ‘Now it’s time for a procedure to offer a more comfortable longer-term connection to the ventilator that will allow your loved one to get better.’ All of that is true, but it’s also true that once you have this thing, you’re probably not going to go home right away.” A more likely destination is a long-term-care facility, and recovery is often slow. “Even in the best-case scenario,” she says, “it’s

**“We ask patients and their families to make decisions in acute, insane moments.” It can be tough in those moments to grasp the consequences.**



SCIENCE PHOTO LIBRARY/GETTY IMAGES

of sickness and care. Lamas writes about a man whose bout with West Nile virus nearly killed him; after several weeks in intensive care, he emerged tethered to a ventilator, a feeding tube, and a urine catheter. She writes about a grandfather with heart failure who stays alive, and relatively active, with the help of an implanted mechanical heart pump. A fisherman, he can no longer ride in a boat—falling into the water would electrocute him—and every night he must plug the device into the wall and wait “like a dog on a leash” for its batteries to charge. Lamas spends time with a 30-something cystic-fibrosis patient living through an adulthood she never expected to reach, and with a young mother who receives a lung transplant just in time to save her life, but finds the road back to health long and bumpy—and scary and sad—in ways she didn’t foresee.

At any given time, Lamas writes, there are 100,000 chronically critically ill patients in the country, a population largely created by the breathtaking triumphs of the ICU, where doctors routinely save lives that even a few years ago would have been lost. But these



really hard to get back to where you were—and maybe impossible.”

Her goal isn't to change the decision, but to manage expectations. “We ask patients and their families to make decisions in acute, insane moments,” she says. And it can be tough in those moments to grasp the consequences, even if they're spelled out. Still, Lamas says, “I think it's important to set out the risk, so that people have some understanding of what gamble they're making.”

Embedded in dilemmas like this one, and in the narratives in Lamas's book, are ancient questions: what it means to save a life, or to live one; the connection between health and selfhood; and the murky boundaries of being “OK.” In the book, Lamas recalls a moment in the ICU when a patient's worried daughter asked, “She's going to be OK?” Lamas writes: “There it was. I had heard that question so many times, ending with that same word, OK. I had said the same thing to myself. In a way, it was an easy kind of shorthand. And yet I had rarely paused to ask a key question of my own response: What does it actually mean to be OK? The more I looked, the more complicated that answer had become.”

Her fellowship at the Brigham offered an early glimpse of the complications. She undertook a project interviewing patients at Spaulding Hospital in Cambridge, a long-term-care facility where people often land after the ICU. She had been studying end-of-life conversations and wondered about the possibility of an adjacent discussion, on goals and values and health expectations of patients with critical illness. She spent weeks at Spaulding, interviewing patients who were on ventilators. What she learned, she says, was dispiriting but not surprising: their expectations for their future

health were largely unrealistic, and their quality of life was often terrible. They were enduring in the hope that they would eventually go home and resume functional, independent lives. “Which for many of them is not an achievable goal.”

Those interviews stuck with her. Today at Ariadne Labs, she researches conversation tools to help doctors talk effectively with seriously ill patients about feasible goals and quality-of-life recommendations. “Usually people think about that as having a better death,” Gawande explains, “but it's really about how you live as well as you possibly can in the face of impairment at the very end.”

Lamas had one of those conversations a few months ago, with a patient who came to the Brigham for a lung-transplant evaluation. As it became clear that his chances were dim—other health problems made the surgery dangerous—Lamas began nudging him and his family to imagine a life without new lungs. What did “OK” mean to him? Medical interventions could lengthen the time he had left, but would mean more trips to the hospital; forgoing those treatments would allow more comfort at home, but his life would likely be shorter. “It's easy to come in with a set idea of what a ‘good’ process through the medical system looks like,” she said later. “But what's tolerable can be very different from one person to another—talking to ICU survivors has taught me that. If anything, their stories have made me more open-minded about what is OK.”

---

*LydiaLyle Gibson profiled Karen King in “The Bits the Bible Left Out,” in the November-December 2018 issue.*

# Get Harvard news every Friday.

## Sign up for our weekly email with the editors' Harvard news wrap-up.

**HM▶ [harvardmagazine.com/email](https://harvardmagazine.com/email)**

# Ulysses S. Grant

*Brief history of the image of a hero: 1822-1885*

by ELIZABETH D. SAMET

BY LATE 1863, most of the major Civil War battles in the West—Shiloh, Stones River, Port Hudson, Vicksburg, Chickamauga, Chattanooga—had been fought. Union forces had the upper hand. Much of the credit for the success went to Major General Ulysses S. Grant, whose aggressiveness especially appealed to President Lincoln, long frustrated by the cavalcade of hesitant, high-main-

tenance generals who had commanded the Army of the Potomac in the East since 1861. In March 1864, the rank of lieutenant general (last held by George Washington) having been revived for the purpose, a newly promoted Grant assumed command of all Union armies.

In December, Grant had summoned senior officers to Nashville to discuss the winter campaign. One night, at the suggestion of William T. Sherman, they went to see *Hamlet*. The mood was raucous from the start, the audience full of soldiers on their way to or from leave. The officers were sitting incognito in the balcony when, according to one, Sherman started complaining loudly that the actors were butchering the play. When Hamlet picked up Yorick's skull, a soldier at the back bellowed, "Say pard, what is it, Yank or Reb?" The audience erupted, and Grant said, "We had better get out of here."

The anecdote nicely illustrates the difference between the excitable, voluble Sherman and the calm, unobtrusive Grant. It is also deeply suggestive. Contemplating human remains was nothing alien to that audience. The skull prompts Hamlet's unflinching meditation on the fate of even the greatest heroes: Alexander's dust might seal a beer barrel, while Caesar's clay "Might stop a hole to keep the wind away." In the Norwegian Fortinbras, willing to bury 20,000 soldiers to secure a worthless piece of land, Hamlet sees a puffed-up prince hungry for martial honor. Causes, for Hamlet, are never ancillary: with his dying breaths he commands Horatio, "report me and my cause aright."

ADOLPH G. METZNER/LIBRARY OF CONGRESS



CAL VORNBARGER/ALAMY STOCK PHOTO



Grant, like Hamlet a careful parser of causes, readily distinguishes in his *Personal Memoirs*, finished days before his death from cancer, between the cynical political motives that sparked the Mexican War and the just principles that animated defense of the Union. He states unequivocally in his conclusion: "The cause of the great War of the Rebellion against the United States will have to be attributed to slavery." Its perpetuation was "one of the worst [causes] for which a people ever fought, and one for which there was the least excuse."

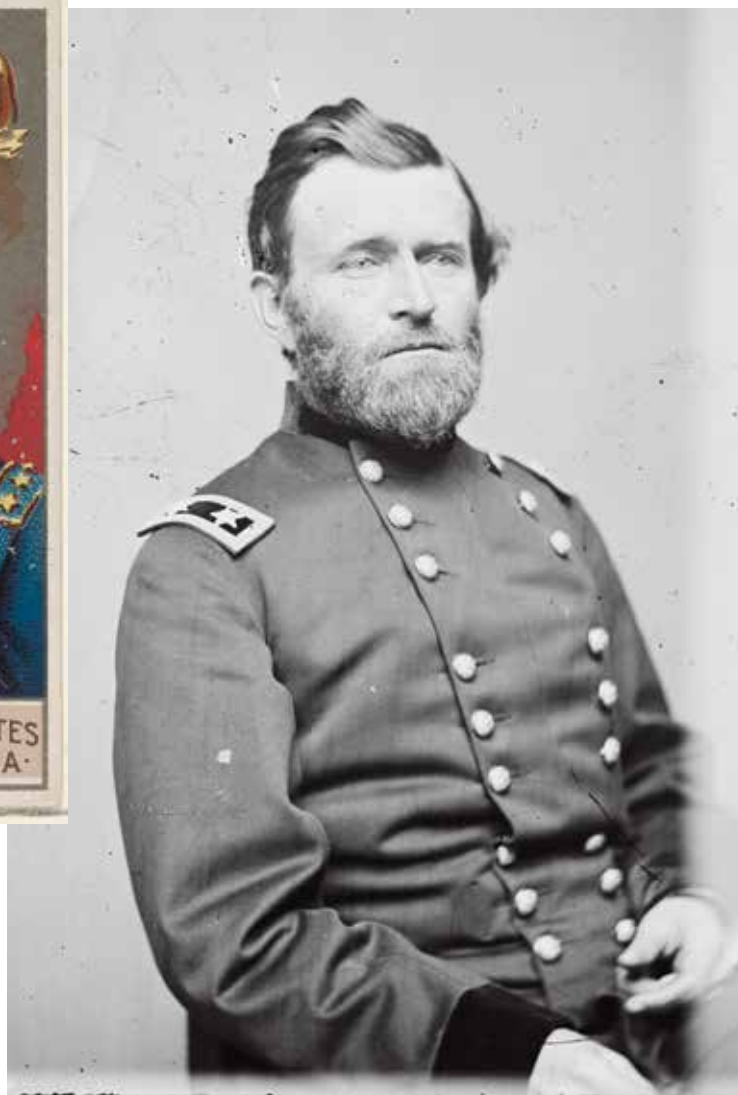
Terse, cool, free of melodrama, Grant's book is an anomaly among the era's many Civil War memoirs. To a perhaps surprising degree, Grant shared Hamlet's mistrust of a particular kind of martial honor. Although he possessed physical courage and recognized it in others, he prized "moral courage" above all. He was suspicious of braggarts, "men who were always aching for a fight when there was no enemy near," and self-deprecating. Yet even as he finished his memoir, its story was being eclipsed, just as Hamlet's doubts are drowned out by Fortinbras, who arrives to take over Denmark and bury its prince with a wildly inappropriate soldier's funeral. The revisionist Civil War narrative—glorifying the Lost Cause through song and story, textbooks and statuary; cloaking with chivalric ritual and romance the doctrine of white supremacy; abstracting the battle from the cause; sacrificing African-American rights to what Frederick Douglass called "peace among the whites"—created a hero who still infatuates the American mind: the knight-errant, Robert E. Lee.

Grant became a casualty of this new narrative. At his death he was arguably the most famous man in America and the most recognizable American in the world. In 1900 President Theodore Roosevelt, A.B. 1880, LL.D. 1902, launched his predecessor into the heroic firmament: "mightiest among the mighty dead loom the three great figures of Washington, Lincoln, and Grant." And there he stayed, briefly, until revisionism did its work, and Grant, LL.D. 1872, became a butcher, a drunk, a serial failure, a dupe of the Gilded Age's greediest men.

The season of Ulysses S. Grant is now upon us. Biographies by Ron Chernow and others have appeared, as have new editions of *Personal Memoirs*. This spring, a statue of Grant will be unveiled at his alma mater, West Point. How, amid such welcome attention, can we celebrate Grant without turning him into the kind of hero he mistrusted? Articulating the particular challenge of Grant's hero-



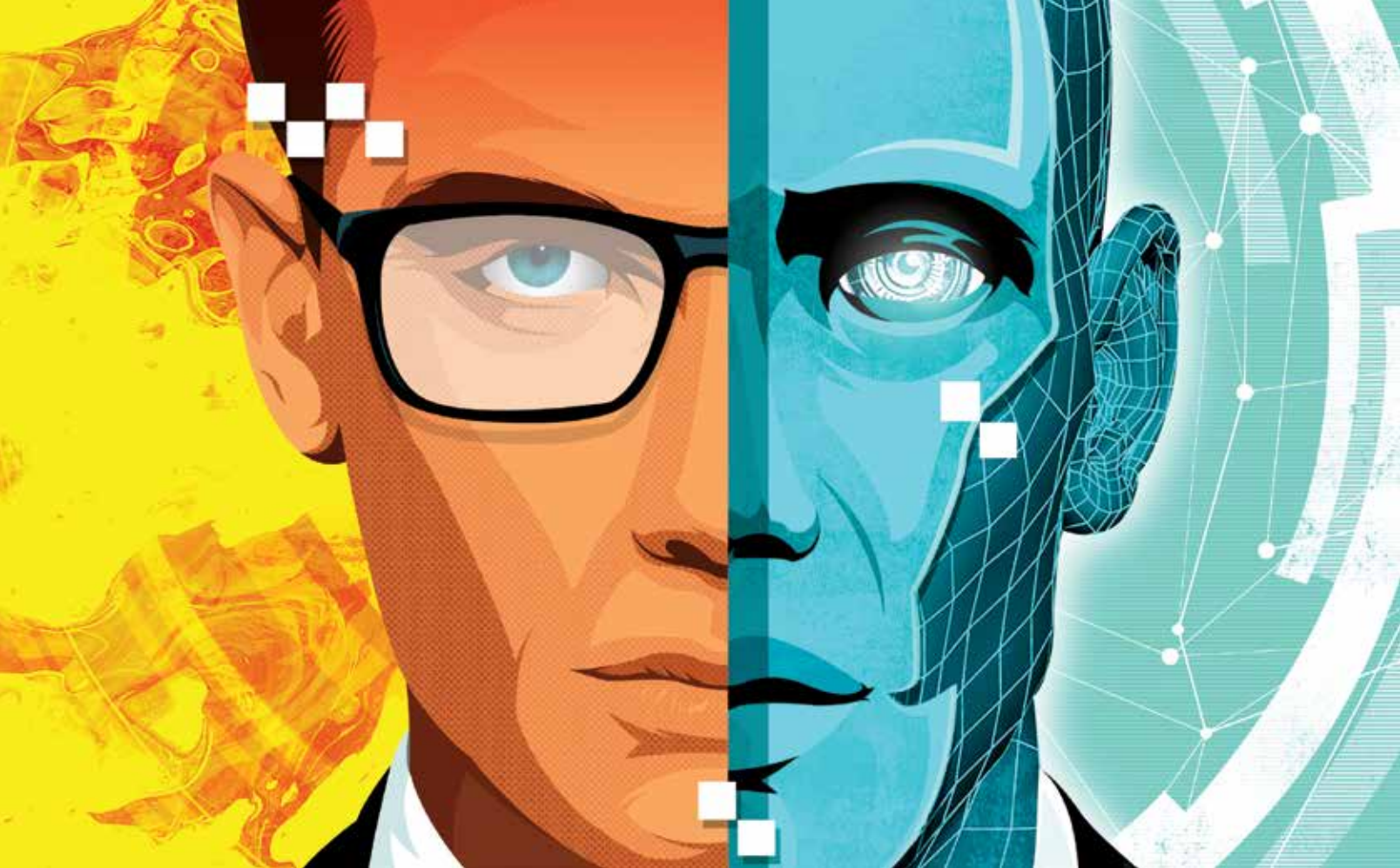
**Views of Grant (from far left): wartime sketch credited to German immigrant and Union Army captain Adolph G. Metzner; his tomb, in New York City; an 1888 collectible from the "Great Generals" series; and a formal wartime portrait**



ism in 1886, Matthew Arnold described him as "free from show, parade, and pomposity; sensible and sagacious; scanning closely the situation, seeing things as they actually were...never flurried, never vacillating, but also not stubborn, able to reconsider and change his plans." Even so, he insisted, Grant "is not to the English imagination the hero of the American Civil War; the hero is Lee."

What Arnold said of the English imagination, W.E.B. Du Bois, A.B. 1890, Ph.D. '95, discerned in the American. To find "greatness and genius" in Lee's demeanor, lineage, and generalship ignores the "terrible fact" that he fought to preserve slavery. It was the South's trial, Du Bois wrote in 1928, that the courage of its heroes would always "be physical...not moral...their leadership...weak compliance with public opinion," not "costly and unswerving revolt for justice and right." There could be no exoneration for Lee, "the most formidable agency" the country produced for preserving "4 million human beings" as "goods." It is the trial not just of the South but of the United States writ large that it chose to fall in love with Lee and a Lost Cause as opposed to the necessary work of Grant's cause: recognizing four million "goods" as human beings. ♡

*Elizabeth D. Samet '91, professor of English at West Point, is the editor of The Annotated Memoirs of Ulysses S. Grant (W.W. Norton).*



# Artificial Intelligence & Ethics

Beyond engineering at the dawn of decision-making machines

by Jonathan Shaw

**O**N MARCH 18, 2018, at around 10 P.M., Elaine Herzberg was wheeling her bicycle across a street in Tempe, Arizona, when she was struck and killed by a self-driving car. Although there was a human operator behind the wheel, an autonomous system—artificial intelligence—was in full control. This incident, like others involving interactions between people and AI technologies, raises a host of ethical and proto-legal questions. What moral obligations did the system’s programmers have to prevent their creation from taking a human life? And who was responsible for Herzberg’s death? The person in the driver’s seat? The company testing the car’s capabilities? The designers of the AI system, or even the manufacturers of its onboard sensory equipment?

“Artificial intelligence” refers to systems that can be designed to take cues from their environment and, based on those inputs, proceed to solve problems, assess risks, make predictions, and take actions. In the era predating powerful computers and big data, such

systems were programmed by humans and followed rules of human invention, but advances in technology have led to the development of new approaches. One of these is machine learning, now the most active area of AI, in which statistical methods allow a system to “learn” from data, and make decisions, without being explicitly programmed. Such systems pair an algorithm, or series of steps for solving a problem, with a knowledge base or stream—the information that the algorithm uses to construct a model of the world.

Ethical concerns about these advances focus at one extreme on the use of AI in deadly military drones, or on the risk that AI could take down global financial systems. Closer to home, AI has spurred anxiety about unemployment, as autonomous systems threaten to replace millions of truck drivers, and make Lyft and Uber obsolete. And beyond these larger social and economic considerations, data scientists have real concerns about bias, about ethical implementations of the technology, and about the nature of interactions between AI systems and humans if these systems are to be deployed





properly and fairly in even the most mundane applications.

Consider a prosaic-seeming social change: machines are already being given the power to make life-altering, everyday decisions about people. Artificial intelligence can aggregate and assess vast quantities of data that are sometimes beyond human capacity to analyze unaided, thereby enabling AI to make hiring recommendations, determine in seconds the creditworthiness of loan applicants, and predict the chances that criminals will re-offend.

But such applications raise troubling ethical issues because AI systems can reinforce what they have learned from real-world data, even amplifying familiar risks, such as racial or gender bias. Systems can also make errors of judgment when confronted with unfamiliar scenarios. And because many such systems are “black boxes,” the reasons for their decisions are not easily accessed or understood by humans—and therefore difficult to question, or probe.

Examples abound. In 2014, Amazon developed a recruiting tool for identifying software engineers it might want to hire; the system swiftly began discriminating against women, and the company abandoned it in 2017. In 2016, ProPublica analyzed a commercially developed system that predicts the likelihood that criminals will re-offend, created to help judges make better sentencing decisions, and found that it was biased against blacks. During the past two years, self-driving cars that rely on rules and training data to operate have caused fatal accidents when confronted with unfamiliar sensory feedback or inputs their guidance systems couldn't interpret. The fact that private commercial developers generally refuse to make their code available for scrutiny, because the software is considered proprietary intellectual property, is another form of non-transparency—legal, rather than technical.

Meanwhile, nothing about advances in the technology, per se, will solve the underlying, fundamental problem at the heart of AI, which is that even a thoughtfully designed algorithm must make decisions based on inputs from a flawed, imperfect, unpredictable, idiosyncratic real world.

Computer scientists have perceived sooner than others that engineering can't always address such problems post hoc, *after* a system has been designed. Despite notable advances in areas such as data privacy (see “The Privacy Tools Project,” January-February 2017), and clear understanding of the limits of algorithmic fairness (see page 49), the realization that ethical concerns must in many cases be considered *before* a system is deployed has led to formal integration of an ethics curriculum—taught by philosophy post-doctoral fellows and graduate students—into many computer-science classes at Harvard. Far-reaching discussions about the social impact of AI on the world are taking place among data scientists across the University, as well as in the Ethics and Governance of AI Initiative launched by Harvard Law School's Berkman Klein Center, together with the MIT Media Lab. This intensifying focus on ethics originated with a longtime member of the computer science faculty.

## From Communication to Cooperation—and Ethics

“A FEW YEARS AGO,” says Higgins professor of natural sciences Barbara Grosz, “I was visiting friends at Microsoft—the husband develops computer-vision systems—and we drove somewhere to go walking. On the freeway in front of us was a truck, with a porta-potty on the back, and a bicycle attached to the porta-potty. ‘What would my system do with this thing?’ the husband wondered. ‘Would it know how to react to that?’” The answer is, probably not. Such an image is unlikely to be part of its “experience”—the vast collection of images, laboriously tagged by humans, that form a system's training data.

The fragility of current AI systems stands in stark contrast to human intelligence, which is robust—capable of learning something in one context and swiftly applying it to another. Even if computers can distinguish bikes from trucks from porta-potties, they have difficulty recognizing how they might have been joined together to travel down the freeway, with the bicycle sideways, at 60 miles



**Barbara Grosz**

an hour. (Exploitation of this input vulnerability is the subject of “AI and Adversarial Attacks,” on page 48.) In other words, AI lacks common sense and the ability to reason—even if it can also make incredible discoveries that no human could, such as detecting third- or higher-order interactions (when three or more variables must interact in order to have an effect) in complex biological networks. “Stop thinking about robots taking over,” is how Grosz sums it up. “We have more to fear from dumb systems that people *think* are smart than from intelligent systems that know their limits.”

Grosz, who studied mathematics at Cornell and then computer science at Berkeley, has worked on problems in AI since 1973, when she was hired as a research mathematician at the Artificial Intelligence Center of SRI International. She is considered an architect of the AI subfield devoted to how computers generate and interpret human speech and text—she won the Lifetime Achievement Award of the Association for Computational Linguistics in 2017—and can rattle off a litany of ways that language-capable systems such as Alexa, Siri, and Google fall short. They know where the nearest

emergency room is, for example, but not that it might be useful to direct someone with a broken ankle to go there.

Because her AI work in language predates data-driven approaches to natural language processing (see “Language as a Litmus Test for AI,” page 47), Grosz developed a model-based approach to represent human discourse in a way that computers could understand. This has proved especially valuable to the field because it led her to reflect deeply on the nature of human-computer interaction, and later, in the course of imagining a future when computers and humans might work together, to propose theoretical models for collaborative AI systems designed to work on teams with people.

Her work on computational models of discourse goes far beyond the programming of grammatical rules. Understanding speaker intention, in order to determine the structure of a dialogue and thus to decipher meaning in human speech, was one key strategy she pioneered. Real speech, she points out, is full of digressions and shifts of focus, citing a notable example: her recording of the spontaneous dialogue as one person tries to tell another via teletype how to assemble an air compressor. (Well into the conversation, one speaker uses the pronoun “it” to refer to an object that has not been mentioned for half an hour—and both people understand exactly what is meant.) Intonation, she adds, is also key to understanding otherwise ambiguous phrases. “You’re a real prince” might be said literally or sarcastically, in ways that a computer must be taught to understand.

From this interdisciplinary research flowed general principles

Grosz envisions a future that combines the speed and statistical prowess of intelligent computers with innate human talents....

human talents, not one that pits machines and humans against each other—the way the relationship is often framed in descriptions of AI systems beating world champions in chess and go, or replacing people in the workplace. Such an integrated approach arguably represents the frontier in AI systems.

When Grosz began experimenting with team-based AI systems in health care, she and a Stanford pediatrician started a project that coordinates care for children with rare diseases who are tended by many people besides parents, including medical experts, home-care aides, physical therapists, and classroom teachers. The care spans years, she says, and “no human being I’ve ever encountered can keep track of 15 other people and what they are doing over long periods of time.”

Grosz, with doctoral student Ofra Amir (now a faculty member at the Technion) began by analyzing how the patient-care teams worked,

and developed a theory of teamwork to guide interactions between the human members and an AI system designed to coordinate information about the children’s care. As she had done with language, she started with general principles. “What we’re trying to do, on the theoretical end, is to understand better how to share information” in that multi-member team environment, “and then build tools, first for parents, and then for physicians.”

One of the key tenets she and her colleague, Bar-Ilan University professor Sarit Kraus, developed is that team members should not take on tasks they lack the requisite knowledge or capability to accomplish. This is a feature of good human teamwork, as well as a key characteristic of “intelligent systems

that know their limits.” “The problem, not just with AI, but a lot of technology that is out in the world, is that it can’t do the job it has been assigned”—online customer service chatbots interacting via text that “are unable to understand what you want” being a case in point. Those systems could have been designed differently, she says, so that the first interactions are with a person *aided* by a computer; the person would be building a relationship with the customer, while vetting what the computer was clearly misunderstanding, and the system, meanwhile, would enable the person to provide an answer



about the nature of human-computer interaction. Grosz, with doctoral student Ece Kamar (now a senior researcher at Microsoft Research) developed a theory of “interruption management,” for instance, for guiding information exchange between a human and a computer in order to make such communication exponentially more efficient. And she has come to believe, during the course of a long career, that the best of use of AI involves integrating such systems with human teams. She envisions a future that combines the speed and statistical prowess of intelligent computers with innate



## Language as a Litmus Test

LANGUAGE, which clearly played an important role in human evolution, has long been considered a hallmark of human intelligence, and when Barbara Grosz started working on problems in artificial intelligence (AI) in the 1970s, it was the litmus test for defining machine intelligence. The idea that language could be used as a kind of Occam's razor for identifying intelligent computers dates to 1950, when Alan Turing, the British scientist who cracked Nazi Germany's encrypted military communications, suggested that the ability to carry on a conversation in a manner indistinguishable from a human could be used as a proxy for intelligence. Turing raised the idea as a philosophical question, because intelligence is difficult to define, but his proposal was soon memorialized as the Turing test. Whether it is a reasonable test of intelligence is debatable. Regardless, Grosz says that even the most advanced, language-capable AI systems now available—Siri, Alexa, and Google—fail to pass it.

The Higgins professor of natural sciences has witnessed a transformation of her field. For decades, computers lacked the power, speed, and storage capacity to drive neural networks—modeled on the wiring of the human brain—that are able to *learn* from processing vast quantities of data. Grosz's early language work therefore involved developing formal models and algorithms to create a computational model of discourse: telling the computer, in effect, how to interpret and create speech and text. Her research has led to the development of frameworks for handling the unpredictable nature of human communication, for modeling one-on-one human-computer interactions, and for advancing the integration of AI systems into human teams.

The current ascendant AI approach—based on neural networks that learn—relies instead on computers' ability to sample vast quantities of data. In the case of language, for example, a neural network can sample a corpus—extending even to everything ever written that's been posted online—to learn the “meaning”

of words and their relationship to each other. A dictionary created using this approach, explains assistant professor of computer science Alexander “Sasha” Rush, contains mathematical representations of words, rather than language-based definitions. Each word is a vector—a relativistic definition of a word in relation to other words. Thus the vectors describing the relationship between the words “man” and “woman” would be mathematically analogous to those describing the relationship between words such as “king” and “queen.”

This approach to teaching language to computers has tremendous potential for translation services, for developing miniaturized chips that would allow voice control of all sorts of devices, and even for creating AIs that could write a story about a sporting event based purely on data. But because it captures all the human biases associated with culturally freighted words like “man” and “woman,” and what the ensuing mathematical representations might embody with respect to gender, power dynamics, and inequality when confronted with the associations of a word such as “CEO,” it can lead neural-network based AI systems to produce biased results.

Rush considers his work—developing language capabilities for microscopic computer chips—to be purely engineering, and his translation work to be functional, not literary, even though the goal of developing an AI that can pass the Turing test is undoubtedly being advanced by work like his. But significant obstacles remain.

How can a computer be taught to recognize inflection, or the rising tone of words that form a question, or an interruption to discipline kids (“Hey, stop that!”), of the sort that humans understand immediately? These are the kinds of theoretical problems Grosz has been grappling with for years. And although she is agnostic about whatever approach will ultimately succeed in building systems able to participate in everyday human dialogue, probably decades hence, she does allow that it might well have to be a hybrid of neural-network learning and human-developed models and rules for understanding language in all its complexity.

more quickly. When such fundamentals of intelligent-systems design aren't respected, the systems are assumed to be capable of things they can't do, or are used in naïve, inappropriate ways.

Grosz's highly interdisciplinary approach to *research*, informed by linguistics, philosophy, psychology, economics, and even a bit of anthropology and sociology, led her to think also about which of these subjects might best inform the *teaching* of AI systems design. Though she had taught an introductory course on AI from 1987 to 2001, a time when its application remained largely theoretical, the world had changed by the time she rebooted that course in 2013 and 2014, when fully operational AI systems were being deployed. Grosz realized there was a teaching opportunity in the interplay between the ethical challenges presented by AI and good systems design.

This led to one of Grosz's most important contributions to the teaching of computer science at Harvard: the idea that ethics should be tightly integrated into every course. In the fall of 2015, she introduced a new course, “Intelligent Systems Design and Ethical Challenges.” By the following year, more than 140 students had applied for the 25 spots in the class, emboldening her to encourage

her computer-science colleagues to incorporate some teaching of ethics into their own courses. Because most of them lacked sufficient background to be comfortable teaching ethics, she began a collaboration with Wolcott professor of philosophy Alison Simmons, who chairs the philosophy department. Together, they worked with colleagues in their respective fields, enlisting CS professors willing to include ethics modules in their computer-science courses and philosophy graduate students to teach them.

The aim of this “Embedded EthiCS” initiative, she says, is to instruct the people who will build future AI systems in how to identify and think through ethical questions. (Computer science is now the second largest concentration among Harvard undergraduates; if students from related fields such as statistics or applied mathematics are included, the total enrollment substantially exceeds that of top-ranked economics.) “Most of these ethical challenges have no single right answer,” she points out, “so just as [the students] learn fundamental computing skills, I wanted them to learn fundamental ethical-reasoning skills.” In the spring of 2017, four computer-science courses included some study of ethics. That fall, there were five,



**Can you quickly navigate this simple decision tree? The inputs are: ICML (International Conference on Machine Learning); 2017; Australia; kangaroo; and sunny. Assuming you have done it correctly, imagine trying to explain in words how your decision to clap hands was reached. What if there were a million variables?**

then 8 by spring 2018, and now 18 in total, spanning subjects from systems programming to machine learning and its effects on fairness and privacy, to social networks and the question of censorship, to robots and work, and human-computer interaction.

Surveys of students in these classes show that between 80 percent

and 90 percent approve of embedded ethics teaching, and want more of it. “My fantasy,” says Grosz, “is that every computer-science course, with maybe one or two exceptions, would have an ethics module,” so that by graduation, every concentrator would see that “ethics matters everywhere in the field—not just in AI.” She and her colleagues want students to learn that in order to tackle problems such as bias and the need for human interpretability in AI, they must design systems with ethical principles in mind from the start.

## Becoming a Boston Driver

BEMIS PROFESSOR of international law and professor of computer science Jonathan Zittrain, who is faculty director of the Berkman Klein Center for Internet and Society, has been grappling with this goal from a proto-legal perspective. In the spring of 2018, he co-taught a course with MIT Media Lab director Joi Ito exploring how AI technologies should be shaped to bear the public interest in mind. Autonomous vehicles provided a particularly salient case study that forced students to confront the nature of the complexities ahead, beyond the “run-away trolley problem” of deciding whom to harm and whom to save.

Once a car is truly autonomous, Zittrain explains, “It means that if an arrest warrant is issued for someone, the next time they enter an autonomous vehicle, the doors could lock and the car could just drive them to the nearest police station. Or what if someone in the car declares an emergency? Can the car propel them at 70 miles per

## AI and Adversarial Attacks

THE PRIVACY and security issues surrounding big data, the lifeblood of artificial intelligence, are well known: large streams and pools of data make fat targets for hackers. AI systems have an additional vulnerability: inputs can be manipulated in small ways that can completely change decisions. A credit score, for example, might rise significantly if one of the data points used to calculate it were altered only slightly. That’s because computer systems classify each bit of input data in a binary manner, placing it on one side or the other of an imaginary line called a classifier. Perturb the input—say, altering the ratio of debt to total credit—ever so slightly, but just enough to cross that line, and that changes the score calculated by the AI system.

The stakes for making such systems resistant to manipulation are obviously high in many domains, but perhaps especially so in the field of medical imaging. Deep-learning algorithms have already been shown to outperform human doctors in correctly identifying skin cancers. But a recent study from Harvard Medical School coauthored by Nelson professor of biomedical informatics Isaac Kohane (see “Toward Precision Medicine,” May-June 2015, page 17), together with Andrew Beam and Samuel Finlayson, showed that the addition of a small amount of carefully engineered noise “converts an image that the model correctly classifies as benign into an image that the network is 100 percent confident is malignant.” This kind of manipulation, invisible to the human eye, could lead to nearly undetectable health-insurance fraud in

the \$3.3-trillion healthcare industry as a duped AI system orders unnecessary treatments. Designing an AI system ethically is not enough—it must also resist *unethical* human interventions.

Yaron Singer, an associate professor of computer science, studies AI systems’ vulnerabilities to adversarial attacks in order to devise ways to make those systems more robust. One way is to use multiple classifiers. In other words, there is more than one way to draw the line that successfully classifies pixels in a photograph of a school bus as yellow or not yellow. Although the system may ultimately use only one of those classifiers to determine whether the image does contain a school bus, the attacker can’t know which classifier the system is using at any particular moment—and that increases the odds that any attempt at deception will fail.

Singer points out that adding noise (random variations in brightness or color information) to an image is not in itself unethical—it is the uses, not the technology itself, that carry moral force. For example, noise can be used with online postings of personal photographs as a privacy-ensuring measure to defeat machine-driven facial recognition—a self-protective step likely to become more commonplace as consumer-level versions of noise-generating technologies become widely available. On the other hand, as Singer explains, were such identity-obfuscating software already widely available, Italian police would probably not have apprehended a most-wanted fugitive who’d been on the run since 1994. He was caught in 2017, perhaps when a facial recognition program spotted a photo of him at the beach, in sunglasses, on Facebook.

COURTESY OF FINALE DOSHI-VELEZ



hour on city streets to the hospital, while all the other cars part like the Red Sea?”

Students in Zittrain’s class thought they knew how the discussion about autonomous vehicles would unfold. But when he posed a very simple question—“Should the driver be able to instruct the car to go 80 miles per hour?”—they were confronted with a designer’s moral dilemmas. If yes, and the car were involved in an accident at that speed, would the driver be responsible? Or would the carmaker be liable for *allowing* the car to speed? “People speed all the time, but we have the implicit comfort of knowing that there is roughly nothing we can do about it,” Zittrain notes. “The understandable initial premise [with autonomous vehicles] is that, gosh, there’s no driver, and we can’t blame an inanimate object like a car. It looks as though there is a paucity of responsibility”—whereas in fact, “there’s a surfeit of responsibility.” The manufacturers, the AI designers, the policymakers, *and* the driver could all be held accountable.

And the situation becomes more complex if the vehicle’s AI system dynamically changes its behavior as it “learns” from experiences on the road, Zittrain points out. “Maybe if it drives enough in Boston, it will become a Boston driver!” This applies to many learning systems, and the legal solutions remain unexplored. Maybe, he suggests, if an AI designer or other contributor builds a learning system in which behavior can’t always be predicted, there will be a price tag on operating with that uncertainty.

The subject is a nexus of interdisciplinary inquiry, Zittrain continues. At the Berkman Klein Center and MIT’s Media Lab, he and his colleagues have created a group called “Assembly” that brings software developers from outside companies in on sabbatical to work with students and one another for a couple of months on some of these puzzles in AI and other data-science fields. “The embedded ethics instruction is part of an effort to create opportunities for students from across the University to encounter one another, and bring the tools they are learning in their respective schools to bear on this kind of stuff in teams.

“I think that’s part of what’s made Barbara [Grosz]’s teaching and research so influential here. And so timeless. Her teaching is not how to intervene in a computer system or piece of software to fix it. It’s really thinking at a broader level about how people and technologies should be interacting.” Can they be accountable? Can they be understood? Can they be fair?

### Systemic Bias and Social Engineering

THE PROBLEM of fairness in autonomous systems featured prominently at the inaugural Harvard Data Science Conference (HDSC) in October, where Colony professor of computer science David Parkes outlined guiding principles for the study of data science at Harvard: it should address ethical issues, including privacy (see “The Watch-

ers,” January-February 2017, page 56); it should not perpetuate existing biases; and it should be transparent. But to create learning AI systems that embody these principles can be hard. System complexity, when thousands or more variables are in play, can make true understanding almost impossible, and biases in the datasets on which learning systems rely can easily become reinforced.

There are lots of reasons why someone might want to “look under the hood” of an AI system to figure out how it made a particular decision: to assess the cause of biased output, to run safety checks before rollout in a hospital, or to determine accountability after an accident involving a self-driving car.

What might not be obvious is how difficult and complex such an inquiry can be. Assistant professor of computer science Finale Doshi-Velez demonstrated by projecting onscreen a relatively simple decision tree, four layers deep, that involved answering questions based on five inputs (see a slightly more complex example, opposite). If executed correctly, the final instruction was to raise your left hand. A few of the conference attendees were able to follow along. Then



she showed a much more complex decision tree, perhaps 25 layers deep, with five new parameters determining the path down through the tree to the correct answer—an easy task for a computer. But when she asked if anyone in the audience could describe in words *why* they had reached the answer they did, no one responded. Even when the correct path to a decision is highlighted, describing the influence of complex interacting inputs on the outcome in layman’s terms is extremely difficult. And that’s just for simple models such as decision trees, not modern deep architectures with millions of parameters. Developing techniques to extract explanations from arbitrary models—scalable systems with an arbitrary number of variables, task, and outputs—is the subject of research in her lab.

Bias poses a different set of problems. Whenever there is a diverse population (differing by ethnicity, religion, or race, for example), explained McKay professor of computer science Cynthia Dwork during a HDSC talk about algorithmic fairness, *(please turn to page 74)*

an algorithm that determines eligibility for, say, a loan, should treat each group the same way. But in machine-learning systems, the algorithm itself (the step-by-step procedure for solving a particular problem) constitutes only one part of the system. The other part is the data. In an AI system that makes automated loan decisions, the *algorithm* component can be unbiased and completely fair with respect to each group, and yet the overall result, after the algorithm has learned from the *data*, may not be. “Algorithms don’t have access to the ground truth” (computer lingo for *veritas*), Dwork explained. If there is bias in the data used to make the decision, the decision itself may be biased.

There are ways to manage this problem. One is to select very carefully the applicant attributes an algorithm is permitted to consider. (Zip codes, as well-known proxies for race, are often eliminated.) But bias has a way of creeping back in through correlations with other variables that the algo-

puts it, “Algorithms, which are purely optimization-driven tools, can inherit, internalize, reproduce, and exacerbate existing inequalities. Say we have a labor-market disparity that persists without any sort of machine-learning help, and then here comes machine learning, and it learns to re-inscribe those inequalities.” Their solution, which uses tools from economics and sociology to understand disparities in the labor market, pushes the thinking about algorithmic fairness beyond computer science to an interdisciplinary, systems-wide view of the problem.

Chen works in social computing, an area of data science that emphasizes the effect of human behavior on inputs to algorithms. Because humans are “self-interested, independent, error-prone, and not predictable” enough to enable design of an algorithm that would ensure fairness in every situation, she started thinking about how to take bias out of the training data—the real-world information inputs that a hiring algorithm would use.

She and Hu focused on the problem of implementing affirmative action in hiring. A straightforward remedy to counteract the

historical disadvantage faced by a minority group would be, simply, to favor that group in employment decisions, all other things being equal. (This might itself be deemed unfair to the majority group, but still be considered acceptable until equity in hiring is attained.) But Chen and Hu then considered the human element. Suppose many of

the minority group’s members don’t go to college, reasoning that “it’s expensive, and because of discrimination, even if I get a degree, the chances of my getting a job are still low.” Employers, meanwhile, may believe that “people from minority groups are less educated, and don’t perform well, because they don’t try hard.” The point Chen and Hu make is that even though a minority-group member’s decision not to attend college is rational, based on existing historical unfairness, that decision reinforces employers’ preconceived ideas about the group as a whole. This pattern of feedback effects is not just difficult to break—it is precisely the sort of data pattern that an algorithm, looking at past successful hires and associating them with college degrees, will reinforce.

The solution that Chen and Hu propose is not based on math alone: instead, it is social

engineering that uses an algorithm to change the ground truth. And it represents an acknowledgment of just how difficult it can be to counteract bias in data. What the researchers propose is the creation of a temporary labor market. Think of it, says Chen, as an internship in which every job candidate must participate for two years before being hired into the permanent workforce. Entry into the internship pool would be subject to a simple “fairness constraint,” an algorithm that would *require* employers to choose interns from minority and majority groups in representative numbers. Then, at the conclusion of the internship, hiring from the pool of interns would be based *solely* on performance data, without regard to group membership. Because the groups are equally talented at the population level, explains Chen, the two groups eventually reach parity.

“What this paper’s trying to fight back against,” Hu explains, “is the perception—still dominant within the machine-learning/AI community—that everything is fundamentally an *optimization* problem, or a *prediction* problem, or a *classification* problem. And when you do that—if you treat it in a standard machine-learning way—you will end up reinforcing those inequalities.”

Hu was the teaching fellow for Grosz’s course in AI and ethics (co-taught with philosophy fellow Jeffrey Behrends) last year. She says people need to understand that the act of “building technologies, and the way that we implement them, are themselves political actions. They don’t exist in a vacuum, as instrumental tools that sometimes are good, sometimes are bad. I think that that’s a particularly naïve way of thinking of technology.”

Whether the technology is meant to provide facial recognition to identify crime suspects from video footage, or education tailored to different learning styles, or medical advice, Hu stresses, “What we need to think about is how technologies embed particular values and assumptions. Exposing that is a first step: realizing that it’s not the case that there are some ethical questions, and some non-ethical questions, but really that, in *everything* we design...there are always going to be normative questions at hand, every step of the way.” Integrating that awareness into existing coursework is critical to ensuring that “the world that we’re building, with ubiquitous technology, is a world that we want to live in.” ▢

Jonathan Shaw ’89 is managing editor of this magazine.

“Algorithms, which are purely optimization-driven tools, can inherit, internalize, reproduce, and exacerbate existing inequalities.”

gorithm uses—such as surnames combined with geographic census data.

Bias against *groups* can often be addressed through smart algorithm design, Dwork said, but ensuring fairness to *individuals* is much harder because of a fundamental feature of algorithmic decisionmaking. Any such decision effectively draws a line—and as Dwork pointed out, there will always be two individuals from different groups close to the line, one on either side, who are very similar to each other in almost every way. And yet only one will get a loan.

In some cases, correcting bias through system design may be an insufficient approach. Consider a hiring system designed by McKay professor of computer science Yiling Chen and graduate student Lily Hu ’15 to eliminate hiring bias against African Americans, historically a disadvantaged group. As Hu





# Native Modern

Philip J. Deloria studies American Indians and the contradictions that made America.

**C**ONJURE YOUR IMAGE of a Native American. Modern Americans might first think of American Indians as relics of the past, their memory consigned to kindergarten Thanksgiving dress-up and Hollywood Westerns. But much as they are marginalized in the story of America, American Indians are also central to the American cultural imagination—both erased from and incorporated into the national narrative. Philip J. Deloria, professor of history, began to explore this seeming contradiction in his first book, *Playing Indian* (1998), writing about white people dressing up as Native Americans, or “playing Indian,” from the Boston Tea Party through the present.

Quoting the French-American writer J. Hector St. John de Crève-

coeur, Deloria asked, “What, then, is the American, this new man?” American national identity, he argued, rests on the image of the American Indian. In the eighteenth century, colonists rebelling against the British crown often wore Indian disguise to assert an authentic, indigenous claim to the American continent. At the height of industrialization and urbanization, Americans played Indian to counter the anxieties of the modern world. And even as Indian play might sound esoteric, it strikes a deep chord: readers who grew up in the United States have likely, at some point, played Indian.

Adapted from Deloria’s dissertation in American studies, which he finished at Yale in 1994, *Playing Indian* is a vivid, mind-expanding, and lucid telling of American history, even as it is deeply theoretical.

by MARINA N. BOLOTNIKOVA

The book changed the field of Native American studies and U.S. history, offering a new way to understand Native Americans' place in the nation's culture and past. "It had a massive impact," says Jay Cook, a historian and former colleague at the University of Michigan, in part because it was a fundamental shift in Native American history. "The field had previously tilted more toward the social sciences...and things like land usage, or treaties, or the politics of removal and genocide and colonial contact."

Deloria made Native American history about *culture*. He was interested in big, fluid questions about representation and how different social groups are perceived. He did not treat Indian play merely as a curiosity, or condemn it as misappropriation of Native American identity (as he might reasonably have done). Instead, he took disguise seriously, as a means of working through social identities that were complex, contradictory, or hidden to the people who participate in them. "Disguise readily calls the notion of fixed identity into question," he wrote. "At the same time, however, wearing a mask also makes one self-conscious of a *real* 'me' underneath."

Deloria, who turns 60 this year, became Harvard's first full professor of Native American history last January, after 17 years at Michigan and six before that at the University of Colorado. In person, with his easy lilt and vital, chatty demeanor, it's easy to imagine him on stage, playing country-western music with his friends—still a favorite pastime after his failed first career as a musician.

Talking about his work, he is both buoyant and dead-ly serious. He remembers conceiving the idea for his dissertation while sitting in a lecture. "It literally unfolded in about a minute," he says. "It was one of the most amazing thought moments of my life." Projected on the screen were historic images of Boy Scouts dressed up as Indians. Fellow graduate student Gunther Peck, now a history professor at Duke, turned to him and said, "This reminds me—have you heard of the Improved Order of Red Men?"—the nineteenth-century fraternal society that provided its members communion and common purpose through "Indian" dress-up and rituals. Deloria's mind suddenly threaded the needle from the kids on the screen to Indian-themed fraternal societies to Boulder, where he lived for years and "where all the hippie New-Agers dress up like Indians and make a big deal out of it. And then it's not hard to go to the Boston Tea Party. I was like, damn, Americans have been doing this in different forms, but with similar practice, from the very beginning. I wonder what that's about."

At bottom, *Playing Indian* is an assiduous work of cultural history. Deloria traces Indian play to the old-world, European traditions of carnival and "misrule," or riotous parties and rituals that involved costume, symbolic effigy burnings, and riots. "Both sets of rituals," he wrote, "are about inverting social distinctions, turning the world upside down, questioning authority." He showed how costume would have felt natural to early American settlers, allowing them to subvert power structures and play with their individual and cultural identities. Indian disguise was adopted throughout the colonies not just to protest the British, but also to defy unpopular land-use laws and play out social conflicts.

Later, during the mid nineteenth century, a young Lewis Henry

Morgan, a pioneering anthropologist, played Indian as part of his literary society, the New Confederacy of the Iroquois. Like other fraternal societies, the group aimed to revive the spirit of the "van-ishing" American Indians and build from it a distinctly American



**Boy Scouts alongside an Indian "adviser" get ready to perform a dance in Indian costume, Denver, 1977.**

identity. Their rituals would lay a troublesome foundation for Morgan's ethnographic work: they presented a nostalgic and stylized picture of Indians even as his career advanced and his aim became to objectively and scientifically document

American Indian societies. This idea of anthropological accuracy, of authenticity, would transmute during the twentieth century, when modern Americans played Indian to reclaim a relationship with the natural world. "In each of these historical moments," Deloria found, "Americans have returned to the Indian, reinterpreting the intuitive dilemmas surrounding Indianness to meet the circumstances of their times."

### "Have Fun with the FBI Agents"

IN MANY WAYS, Deloria might have seemed predestined for a pre-eminent career in Indian studies. His great-grandfather Tipi Sapa, also known as Philip Deloria, was a prominent Yankton Sioux political leader who converted to Christianity and became an Episcopal minister, and his grandfather, Vine Deloria Sr., also entered the clergy. His father was Vine Deloria Jr., a professor and activist who served as an executive director of the National Congress of American Indians. Most famous for his 1969 book *Custer Died for Your Sins: An Indian Manifesto*, a blistering, yet often humorous, appraisal of the country's relationship with American Indians as well as a call for Native self-determination, Vine was one of the most influential figures in twentieth-century Indian affairs.



**“It just seemed *wrong*, somehow, that Indians should leap from ‘primitive hunter-gatherer’ status...into the cutting edge of technological modernity, without moving through all the other stages!”**

equipment, and to try to make a hard turn in his life.

“I couldn’t figure out music, or journalism, or what,” he says. After that, he applied to Yale’s doctoral program in American studies, at the encouragement of Patricia Limerick, a historian of the American West whose

Growing up, Philip was aware of his father’s stature, and of the importance of what was happening around him. He remembers American Indian activists and artists passing through his house, and being enlisted to stuff envelopes for his father’s political efforts. “There was a moment during the Wounded Knee trials when the phones were tapped, and he told us...‘Have fun with the FBI agents.’” His mother was worried after the assassinations of Martin Luther King Jr. and Bobby Kennedy, Deloria says: “You had the sense that bad stuff was happening to people.”

But Deloria didn’t directly inherit his father’s role as political advocate. “When he became director of the National Congress of

class he took for his master’s. He didn’t have the academic preparation of most of his peers and hardly said a word in his first year of classes. One of his fellow students said he wanted to be the next Michel Foucault. “Another guy said, ‘I’ve been reading the exam list on the beach this summer,’” he remembers. “I showed up at Yale and really, really didn’t know what I was doing.” But from the beginning, Deloria looked for deep, difficult explanations for culture. He combined his American studies work with courses on European social theory. “His early papers were hyper-theoretical, with a lot of jargon—he started out that way, harder to read,” remembers historian and public artist Jenny Price, a friend from graduate school. “By the second year, it was clear he was going to be a fine writer and really a standout.”

### Undercutting the “Easy Takeaways about U.S. History”

THE FLIP SIDE of Indian play, Deloria discovered, was that nostalgic or romantic images of American Indians put Native people in an impossible position. It made it difficult for them to participate in modern society, while also treating them as *victims* of modernity, whose traditional societies have been steamrolled by civilization. Even ostensibly reverential forms of Indian play, like mid-century powwows or the rituals of hippie counterculture, have always hinged on the idea of the “vanishing Indian,” an ideology of inevitable replacement of Native Americans by U.S. dominion.

Deloria treated these issues in his second book, *Indians in Unexpected Places* (2004). The book is almost a mirror image of *Playing Indian*, covering Native Americans participating in modern life—in film, sports, cars, music, and elsewhere—during the late nineteenth and early twentieth centuries, a period when many were relocated to

reservations and allotted arbitrary parcels of carved-up land. What is so funny and surprising to many Americans, Deloria asked, about a photograph of Geronimo behind the wheel of a Cadillac? Readers might imagine that at the dawn of modernity, Native Americans just dropped out of history. But “American Indians were at the forefront of a lot of things we consider quintessentially modern, like making movies and car culture,” says Carlo Rotella, another Deloria friend from graduate school, who is now director of American studies at Boston College, where he teaches *Indians in Unexpected Places* in his courses.

Significant numbers of Native people were buying cars at the



LIBRARY OF CONGRESS

American Indians,” he says, “we didn’t see him for, like, nine months....There were moments when he’d rise to being a great father. But for the most part, he was not. He was doing his thing. It was super important—we all got how important it was.” As a result, Philip and his brother and sister “could do whatever.” He was drawn to music and sports; he started as a performance major at the University of Colorado, then switched to music education after realizing he was not going to make a living as a performer. He taught middle-school band and orchestra, but quit after two years. He got married around the same time: “My father-in-law was not that happy with me.” It was the ’80s, during the rise of MTV, and he became obsessed with making music videos. “If you look back at the last three or four generations of Deloria men, they screw around until they’re 30,” Vine Deloria told him. “They look like complete losers.” Philip went back to the University of Colorado for a master’s in journalism, to get access to video

**Members of the Wildshoe family, of the Coeur d’Alene people, pose in their Chalmers automobile, 1916.**

turn of the twentieth century for business or to cross the long distances across reservations, and cars, in turn, shaped the evolution of modern American Indian practices, such as the powwow. “White Americans were *outraged*,” Deloria said at a 2005 talk, “for Indian drivers went square against the grain of their expectations. Viewing Native people through the lens of social evolution, it just seemed *wrong*, somehow, that Indians should leap from ‘primitive hunter-gatherer’ status...into the cutting edge of technological modernity, without moving through all the other stages!” Deloria’s aim in the book was not to highlight Indians in modernity as anomalies—it was to dispute that very idea, and assert American Indians as real participants in the creation of modern life. He contrasted the marginalization—the unexpectedness—of Native people in modernity with that of the African-American modernist movement: “The Harlem Renaissance can be named as a discrete thing,” he said, “which is more than can be said for the cohort of Indian writers, actors, dancers, and artists also active in the modernist moment.”

Deloria is ever observant of the problems that representations of American Indians have created for living Native people. “Phil is deeply humane and deeply ethical in the way that he frames questions,” says Gunther Peck, still a close friend. “He pursues answers that are disquieting and that cut against some of the easy takeaways about U.S. history.” He considers issues, Rotella adds, “for which we haven’t had much of a vocabulary before, other than ‘That’s racist’ or ‘That’s cultural appropriation.’” Deloria’s deep historical and interpretive work provides answers that are not only more interesting, but also more helpful and revealing. He draws a complete, tangled picture of how U.S. culture came to be, and how it might harm Native people even when it appears to repudiate the violence of the past.

### “Go to Harvard”

DELORIA’S RESEARCH has distinguished him as perhaps the world’s leading thinker on American Indian studies. He also co-authored, in 2017, a new introductory textbook to American studies, the interdisciplinary field that draws on history, politics, culture, literature, and the arts to understand American society. Shelly Lowe, executive direc-

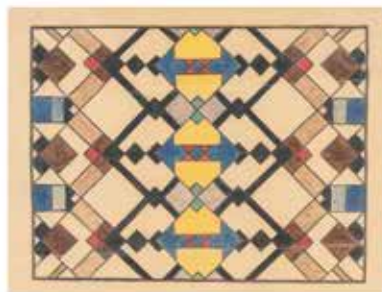
tor of the Harvard University Native American Program (HUNAP), which since its founding in 1970 has advocated the recruitment of Native faculty and scholars of indigenous issues, hopes that Deloria’s appointment will put Harvard on the map for Native American studies.

The University had been recruiting Deloria for years, Lowe says, not just as the top scholar in his field, but also as an outstanding classroom teacher and a capable administrator who can shape a coherent Native studies program. “There’s a severe lack of understanding of what Native American studies is as a discipline, because it’s never been something that Harvard has really offered,” she explains. “Phil is going to be the leader in that realm.” (Since his appointment, the University has also hired professor of history Tiya Miles ’92, who focuses on African-American and Native American studies, and her husband, Joe Gone, professor of anthropology and of global health and social medicine, who studies public health in American Indian communities.)

Rotella adds that Deloria “exudes competence,” and keeps being appointed to run things as a result. Recently, he was named chair of the committee on degrees in history and literature. This past fall, he taught “Major Works in American Studies” and “American Indian History in Four Acts,” and in the spring, he will teach “Native American and Indigenous Studies: An Introduction.” Part of what made it difficult for him to move, Deloria says, was his wife’s career. Peggy Burns joined Harvard last April as executive director for corporate and foundation development and relations; previously, she was chief development officer for the Henry Ford Health System in Detroit, and before that, a top fundraiser at the University of Michigan. Says Deloria, “She’s the lead partner, I’m the trailing spouse.” As for why he chose Harvard: “Harvard has so many opportunities...If you thought, in the last few years of your career, that you could make a real impact in the field, you might think to yourself, ‘Go to Harvard, use the resources here, train some great grad students, help out the interesting Native undergrads who are here, write a couple good books, see what kind of impact you can make.’”

### Indigenizing American Art

DELORIA’S NEW BOOK, to be published this spring by the Univer-



**Mary Sully’s *Three Stages of Indian History: Pre-Columbian Freedom, Reservation Fetters, the Bewildering Present* imagines a vision of the future.**



sity of Washington Press, builds on the foundation of its predecessors. If *Indians in Unexpected Places* represented a call to recognize Native Americans in modern culture, then *Becoming Mary Sully: Toward an American Indian Abstract* is, in part, an answer to it. Part biography, part history of American modernist art and its tangled relationship with Native people, the project began in 2006, when Deloria and his mother thumbed through the drawings of his great-aunt Mary Sully. The pictures, carefully preserved by his mother, a librarian, were virtually unknown to the outside world, but as Deloria would discover after talking with other scholars and conducting his own investigations into art history, they were remarkable. “I think she belongs in the canon of American art, and I think she’s transformational of that canon,” he said at a talk on Sully last February. His project in the book, he explained, is to “indigenize American art.”

Mary Sully, born Susan Deloria, was the sister of Ella Deloria, a well-known ethnographer and linguist who worked for anthropologist Franz Boas (“I’m going to inflict yet another Deloria onto the world,” Philip jokes). They grew up on the Standing Rock Indian Reservation in South Dakota, the granddaughters of Alfred Sully, a nineteenth-century military officer who led campaigns against American Indians in the West, and great-granddaughters of Thomas Sully, an eminent portrait painter. (Alfred Sully’s daughter with Pehánlútawin, a Dakota Sioux woman, married Tipi Sapa/Philip Deloria, unifying the Sully and Deloria lineages.) Deloria surmises that Susan embraced Thomas Sully’s name to evoke his stature in American art; identity doubling was also an important concept in Dakota women’s arts. Sully was most active in the 1920s, ’30s, and ’40s; she had little formal artistic training, and no artistic community with which to share and reflect on her work.

Sully’s pencil-on-paper drawings comprise mostly what she called “personality prints,” 134 in all (plus a few unfinished

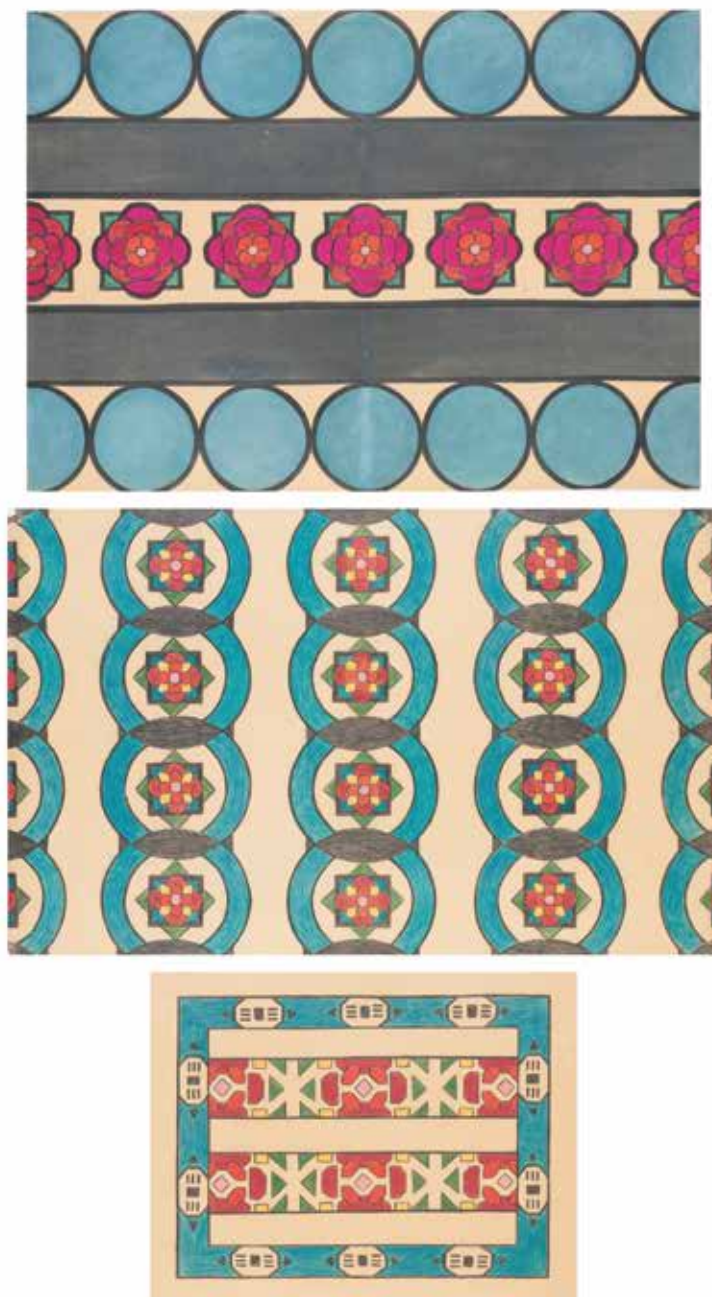
ones), each depicting a personality (famous or not) from the 1930s. Some prints depict Native American subjects, such as *The Indian Church* or *Bishop Hare*, a leading missionary among Dakota Indians; others represent figures from pop culture, like Babe Ruth; Russian ballerina Anna Pavlova; and tennis star Helen Wills. Each work consists of three panels: the top one, Deloria writes, is usually an abstract depiction of the person or concept; the middle panel is a geometric, patterned design; and the bottom one is what he calls an

“American Indian abstract”—a variation on the themes of the work that draws from American Indian visual possibilities.

One particularly haunting print, *Three Stages of Indian History: Pre-Columbian Freedom, Reservation Fetters, the Bewildering Present*, holds a “master key,” Deloria says, to understanding the political content of Sully’s work. She created it while the Native community was grappling with the 1934 Indian Reorganization Act, a complex, highly contested restructuring of federal Indian policy with consequences that reverberate today. The top panel narrates Native American history: an idealized past before European contact, the trauma of reservations, contained by barbed wire, and the struggle of Native people against distinctly American figures in jeans, boots, and a pinstriped suit. In the middle panel, a visually complex pattern abstracts away from the scenes of the top into a dense, geometric composition, producing a sense of disorientation, anxiety, and uncertainty. The bottom panel, in Deloria’s reading, turns the middle panel 90 degrees, transforming it into a symmetrical Indian pattern. The barbed wire and struggling figures from the previous panels have disappeared; their browns and blacks now form strips of vertical diamonds. “At

the center,” he writes, “and overwriting the barbed wire, is a single band of color. Yellow, blue, red, and green,” colors from Plains Indian parfleche painting, form a strip of diamonds. This panel evokes Indian strength and continuity, contrasting with the panel above it.

How to read this image? Sully’s title, *Three Stages of Indian History*, provides a clue. The top panel represents the present; the



**Gertrude Stein is among Sully’s many prints depicting artists, actors, athletes, and other celebrities from American pop culture.**

middle, a transition; and the bottom, the future. The bottom panel provides a vision of Indian *future*, Deloria argues, insisting on the participation and centrality of American Indians in the future rather than confinement in the past. This interpretation also provides a general approach

to reading Sully's personality prints. Taken together, the prints evoke a full range of human experience—playfulness, joy, wonder—in a Native visual vocabulary. They invite viewers to imagine *Indianness* in American mass culture, and in the fabric of the United States itself. In this way, Sully was among the group of indigenous visual artists active in modernism, the movement that embraced abstraction, experimentation, and the use of geometric forms. Deloria writes: "The diamond is as central to Native women's arts as the grid is to the modernist—and yet Sully made them one and the same, dialogic and simultaneous."

But Sully's work also provides a challenge, and thus a distinct contribution, to the canon of American art. She was not part of the group of modernist artists, including some Native artists, known as "primitivists," who looked backward toward "primitive" aesthetics and experience. She was not captivated by visions of a romantic, pre-modern past. Sully was interested in American Indians' relationship to the present and future; she was, as Deloria terms it, an antiprimitivist. Other Native artists, who received financial support from arts institutions, created images of Indians in the past that appealed to white viewers. Because Sully never received any patronage, and her art was never publicly viewed save for a few exhibitions at children's schools, she was unconstrained; she could create images of Amelia Earhart or Gertrude Stein in an American Indian abstract. No one saw her work, yet she changes the story of American art.

*Becoming Mary Sully*, like Deloria's earlier books, manages to feel both concrete and abstract. It tells an engrossing story while also pivoting at each turn to artistic, historical, and moral implications. It is also a striking intervention into the history of visual art. Carlo Rotella calls this Deloria's "human Swiss Army Knife" quality. "The typical thing with Phil is, he'll say, 'I don't know much about *x*, so I'm going to have to find out about *x*.' And the next thing you know, he's made a masterly argument about *x* in which he's saying something totally new that no one has said and ends up doing the definitive work on that subject."

### "The Last Thing We Think About"

DELORIA, UNLIKE HIS FATHER, has never acquired a reputation for polemics or for being particularly tendentious in his writing; he is a different type of scholar. "You knew when you were in a room with Vine Deloria," says HUNAP's Shelly Lowe. "You may not know when you're in a room with Phil Deloria." The son's differences with his father are of a piece with how lightly he wears his association with the Deloria family. Jenny Price remembers when, in graduate school, he began presenting the material that would become *Playing Indian* at conferences. "Almost inevitably, some outraged person would stand up and say, 'How can you presume to talk about Indians as a non-Indian?'" she recalls. "My sense was always that the reason it would happen is that he wasn't performing Indianness in the way people thought he should. Phil would never start his answer with, 'I'm an Indian, my name's Deloria, for God's sake.' Because how do you even define that? He would start to say, 'Well, my great-great-great-grandfather was this person, and then he married this person.'"

## Mary Sully's drawings invite viewers to imagine *Indianness* in American mass culture, and in the fabric of the United States itself.

Still, Deloria's work is personal and political, even as it is analytically careful. He doesn't believe there could be a coherent way to cleanly separate scholars' personal identity from their interests and research agendas: "There is something about my interiority that gets me to think and ask questions in a certain way." When talking about diversity categories, he says, there's a sequence in which people list them: African-American, Latinx, Asian-American, Native American. Many people reciting that list might not think they're setting up a hierarchy, "but I see a hierarchy. I see the fact that Native people make up 1.7 percent of the population and that means they always get stuck last. They're always the last thing we think about," he continues. "And I get unhappy. And that unhappiness is part of my interiority."

But "this is not a moment when any of us are thinking very well about these things," he continues. In his view, much of what should be the subject of private thinking has become a public performance, and "It's not been that productive.... We've had a lot of identity policing, and ways in which people are trying to figure out how to perform a better identity. If we can think about how we [can] do these things in a good way, in a right way, in an honorable way, in a humble way, *that* would be useful and productive."

Recently, Deloria has been thinking more about the relationship between Native American and African-American studies, and those hierarchies that exist among different identity groups. He considers how his children learned the usual story about black history in school: "It's all about the progressive narrative that leads us to civil rights. 'America really was fundamentally good, but it took us a while to get there.'..."

"But how do you do that with a Native American narrative? You don't have the same kinds of redemptive possibilities. So all you can do is erase Indian people, and retell the story in which we all got along pretty early because the Indians pretty much handed off the continent to white people." There is no better narrative, he says, "because the narrative would be, 'Look at the ground our school's on; look at your playground. Who owned that land? How did it come to be our land? Was it a clean process? Is it over? Do you think there are Indian people out there? Oh, there are?' All of a sudden the complications just get too hard."

"So part of this is thinking, can a country deal with more than one original sin at a time? And if it can't, has the U.S. decided to deal with the original sin of slavery in a way it doesn't deal with the original sin of settler colonialism? How do the two interact?" A question, perhaps, for another book—Deloria's interdisciplinary, elastic way of thinking makes him an ideal person to answer it. The most revealing answers often lie in contradictions, his work has shown, and in the slippage between different narratives. He challenges readers to lose the assumptions that have caused Native people to be forgotten and persistently, but expectantly, asks more of America. ▢

Associate editor Marina N. Bolotnikova '14 previously profiled linguist Kathryn Davidson in "A Language Out of Nothing" (May-June 2017).



# Montage

Art, books, diverse creations



- 58 Artistic Capital
- 59 Chapter & Verse
- 60 "Here and Then Gone"
- 62 Off the Shelf
- 63 Uses—and Abuses—of Austerity

**After the harvest, Kelby Russell, who makes cold-climate white wines, stands in a vineyard overlooking New York's Seneca Lake.**

Ever since Russell graduated, he's embraced the challenges of wine-making in the Finger Lakes region, where he grew up. Now 31, he's a specialist in the art of cold-climate white wines. Working with the East Coast's fickle climate "allows you to throw out the false idol of a perfect wine," he says. "You come to understand that your job as winemaker is to artfully direct what comes into

the winery into the best thing and the most honest expression of the year that you possibly can."

In November, after the harvest, Russell's work shifts indoors. The grapes are pressed, and the juice settles and starts to ferment. "You hear this gentle chorus of things bubbling away," he says: 50 to 60 tanks of Riesling, and a few barrels and tanks of cabernet franc and other varieties, burble as carbon dioxide escapes through water locks. "A lot of [tanks] smell beautifully of fruit, whether it's peaches or strawberry ice cream," he says. "Sometimes in our cellar you get a lot of grapefruit and things that almost smell like basil, these really interesting herbal green aromatics." For Russell, it's the most

## Grace Notes

*Why the vineyards of New York called Kelby Russell home*

by ERICK TRICKEY

**E**VERY SEPTEMBER and October, Kelby James Russell '09 spends seven days a week walking through sloping vineyards above New York's Seneca Lake. Vine canopies arch above his head, seven or eight feet tall. Bands of golden grapes cascade down. Russell, head winemaker at Red Newt Cellars Winery, picks a grape and tastes it. It's incredibly sweet, much more so than a table grape, not at all like the wine

it'll become. "A Riesling grape tends to taste like beautiful floral notes and tangerine and peach," Russell says, "almost a honey-like sweetness."

The exact notes he tastes get him thinking about his plan for the rest of the harvest: when to send in the mechanical picker, and "what the different parcels are going to want to be as wine"—dry or off-dry, destined for a reserve wine or for Red Newt's house style.

fun part of the work year. “My job is to taste them every day,” he says, “and decide to gently try steer [their] direction”—with more oxygen, perhaps, or more heat.

At Harvard, Russell concentrated in government, minored in economics, threw himself into the Glee Club, and planned a career in orchestra management. Like many college students from the exurbs or the country, he never thought he would move back home. But during a foreign study tour in Tuscany, he made wine for the first time. “I could never forget how much I enjoyed working with my hands, and the creative side of winemaking,” he says. The autumn after graduation, when a job at Jazz at Lincoln Center didn’t pan out, he visited Fox Run Vineyards near his hometown. He thought he had an interview, but the staff was busy with the first day of harvest. “They were knee deep in grapes,” he recalls. “They handed me a shovel: ‘Here you go.

**Working in the East Coast’s fickle climate “allows you to throw out the false idol of a perfect wine.”**

You can help out on the crush pad if you’d like.” He kept showing up, completing an unpaid internship.

Fascinated, he began an accelerated set of apprenticeships in winemaking. For three years, to double his harvest experience, he spent winters in New Zealand or Australia, and autumns in the Finger Lakes. He started his first year-round salaried job in spring 2012, as Red Newt’s assistant winemaker. By year’s end, Red Newt co-founder and longtime winemaker David Whiting stepped out of the wine cellar to oversee the winery’s bistro—and promoted Russell to head winemaker. “Right from the start,” Russell says, “[he] gave me tons of freedom to pursue the winemaking in the way that I saw fit.”

In the Finger Lakes, that means exploring the possibilities of Riesling, the best fit with the local climate. Russell considers Riesling a misunderstood grape. Americans, recalling mass-produced wines such as Blue Nun, tend to think of Rieslings as sweet, simple, and uninteresting. It’s “our cross to

O P E N B O O K

## Glorious Genji

by some of the art discussed below), is simplicity itself—so long as one can overlook the remarkable survival of a fragile masterpiece for more than five centuries. An associated exhibition—on the artistic tradition inspired by the novel, curated by McCormick—opens at the Metropolitan Museum of Art on March 5. From the introduction:

**In the year 1510**, at a private residence in the capital city of Kyoto, two men raised their wine cups to celebrate the completion of an extraordinary project, an album of 54 pairs of calligraphy and painting leaves representing each chapter of Japan’s most celebrated work of fiction, *The Tale of Genji*. One of the men, the patron of the album Sue Saburo, would

take it back with him to his home province of Suo (present-day Yamaguchi Prefecture), on the western end of Japan’s main island. Six years later, in 1516, the album leaves would be donated to a local temple named Myoeiji, where the work’s traceable premodern history currently ends. In 1957 it came into the possession of Philip Hofer (1898-1984), founder of the Department of Prints and Graphic Arts at the Houghton Rare Book Library of Harvard University. A prolific collector of illustrated manuscripts, Hofer purchased the album along with numerous other Japanese books and scrolls, which were subsequently bequeathed to the Harvard Art Museums in 1985. This remarkable compendium has survived intact for over 500 years, making it the oldest complete album of *Genji* painting and calligraphy in the world....

Although steeped in the complex belief systems and moral codes of its own era...

**One need not** know how to read Japanese calligraphy, nor even have taken in the thousand-year-old *Tale of Genji* in translation, to savor *The Tale of Genji: A Visual Companion*, by Melissa McCormick, professor of Japanese art and culture (Princeton, \$45). The story she tells, drawing on the justly famous underlying work (see “Vita: Murasaki Shikibu,” May-June 2002, page 32, illustrated



**A boat cast adrift: visualizing the text, “Though the orange tree isle/Remain fast in its color,/Tis not such change,/But this drifting boat’s whither/That is beyond all knowing.”**

the tale can be read as a monumental exploration of human nature. No matter how characters may triumph or what virtues they may exhibit, all ultimately confront hardships and grapple with their own fallibility, none more so than the eponymous protagonist Genji. To give voice to her characters’ internal conflicts and thought processes, Murasaki Shikibu took unprecedented advantage of...the affective power and ironic distance effect of *waka* poetry, and a mode of prose narration similar to stream of consciousness and free indirect discourse in Western literature. The shifting perspective of the narrator throughout the work also makes for a reading experience surprisingly akin to that of the modern novel.

bear,” he says, “to prove to people that that isn’t true, and that Riesling can be a great grape.” His own generation of wine-drinkers, he says, is shifting the market toward

the Finger Lakes’ strengths: lower alcohol, more finesse—“They’re far more interested and open to new wine regions and new expressions.”

HARVARD ART MUSEUMS IMAGING DEPARTMENT © PRESIDENT AND FELLOWS OF HARVARD COLLEGE





**In the wine cellar, with the “gentle chorus” of juices fermenting**

sell label, which features small-batch wines, from a dry rosé to an Australian-style dry Riesling. He helped found and oversees the Empire Estate wine project, a Riesling label that distributes more than 10,000 cases of wine from sev-

Six harvests into his position as head winemaker, Russell not only masterminds the Red Newt's house styles and reserves, he's in charge of his own Kelby James Rus-

several Finger Lakes vineyards to 48 states. He met his wife, Julia Hoyle, thanks to their shared love of wine: when he was a Fox Run intern, she worked in the tasting room. Now

she's head winemaker at Hosmer Winery on Cayuga Lake.

Though he's dedicated his career to the art of winemaking, Russell has also returned to his love of music. He travels 90 minutes from his home in Geneva to sing as a tenor in the Eastman Rochester Chorus. His private wine label suggests song pairings instead of food pairings: music by Janelle Monáe, Radiohead, and Parliament Funkadelic.

“Winemaking is such a puzzle,” he says. “There's thousands and thousands of decisions, and there's no right or wrong answer.” It's a natural fit with his social-theory training at Harvard, he says: “how to grapple with an impossible number of inputs and navigate through what makes sense.”

## Artistic Capital

*In Liz Glynn's massive installations, big questions about the meaning of value*

by SAMANTHA CULP

**F**OR SOME ARTISTS, MASS MoCA's iconic Building Five would be a daunting space to fill. The length of a football field, the 30,000 square-foot former textile mill is the nation's largest free-standing gallery, and the centerpiece of one of its most prestigious museums. But for Liz Glynn '03, a Boston-born, Los Angeles-based artist known for ambitious projects like attempting to literally rebuild Rome in a day, it was the ideal setting for a new work.

“I saw MASS MoCA for the first time when I was 19,” Glynn says. “It was the place that made me want to make sculpture.” In late 2017, she became the youngest artist to take on the space with the exhibition “The Archaeology of Another Possible Future” (now extended through early 2019). It's a sprawling landscape of shipping containers,

reclaimed forklift pallets, 3-D printers, industrial felt, glazed stoneware, vinyl records, and towering pyramids in the shape of economic charts. The piece interrogates the notion of progress itself, and particularly the American dream as it interweaves with the history of material production and consumption. Increasingly, financial value arises from

high-speed, algorithmic trading—not on the physical factory floor, like Building Five once was—and Glynn's installation asks, “Where does real value exist?” And what does the answer to that question mean for a society that is perhaps more unequal than ever before?

Glynn's practice, which spans sculpture and performance, has always given shape to abstract systems. Her interests in class, labor, and its divisions began in her youth, growing up in Boston's South Shore suburbs with an architect mother and engineer father. “My father's family identified as blue-collar, my mother's a bit more upper middle class, but they were from the same town,” she says, recalling how she first realized

class differences could almost be an “arbitrary distinction” within a shared geography.

She considered becoming an architect or photojournalist, which led her to Harvard, where legendary photographer Nan Goldin was then teaching. Glynn also drew inspiration from fields like economics (her freshman year, she took Ec 10 from Baker professor of economics Martin Feldstein), while concentrating in visual and environmental studies. She attributes her even-

**Liz Glynn**





Images from three of Glynn's art installations (clockwise from above): "24-Hour Roman Reconstruction Project," at the New Museum in New York; "Open House," in Central Park; and "The Archaeology of Another Possible Future," at MASS MoCA

tual focus on art to her love of making room for the unexpected in a project. "I always like to leave about 10 percent of something up to chance," she explains. "While great designers will sort of 'complete the box'—for me, something needs to change along the way... or what's the point of actually executing it?"

After stints in Berlin and New York City, Glynn moved to California to do her M.F.A. at CalArts. Like many young artists, she had juggled demanding day jobs (many in arts administration) with long nights in the studio, and prided herself on her stamina. The CalArts program was a culture shock: it prized strong concept above sheer labor. "It almost threw me off my chair," she

says, laughing. "It's like the only thing I had taught myself to do was work—but now there were people saying, 'Go take a drive and think.' Like, what?"

One of those people was the late, beloved teacher and 1960s conceptualist Michael Asher, whose critique sessions often lasted up to 16 hours. Glynn was then making a lot of work about "utopia," and the discussions always seemed to lead back to the idea that all utopias failed. Her frustrations



© LIZ GLYNN, COURTESY PAULA COOPER GALLERY, NEW YORK



© LIZ GLYNN, COURTESY PAULA COOPER GALLERY, NEW YORK

## Chapter & Verse

Correspondence on not-so-famous lost words

**Jane Arnold seeks** a short story, possibly from the 1960s, about a judge known for mercilessness who goes fishing on his day off without his toupee, teeth, or ID, and is picked up for vagrancy. His cellmate tells him about the horrible judge they'll face the next day (himself, of course), and they break out of jail. The next time he is faced with a case, he tempers the law with mercy. Star asters are important in the story, and may appear in the title.

**"Menasseh ben Israel"** (November-December 2018). On clothing made from stone in China, Vincent Daly wrote that

Marco Polo describes an asbestos mine in "Ghinghin talas" province "from which the cloth which we call of salamander, which cannot be burnt if it is thrown into the fire, is made..." (A.C. Moule and Paul Pelliot, *Marco Polo: The Description of the World*, 1938, page 156). On swollen thighs in Cochin, India, Bernard Witlieb wrote that elephantiasis was widely prevalent there and often referred to as "Cochin leg."

Send inquiries and answers to Chapter and Verse, *Harvard Magazine*, 7 Ware Street, Cambridge 02138, or via email to [chapterandverse@harvardmag.com](mailto:chapterandverse@harvardmag.com).

with these critiques led to the "24 Hour Roman Reconstruction Project," first staged in 2008 at the artist-run space Machine Project, in Los Angeles, and later reprised at other venues. Each time, Glynn and a team of volunteers would create the ancient capital at room size from cardboard and scrap materials, in historical order—then destroy it. "It was a meditation on loss," she says.

This absurdist yet reverent take on history can be seen in her subsequent projects, which continued to scale up. In 2014, "Ransom Room" reimagined the gold treasures used to ransom the Incan emperor Atahualpa from Spanish conquistadors—but in her rendering, the treasures were lost-wax castings, brought by the artist herself from far corners of all five boroughs to replenish the room on a weekly basis. All objects were eventually melted down, again reflecting on the dichotomy of symbolic and functional wealth. "At the time, the gold had no monetary value to the Inca themselves; it was only ritual and ceremonial," Glynn explains. "The Spanish just saw dollar signs and the need to pay for the conquest, and so they took all these artifacts and melted them down." In 2017, "Open House," sup-



ported by the Public Art Fund, created the ghostly ruin of a Gilded Age ballroom in Central Park, with lavish Beaux Arts furniture cast in gray concrete. The sofas, chairs, and footstools were modeled after real pieces from a now-demolished Fifth Avenue mansion, evoking a history of the disembodied capital that lives on today in cities like New York. Finally, her MASS MoCA show tackles these subjects on a grand canvas—though perhaps even the bounds of a 30,000-square-foot museum can no longer contain the scope of her ideas.

Glynn is completing a commission for the

San Francisco airport: a massive sculpture suspended above the security checkpoints that will reflect on the venue as a hub of connectivity. She's also been working on a few projects in the desert outside Los Angeles: a replica of Nero's villa that will be constantly expanding and renovating, never complete; and a sculpture of a toppled triumphal arch called "One Over," to premiere during 2019's Desert X art festival. "It will look as if it were just excavated, but it's a monument to the defeat of the idea of winning itself," she says. The work is related to the current political moment but also to the

culture of ambition and competition in the arts and other fields. "I'm someone with ambitions but also see the darker side of that," Glynn says—yet the artist, who continues teaching at UC Irvine's art school, still has deep belief in the potential of art.

"I think one of the most powerful things about art is that you can propose these ideas that are not practical, but they're a way of creating space for asking questions," she says. "For me, that's what makes it really important to keep working in that space and to try to create work that really pushes the *what if*."

## "Here and Then Gone"

*Bess Wohl writes plays from an actor's perspective.*

by LYDIALYLE GIBSON

**I**N PLAYWRIGHT Bess Wohl's work—sweet and sharp and sad, and often darkly funny—something important is usually missing. In *American Hero*, it is the owner of a new sandwich franchise who mysteriously disappears, leaving his employees to drift between existential hope and despair. In *Make Believe*, the void left by their absent parents causes four young siblings, latchkey kids of the 1980s, to dream up fantasy worlds together in the attic of their home.

"There seems to always be some author-

ity figure who should be there and is not," says Wohl '96. "Somebody who should be in charge but is absent, or inaccessible." That's true also of her best-known work, 2015's *Small Mouth Sounds*, in which six strangers in search of inner peace find their way to a silent retreat deep in the woods. With a running time of 100 minutes, *Small Mouth Sounds* contains very little dialogue, and what there is belongs mostly to the retreat's unseen guru, whose only presence is as a disembodied voice that grows increasing-

ly loopy and unhinged. *The New York Times* named it "one of the year's top plays" ("intrepid writing," critic Charles Isherwood wrote), and this January, SpeakEasy Stage in Boston will mount a new production. "There's a certain freedom of expression" in a play mostly without words, says the director, M. Bevin O'Gara. "I think this play makes the audience listen harder, by which I actually mean observe....By stripping away the language, Bess makes us more open and attuned to details."

Wohl never expected to write a play—she'd planned to become an actor. Growing up in Brooklyn gave her an early introduction to the theater. At three or four years old, she went with her grandmother to see the famous production of *Peter Pan* with Sandy Duncan in the title role. It left a deep impression. When Duncan flew out over the audience at the end of the play, "I was completely blown away....I didn't know you could do anything like that." Wohl wrote a fan letter to Duncan, who wrote back, enclosing a photo of herself as a flapper in a beaded headdress. "I have that picture framed to this day," Wohl says. "As an actor, I always put Sandy up in my dressing room."

An English concentrator, Wohl joined the Harvard-Radcliffe Dramatic Club and acted in several plays—appearing onstage as a television reporter, a sappy lover, one half of a married couple from Utah—and enrolled in Marjorie Garber's two-semester course on Shakespeare. Garber, the Kenan professor of English and visual and environmental studies, "really instilled in me this idea that the theater can help you live your life," Wohl says. "that the things you encounter in plays can become almost like a manual."

After college, Wohl returned to New



Bess Wohl

## HM Explore More

For other, online-only, articles on the arts and creativity, see:

### Looking at the Cosmos through a Feminine Lens

Artist Anna Von Mertens depicts the findings of Harvard's female

astronomers using quilts and drawings.  
[harvardmag.com/vonmertens-18](http://harvardmag.com/vonmertens-18)

### Shaina Taub Shares Suffragists in Song

A spirited tribute to voting rights helps celebrate the Schlesinger Library's seventy-fifth anniversary  
[harvardmag.com/taub-18](http://harvardmag.com/taub-18)

York, where her life filled with acting and auditioning. "I would do any reading for anything I could find," she says. At the same time, she kept applying to the Yale Drama School's M.F.A. program in acting. On the third try, she got in. It was in New Haven, while training to be an actor, that she became a playwright. "Yale has a student-run experimental performance space called Cabaret," she explains, "and you can do anything you want there. You can work outside of your discipline."

She came up with an idea for a play: a mock "talkback"—a post-show discussion, in which the director and cast members come onto the stage for an informal conversation with the audience. Her piece, *Cats Talk Back*, centered around five cast members from the Andrew Lloyd Webber musical *Cats*, and it was a riot. "A comedy, obviously—and a really strange play." There were plants in the audience asking questions, and the cast performed a supposed "lost" number in which the cats maul a small child to death. Wohl and her cast took the play to the New York City International Fringe Festival, where it won best overall production. "To this day, it's maybe my favorite thing I've ever done," she says. "It really unlocked something in me. I remember vividly being in the Cabaret, sitting in the

COURTESY OF THE ARTIST AND ELIZABETH LEACH GALLERY

KEVIN GRADY/RODCLIFFE INSTITUTE

## { THE CHARLES HOTEL }

The Smart Place to Stay

### RELIVE THE Magic OF WINTER IN HARVARD SQUARE



#### Friday

##### 3pm - Check In

Welcome to The Charles! Time to set your internal clock to vacation mode.

##### 5:30pm - Dine Out

Return to a nostalgic spot or check out the hot new dining rooms in town.

##### 7:30pm - Snap Along

Cozy up around the stage at Regattabar Jazz Club with wicked talented jazz artists from across the globe.

##### 10pm - Cheers

We won't tell - Stay up past your bedtime with a specially crafted nightcap at Noir.

#### Saturday

##### 9am - Wake Up

Follow the scent of coffee and bacon downstairs for a home cooked breakfast at Henrietta's Table.

##### 11am - Shop Local

Fueled up? Hit the Square to window shop: book stores, chocolates and clothes - oh my!

##### 7pm - Buongiorno!

Relax over a leisurely, multi-course meal on the second floor with Benedetto. Save room for dessert!

#### Sunday

##### 12pm - Sleep In & Check Out

Slowly shift back to reality as you pack your bags and head home with a fresh focus to conquer 2019.

BOOK YOUR HARVARD SQUARE GETAWAY *Now!*

1 BENNETT STREET • CAMBRIDGE, MA • 800.882.1818 • CHARLESHOTEL.COM

## TURN TO PAGE 71

TO BROWSE LISTINGS IN OUR SPECIAL SECTION

SPOTLIGHT ON FRANCE



## Sublime...

### Luxury Barge Cruises



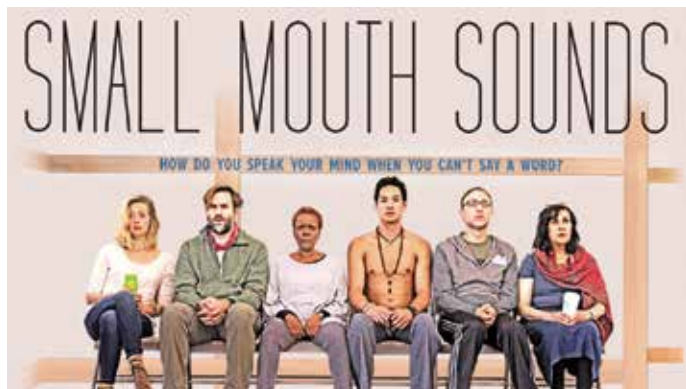
FRENCH COUNTRY WATERWAYS, LTD.

P.O. Box 2195, Duxbury, MA 02331

800-222-1236 781-934-2454

[www.fcwl.com](http://www.fcwl.com)





Poster for *Small Mouth Sounds*, listed as one of the best plays of 2015

audience and watching people on stage perform these words that I had written. And I just felt this click, like, 'This is something I could actually do.'

After Yale, Wohl kept acting and writing

She found small parts in films and television shows, and briefly moved to Los Angeles. But as her writing picked up speed, it became too hard to juggle both. She chose writing.

But acting still strongly influences her

simultaneously. She wrote a play about a young woman recovering from eight medicated years in a mental institution, and another about a young man trying, with professional help, to get into Harvard ("It's really about the meritocracy and where it succeeds and where it fails").

work. "So many things I learned have been helpful," she says, "like the experience of thinking about character from the inside out, and having a sense, almost on a cellular level, of whether something is playable or not."

Wohl's new play, *Continuity*, debuting this spring at the Manhattan Theatre Club, is a dark comedy following a film crew in New Mexico through six takes of a single scene in a high-budget thriller about climate change. As usual, a figure of authority is missing. "There's a sense of, 'Is anybody out there?'" she says. "'What's going to happen to us?' We're sort of stranded on this planet and nobody is taking care of us in the way we had hoped."

It took eight years and several drafts to write the play—for a long time she struggled with how to bring the subject

## Off the Shelf

Recent books with Harvard connections

**A Lens of Love: Reading the Bible in Its World for Our World**, by Jonathan L. Walton, Plummer professor of Christian morals and Pusey minister in the Memorial Church (Westminister John Knox Press, \$16 paper). If you can't hear him preach on Sundays, Reverend Walton's voice is readily accessible this way. "I am an avid reader of the Bible," he writes simply, because he is professionally, personally, and morally committed to a life "led by our faith, not by our fears."

**Sabina Augusta: An Imperial Journey**, by T. Corey Brennan, Ph.D. '90 (Oxford, \$85). A careful excavation of the life and reputation of the wife of the Roman emperor Hadrian—one in a series on women in antiquity—by a professor of classics at Rutgers; working from 200 words of textual references, sculptural repre-

**Making scant (and mute) evidence tell its story: the empress Sabina, sculpted A.D. 136-138**



sentations, and other sources, he effects a remarkable reconstruction of an iconic empress—all the more so given Hadrian's complicated family and personal life.

**The Incomplete Book of Running**, by Peter Sagal '87 (Simon & Schuster, \$27). With a half nod to Jim Fixx, the host of NPR's *Wait Wait... Don't Tell Me* applies his voice to his running life, observing that at age 40 (intimations of mortality and all that), "I went from being a person who ran to being a runner." Unlike his most serious brethren, he can confess, "Sometimes running sucks."

**The Limits of Blame**, by Erin I. Kelly, Ph.D. '95 (Harvard, \$35). A professor of philosophy at Tufts addresses head-on the assumptions underlying criminalization of people, sorting out the problem that "the legal criteria of guilt do not match familiar moral criteria for blame." An atypical philosophical inquiry, with immediate application—to America's vast system of incarceration.

**The Age of Surveillance Capitalism**, by Shoshana Zuboff, retired Wilson professor of business administration (PublicAffairs, \$38). A daunting, alarmed argument

about "the fight for a human future at the new frontier of power" (the subtitle), brought about by technologically enabled capitalism that treats "human experience as free raw material for translation into behavioral data"—and then renders every sphere of life into commerce.

**Driving Digital Strategy**, by Sunil Gupta, Carter professor of business administration (Harvard Business Review Press, \$32). And on the other hand, a nuts-and-bolts guide for businesses about rethinking their strategy, value chain, customer engagement, and organization to succeed in a pervasively digital era.

**Globalization and Inequality**, by Elhanan Helpman, Stone professor of international trade (Harvard, \$26.95). Addressing the literature and technical issues for lay readers, Helpman finds that "rising inequality in recent decades has been predominantly driven by forces other than globalization." Problems there are, in other words, but choking off the global trade system won't resolve them.

**Wit's End**, by James Geary, deputy curator, the Nieman Foundation for Journalism (W.W. Norton, \$23.95). Beginning with the identification of Adam and Eve's forbidden fruit as a pun (from the Latin *malum*, meaning both "apple" and "evil"), probes the what, how, and why of wit, seriously but lightly—an apt approach for someone who is also an accomplished juggler.

to the page in a way that felt compelling. “So much of climate change is a failure of narrative,” she says. “When you talk to scientists, they say, ‘We haven’t found a narrative that connects with people enough.’ That’s what a writer is trying to do as well.” But as with other eternal questions concerning mortality and how to cope with it, theater is the right vehicle, she says. “Because plays themselves are so temporary. And the moment we have with them is so fleeting, and it never comes back. That’s what’s so exciting and precious about them to me. There’s something very resonant about looking at how temporary and fragile everything is in the context of this made thing that is here and then gone.”

# Uses—and Abuses —of Austerity

*Economists revisit an unsettled economic policy.*

by IDREES KAHLOON

**P**RECIOUS FEW WORDS in economics evoke emotional responses of any kind. But austerity, the reduction of government deficits through tax increases or pared-down spending, is an exception. Discussions of austerity quickly devolve into moralizing—between supporters, who see austerity as a kind of virtuous self-denial, and opponents, who portray it

as self-defeating, self-flagellating nonsense. Ten years after the Great Recession pushed many European countries with precarious finances to embrace austerity measures, the debate continues.

And worse, it remains deeply unsettled. Now Ropes professor of political economy Alberto Alesina seeks to rectify that with his matter-of-factly titled *Austerity: When It Works*

**An Inclusive Academy: Achieving Diversity and Excellence**, by Abigail J. Stewart, Ph.D. '75, and Virginia Valian (MIT, \$29.95). Senior professors at the University of Michigan and Hunter College, respectively, comprehensively review the research, and draw on their own experiences, to direct academic institutions toward realizing their aspirations for broadening their faculties.

**A Few Thousand Dollars: Sparking Prosperity for Everyone**, by Robert E. Friedman '71 (The New Press, \$26.99). The founder of Prosperity Now (formerly the Corporation for Enterprise Development) prescribes universal savings interventions that would enable the most economically marginalized members of society to begin to get a purchase on the levers that lead to an income—and everything that follows in its wake—in a society where the wealth gaps have become impossibly large.

**The Promise of Elsewhere**, by Brad Leithauser '75, J.D. '79 (Knopf, \$26.95). The quietly prolific novelist and poet's seventeenth book: a comic novel about a stuck middle-aged professor at a Midwestern college whose tour of world architectural sites (his field) is deflected by a doomed romance. A journey about yearnings.

**The Hell of Good Intentions: America's Foreign Policy Elite and the Decline of U.S. Primacy**, by Stephen M. Walt, Belfer professor of international af-

fairs (Farrar, Straus and Giroux, \$28). A critic of both “liberal hegemony” and the present moment of trashing international agreements and organizations willy-nilly, Walt argues for foreign policy guided less by ambition and military prowess and more by the pursuit of peace, exemplary restraint, and the building of alliances.

**Words & Works: Scenes from a Life in Architecture, 1948-2018**, by Henry N. Cobb '47, M.Arch. '49 (The Monacelli Press, \$45). The acclaimed architect in his own words. On the Center for Governmental and International Studies, straddling Cambridge Street (represented in handsome photographs here), he gracefully notes of the protracted back-and-forth with Cambridge neighbors and officials, “the extended negotiations and consequent reconsiderations created opportunities that led to improvements in design.”

**Peaches Goes It Alone**, by Frederick Seidel '57 (Farrar, Straus and Giroux, \$24). New poems by a poet whose work

**Architect and client: Henry Cobb presenting an early scheme for Place Ville Marie to William Zeckendorf Sr. in 1956—aboard the latter's DC-3**

can provoke discomfort (see Adam Kirsch's “Again, A Dangerous Art,” a review of *Poems 1959-2009*, November-December 2009, page 19); the publisher categorizes the latest work as adding “new music and menace to Seidel's masterful body of work.” In the same form, but from a different perspective, Michael H. Levin, J.D. '69, a lawyer and solar-energy developer, publishes **Man Overboard: New and Selected Poems** (Finishing Line Press, \$14.99); their gentler language often encompasses bracing, current realities, too.





and *When It Doesn't*, co-written with Carlo Favero and Francesco Giavazzi of Bocconi University. Their book focuses painstakingly on proving a single proposition: austerity achieved through tax increases tends to trigger recessions and worsen a country's debt load, whereas austerity accomplished through government spending cuts has only a limited impact on economic output.

becomes income for individuals, who spend a portion of it, generating economic activity, which generates further activity, and so on.

George Box, the great British statistician, once quipped that "all models are wrong but some are useful." Keynes's basic model was certainly wrong—it did not consider the supply side of the economy or the importance of incentives. Later economists have

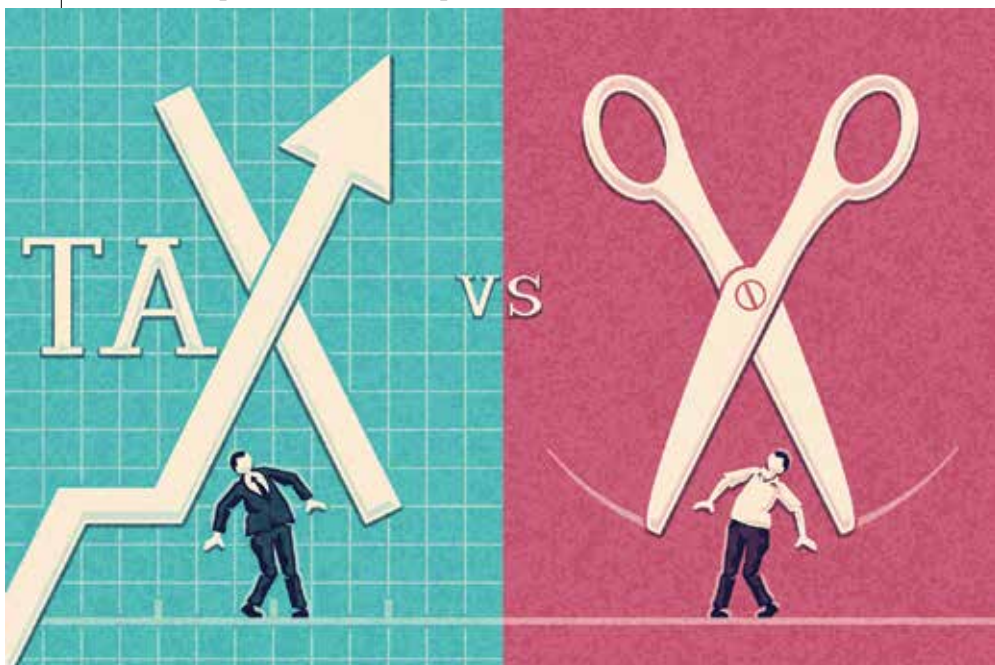
The underlying reason, Alesina and his coauthors explain, is investor confidence. Immediate tax increases

reduce the incentive for investment, while spending cuts—especially to government programs with ever-inflating budgets—signal the possibility of eventual tax cuts. Relative to tax-based austerity, *spending-based* austerity spurs private investment and mitigates the recessionary result predicted by Keynesians. The theory is controversial. Paul Krugman, a prominent and vitriolic critic of austerity programs, has pooh-poohed this explanation as belief in the "confidence fairy."

There are also more technical critiques of Alesina's results. The relative outperformance of spending-based austerity programs could be explained by other factors. This is a central barrier to knowing anything with confidence in macroeconomics: experimental evidence is nonexistent. If monetary policy kicks in at the same time to stimulate the economy through reduced interest rates or expansion of the money supply, then spending-based austerity might look better than it does. The International Monetary Fund made this point in a biting critique of Alesina's work published in 2012. A weaker currency, which promotes exports and thus GDP growth, and labor-market reforms that often accompany austerity packages (such as deregulating hiring and layoffs), could also be influential factors. Alesina thinks that none of these defeat his theory, but they provide enough ammunition for skeptics who do not wish to be convinced.

ALL THIS theoretical back-and-forth does not change the fact that austerity is an un-

*Austerity: When It Works and When It Doesn't*, by Alberto Alesina, Carlo Favero, and Francesco Giavazzi (Princeton, \$35)



If this doesn't seem like a page-turner, that's because it isn't. Among the general public, only macroeconomic fiends will pick it up—and even they might not. Alesina has advocated the central thesis for nearly a decade; his influential study on the topic (with then Harvard economist Silvia Ardagna), published in October 2009 at the height of the financial crisis, made much the same point. The analysis in the new book is more rigorous—it rests on details of 200 austerity plans in 16 rich countries before and after the financial crisis—but the ultimate finding is the same: belt-tightening through tax increases is ultimately much more painful than slashing spending.

That remains a provocative assertion because it flies in the face of basic Keynesian logic. That influential macroeconomic model focuses on movements in aggregate demand—the total of public spending, consumption, investment, and net exports. Although higher taxes will reduce consumption a bit, the theory predicts that reduced government spending has an outsize effect on the economy. Cash spent by public programs

updated the model to account for these deficiencies, but their conclusions remain the same: government spending should have a larger impact on output (i.e., be a larger "fiscal multiplier") than taxes.

The entire game in settling the debate lies in figuring out the magnitude of these fiscal multipliers. Yet the repeated estimates put forth by economists on this fundamental number vary widely enough to allow individuals to continue believing what they wish. In Alesina's analysis, a reduction in spending

**In the fiscal-policy kit, austerity ought to be a rare tool. Instead, it promises to become recurrent.**

on the order of 1 percent of gross domestic product (GDP, the broadest measure of national output) is associated with a loss in GDP of less than 0.5 percent; a *tax increase* of similar magnitude tends to decrease GDP by 3 percent—and the ensuing recession tends to last for several years. The differences matter at times of economic stress or when policymakers try to rein in profligacy (in an attempt to stave off still worse depressions to come.)

popular and dirty word. After the Great Recession, Britain began a years-long austerity program—slashing day-to-day departmental spending by 16 percent per person—that it is only now reversing. As Alesina and his colleagues recommend, David Cameron, the prime minister, and his chancellor of the exchequer, George Osborne, went the cut-spending route rather than the tax-raising one. Indeed, the British experience

is cheered in the book.

But look also at what that has wrought. Doctors in training, university lecturers, even public defenders have gone on strike to protest benefits cuts. The Labour Party, firmly in the grip of its hard-left leader Jeremy Corbyn, has converted disaffection with austerity—especially among the young—into a potent political force. Should Theresa May's tenuous hold on government slip, Corbyn could easily take control in the next general election and introduce spendthrift policies that eliminate whatever good the austerity did.

The paradox is that if fiscal policymaking were left to prudent hands, austerity would almost never be needed. The authors do not deviate from the economics orthodoxy that governments should run surpluses in boom times and deficits in lean times. The German allergy to deficits of *all* kinds, in a show of Teutonic "moral superiority," is rejected by Alesina as "bad economics." But the same goes for countries that run up debts "for no good reason." Take Greece. The country radically expanded public spending during years of strong economic growth, while neglecting to crack down on tax evasion, and accumulated a colossal debt load, which threatened to upend the entire Eurozone. The unwinding of the crisis remains painful (unemployment has persisted at Great Depression levels, and even under optimistic forecasts, Greece will be paying off its debt until 2060)—and gives ample opportunity to populists on both the left and the right.

Or look no further than the American economy. Despite a record-low unemployment rate and decade-long recovery, Congress has passed an enormous tax cut without an accompanying plan to pay for it. The budget deficit has swollen 17 percent at precisely the time it should be reduced. In the fiscal-policy kit, austerity ought to be a rare tool. Instead, it promises to become recurrent. ▢

*Idrees Kahloon '16 is U.S. policy correspondent for The Economist. He wrote the feature "Does Money Matter?" about the influence of money on elections, in the July-August 2016 issue.*

## ALUMNI

# Once Again, with Feeling

*A cellist and conservatory teacher who's never stopped learning*

by NELL PORTER BROWN

**B**RANNON CHO, a rising young cellist, dives into the first movement of Sergei Prokofiev's Symphony-Concerto in E Minor, Op. 125. The virtuosic piece requires tremendous strength and dexterity to tackle complex finger work, triple fortés, and triple pianos, along with empathy for the fluctuating moods of the music.

After nearly 40 minutes of vigorous bowing, Cho glides into a sensual section, sliding the bow over the strings, building to the climax—a repeated arpeggiated figure in E major played first on the A and D strings, then on the G as well, high up on the cello's

register—for an exhausting eight seconds. Hiking his bow with a flourish on the final note, Cho rests and dabs the sweat trickling down his face and onto the curves of his 330-year-old instrument.

Fellow students in the New England Conservatory of Music master class applaud. Then comes a kindly "Do you need a sponge?" from Cho's teacher, Laurence Lesser '61.

A gentle-looking man with lanky limbs and a puff of white hair, Lesser has played the cello for 74 years, and taught it since he was even younger than Cho. A math concentrator at Harvard, who instead pursued a music career, he studied with masters like Gaspar Cassadó and Gregor Piatigorsky and won major awards, including at the 1966 Tchaikovsky Competition in Moscow, where he met his future wife, the concert violinist Masuko Ushioda. He went on to perform with orchestras around the country, and around the world. Along the way, in 1974, he joined the faculty at the New England Conservatory (NEC). He served as president from 1983 to 1996, overseeing restoration of the acoustical gem Jordan Hall, before, as he likes to say, "re-rising" to teach.

The NEC last fall celebrated Lesser's contributions, and eightieth birthday, with a concert by the NEC Philharmonia, conducted by Hugh Wolff. The evening featured Lesser's own impassioned rendition of Ernest Bloch's "Schelomo: Rhapsodie

**Cellist and teacher Laurence Lesser is celebrating his forty-fifth year at the New England Conservatory of Music.**



Photographs by Andrew Hurlbut

HARVARD MAGAZINE 65



Hébraïque for Violoncello and Orchestra,” which premiered at Carnegie Hall in 1917.

“I’ve known this piece since I was child and have always loved it,” says Lesser, who plays a 1622 Amati cello. “It’s the story of a man, King Solomon, who is looking back on his life, a life in which lots of things have happened. There’s joy, euphoria, aggressiveness. King Solomon was a warrior, a lover, a poet, and a person of great wisdom. And one does hope that with age,” he pauses, “one gets a little bit wiser.”

The venerated teacher has 16 students this semester, including the 24-year-old

the growth that gives the impression it’s all louder. That other way sounds like you’re desperate.”

The Symphony-Concerto also contains what Lesser calls “the dance part,” in the third movement. It “starts with this very heroic—dah-dah—dahdeedahdeedo,” he sings again, explaining the piece, “and then it becomes a waltz—oom-pah-pah, oom-pah-pah.” Lesser often pictures music, creating a narrative in his mind. “That theme sounds to me like a bunch of guys in the cadet corps in St. Petersburg in the end of the nineteenth century getting together and saying, ‘We

save our country. It’s up to us’—something out of Tolstoy,” he adds—a fan of Russian literature, he’s read “Brothers K” at least three times—“then they all go out and dance. And in the middle of that, is a Jewish wedding theme: eyump pah-pah. A lot of Jewish culture, and I’m Jewish, finds its way into Prokofiev and Shostakovich.”

In class, he pushes Cho to play the section with less rigidity; to make it “swing.” “The first one was good, then the other went back to the smashing sound,” Lesser says, then addresses the entire group as much as Cho: “It’s all about—what mood do you want people to feel here?”

**“You have to master your craft, but you also have to have something to do with it.”**

“Joyful,” Cho answers, hesitating. “A little mischievous.”

“Yes,” Lesser agrees. “But joy is not yadetta, yadetta,” he adds, mimicking an agitated, repetitive quality.

He has Cho repeat the waltzing phrase. Then again: “But now, play the first note a little louder than the rest, that’s all.” And then again.

“You want to make people smile—‘Oh, he’s having such a good time playing!’—and not see that you’re working. It has to have a kind of poise,” says Lesser, who speaks slowly and deliberately, so no one misses a single word he has to say. Then he quotes a Russian phrase—echoing his most influential teacher,

the Ukrainian-born virtuoso Piatigorsky—and translates it: “Make it as light as feathers.”

EIGHT DAYS after the class, Lesser was at home preparing for a trip to Helsinki, where he’d sit on the jury for the International Paulo Cello Competition 2018. Among the 25 contenders were Cho and Timotheos Petrin, another of Lesser’s NEC master-class students. While talking in his living room, Lesser says he loves Helsinki, not least because Finland vigorously supports classical music and musical education. It’s also the homeland of composer and violinist Jean Sibelius, recordings of whose music are among the hundreds of records, CDs, books packed, along with stereo equipment, into a wall of shelves that dominates the room.

He pulls out a few albums recorded by his wife, also an NEC teacher, who died in 2013. There are photographs of her, and of her with former longtime Boston Symphony Orchestra (BSO) music director Seiji Ozawa, their friend, who is among the countless other musicians across the globe whom they’ve known, played with, and admired during the last half-century.

Life without music is unimaginable. Raised in Los Angeles by a pianist mother and a lawyer father, Lesser was introduced to classical works early on. At a concert of the Los Angeles Philharmonic’s youth orchestra, his parents asked what instrument he wanted to play. He chose the double bass. Too big, they determined, but, responding to his preference for deeper sounds, gave him a half-sized cello for his sixth birthday.

“I’m still trying to learn how to play,” he says, not really joking. “It’s like practicing medicine or languages: you never stop learning, you never stop growing.” At times, he regrets not also mastering the piano. As an adult, he’d occasionally plunk away at home, he says, but “My wife would hear me and say, ‘Stop playing. Your sound is so ugly.’” He smiles and shrugs: “Well, she was a great violinist and had an *absolutely* beautiful sound.”

By the time he got to Harvard, Lesser was an accomplished musician and performer who chose a liberal-arts (over a conservatory) education because he also enjoyed math, literature, and science. He soon realized that he lacked his classmates’ laser-like penetra-



Cho, a graduate of Northwestern’s Bienen School of Music and already a recognized talent when he began NEC’s Artist Diploma program. Lesser seeks students with whom he feels “a human bond,” and who “can do more than just play fast and accurately—people who have something inside of them that’s an itch they have to scratch.”

Following Cho’s Prokofiev presentation, Lesser offers a few comments. “The hardest note in that piece,” he says, is the first one, a high B, “because you have to be able to hold it long enough to make it sound like you’re as big as the orchestra.”

Cho strikes the high B again, drawing across the strings with an almost defiant tone.

“No, no—gently,” Lesser cautions, then boldly sings the initial sound, but quickly retreats, holding it enticingly low and taut, like he’s making the audience hold its breath, before raising the volume again at the end. The note is held in a dip, like a suspension bridge.

Cho tries again. “Now *that* sounds like you’re powerful,” says Lesser, smiling. “Of course it starts loud, but now I can also hear

tion of mathematical challenges, but had, compared to his musical peers, an “inborn... natural spark.” After graduation, he studied for one year in Germany with Gaspar Casadó, then returned home. By 1963 he was studying with Piatigorsky, a faculty member at the University of Southern California, where Lesser became his teaching assistant.

Piatigorsky had escaped Russia as a young man, living in Poland, Germany, and France before moving to the United States and becoming a citizen in 1942. A gregarious raconteur, he (along with Pablo Casals and others) helped transform the cello from its traditional, supporting role into a starring one, and often performed with the BSO, which at one point was directed by his longtime friend, Serge Koussevitzky. It was a 1953 recording of Piatigorsky’s “Schelomo” with the BSO that, for Lesser, epitomized the composition’s romantic, combative, and soulful resonance.

In 1970, Lesser left Los Angeles to become a cello professor at the Peabody Institute in Baltimore (now affiliated with Johns Hopkins); he moved to the NEC four years later. As with his mentor, Piatigorsky, also a pedagogical force at Tanglewood Music Center, teaching for Lesser became integral to his artistry.

What’s required of a cellist? Lesser re-frames the question: “What does it take to be distinctive in anything? You have to master your craft, but you also have to have something to *do* with it. So, it doesn’t matter if you’re a cellist or a kazoo player.”

People attend arts events “because they’re hoping to get something that they don’t have,” he says. Too many young people these days “think they’re being judged, so they have to be perfect—and I think they should try to be,” he acknowledges. “But the most important thing is that they have to understand that they are there to share a vision or a feeling with somebody who is interested in knowing about that.”

Cho, he says, is “an amazing instrumentalist. In my work with him, I am trying build on that to get him to find out: what does he want to do with that?” Petrin, whose Helsinki repertoire included Shostakovich’s less well-known, but demanding, second concerto, is also an exemplary musician, Lesser notes, with “very, very deep feeling, very warm and communicative—but we’re working to give his listeners more ‘fun,’ along with the seriousness.” There, the goal is helping him build a bridge from the internal to the external world.

It’s exciting to see and hear students discover themselves, and struggle with unfamiliar works: Lesser urges them to play modern and peer-written compositions. Classical musicians, himself included, too often “box themselves into a certain pre-defined area that doesn’t sound like it’s going to grow—and it is growing,” he reports. “People and composers are always dreaming up something that someone else hasn’t done—because that’s what they do. To think of classical music as only Beethoven’s Fifth is unfair. If I don’t insist it has to be what it always was, I have great optimism,” for the future of the art form, he adds, “because people will always want to express themselves.”

In Helsinki, both Cho and Petrin reached the final round. (Jury members were not allowed to discuss or vote for their own students.) Cho played the Prokofiev piece last, and won. “He sounded very free and emotional,” says Lesser, with pleasure. “I think the excitement of the moment lent something to it that was very special. The judges all just said ‘Bravo,’ and when the vote came, there was no question about the outcome.”

## HM Explore More

For an additional, online-only, article on alumni, see :

### A Turning Point for WHRB

Harvard radio station’s long-time board chairman, David Elliott ’64, steps down.  
[harvardmag.com/elliottwhrb-18](http://harvardmag.com/elliottwhrb-18)



New music is always a challenge—for Cho, because he’s still young, and for Lesser because “my brain is old, my fingers are old.” But Ernest Bloch’s “Schelomo”? Beethoven? J.S. Bach? Lesser has played those pieces his entire life, and not long ago, recorded the complete Bach cello suites and Beethoven sonatas. “But that music? You’re never satisfied with how you’re doing,” he says. “So, there’s plenty to do. It’s not like I’m finished.” ▢

## Crimson on Capitol Hill: 116th

**The Senate tilts red**, the House blue for Harvard degree-program alumni or matriculants in the 116th Congress. The GOP roster now has eight senators (up two) and six representatives (down one); across the aisle are six senators (down one) and 32 representatives (up 3). Asterisks mark the newcomers.

**Senate Republicans:** \*Michael Braun, M.B.A. ’78 (Ind.); Tom Cotton ’99, J.D. ’02 (Ark.); Michael D. Crapo, J.D. ’77 (Id.); Rafael Edward “Ted” Cruz, J.D. ’95 (Tex.); \*Mitt Romney, J.D.-M.B.A. ’75 (Utah); Ben Sasse ’94 (Neb.); Daniel S. Sullivan ’87 (Alas.); Pat Toomey ’84 (Pa.)

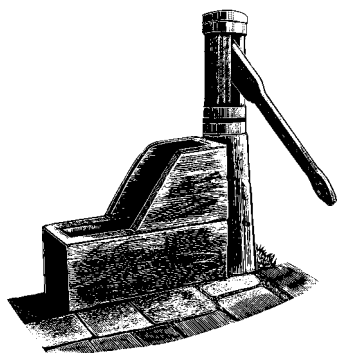
**Senate Democrats:** Richard Blumenthal ’67 (Conn.); Timothy M. Kaine, J.D. ’83 (Va.); John F. (Jack) Reed, M.P.P. ’73, J.D. ’82 (R.I.); Charles E. Schumer ’71, J.D. ’74 (N.Y.); Christopher Van Hollen Jr., M.P.P. ’85 (Md.); Mark R. Warner, J.D. ’80 (Va.)

**House Republicans:** \*Dan Crenshaw, M.P.A. ’17; Brian Mast, A.L.B. ’16 (Fla.); John Moolenaar, M.P.A. ’89 (Mich.); Elise Stefanik ’06 (N.Y.); \*Van Taylor ’96, M.B.A. ’01 (Tex.); \*Steve Watkins, M.P.A. ’17 (Kan.)

**House Democrats:** Brendan Boyle, M.P.P. ’05 (Pa.); Anthony G. Brown ’84 (Md.); Joaquin Castro, J.D. ’00 (Tex.); Katherine Clark, M.P.A. ’97 (Mass); Gerry Connolly, M.P.A. ’79 (Va.); James H. Cooper, J.D. ’80 (Tenn.); \*Antonio Delgado, J.D. ’05 (N.Y.); Bill Foster, Ph.D. ’83 (Ill.); Ruben Gallego ’02/’04 (Ariz.); John Garamendi, M.B.A. ’70 (Calif.); Josh Gottheimer, J.D. ’04 (N.J.); \*Josh Harder, M.B.A.-M.P.P. ’14 (Calif.); Brian Higgins, M.P.A. ’96 (N.Y.); Jim Himes ’88 (Conn.); Joseph P. Kennedy III, J.D. ’09 (Mass); Ron Kind ’85 (Wisc.); Raja Krishnamoorthi, J.D. ’00 (Ill.); James R. Langevin, M.P.A. ’94 (R.I.); \*Andy Levin, J.D. ’94 (Mich.); Stephen F. Lynch, M.P.A. ’99 (Mass.); Seth Moulton ’01, M.B.A.-M.P.A. ’11 (Mass.); \*Chris Pappas ’02 (N.H.); \*Katie Porter, J.D. ’01 (Calif.); Jamie Raskin ’83, J.D. ’87 (Md.); Raul Ruiz, M.D.-M.P.P. ’01, M.P.H. ’07 (Calif.); John P. Sarbanes, J.D. ’88 (Md.); Adam B. Schiff, J.D. ’85 (Calif.); Robert C. Scott ’69 (Va.); Terri Sewell, J.D. ’92 (Ala.); Bradley J. Sherman, J.D. ’79 (Calif.); Mark Takano ’83 (Calif.); Juan C. Vargas, J.D. ’91 (Calif.)



# Hallowed Ground



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

**H**ARVARD YARD is sacred ground. Admirers *expect* the canopy of tall trees, trimmed just so (the clean, early-1990s landscape design of Michael Van Valkenburgh); the familiar brick; the contrasting granite of University Hall. Opportunities to change its look are few, but when Nazneen Cooper was invited to seize the most recent one, she had the courage and taste to rethink the landscaping of Massachusetts Hall—a small cluster of leggy rhododendrons, hostas, and low yews, plus a couple of not-very-hardy dogwoods—following its renovation last summer.

During an autumnal walk around Mass Hall, Cooper—who is assistant dean of campus design and planning, involved in most of the Faculty of Arts and Sciences’ projects, with degrees in architecture and landscape architecture (M.L.A. ’95)—said she began with the building itself: a Georgian gem, Harvard’s oldest structure, and today home to both the president and his senior staff and (on the top floor) undergraduates. Given that, and in keeping with Van Valkenburgh’s first principle (he chaired the department when she was a graduate student; see “The Urban Landscaper,” November–December 2013, page 32), Cooper had no hesitancy in *subtraction*, so Mass Hall, like the other Yard buildings, “can stand proud.” Goodbye to the dogwoods, yews, hostas, and rhododendrons.

The upside is what replaces them. Merely surrounding Mass Hall with lawn would have been costly, given the expense of irrigation lines. And the Yard already has enough expanses of green (or, brown, where tourist or ceremonial throngs have worn the turf down). Cooper and her colleagues (Wayne Carbone, Paul Smith, Jason McKay, Arthur Libby, Ryan Sweeney, and Jack Lemos) instead opted for form, scale, and ground-level colors that will change seasonally.

Alongside the ramp to the front door, low *Fothergilla major* shrubs (fragrant members of the witch-hazel family) will bloom in spring, detonate fiery fall foliage, then shed their leaves to reveal an interesting winter architecture. Opposite, a *Stewartia pseudocamellia*—a showy understory tree, with magnificent white flowers—is surrounded by pachysandra, as is the towering locust that anchors the northeastern corner of Mass Hall.

Cooper is both quoting another feature of Harvard Yard, and narrating a story. There is little public art on campus, but two large specimens are the Henry Moore sculpture between Loeb House and Lamont Library, and the monumental Chinese stele by Widener. Drifts of pachysandra, rather than an off-putting barrier, surround both. Hence the use of that ground cover here, a nod to the *living* sculptural qualities of the locust, with its shaggy trunk, and the prized, mottled-bark *stewartia*. Near next-door Matthews Hall is a third such sculpture: a paperbark maple (*Acer griseum*), with an extravagantly cinnamon outer layer and, when mature, socko red (crimson, anyone?) leaves that should light up the brick and stone background. Around the corner on the south side, near the oaks that tower over the courtyard between Matthews and Straus, Cooper has installed an *Acer triflorum*: yet another textured trunk—plus eye-catching golden-orange fall color. All the new



woody stock enlivens the building, but will remain small enough in stature to harmonize.

Inside the tall fence on the Mass. Ave. side, the mature locusts remain but the rhododendrons and ivy are gone. The president’s office will be screened by a row of taller *Hamamelis intermedia* ‘Arnold Promise’: witch hazels introduced by the Arnold Arboretum in 1928, with yellow blossoms that unfurl in late winter, followed by more good fall color.

To the north, facing Harvard Hall along the main roadway through the Johnston Gate, the allée of tall ash, oak, and tulip trees are now carpeted in fresh sod, allowing the mellow brick and wooden trim of Mass Hall to stand free and clear in the changing light.

Cooper says the purpose of the project (for which Carolee Hill, managing director, real estate, within Harvard’s campus-services organization, was the client in connection with the building renovation) was rethinking the landscaping “to look fresh, to look renewed.” Its restrained results mean that Mass Hall can indeed, like its later siblings, “stand proud.” The new plantings, she said, have “more character and seasonal flavor” than their predecessors, without contradicting Van Valkenburgh’s handsome scheme.

Examining the result, even before things had settled in, Cooper was well pleased. Passersby should be, too, as Harvard’s front door has been subtly rendered more appealing and less imposing. This winter, and in future ones, this is something to enjoy—and to look forward to come spring.

—PRIMUS VI

# A Millennial Mystery

...and a possible clue in the stacks



cott (who had died 40 years earlier), her prospective son, “Shiloh,” and her millennialist beliefs. The strident songs are set to recognizable tunes, a puzzling farago of sea shanties, folk songs, hymns, even “Rule Britannia,” as well as one in Masonic-like cipher. What to make of this mystifying collection?

Opposite each song appears a naïvely drawn watercolor of a dream vision with no evident correlation to the adjacent lyrics. Early illustrations of biblical prophets give way to visions by contemporary millennial artists, but also to Hamlet and Macbeth, framed by laurel roundels evocative of medieval manuscript. The images may suggest Blake’s *Songs of Innocence and Experience* (1789, 1794)—and one Blake associate was the engraver William Sharp, who enthusiasti-

cally supported Southcott and tried unsuccessfully to convert Blake to her beliefs. Was George Sharp a relative?

Southcott published prophecies based on her dreams, such as “The Rider and Horse, Forming a Body of Stars” of October 17, 1802 (at left); she then sealed them until the predicted event came to pass. Self-described as the “Woman Clothed with the Sun” (Revelations 12), she gained followers who, in astonishing acts of communal conviction, desired “to be sealed” and certified for the coming millennium. In late 1813, she declared herself pregnant with the new Messiah, but the swelling proved to be a fatal disease; she died in 1814, taking her secrets with her. The sealed prophecies, reputedly stashed in a chest, have fascinated adherents and adventure-seekers for 200 years—while *The Songs of Argus Zion* offer an enigma of fervent millennialism in nineteenth-century England, still waiting to be unraveled.



Visit [harvardmag.com](http://harvardmag.com) to see additional images from the journals

~DIANE BOOTON

**D**O YOU LIKE a mystery? How about a treasure hunt for clues hidden in visionary dreams, spiritual lyrics, and symbolic ciphers in William Blakesque personal journals? Intrigued sleuths and scholars can visit Houghton Library to investigate *The Songs of Argus Zion* as a possible “map” to the whereabouts of prophetess Joanna Southcott’s chest of sealed revelations.

The *Songs* are stylishly arranged in a series of illustrated, handwritten journals (MS Eng 1610). The frontispieces give authorship to John “Argus Zion” [guardian of Zion] Brabham, a little-known Southcottian proponent, but the journals are signed and dated 1853–54 by George Sharp. His signatures are a close match to the journals’ script, identifying Sharp as the plausible copyist and illustrator. The journals compile more than 500 songs extolling South-







# JOIN MORE THAN **10,000** HARVARD ALUMNI

Whether you're in the Square or across the world, show your true Crimson pride by carrying the Harvard Alumni World MasterCard®.

Join more than 10,000 Harvard alumni already taking advantage of best-in-class rewards and unrivaled service you won't get with any other card.



THE **ONLY** CREDIT CARD OFFERED  
EXCLUSIVELY TO HARVARD ALUMNI  
**FEATURING:**

**NO** Annual Fees

**NO** Foreign Transaction Fees

**NO** Blackout Dates or Travel Restrictions

**HARVARDCARD.COM**





## Seeking 43 great leaders.



The Harvard Advanced Leadership Initiative offers a calendar year of rigorous education and reflection for highly accomplished leaders in business, government, law, medicine, and other sectors who are transitioning from their primary careers to their next years of service. Led by award-winning faculty members from across Harvard, the program aims to deploy a new leadership force tackling the world's most challenging social and environmental problems.

**HARVARD**  
ADVANCED LEADERSHIP INITIATIVE



be inspired at [advancedleadership.harvard.edu](http://advancedleadership.harvard.edu)

+1-617-496-5479