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January 11, 2017 Volume 117, Number 6

PRINCETON ALUMNI WEEKLY

An editorially independent magazine by alumni for alumni since 1900

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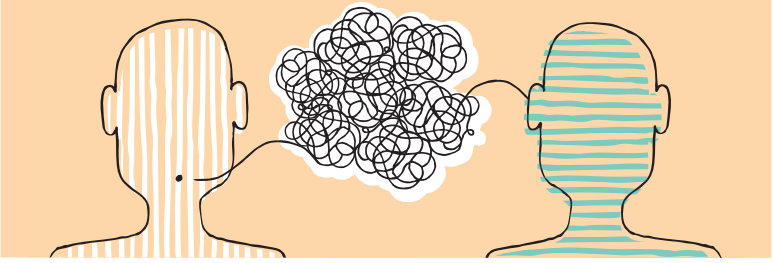
More on Language
Listen to some of the languages featured in this issue; read about student slang in the 1920s; share your Princeton parlance.



Joy and Pain
Blogger Beth Merrill Neel '86, a Presbyterian minister, writes about "what is good in life" as well as grief.

Night of Celebration
Greg Rosalsky *13 recalls a memorable White House visit in March 2010.

Alumni in the News
Sign up for PAW's new email newsletter, a weekly roundup of alumni newsmakers.

From top: Jon Heller; from left: iStock; courtesy Beth Merrill Neel '86

On the cover: Photo illustration by Jon Valk; some images from 123rf, Shutterstock

Campus Life: Learning Through the Co-curricular Experience

Princeton was fortunate indeed when W. Rochelle Calhoun agreed to become our new vice president for campus life last year. With compassionate and energetic leadership, not to mention a wonderful sense of humor, she is helping revitalize the residential experience for all of our students. I asked her to write the President's Page for this issue of PAW, *and I am delighted that she has agreed to share her vision for co-curricular learning at the University. — C.L.E.*

If you happened to visit Jadwin Gym the last time you were on campus, you may have noticed a sign announcing, "Education through Athletics." First used by former Athletic Director Gary Walters '67 to describe his goal for the University's athletics program, this phrase has since become the official motto of Princeton Athletics. It expresses a philosophy that coaches, professors, administrators, and peers embrace in encouraging our athletes to be good students and good people as well as outstanding competitors. So, in addition to winning 15 league championships last year, Princeton team members dedicated themselves to more than 4,000 hours of community service—including working on literacy in a local elementary school—while also earning significant distinctions, among them a Pyne Prize, a Rhodes Scholarship, and two Spirit of Princeton awards. "Education through Athletics," and the programs that support it, demonstrate how out-of-the-classroom experience can play a key role in the education and development of Princeton students.

In Campus Life we work collaboratively to foster an integrated learning environment in which students have opportunities for personal, intellectual, cognitive, emotional, social, physical, and moral development. The University's interest in our students' co-curricular lives is an expression of our commitment to supporting the fullest possible development of the whole student. When done well, co-curricular learning motivates students to devote time and energy to purposeful activities that have stated goals and measurable outcomes and that align with the values of a liberal arts education.

Danielle Alio

Community Action trips are offered as part of Princeton's Freshman Orientation program. Here, volunteers in the Farminary program install chicken wire to keep rodents out of a garden.

Sameer A. Khan/Fotobuddy

Vice President for Campus Life W. Rochelle Calhoun

The belief in the educational value of co-curricular experience has a long history at Princeton. Back in the mid-1990s, when the Center for Community Service (now the Pace Center for Civic Engagement) was being developed, Professor of Economics Burton G. Malkiel *64, in his Charter Day address of 1996, expressed his hope that "the new center . . . will show that community service is not simply a useful add-on, a discretionary extracurricular activity, but rather an essential part of a liberal education. . . . Experiences in service to communities will not then be peripheral to the academy but rather directly connected to learning and to the full possibilities and promise of education."

A recent report issued by the Service and Civic Engagement Self-Study Task Force, a part of the Princeton Strategic Planning process, echoes this aspiration to make service and civic engagement experiences integral to a Princeton education. The Pace Center, in response to the report, has adopted the idea of a "positive learning spiral" that deepens the service experience by asking students to reflect on why they serve, how they serve, and what they are learning from their service. This intentional approach has had positive results: a recent survey shows that 89 percent of Pace Center volunteers say that service helps them feel like they belong at Princeton, 82 percent express their belief that service has helped them become better leaders, and more than half say that service has influenced their coursework and professional interests.

A Princeton education provides a powerful lens through which students better understand themselves, others, and the world around them. In Campus Life, we strive to provide co-curricular opportunities that help students develop skills and habits of mind that will allow them to lead healthy and meaningful lives and to become thoughtful, mature, and responsible global citizens.

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TRIANGLE'S TRADITIONS

It is sad that we find more and more ways to expunge our heritage and homogenize our discourse ("Changing Times at Triangle," Nov. 9). Parody and the ability to laugh at ourselves are basic to human happiness, even survival. The kickline is pure entertainment, mainly incongruity and sight gags. You can get by with editing its theme and message, but the all-male kickline — as David Walter '11's article pointed out — is part of Triangle's birthright. Don't sell it out for a mess of pottage.

Mac Francis '56
New York, N.Y.

I enjoyed the article on Triangle. But going forward, a compulsory freshman course on "Silliness Appreciation" might be helpful to reduce delicate sensitivities, avoid offense, and prepare for life.

Tom Welch '62
Paia, Hawaii

I was in *Blue Genes,* which premiered at Houseparties in 1972. We had an all-female roller-derby kickline on roller skates. Since my balance wasn't good, I dressed head to toe in bandages — a wonderful sight gag. I still remember the roar of laughter in McCarter when I appeared!

Sheira Greenwald '75
Morristown, N.J.

EXPLAINING ISLAM

Thanks to Celine Ibrahim '08 for illuminating the religion of Islam (feature, Nov. 9). Given the massive amount of disinformation in the media, is it possible to ask the author to clarify the following: Given that "'muslim' ... describ[es] a person possessing ... full-hearted peace," where does beheading in the name of Allah come from; given "Islam's many inherently women-affirming principles," how do we understand honor killings; can one be a practicing Christian, Jew, Hindu, etc. and receive Islam's "hearty embrace of diversity"? What is the view of Sharia law on these issues?

Lew Kamman '67
Brooklyn, N.Y.

Ms. Ibrahim's explanations go a long way toward clarifying misconceptions and ignorance with respect to Islam. However, she avoids some of the issues that confuse us. To wit, why do Muslims, e.g., Sunnis and Shiites, viciously fight each other while each sect claims Muhammad as their spiritual leader under Allah? Why have all the recent major terrorist attacks in the United States, France, United Kingdom, and Germany been carried out by Muslims? If Islam honors and reveres women, as she states, why are women stoned to death in Saudi Arabia for adultery, not allowed to drive, and are considered inferior to men? Ms. Ibrahim highlights the kind and gentle aspects of Islam while ignoring much of its teachings and practices that are troubling.

David R. Pohndorf '65
Palm City, Fla.

Thank you for an upbeat piece that can be shared with many friends whose knowledge of Islam is evidently limited to the content of hateful emails.

James Schueler '66
Jupiter, Fla.

PLEDGING CONSENT

I applaud efforts to encourage consensuality of relationships. Reality check: People get drunk. People have sex. This is largely why parties happen. Frequently, on the morning after, there are revisions/gap-filling to the story. Drunk people cannot legally provide informed consent; one of the intended consequences of imbibing alcohol is to absolve one of one's reasoning capabilities. Therefore this idea of signing first, then partying (Student Dispatch, Nov. 9) — although well-intended and possibly a stagger in the right direction — cannot solve the problem.

Undergraduates are over 18 and by many moral and legal standards are considered adults. As such, universities (including Princeton) as part of the

FROM PAW'S PAGES: 4/15/55

Hardest Working Bell

Dear Sir:

Far be it from me to question any figure offered on the authority of my learned classmate the Dean of the Faculty, but I can't help feeling some curiosity about the basis for the estimate that the bell recently retired from Nassau Hall has probably rung more strokes than any other in the world.

Donald M. Street '19

Port Washington, N.Y.

The authority for the statement referred to was not Dean Brown but Professor Arthur Bigelow, Bellmaster of the University. He estimates that the old bell in Nassau Hall was rung more than 35,000,000 times. Of this number he allows only a modest 1,890,000 strikes in celebration of athletic victories, the most difficult figure to estimate. Mr. Bigelow's figures indicate that annually the bell is rung 257,550 times for class changes; 15,470 for curfew; 13,740 for Chapel; and 56,784 to strike the hours.

"Compare this," he writes, "to a bell founded in 1446, hanging in the tower of St. Gertrude's Abbey, Louvain, Belgium. It is estimated to have sounded, by ringing and by carillon play, 22,970,000 times. Accordingly, this venerable instrument will not have caught up to our old Nassau Hall bell until sometime around the year 2206 A.D.!" —Ed.

PAW TRACKS

SEEKING COMMUNITY: Jenny Korn '96 tried to build connections as an undergrad, founding Princeton's Thai-American Student Organization. That theme has continued, both in her work and in a Chicago-based alumni group. Listen to her story at paw.princeton.edu.

Jenny Korn '96

Courtesy Jenny Korn '96

FROM THE EDITOR

Language and Style

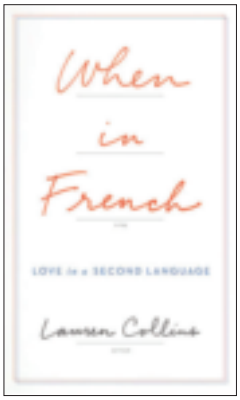
You may be surprised to learn that for all of PAW's quirks — and yes, there are many of them — the magazine adheres to a style guide. It's based on the nearly 600-page *Associated Press Stylebook,* with exceptions we collectively call "PAW style," because nowhere in the AP book will you find entries for such terms as *reuner* or *Nude Olympics*. (Should that be uppercase or lowercase?)

Pity the people who work on the AP stylebook and on similar guides — and in newsrooms across the United States. "[T]he country's highly polarized electorate and its factious media environment are combining to produce a linguistic battle royale," wrote Liz Spayd, public editor at *The New York Times,* in December. She was describing the furor of *Times* readers on both the right and left over how the term *alt-right* should be defined and whether it should be used at all.

From time to time, Princeton and PAW get caught up in these debates as well — most recently last fall, when it came to light that the University's HR department had instructed employees to use gender-neutral alternatives to commonly used words that included a form of "man" (PAW, Sept. 14). An uproar followed, and the University clarified that it was not banning any language.

This issue of PAW is devoted to language, though not to the year's linguistic controversies. Still, what becomes clear both in those debates and in the articles you see here is how language is more than communication. It's culture, and politics, and even history: Reviewing 2016's changes in the AP stylebook — the addition of terms like *alt-right* ("an offshoot of conservatism mixing racism, white nationalism, and populism ..."); names like *Rodrigo Duterte;* and nouns like *microcephaly* — provides a map of the year's thinking and events.

Collins '02



In a new memoir, *When in French: Love in a Second Language* (Penguin Press), Lauren Collins '02 explores learning not just the French language, but the culture that comes with it: "The necessity of classifying each person one came across as *vous* or *tu,* outsider or insider, potential foe or friend, seemed at best a pomposity and at worst an act of paranoia. The easy egalitarianism of English tingled like a phantom limb."

We hope that in reading about languages in this issue, you sense the cultures that made them, too, come alive. — *Marilyn M. Marks *86*

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educational process should inform freshmen (and freshwomen) when they arrive that they are considered adults and that they will need to sort these things out in an adult fashion among/between themselves.

Universities should provide counseling services to assist students in honing the skill, but should never feel accountable for the adult students' intimate actions, sober or drunk. If nonconsensual sexual contact has allegedly occurred, then law-enforcement authorities need to be brought in to adjudicate the case. The University can provide counseling and safe (alcohol-free) social gathering spaces but otherwise remove itself from responsibility in dealing with private behavior between adults.

College students need to grow up and take responsibility for their actions as adults, allowing the University to go back to providing a top-notch academic education. As a side effect, smart young grown-ups might just find relationships are a lot more interesting and fulfilling when their intellects are intact.

Jeff Georgia '78
Helena, Mont.

A LESSON FOR PRINCETON

I'm a bit surprised to be seated at my computer to send a letter to the editor of PAW praising not Princeton, but Harvard. But there's definitely an important message here for Princeton. The Harvard decision to cancel the remainder of the season for their men's soccer team (because of exceptionally sexually uncouth behavior) and to waive any postseason games is laudable and places an important marker in the ground for other universities like our own.

Where is the line for responsible/irresponsible undergraduate behavior? Even though it seems pretty obvious to most of us, not many universities have yet drawn the line where Harvard just did. Take note, Princeton.

Douglas M. Yeager '55
Estes Park, Colo.

MORE PRESIDENTIAL HOPEFULS

Kathy Kiely '77's story about Princetonians who have run for the

Philip Andelman

White House (feature, Oct. 26) was a fascinating look at the impact the University has had on politics. But let's not be too hasty patting ourselves on the back — for every Princetonian who won the White House or made a major mark on history, there is another alumnus whose presidential candidacy sunk like a stone.

Starting in the 1800s, William Dayton 1825, the GOP's first vice presidential nominee in 1856, ran for president four years later, but only 14 delegates voted for him. Two Princetonians were dark-horse candidates at the 1868 Democratic convention — former New Jersey Gov. Joel Parker 1839 and Frank Blair 1841, scion of a powerful Missouri political dynasty. Parker's candidacy never got anywhere; Blair managed to parlay his support into a vice presidential nomination, but he and his running mate, Horatio Seymour, won only six states in the fall.

In the 20th century, George Gray 1859, a former senator serving as a U.S. circuit court judge, attracted some attention at the 1904 Democratic convention as a less-scary alternative to William Randolph Hearst, but the convention ultimately nominated another obscure judge, Alton Parker. In 1928, two Princetonians — former Ohio Sen. Atlee Pomerene 1884 and Huston Thompson 1897, who had chaired the Federal Trade Commission — tried to stop Al Smith from winning the Democratic nomination. Smith beat Pomerene in the Ohio primary that year by more than 40 points, and Thompson finished dead last in the sole ballot that the Dems held at their convention. Ohio Gov. George White 1895 fared a little better at the 1932 Democratic convention, but his 52 delegates were only good enough for fourth place.

In 1936, anti-New Deal businessman Henry Breckinridge 1907 ran a quixotic campaign against Franklin Roosevelt in the primaries and got thumped badly in every contest he entered. Maryland Gov. Daniel Brewster '46 did win his state's primary in 1964 by a small margin, but only as a surrogate for Lyndon Johnson (LBJ didn't want to run the risk of losing to George Wallace, who was also on the

continues on page 10

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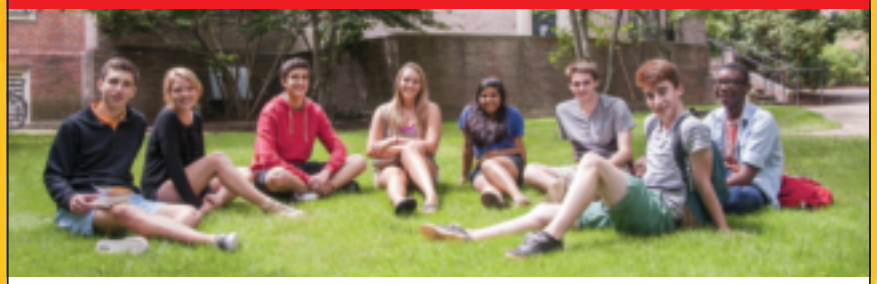

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continued from page 7
ballot). More recently, former Delaware Gov. Pete du Pont '56 ran for the 1988 GOP nomination, but dropped out after winning only 10 percent in the New Hampshire primary.

Princeton doesn't fare any better in vice presidential history. Six Princetonians — Blair, Dayton, Richard Rush 1797, John Sergeant 1795, Amos Ellmaker 1805, and Theodore Frelinghuysen 1804 — were on major-party tickets between 1824 and 1868. All lost. No Princeton alum has been a major-party running mate since then.

Keating Holland '82
Washington, D.C.

Congratulations on PAW's thoughtful and timely piece on Princeton presidents and candidates. Especially apt was the juxtaposition of the quote from Bill Bradley '65, the best qualified Tiger never to reach our highest office — "If people of idealism don't go into politics, you abdicate that to people who misuse the system to their own advantage or will be ideologues that will polarize the country or more," which provided the lead-in to the profile of Ted Cruz '92. 'Nuff said.

J. Michael Parish '65
Alameda, Calif.

REIN IN ADMINISTRATORS

I loved my years at Princeton and have contributed to Annual Giving every year for 50 years. I will also leave a portion of my estate to Princeton when I die. Nonetheless, I am not blind to her warts.

I once heard a talk by C.N. Parkinson explaining Parkinson's laws. One was: "In any organization, administration expands without limit." Where there were a modest number of deans and administrative personnel in 1960, there are now multiple deans, assistant deans, and a battalion of accountants and administrative personnel. Each receives a salary and benefits at considerable annual cost.

Tuition in 1960 was about $800/year, or about 15 percent of the median U.S. annual income. In 2015, tuition was about $43,000/year, or about 75 percent of the median household income. The compound growth rate over this interval is 7.2 percent! Unabated, this will lead to "a tyranny of exponential functions" where in 2040 a college education will cost approximately $1 million, and in 2065 it will run $5 million! These numbers seem absurd, but annual college expenses over $50,000/year would have seemed preposterous in 1960. What to do?

I believe all universities need to limit costs to avoid pricing themselves out of the market. How many deans, assistant deans, and administrators are essential to the operation of a great university? When I look back on my time at Princeton, I remember four wonderful professors who helped make my career possible. I do not remember a single administrator.

Paul F. Jacobs *66
Saunderstown, R.I.

IMPROVE THIS RANKING

Like many other alumni, we were proud to see Princeton again ranked No. 1 among American universities by *U.S. News & World Report* (On the Campus, Oct. 26). We wish that Princeton would have been ranked higher than 102nd among American colleges and universities that "prioritize environmental protection" by *Sierra Magazine* in its October 2016 issue. Admittedly the criteria used by the Sierra Club to establish its rankings could be at odds with other worthy institutional priorities, but it still would be gratifying to see our university ranked higher than 102nd among the "colleges working hardest to protect the planet in 2016." Ultimately, it would be wonderful for Princeton to claim the No. 1 spot in both these college rankings.

Frank Ellis '54
Green Valley Lake, Calif.
Richard Tombaugh '54
Hartford, Conn.

SLIGHTING GRADUATE ALUMNI

For three years I have tolerated the painful actions of President Eisgruber '83's administration (the Wilson fiasco, the recommendation to eliminate uses of "man" from the Princeton vocabulary, the drive for diversity for the sake of diversity at the expense of quality), all for the sake of political correctness.

Now it has come to my attention that only graduate alumni who pay dues receive all 14 issues of PAW. The University sends five issues to those who do not pay dues. This is not only discrimination, but it is stupidity. All undergraduate alumni receive all issues of PAW, even if they do not pay dues. The classes pay for this through dues collection. This, too, is ridiculous.

I understand that this problem is one that President Eisgruber inherited, but I hope it is one that he will get rid of. The University has spent a huge effort in the last few years to make the graduate students and alumni feel more included. I can't believe that this unnecessary slight was overlooked.

For 20 years I have argued with Vice President and Secretary Bob Durkee '69 that PAW should be sent by the University, at its expense, to all alumni. What better loyalty-raiser does Princeton have? It would be money well spent. That is why the University spends millions on Reunions and other Princeton events and programs.

If the University can't find the money in our huge endowment, one or more alumni could be asked to endow PAW and be rid of the problem once and for all.

Thomas P. Wolf '48
Fairfield, Pa.

Editor's note: Graduate alumni receive an email notification when each new issue of PAW is posted online, with links to stories of special interest and web-exclusive material.

RENAMING SUGGESTIONS

The article "Trustees Approve Naming Policy" in the Oct. 5 issue brought the good news that the University aspires to be "diverse and inclusive" in the naming of campus buildings. I suggest consideration be given to our two leading graduates of Hispanic heritage. First, Jeff Bezos '86, founder and CEO of Amazon, whose stepfather is Cuban; he changed the world and created 225,000 jobs. And second, Sen. Ted Cruz '92, one of Princeton's highest-ranking elected officials in the U.S. government.

Charles S. Rockey Jr. '57
Boca Grande, Fla.

The Oct. 26 issue reports that there is a committee to rename buildings, it solicits suggestions for names, and PAW will accept suggestions and forward them to the committee. One of the buildings is West College. I have a suggestion: the Andrew Fleming West Building. Please forward this to the committee.
Ted Perlman '46
Washington, D.C.

West College for West College sounds right to me!
John R. West '55
Sacramento, Calif.

AUTHORS' QUERY
Together with Philip Coleman (Trinity College Dublin), I am co-editing a volume of John Berryman's letters, under contract to Harvard University Press. Because Berryman taught at Princeton for nearly 10 years, beginning in 1943, we believe some of your alumni may possess unpublished letters from the poet. We would like to consider these for inclusion in our volume. If readers believe they have material of use, we would be grateful if they could contact me at mcrae@njit.edu or Dr. Coleman at philip.coleman@tcd.ie.
Calista McRae
Department of Humanities
New Jersey Institute of Technology
Newark, N.J.

WE'D LIKE TO HEAR FROM YOU
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Mail: PAW, 194 Nassau St., Suite 38, Princeton, NJ 08542
PAW Online: Comment on a story at paw.princeton.edu
Phone: 609-258-4885
Fax: 609-258-2247

Letters should not exceed 250 words and may be edited for length, accuracy, clarity, and civility. Due to space limitations, we are unable to publish all letters received in the print magazine. Letters, articles, photos, and comments submitted to PAW may be published in print, electronic, or other forms.

News *from the* Alumni Association

aluminaries

Ricardo DeLeon '86
President, Association of Latino Princeton Alumni

c. 1986 *(center)*

To learn the many ways to stay connected to Princeton, contact the Office of Aumni Affairs at 609-258-1900 or alumni.princeton.edu

As a high school senior in Corpus Christi, Texas, Ricky DeLeon applied to five colleges. Princeton was the one he didn't visit, but it was the one he chose to attend.

"I had a romantic vision of what it would be like. I wanted a change." He remembers arriving with two suitcases and little idea of what to do next. He remembers his first A- in Calculus. He remembers his many interactions with friends in the Latino community on campus. But he also remembers times of great discomfort.

Fifteen years later, Ricky had his MBA, was living in Cincinnati while working at Procter & Gamble and was active with local Latino service groups. It was then that he felt he had begun to reconcile his Princeton experience. He had to "catch up with tradition." His volunteer work began with Alumni Schools Committee interviewing. Now, however, his deepest ties are through the Association of Latino Princeton Alumni (ALPA). Since 2015 he has been the president of ALPA and currently co-chairs the steering committee for the upcoming University conference for Latino alumni, on campus March 30 to April 1.

"Through Princeton I learned to bridge two different lives and to value both lives. We want this conference to serve that role: to present options for achieving a balance, a bridge. Some will want a forum to share and reconcile their discomfort with their Princeton experience, and some will be eager to explore how to position for future success," he says, noting a panel on how to get into "the C-suite."

Ricky's understanding of the importance of that bridge between two equally valuable lives informs his own choices beyond his Princeton experience and engagement. In November of 2016, he became the first Chief Operating Officer of the Hispanic Scholarship Fund in Gardena, California, which, through grants and support services, helps exceptional Latino students cross that bridge by ensuring that they successfully complete their college years.

Reflecting on his career move, Ricky's enthusiasm is palpable: " My new job, my role with ALPA and my work with the conference have come together to create an exciting synergy in my life."

Graduate Alumni

Congratulations to Pedro Pablo Kuczynski *61 P20
Winner of the 2017 Madison Medal
Join us in celebrating Madison Medalist Pedro Pablo Kuczynski *61 P20, an economist and current president of Peru, at Alumni Day on February 25, 2017. Learn more about this year's Medalist and register for Alumni Day activities at: **http://alumni.princeton.edu/goinback/alumniday/2017/**

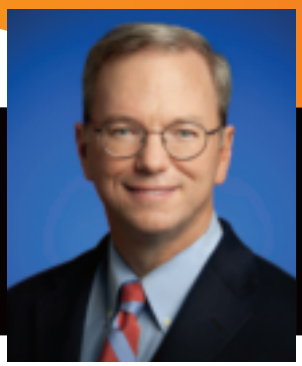
Dean of the Graduate School Sanjeev Kulkarni to meet with alumni in Texas
Dean Kulkarni has been visiting regions each year to connect with alumni, share a campus update and hear how to best sustain and enhance graduate education at Princeton. Join the conversation at an upcoming gathering: Houston (January 23); Austin (January 24); and Dallas (January 25). For more information, visit: **http://alumni.princeton.edu/graduate/dean**

APGA Reunions 2017: Reunions are in our DNA
All graduate alumni are invited to campus for Reunions June 1 – 4, when the Association of Princeton Graduate Alumni (APGA) will celebrate the Natural Sciences with the theme *Reunions are in our DNA*. Come for the weekend and discover developments in your home department, meet current faculty and students, and reminisce the good old days with fellow graduate alumni. As always, the weekend will offer fabulous entertainment including live music, fireworks and the P-rade! To learn more, visit: **http://alumni.princeton.edu/communities/graduate/apga/reunions/2017/**

These pages were written and paid for by the Alumni Association.

February 25, 2017

Alumni Day



Woodrow Wilson Award
Eric E. Schmidt ’76
Executive Chairman, Alphabet Inc.

Madison Medal
Pedro Pablo Kuczynski *61
President, Peru

In addition to addresses by the two award winners, morning programming will include:

- **“Practice, Practice, Practice: Princeton’s New Arts Complex,”** featuring **Michael Cadden**, Chair of the Lewis Center for the Arts, and **Wendy Heller**, Chair of the Department of Music, discussing how the new buildings designed by Stephen Holl, opening in the fall of 2017, will affect the arts landscape of the University
- **“Perspectives on the Global Refugee Crisis,”** a panel discussion with **Douglas Massey *78,** Henry G. Bryant Professor of Sociology and Public Affairs and Director of the Office of Population Research, the Program in Population Studies, and the Program in Urban Studies; **Andrew Moravcsik,** Professor of Politics and International Affairs and Director of the European Union Program; and **Jacob Shapiro**, Professor of Politics and International Affairs

Then gather in Jadwin Gymnasium for a reception, followed by the Alumni Association Luncheon and Awards Ceremony.

After the luncheon, join fellow Princetonians for the moving Service of Remembrance at 3:00 PM in the University Chapel.

Cap off the day with a festive Closing Reception for all alumni at 4:00 PM in Chancellor Green Rotunda.

Campus is abuzz with other activities all day, including a workshop on navigating the college admissions process, exhibits at the Art Museum and Firestone Library, performances in the arts, athletic competitions… and much more.

For the full Alumni Day schedule and registration information, go to: alumni.princeton.edu/alumniday

Schedule subject to change.

On the Campus

The eastern face of Whitman College's Community Hall. This year will mark the 10th anniversary of the college's completion. *Photograph by Ricardo Barros*

Students demand that Princeton become a "sanctuary campus," Nov. 17.

Election Aftermath

Trump victory spurs student concerns; Eisgruber issues pledge of support

Princeton responded to the election of Donald Trump as president of the United States with student protests, faculty petitions, and administration statements, and some Republican students quietly expressed concerns that they could not speak freely about the result.

More than 2,000 people signed a petition sponsored by the DREAM Team, a student group that advocates for immigrant rights, and nearly 400 attended a Nov. 17 march through campus to demand that the University become a "sanctuary campus" to protect undocumented immigrants.

A primary focus of student unease was the future of undocumented students who have been protected by the Deferred Action for Childhood Arrivals (DACA) policy, an Obama-administration initiative that protects undocumented immigrants who arrived in the country as children. Trump said during the campaign that he might end the policy and deport students who had been protected by it.

President Eisgruber '83 joined with more than 100 college presidents to urge continuation of the DACA policy and promised to take every legal step available to protect undocumented students, but rejected the idea of declaring Princeton a sanctuary campus. He said immigration lawyers have advised that the sanctuary-campus concept "has no basis in law,

Protesting election of Donald Trump, Nov. 9

Eisgruber: Princeton to take every legal step available to protect undocumented students.

and that colleges and universities have no authority to exempt any part of their campuses from the nation's immigration laws."

"In a country that respects the rule of law, every person and every official, no matter what office he or she may hold, is subject to the law and must respect the rights of others," Eisgruber continued. "Princeton University will invoke that principle in courts and elsewhere to protect the rights of its community and the individuals within it. But we jeopardize our ability to make those arguments effectively, and may even put our DACA students at greater risk, if we suggest that our campus is beyond the law's reach."

Sociology professor Miguel Centeno was working with Princeton residents to organize a network of safe houses that would be open to undocumented students if there were to be a raid on campus. "If it comes down to protecting a student who has done nothing wrong, but is undocumented, I will open my house and I will allow myself to join their fate," Centeno said.

Students were organizing around other issues as well. The Women's Center and the Program in Gender and Sexuality Studies was funding buses to take students to the Jan. 21 Women's March on Washington in support of women's rights and marginalized groups.

Muslim students met to develop ideas to combat the bigotry — and in some cases, violence — experienced by Muslims nationwide after the election. "We are fighting for something as simple as making sure that we, our families, our friends, undocumented migrants, and others from minority groups can live safely in America — [both] Muslims and non-Muslims," said Robia Amjad '18, co-president of Muslim Advocates for Social Justice and Individual Dignity, a student group.

Graduate Student Government president Mircea Davidescu said some international students fear that the

From top: Mary Hui '17; Spencer Parts '17

Trump administration will change or repeal visa programs needed to find employment in the United States after graduation. International students make up about 42 percent of the graduate student body. Some international undergraduates who are eligible for citizenship have asked for advice on how to pursue that now, said Khristina Gonzalez, associate dean of the college and director of programs for access and inclusion.

Gonzalez said the University has encouraged groups of students to come together while reaching out to students with the message: "How are you feeling? How can we be there to support you? Do you need help with legal questions?"

As examples, she cited a conversation in Butler College, hosted by Nicole Shelton, head of the college, about the election and "how we move on from here"; a workshop sponsored by the Davis International Center and the Office of Religious Life with a lawyer experienced in immigration issues; and a series of events called "Community Mindfulness in Action" that offered both practical legal information and the opportunity to "reflect where we are and to de-stress."

Concern has not been limited to Trump's critics. English professor Jeff Nunokawa, head of Rockefeller College, described having a "very sobering" conversation with a group of conservative students. He believed they were not open to sharing or admitting their views on Trump because "they felt a lot of pressure on campus," and worried that others might assume they were racist because of their support for the president-elect, he said.

A primary issue "is people misunderstanding conservatism even more than they already do and assuming that being conservative means supporting Trump," said Sofia Gallo '17, vice president of the Princeton College Republicans. That, she said, "will make it harder to have conversations about politics." *By A.W. and Francesca Billington '19*

READ MORE: For more information on the events and actions in this article, go to **paw.princeton.edu** and click on "After the Election: The Campus Responds."

Illustration: Tomasz Walenta; photo: courtesy Ann Thompson GS

STUDENT DISPATCH

Changing Landscape for Public Service

By Ann Thompson GS

Julia Reed, a second-year M.P.A. student, finally closed down the Woo's festive-turned-somber election watch party at 1:30 a.m. Nov. 9, when few remained to witness Donald Trump's victory. Personal disappointment aside, Reed, who had hoped to work in a Clinton administration, suddenly faced an ambiguous career landscape.

The Woodrow Wilson School grooms public servants, but the election outcome has some soon-to-be graduates, like Reed, looking for opportunities to work in the public interest outside of more traditional Washington, D.C., roles.

Simone Webster, a second-year M.P.A. student focused on education policy, said she was concerned "because you read different things every day — like, oh, there's not going to be a Department of Education. I don't know what that means for me, or what the implications will be on the ground level." Her classmate Vivian Chang has not ruled out working on climate-change policy for the new administration, but is now considering alternatives. "I think people are even looking at working for solar companies, rather than government being the solution right now," she said.

Second-year M.P.A. student Claire Denton-Spalding asked former professor Robert Hutchings for ethical advice and sent classmates his response. "Be prepared to wait until the dust settles before taking a position," wrote Hutchings. "Don't compromise on your principles — which means you need to know what they are. You are embarking on a long career, and the patterns of behavior you adopt now will be more important than any particular job that you take (or decline)."

Many have found such advice useful, including Ryan Stoffers, who interned at the Consumer Financial Protection Bureau last summer and hopes for a relatively "politically insulated position" after getting his M.P.A. degree this year. "There are still many places to make a positive impact," he said.

International students also are deliberating. Francisco Varela, a second-year M.P.A. student, feels an urgent obligation to his native Mexico. "Originally, I wanted to stay here for a couple of years, but now I feel like I need to go back," he said.

Several students have career commitments, and some are enthusiastic about serving. Air Force Maj. Hugh Walker, one of five master's candidates on active duty, explained, "Our mission never stops." And three graduating M.P.A.s are committed to joining the U.S. Foreign Service.

continues on page 18

Alex Wheatley '16, who will serve a two-year federal internship as part of the University's Scholars in the Nation's Service Initiative after her first year in the M.P.A. program, said she came to realize that "the issues I care about may be more threatened by a Trump presidency than a Clinton presidency. I'll use my fellowship years to do the most good that I can."

STUDENT DISPATCH

Uncertainty for Climate, Energy Research

By Nikita Dutta GS

Since the election, Princeton graduate students working on issues related to climate change are worried about their prospects, fearing that the new administration won't support environmental initiatives.

"I wouldn't say people are scared right now, but people are uncertain," said Yuzhen Yan, a fourth-year Ph.D. student in geosciences. "If the current situation persists, I think there will be more talents being attracted somewhere else."

Yan, who hopes to become a professor, is concerned that government funding cuts may limit new positions and is considering opportunities abroad. He believes many of his peers feel similarly. "It's very frustrating that science has become so politicized," said Anna Hailey, a sixth-year Ph.D. student in chemical and biological engineering. "Especially on issues that have global impact."

Not all students are looking overseas just yet. Sarah Schlunegger, a third-year Ph.D. student in geosciences, feels good about academic career prospects. She expects funding will "more than rebound" after a Trump presidency and plans to stay the course, saying research and teaching are now "that much more necessary." Advancing environmental science in the coming years, she said, will involve understanding "the cross section between human psychology and climate change."

Grad students said that highlighting particular benefits of their research may be helpful. "Focusing on gains in efficiency and sustainability, and emphasis on domestic job creation and energy independence — instead of reducing environmental impact — may be a better way to motivate research under this administration," said Hailey, who is researching biofuels.

Greg Davies, a fifth-year doctoral student in mechanical and aerospace engineering, has similar plans to promote his work on efficient batteries. "From a scientist's or an engineer's point of view, just making technology cheap enough that it's economically going to march forward is probably the most critical thing," he said. "Because at that point, it doesn't really matter what people think from a philosophical perspective."

In the meantime, students expressed confidence in Princeton's support. "All the scientific community agrees that human influence is undeniable in climate change," said Victor Charpentier, a third-year Ph.D. student in civil and environmental engineering. "Universities are not going to divert their attention from this."

TALK BACK After the election, bioethics professor Peter Singer was approached by *Quartz,* an online news site, with the following question:

If you disagree with Donald Trump's positions, is it ethical to take a job in the Trump administration?

Singer

Take the job, said Singer, who specializes in applied ethics. "My view is that you ought ... to go in thinking you'll be able to make a difference," he told *Quartz.* "And if you get to the point where you think there's nothing you can do, you should be prepared to leave."

If you were to give advice, what would you say? **Share your views at paw@princeton.edu.** Read the full Singer interview here: bit.ly/SingerQz.

NEW VICE PRESIDENTS

The University has filled two top administrative positions. KEVIN HEANEY leads the offices of development and alumni affairs in the newly created position of vice president for advancement, while KYUJUNG WHANG begins work Jan. 23 as vice president for facilities.

Whang has been vice president of infrastructure, properties, and planning at Cornell University. At Princeton, he will work to complete the University's campus plan, scheduled for release by next fall. He succeeds Michael McKay, who retired recently.

Whang

Heaney

Heaney joined Princeton in 2015 as deputy vice president for development and has been acting vice president for development since March. In his new role, he will help shape the University's next fundraising campaign. The last campaign, which ended in 2012, raised more than $1.75 billion.

Until now, development and alumni affairs have reported through different vice presidents. President Eisgruber '83 has said that the two offices will have "independent and co-equal status" under the new vice president.

PAW will continue to report for administrative matters to Margaret M. Miller '80, deputy vice president for alumni affairs; her office previously reported to Robert K. Durkee '69, vice president and secretary. Durkee and Miller will continue to sit on PAW's board, and the magazine will remain editorially independent as stipulated by its charter.

Far left, from top: Marie Lilly, Tony Phillips; vice presidents, from top: Cornell University; Andrea Kane

Frank Wojciechowski

Q&A: HENDRIK HARTOG AND ANNE CHENG '85

Looking for America

Task force calls for new approach with interdisciplinary, problem-oriented focus

A faculty task force has proposed a makeover of American studies that would transform the University's oldest certificate program into the Collaborative Center for the Study of America. It would have dedicated faculty and an undergraduate major and would assemble working groups in a research hub called the Collaboratory. A statement by President Eisgruber '83 and Dean of the College Jill Dolan endorsed most of the recommendations while noting that fundraising would be needed for many of them. PAW spoke in December with professors Anne Cheng '85 and Hendrik Hartog, the co-chairs of the task force.

What needs changing in American studies?

Hartog: We talk more about affirming and expanding what the American studies program already does. One of the things that's distinctive here is that we're a relatively small, relatively less-powerful interdisciplinary unit on a campus where the traditional disciplines are probably more powerful and more successful than at any other major university. So one discourse is about what is America; the second problem is about interdisciplinarity, which we embody.

The report talks about how the natural sciences give research more of a problem orientation than the humanities and social sciences.

Cheng: And that's why we propose the model of what we call the Collaboratory. ... You would be problem-directed, not discipline-directed, and the people participating would be people from all these different disciplines, who may have very different approaches but may be worrying over the same problems. We also want to have faculty and graduate students together. This is about creating intellectual communities.

Where do ethnic studies fit in? You recommend that an American studies major offer an option of specializing in Asian American studies or Latinx studies.

Cheng: We think it's really important that as we build these fields at Princeton, they are intellectually integrated so that we understand Asian American studies is part of American studies and American studies is enriched by paying attention to Asian American studies — and the same with Latinx. Part of the lessons we've learned from ethnic studies that have been developed elsewhere is that over time, they become increasingly segregated. ...

In the last 10 years or so, there have been various trends in American studies — a more transnational focus, and a move toward thinking about ethnic studies as being within the purview of and of great concern to American studies.

Hartog: Part of the dynamic is that in the '80s and '90s, many programs — both ethnic studies and American studies — created separate fields that were all connected to American studies, but often as their own identities. There's been a pushback against that. I think you can read in the report our attempt to mediate between both the need for recognition of group identities and a kind of commitment to integrating groups in a larger conversation.

What about the cultural divide we see in America today?

Cheng: If one thing is clear over the last year, it's that we hardly know what America is. We all think we know this thing, but it's constantly changing, its borders are changing, its self-perception is changing, there's just so much for our students to think through. And we do not want to tell them what to think; all we can do is give them a safe place for conversation and for difficult, conflicting points of view — and to give them some tools, some vocabulary. *Interview conducted and condensed by W.R.O.*

Taking a Deeper Look at Portraits

CLASS CLOSE-UP: Photographic Portraiture

Teacher: Visual arts professor Jeff Whetstone

Focus: The history of photographic portraits; practical issues such as how to light and frame a photo; and theoretical topics such as how selfies and mug shots provide insights into how people choose to portray themselves to others and how others view them.

Sample assignments: The selfie can be traced back to the mid-1800s in France, when *cartes de visite,* or collectible pocket-sized cardboard photos of everyday people, became popular; students use a camera with a bellows to create their own. The final project is a series of photos on a subject chosen by the student.

Required reading and viewing: *The Naked Face* by Malcolm Gladwell; *Regarding the Pain of Others* by Susan Sontag; excerpts from the films *Blade Runner* and *Days of Heaven*.

Who should take it: Photography courses at Princeton are prerequisites. "I try to give very little direction," Whetstone said. "In art you're creating meaning and there's not really any path to do so ... it's important for [students] to be comfortable not knowing if they're on the right path."

The importance of photos: "We communicate in images almost as much as we do in text," Whetstone said.

STUDENTS' PORTRAITS: THREE EXAMPLES

LEFT: Walid Marfouk '17 asked his subjects, including the woman at left, to make the most neutral face possible. "The goal was to limit the projection of my own aesthetics," he said, and provide "direct, undisturbed testimony of my subjects' characters."

RIGHT: Emily Madrigal '17 finds subjects for her photos on Craigslist and pays them an hourly rate. Noting this family's expressions and casual lighting, she said, "My photos are messy and don't look like stereotypical family photographs."

"It's imperative that people who use photography learn its history and syntax, learn how to create new forms and how to engage with old forms, and learn to be more articulate communicators."

Whetstone's hope for students: "There are deep complications and profound possibilities in looking into the face of another person," he said. "When you make a portrait, you're representing someone. When you pose for a portrait, you're performing an identity. ... These performances cut to the very nature of our human desire of looking into another person's face." *By A.W.*

ABOVE: "The universal emotion showcased through the facial expression and body language of the models" makes this image special, said Pranaya Anshu '19, who chose roommates who are close friends as subjects.

STUDENT SCHOLARS

11 Named as Scholarship Recipients

Eleven Princeton seniors will continue their studies overseas next year as recipients of prominent scholarships.

Rhodes scholar **Aaron Robertson '17,** of Redford, Mich., is a concentrator in Italian and co-editor-in-chief of the *Nassau Literary Review.* At Oxford, he will purse a master's degree in modern languages.

Marshall scholar **Joani Etskovitz '17,** of Wayne, Pa., is an English major completing certificates in humanistic studies and European cultural studies. She will seek master's degrees in English literature at Oxford and at King's College London, with plans to pursue a Ph.D. and to become a professor.

Mitchell scholar **Ellie Sell '17,** of Tallahassee, Fla., will study gender, sexuality, and culture at University College Dublin. Sell, a chemistry major who plans to pursue a medical degree, hopes to build an academic foundation that will be valuable as a physician and researcher.

Becca Keener '17 and **Shannon Osaka '17** (photos from top) will receive the Daniel M. Sachs '60 scholarship to study, work, or travel abroad after graduation.

Keener, of Pilot Mountain, N.C., is a religion major with certificates in Near Eastern studies and Arabic language and culture. She will pursue a master's degree at the London School of Economics in "Global Europe: Culture and Conflict."

Osaka, of San Jose, Calif., is an independent concentrator in environmental science and environmental studies; she will receive certificates in creative writing, technology and society, and environmental studies. She plans to pursue an M.Phil. in nature, society, and environmental governance at Worcester College, Oxford University.

The following six students were named to the second class of Schwarzman scholars. They will live in China as they complete a one-year master's program at Tsinghua University:

Emery Real Bird '17, of McNary, Ariz., is a concentrator in the politics department with a certificate in East Asian studies. He is the founder and president of Natives at Princeton, and plans to help develop public policy relating to American Indians and ethnic minorities.

Jacob Cannon '17, of Scarsdale, N.Y., is majoring in the Woodrow Wilson School with a certificate in Chinese language and culture. He hopes to have a career in public service.

Kevin Wong '17, of Thornhill, Ontario, is a Davis scholar and philosophy major. Wong hopes to develop the skills to advance social change in Canada.

Molly Reiner '17, of Potomac, Md., is a Woodrow Wilson School major, interested in the intersection of diplomacy and business in China. She plans to use her Chinese in work in both the public and private sectors.

Preston Lim '17, of Vancouver, British Columbia, is majoring in Near Eastern studies and minoring in history and the practice of diplomacy. He plans to study China's "One Belt, One Road" initiative.

Samuel Maron '17, of Petersham, Mass., studies neuroscience. Maron plans to explore health-care and business opportunities in China.

Photos courtesy of the students, except for: Monique Claiborne '17 (Keener); Peter Hyungjun Yoon '20 (Osaka); Denise Applewhite/Office of Communications (Maron)

Mission: Critical

A reshaped language-study program offers scholarships for a summer abroad

Undergraduate women first came to Princeton in 1963 to study six "critical languages" — Arabic, Chinese, Japanese, Persian, Russian, and Turkish — for one to two years. A critical-language program exists today as well, though the structure of the program has changed.

Since 2006, the U.S. State Department has offered scholarships for summer study abroad by undergraduate and graduate students who plan to use certain languages in their careers. Each year, about 600 students are selected to spend seven to 10 weeks in a program of intensive language study and cultural immersion. Today, 14 languages are deemed critical: Arabic, Azerbaijani, Bangla, Chinese, Hindi, Indonesian, Japanese, Korean, Persian, Punjabi, Russian, Swahili, Turkish, and Urdu.

In the past decade, 51 Princeton students have taken part in the Critical Language Scholarship Program. Last year three students — Saurabh Pant GS, Jennifer Silver '18, and Coy Ozias '18 — were chosen to participate.

Pant, a Ph.D. student studying politics and government, studied Urdu — spoken in Pakistan and northern India — in Lucknow, India. Silver, a religion concentrator, traveled to Malang, Indonesia, to study Indonesian. Near Eastern studies major Ozias studied Arabic in Meknes, Morocco. Other recent Princeton participants have studied Persian in Tajikistan, Turkish in Turkey, and Korean in South Korea.

Princeton offers instruction in 10 of the 14 languages listed as critical today. Spanish is the most-enrolled foreign language at the University by far (particularly for beginning speakers); the least-enrolled language is Bosnian-Croatian-Serbian, with two students. *By Nina Sheridan '19 and Jennifer Shyue '17*

Princeton offers instruction in 10 of the 14 languages supported by the Critical Language Scholarship Program. Here are the enrollment numbers for the fall semester:

Chinese: 246
Arabic: 91
Japanese: 85
Korean: 74
Russian: 55
Persian: 28
Hindi: 21
Urdu: 16
Swahili: 12
Turkish: 10

The three languages with the most enrolled students in the fall semester were:

Spanish: 675
French: 361
Chinese: 246

Sir Angus

Sir Angus Deaton, senior scholar and professor emeritus of economics and public affairs, is officially knighted by Prince William at Buckingham Palace Dec. 6 for his service to economics and international affairs. Deaton, who holds both British and American citizenship, won the Nobel Prize in economic sciences in 2015.

IN SHORT

Researchers, policymakers, and government officials will gather in Berlin March 20–21 to discuss topics such as privacy and human rights, regulation, security, and access to information as part of the fourth PRINCETON-FUNG GLOBAL FORUM, "Society 3.0+: Can Liberty Survive the Digital Age?" Alumni and faculty will be among the speakers from academia, government agencies, and the media.

Vincent Cerf, who holds the title of vice president and chief internet evangelist at Google, will give a keynote address on the past, present, and future of the internet. Cerf and Robert Kahn *64 — widely known as the fathers of the internet — designed the TCP/IP internet protocols and internet architecture. Other conference speakers include Brad Smith '81, Microsoft's president and chief legal officer; and Neelie Kroes, a former EU commissioner who oversaw Europe's digital agenda.

For information about the conference, which is open to the public, go to fungforum.princeton.edu.

The Princeton University ATHENS CENTER opened its doors in November to University students and scholars in Greece. The center includes conference facilities, seminar rooms, offices, and study space. The Athens Center is part of the Seeger Center for Hellenistic Studies, which supports more than 100 Princetonians for study and research in Greece each year.

ANNE HOLTON '80, a former Legal Aid Society lawyer and state education official in Virginia, will be the speaker at the June 4 Baccalaureate ceremony. Holton is the wife of Sen. Tim Kaine of Virginia, Hillary Clinton's vice presidential running mate last year.

PETER SINGER, professor of bioethics, received *Philosophy Now*'s annual award for "Contributions in the Fight Against Stupidity," which recognizes an individual for "promoting knowledge, reason, or public debate about issues that matter."

From left: British Ceremonial Arts; courtesy of Anne Holton '80

Brett Harner '17 was last year's EIWA champion at 197 pounds.

Beverly Schaefer

WRESTLING

Breaking Through

All-American Harner '17 inspires his teammates to dream big

A picture of Brett Harner '17 hangs in the subterranean wrestling room at Jadwin Gym. It shows him on the podium after earning eighth place in the 197-pound division at last year's NCAA Championships, the first All-American finish for a Princeton wrestler since 2003, when Greg Parker '03 was eighth at 184 pounds.

Harner calls it "the most surreal moment of my life."

The picture hides what Harner looks like most days on campus: a bespectacled, mild-mannered economics major with an offer to return to sales and trading at JPMorgan Chase & Co. after graduation.

"He looks like a geek," Tigers head coach Chris Ayres joked. "He's very scholarly. He's pretty laid back off the mat."

On the mat, though, Harner is a storm of intensity. He blossomed after arriving from Norristown (Pa.) Area High School, where his father was head coach and two older brothers preceded him on the path to success in college wrestling.

"He does everything right," Ayres said. "He's got his school in line, his schedule's perfect, he does all the right things. He's probably the best leader I've ever had, here or at Lehigh. You do the right things every day, good things will happen."

Being All-American seemed a lofty goal until Harner watched several opponents do well at the NCAA Championships at the end of his freshman season. His own chance that year was hampered by a torn meniscus in his knee. He suffered another injury at the end of his sophomore year but still reached the NCAAs and won one match — a sign that All-American status was just a few steps away. "It made it more tangible for me," Harner said. "I was right there."

Harner returned last year more determined than ever. Before a home crowd at Jadwin, he won the Tigers' first individual EIWA championship since Parker in 2003, and in the thrill of that achievement he told Ayres he wasn't done yet. Harner made good on his promise when he took eighth at nationals to cap a 36–6 season.

Harner said the NCAA meet "removed any sort of glass ceiling in my mind that might have been there." And not just for Harner: His podium finish has given his teammates inspiration.

"Now they're following that draft of what he did," Ayres said. "It builds a lot of momentum within the program. This year, it's ridiculous how much better the training and the collective attitude has been. This has the makings to be a special team."

Princeton is building off its best EIWA team finish since 1978, and Harner is trying to improve his All-American finish and earn another picture on the wall, to match that of the only national champion in program history, Bradley Glass '53.

By Justin Feil

Charlie Volker '19 ran for 111 yards in the win over Dartmouth.

FOOTBALL

Princeton Caps Season with Ivy Title, Touchdown Record, and Top Awards

Princeton football's season finales in each of the last six seasons had been spoiled by Dartmouth, but not this year: The Tigers ended a six-game losing streak against the Big Green with a 38–21 come-from-behind win Nov. 19 to share the Ivy League championship with Penn, a team that Princeton had beaten, 28–0, two weeks earlier.

"The way we performed on both sides of the ball and special teams kind of proved that we're the best team in the league," Princeton co-captain Dorian Williams '17 said afterward. "Not to be too arrogant, but I think it's known around the league too."

The Ivy title was Princeton's second in four seasons and the 11th in program history. The Tigers' only loss in league play was a 23–20 overtime defeat at the hands of Harvard Oct. 22. "We'd love to have it back," said Princeton quarterback Chad Kanoff '17. "But you can only control what you can control, and we did a great job of doing that."

Kanoff's senior class will graduate with 26 wins, equaling the Class of 1997 for the most by a Princeton class since the Ivies began formal play. They also have two Ivy rings, something no Princeton player had had since the 1960s.

Quarterback John Lovett '18 rushed for two touchdowns against Dartmouth to set a new Princeton season record with 20 rushing touchdowns. Three days later he was unanimously chosen for the All-Ivy team as a running back, joining lineman Mitchell Sweigart '18. In December, Lovett was named the Ivy Offensive Player of the Year, sharing the Bushnell Cup with Dartmouth's Folarin Orimolade, the league's top defensive player.

In seven Ivy games, Princeton led the league in total defense (yards allowed) and scoring defense by wide margins, surrendering 279 yards and 10.6 points per game. Four of the Tigers' defensive starters were All-Ivy honorees: Williams, Kurt Holuba '18, Luke Catarius '17, and James Gales '17.

Princeton finished 8-2 overall, tying its best mark in seven years under head coach Bob Surace '90, who was named Ivy Coach of the Year. *By Justin Feil*

SPORTS SHORTS

The Princeton MEN'S SWIMMING AND DIVING season was suspended Dec. 15 following the discovery of "vulgar and offensive" materials that included messages on a University-sponsored team listserv. The material was "misogynistic and racist in nature," according to a University release.

"The behavior that we have learned about is simply unacceptable," Athletic Director Mollie Marcoux Samaan '91 said in the release. "It is antithetical to the values of our athletic program and of the University." At press time, a final decision about canceling the team's remaining meets had not been made. For updates, visit paw.princeton.edu.

Cara Mattaliano '17 won her second straight Ivy League Player of the Year award in WOMEN'S VOLLEYBALL after leading the league with 3.8 kills per set. The Tigers, playing in their first NCAA Tournament game since 2007, lost 3–0 at No. 13-seed Brigham Young Dec. 2.

Mattaliano '17

FIELD HOCKEY standout Cat Caro '17, the Ivy League Offensive Player of the Year, scored her 18th goal of the season against Delaware in the NCAA semifinals Nov. 18, tying the game at 2–2 in the second half. Less than two minutes later, the Blue Hens scored to regain the lead, 3–2, and held on to advance to the championship game.

Photos: Beverly Schaefer

Life of the Mind

A Hubble Telescope image of the Tadpole Galaxy, which is thought to be the product of two galaxies merging.

From top: ACS Science and Engineering Team/NASA; Denise Applewhite/Office of Communications

FACULTY BOOK

Expanding the Universe

Astrophysicists create an accessible guide to the cosmos

Who hasn't looked up at a clear night sky and wondered at the vastness of the universe? But even if we are moderately acquainted with the basics of astronomy — billions and billions of stars, the Big Bang theory, E=mc² — most of us have a hard time conceiving of its enormity. Princeton astrophysics professors Michael Strauss and J. Richard Gott *73 deconstruct the heavens in their new book, *Welcome to the Universe: An Astrophysical Tour* (Princeton University Press). Written with *Cosmos* host and former Princeton professor Neil deGrasse Tyson, it aims to demystify the complexity of space by showing how some of the greatest theories of our time were created.

***Universe* authors, from left, Strauss, Gott *73, and Tyson at Princeton in 2001 during a session of Astrophysics 203: The Universe.**

"It's very easy to provide a lot of amazing facts and beautiful pictures," says Strauss. "But the processes by which these conclusions are arrived at get left behind. We try and make that accessible to the average reader." Based on a class for nonscientists, Astrophysics 203: The Universe, which the trio taught together at Princeton from 1999 to 2003, the book mimics its conversational tone — starting with Tyson's explanation of exponential numbers using McDonald's burgers.

"We think astrophysics is fun, and we are anxious to communicate that," says Gott, who retired last year.

The book is presented in three units: The first part, written by Tyson, explains stars and planets; then Strauss unpacks galaxies; and the third part, written by Gott, illuminates Einstein's theories of relativity. Along the way, the book presents plenty of interesting facts — for example, that there is a supermassive black hole at the center of our galaxy with the gravity of hundreds of billions of suns. But it also guides readers gently into the mathematics behind how that gravity is calculated — or for that matter, how theories like E=mc² and the Big Bang were developed. "The theory that the universe exploded out of a center of infinite density 13.8 billion years ago sounds like some crazy notion," says Strauss. "But it is actually one that follows logically from a series of observations."

More than anything, the authors hope to describe the human side of science. After all, many of the greatest discoveries in the field of astrophysics have been made within our lifetime, by a relatively small group of people. "I always say that the universe is so big, and we are so ignorant about it, that with a little perseverance and hard work, discoveries are relatively easy to make," says Strauss. The authors convey an infectious feeling that any of us can understand the farthest reaches of space and contribute to humanity's great quest to understand the cosmos.

"When people read this book," says Gott, "they can find these stories inspiring and maybe say, 'I can discover something like that, too.'" *By Michael Blanding*

LINGUISTICS

'The Dawning of a New Era for Linguistics at Princeton'

During the 2010–11 academic year linguistics at Princeton had 271 course enrollments. Five years later, enrollments were up to 583. Now the linguistics program has added three new tenure-track faculty members, a move that Sarah-Jane Leslie, the director of the program, calls "the dawning of a new era for linguistics at Princeton."

Linguistics at Princeton is a program in which undergraduates earn certificates; the program also supports independent concentrations. A 2015 task force report on the future of the humanities at Princeton advocated that it be granted status as a department. Linguistics "is the most interdisciplinary of all the fields" in the humanities, the authors wrote, noting its links to fields such as anthropology, psychology, computer science, and neuroscience.

Kalin

Ahn

Lionnet

Leslie says that the new hires were not made in response to the report, but occurred hand-in-hand with it. Including the new professors, who will focus solely on linguistics, three to four other faculty with affiliations with the program teach linguistics courses each semester. The three hires were also meant to offset two retirements, both full-time in linguistics: Robert Freidin, who retired last year, and Edwin Williams, who will retire at the end of this academic year.

The three new professors — Laura Kalin, Byron Ahn, and Florian Lionnet — study various corners of the field. Kalin, who received a Ph.D. from UCLA, is interested in grammatical idiosyncrasies and the possibility of a "universal grammar" that determines the structure of all human languages. She works with Neo Aramaic, surviving varieties of a language once common in the Middle East. Kalin studies the languages in the small communities where they remain to examine and understand the differences among them.

Ahn also seeks commonalities among linguistic phenomena. He has interests in syntax and prosody, the rhythm, stress, and intonation of speech. He has examined data from languages as varied as Tongan, Lakota, Japanese, Turkish, and Korean. Ahn completed a Ph.D. at UCLA and previously taught at Swarthmore College and Boston University.

Lionnet, who received a Ph.D. from the University of California, Berkeley, focuses in part on phonology — the study of sound systems in languages — and on the languages of sub-Saharan Africa. He spent four years of his childhood in Chad, where his father practiced medicine. "About 130 languages are spoken in [Chad], very few of which have been properly documented, mostly due to the political and military instability from the late 1970s to the early 2000s," he says. "My colleague and I even 'discovered' a language two years ago that was until then unknown to anyone outside the region where it is spoken." *By Alastair Gee*

IN SHORT

Consumers last fall were dismayed that costs for private health plans under the AFFORDABLE CARE ACT were set to rise substantially — in some cases by 25 percent or more. A new paper by economics and public affairs professor Uwe Reinhardt says young people are a big reason why. Many insurance companies underpriced their policies, either to gain early market share or because they underestimated the risks, according to Reinhardt's paper, published in the *Journal of the American Medical Association* in October. As many younger, relatively healthier people have decided to forgo insurance and pay small fines instead, insurers are forced to raise rates dramatically in order to cover older and sicker people. The result: higher premiums for everyone.

High-quality PRESCHOOL EDUCATION can give children a leg up, but there is an important qualification to that, according to a new publication co-edited by Woodrow Wilson School Dean Cecilia Rouse and education researcher Lisa Markman-Pithers: Pre-K programs are most fruitful only when they are integrated with the K-3 programs that come after them. Unfortunately, too often that's not the case; pre-K programs frequently operate in isolation with teachers who are undercompensated and unprepared for the task. Only when pre-K is thought of as a part of school, and not just preparation for it, will kids reap the biggest benefits, researchers conclude. The findings were released in the latest issue of *The Future of Children,* a joint publication of Princeton and the Brookings Institution. *By Michael Blanding*

Photos, from top: Isometric, Laura Kalin, Hannah Sande; illustration: Peter Arkle

Professor Celeste Nelson in Hoyt Lab.

Sameer A. Khan

CHEMICAL AND BIOLOGICAL ENGINEERING

Slowing Cancer Cells

Princeton scientists discover a common trigger for metastasis

Tumors are generally rigid and blood vessels cannot easily penetrate them. These two factors combined create oxygen-devoid, or hypoxic, pockets. Celeste M. Nelson, a professor in the chemical and biological engineering and molecular biology departments, and her colleagues recently uncovered how rigid tissue and the subsequent hypoxia can lead to metastasis. The two combined conditions tended to trigger a protein called integrin-linked kinase (ILK) to behave abnormally in breast-cancer cells, which has been shown previously to initiate metastasis. The team's findings could provide several new avenues to target and treat cancer.

Cancer cells communicate with their immediate environment, including the connective tissue that surrounds the tumor. Nelson's lab focused on whether the stiff and oxygen-deficient neighborhood of tumor cells affects ILK, a signaling protein that is found in healthy cells, but tends to be found in higher levels in some tumor cells. "ILK is a protein that acts as an antenna for the cell — it senses its surroundings and relays [what it learns] back to the cell," Nelson explains. ILK helps to regulate survival and migration of cells, but it is unknown how stiffness and hypoxia may change the activity of ILK to help drive the dispersal of cancer cells to other parts of the body.

By growing human breast-tumor cells within a mix of proteins that mimic the connective tissues that frame the cells in the body, the lab found that the combination of a stiff and hypoxic environment increased the levels of ILK in cells; these cells often would begin to take on properties of cancer stem cells — cells in the tumor thought to be responsible for metastasis.

Tracking how the breast-tumor cells moved over time in cultures both with and without oxygen, Nelson's lab observed that the cells had greater mobility with decreased oxygen and increased stiffness of the surrounding connective medium compared to cells grown on a well-oxygenated, soft medium. When the ILK in the cells was depleted, even under the stiff and hypoxic conditions, the breast-tumor cells no longer behaved like cancer stem cells; however, adding more ILK to breast-tumor cells growing in a soft medium under normal oxygen levels could convert the cells into cancer stem cells.

Examining breast-tumor biopsies, the lab found similar results: The hypoxic regions had higher levels of ILK and cells likely to be cancer stem cells. "That's quite a lot of evidence to suggest what we are seeing [in the lab] takes place in breast-cancer patients," says Nelson.

Previously, it was understood that tumor hypoxia makes for a poorer prognosis and that when the connective tissue surrounding cells is stiff, tumor progression is more likely. But Nelson's study is the first to hint that the two together tend to promote nefarious ILK signals that can lead to metastasis. For Nelson, this suggests that elevating oxygen levels and softening the area around tumor cells may be a possible cancer treatment. Another treatment could be to block the activity of ILK with a drug.

The lab is now trying to understand the other important molecules in the cancer cells that interact with ILK and will test whether ILK inhibitors can prevent the aggressive behavior of laboratory-grown breast-tumor cells. "We would like to move this study forward," says Nelson, "to the point where we can help people." *By Anna Azvolinsky *09*

ONE ALUM'S MISSION TO PRESERVE HIS PEOPLE'S CULTURE

BY MARK F. BERNSTEIN '83

WHEN LANGUAGE IS MORE THAN WORDS

ON A DREARY SEPTEMBER MORNING, eight students file into a class on elementary Ojibwe at Bemidji State University in northwestern Minnesota. Hunched over their phones, hoodies pulled low over their heads, coffee not yet kicked in, there is little energy for a 10 a.m. class. Outside, clouds descend over the football practice field and the dark lake beyond it.

In strides Anton Treuer '91 to jolt everyone awake. Lean and casually dressed, his long black hair tied in a braid, Treuer starts peppering the students in Ojibwe about their day.

"Aaniish ezhi-ayaayan?" (How are you doing this morning?) he asks a young woman sitting by the window.

"What's the word for 'tired'?" she answers in English.

Treuer smiles. *"Indayekoz,"* he tells her, and she repeats it.

"Hay'," he says. Yeah.

Two days later, Treuer sits on the linoleum floor in a crowded community center on the White Earth Indian Reservation, about an hour southwest of Bemidji. By his side is a ceremonial drum painted red, yellow, and blue; four eagle feathers mounted around it on oak poles mark the cardinal directions. A bowl filled with ceremonial tobacco sits at his feet. Everyone who enters adds a pinch and whispers a blessing.

While other tribal members talk and gossip, Treuer suddenly begins to sing in a high, keening voice and beat the drum. Soon four or five other men join him, including his younger brother, David '92, a novelist and creative writing professor at the University of Southern California. Other men strap bells on their legs and begin to dance. Anton Treuer attends drum ceremonies most weekends, often bringing the youngest of his nine children with him.

Although visitors may attend these ceremonies, it is hard to get Treuer to explain them in detail. "In Ojibwe culture," he wrote in *Warrior Nation,* his 2015 history of the Red Lake Ojibwe, "most spiritual matters are not shared for anthropological purposes, for the curiosity of outsiders, or for intellectual enrichment. They are shared as part of a spiritual experience, ... [which] involves someone who knows the teachings taking the songs out of his or her soul and directly transferring them to another, where they become a permanent part of who that someone is. ... Ceremonial knowledge must be paid for — and not with money, but with tobacco, food, culturally appropriate gifts, and time."

And, he might have added, by understanding the language in which they are conducted.

THE OJIBWE, COMMONLY KNOWN AS CHIPPEWA ("Chippewa" is a Europeanized pronunciation of "Ojibwe") are the most populous tribe in North America, scattered from eastern Ontario to Montana; U.S. bands are centered in the upper Midwest. Like most Indian reservations, White Earth is plagued by poverty, poor health, addiction, and crime. Truancy rates are high; graduation rates, low. Traditional folkways, which help bind this community together, remain strong, though their future is uncertain. Those who can conduct ceremonies fluently are dying out or drifting away.

A professor at Bemidji State and director of its American Indian Resource Center, Treuer is working to keep his

Thunderbird icon: Jon Valk; photo: Jon Heller

Treuer with daughter Luella at the Leech Lake Powwow in 2013.

Courtesy Anton Treuer '91

people's language and culture alive. He is the author of three tribal histories, several vocabulary books, a collection of oral histories, an atlas of Indian nations, and a forthcoming history of American Indian wars. He also edits the world's only Ojibwe academic journal. In addition to attending drum and other tribal ceremonies, he lectures around the country and heads his county's Truth and Reconciliation Committee, which seeks to improve relations between the tribe and white residents.

Treuer estimates that about 60,000 people speak at least rudimentary Ojibwe, but only about 1,000 fluent speakers remain in the United States. More than half of them live on two Minnesota reservations — Red Lake and Mille Lacs — and hardly any still speak it as their primary language. Fluency rates are higher in Canada, where many Ojibwe live in remote areas.

Somewhere in the world a language is lost every 14 days, according to a 2010 UNESCO report, which predicted that half of the world's 6,000 spoken languages will disappear by the end of this century. There were nearly 300 spoken languages in North America when the Europeans arrived. About half survive, but only three — Ojibwe, Dakota, and Dene (Navajo) — still are spoken regularly.

The death of a language depletes us intellectually, but languages and the cultures that used them have always been ephemeral things. Who still speaks Etruscan? Samarian? Saxon? Is it important — or even possible — to keep them all alive? Nevertheless, efforts to revive indigenous languages have been attempted around the world, sometimes with success.

Treuer's activities inside and outside the classroom are connected, because what is at stake, he insists, is much more than just an academic discipline. Language is the means through which a culture expresses its understanding of the world. To pick just a few examples, the Ojibwe word for drum — *dewe'igan* — means "heartbeat," and the drum at tribal ceremonies sits at the center of the communal circle, its syncopated sound signifying a heartbeat. The word for old man — *gichi-aya'aa* — means "great being," while the word for old woman — *mindimooye* — means "one who holds things together."

"In Ojibwe, you don't have to say, 'respect your elders,' " Anton Treuer observes. "It's built into the language."

As David Treuer wrote in his 2012 book about the Minnesota Ojibwe, *Rez Life,* "To claim that Indian cultures can continue without Indian languages only hastens our end, even if it makes us feel better about ourselves. ... Cultural death matters because if the culture dies, we will have lost the chance not only to live on our own terms ... but also to live in our own terms."

What is at stake, Treuer insists, is much more than just an academic discipline. Language is the means through which a culture expresses its understanding of the world.

ALTHOUGH THE *GUINNESS BOOK OF WORLD RECORDS* lists Ojibwe as the most complex language in the world, with more than 4,000 verb forms, Anton Treuer rolls his eyes at this. Ojibwe is not an especially difficult language to learn, he says; there are indeed a large number of grammatical structures, but they are more consistent than those in English or Romance languages and thus easier to keep straight.

Linguistically, Ojibwe is part of the Algonquian family, which encompasses 29 native languages, including Delaware, Powhatan, and Lenape. There are 23 letters in its alphabet — long and short vowels are represented separately — and one letter that does not appear in English — a glottal stop approximating the sound in the middle of the expression "uh oh." The sounds represented by the English letters f, l, r, u, v, and x do not occur in Ojibwe. At least 20 Ojibwe words have made their way into English, including moose, totem,

chipmunk, toboggan, and moccasin. Several American place names, including Mississippi, Michigan, and Wisconsin, also come from Ojibwe words.

Ojibwe nouns are not gendered in the Western sense but are divided between animate and inanimate objects. It is a verb-based language; Treuer estimates that nearly two-thirds of Ojibwe words are verbs, including things like days of the week. The Ojibwe sentence *Giziibiigisaginige-giizhigad noongom* ("Today is Saturday") literally means, "It is Saturdaying." Rather than separating tenses, adjectives, and adverbs into distinct words, Ojibwe builds them into noun and verb roots in what are called "prenouns" and "preverbs." There are indeed hundreds of Ojibwe verb conjunctions, including several that do not have direct cognates in English. One, called the dubitative, expresses a sense of uncertainty or self-effacement, as in: "I saw someone who must have been sick."

Although the Ojibwe had developed a system of pictographs to convey ideas, the first efforts to reduce the language to writing began with 17th-century French missionaries eager to teach the Bible. There are two Ojibwe orthographies, which date to the mid-19th century: a syllabic one favored in many remote Canadian villages, and a more widely used Roman version that includes English conventions for punctuation and capitalization. There still is no concise Ojibwe grammar book: Anton Treuer and Professor John Nichols, at the University of Minnesota, have been working on one.

"Our grammar books," Treuer acknowledges, "are people."

One problem in adapting Ojibwe to modern usage has been developing vocabulary for new concepts, products, and technologies; there is no tribal equivalent to the Académie Française, which famously tried to develop French cognates for English words like "floppy disk." Ojibwe writers and speakers develop such words haphazardly; some catch on, others do not. The commonly accepted word for television, for example, *mazinaatesijigan,* means "box that reflects pictures as light." As Treuer points out, however, since most languages were developed for pre-industrial people, all have had to go through a similar process. The English word "television" is simply a mishmash of a Greek word, *tele* (distant), and a Latin word, *videre* (to see).

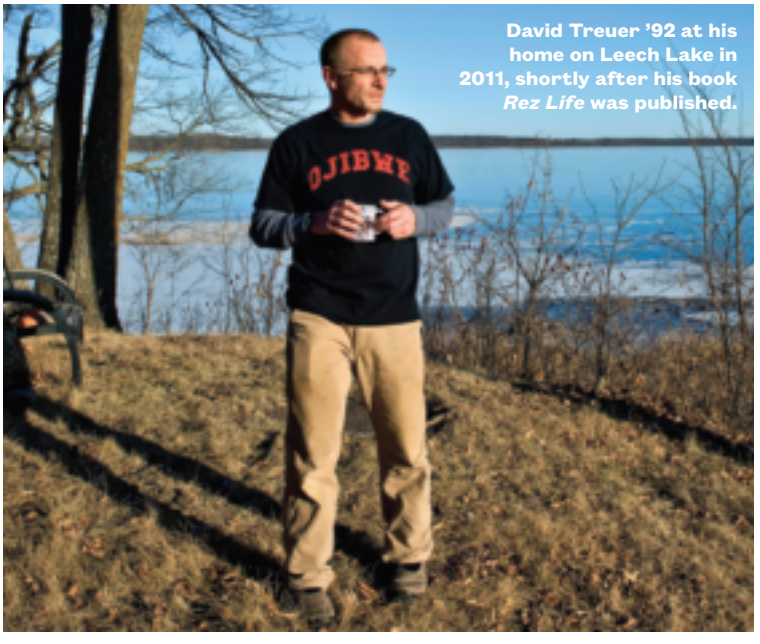
Bemidji State offers a six-course Ojibwe language program designed to be taken over three years, along with classes in Ojibwe culture and oral literature. Treuer teaches them all, though there are three Native faculty members in the Department of Indigenous Studies and a dozen at the university overall. In a typical year, there may be as many as 50 students learning the Ojibwe language. Most, though not all, are Native; many, too, are older students who have transferred from a nearby tribal college or gone back to school to finish their degrees.

As in any introductory language class, Treuer blends vocab quizzes, audiotapes, and unceasing conversation. On this day, students are preparing a two-minute speech in Ojibwe and practicing prepositional phrases. Fliers in the lobby advertise Ojibwe language tables and tribal games that enable students to hone their fluency.

Since Bemidji State created the first academic Ojibwe language course in the country in 1969, similar programs have sprung up at more than 20 universities and tribal colleges around the United States. Because of the broad geographic dispersement of its people, Ojibwe is one of the most widely taught Indian languages, though Treuer says that few programs are extensive enough to build true proficiency. Bemidji offers a master's degree in Ojibwe but has no doctoral program. He hopes to add one someday, but says that a more pressing need is for an accredited teacher-training program, to produce a new cadre of fluent speakers who can spread the language further.

THE TREUER BROTHERS GREW UP by the Leech Lake reservation, about 20 miles from Bemidji, but it took time for Anton to fully embrace his culture and language.

Their father, Robert, was an Austrian Jew who spoke only German as a child. Robert's family had fled the Nazis and moved to the United States in 1939, where he learned English by listening to the radio. In the 1950s, while working as a labor organizer, he discovered a 250-acre piece of tax-forfeited property on Leech Lake during a weekend trip to Minnesota. He bought it because the area reminded him of rural Austria, and replanted the land in pine trees, which have grown into a dense forest where both Treuer brothers still live, David part time.



David Treuer '92 at his home on Leech Lake in 2011, shortly after his book *Rez Life* was published.

Dan Koeck

Robert Treuer took a job running Leech Lake's community-outreach program and there met Treuer's mother, Margaret Seelye Treuer, an Ojibwe woman who ran the reservation's health office. She later earned a law degree, becoming the first female American Indian attorney in Minnesota, and still serves as a judge in tribal courts.

Growing up, the Treuer children (including younger brother, Micah '01, a doctor; and sister Megan, a lawyer) did not speak Ojibwe at home, as Anton now does with his own children, because neither parent was fluent in it. Instead, Margaret Treuer introduced her children to their heritage through cultural practices such as hunting, harvesting wild rice, tapping maple trees, and attending tribal ceremonies.

"It was a regular part of our lives always," David recalls. "That was how our family socialized." He

Anton Treuer with Archie Mosay, an Ojibwe spiritual leader, circa 1993

once tried to rebel by telling his mother he wanted to go to church. "You can worship in any way you want to," she told him, "but you had better plan on walking."

Both Treuers have faced challenges assimilating, but in physical appearance and coloring Anton is more obviously Indian: David affectionately describes his brother as "a handsomer version of Tonto." When the family lived briefly in Washington, D.C., Anton says his first-grade teacher thought it would be funny to place him in front of the class and dress him like a girl, putting his long hair in barrettes and applying lipstick. Even back in Minnesota, he heard casual slurs from white students, while some Ojibwe classmates castigated him as an "apple": red on the outside, white on the inside.

By the time he finished high school, Anton was anxious to leave Minnesota, but his attitude changed shortly after he arrived at Princeton. "As soon as I left, I started to see the value in a lot of the things my mother had been trying to show me about Ojibwe culture, language, and ceremonial life," he says. He was one of about 20 American Indian students on campus (only five of whom were enrolled members of a reservation) and majored in the Woodrow Wilson School, where he wrote his thesis on an Ojibwe spearfishing-rights dispute in Wisconsin.

Having in a sense run away from home, he chose to run back after graduation. Declining an opportunity to work in Washington, Treuer instead sought out 91-year-old Archie Mosay, an Ojibwe spiritual leader who had been born in a wigwam and was one of the last living links to traditional tribal customs. Treuer simply drove to Mosay's village in Wisconsin, found his address in the phone book, and knocked on his door. Although they did not know each other, Mosay greeted him with the words, "I've been waiting for you," telling Treuer of a dream in which a young man sought him out to learn tribal customs.

Over the next four years, Treuer lived with Mosay, partaking in what Treuer calls a "holistic" immersion in language and culture. He became so deeply engaged that he regularly returned to Mosay's house while getting his Ph.D. in history at the University of Minnesota and during his first teaching job at the University of Wisconsin-Milwaukee. He joined the Bemidji State faculty in 2000.

Many tribal members, Treuer says, see the American education system as "the tip of a long spear of assault on language and culture."

"THERE IS A TREND toward the proliferation of several dominant world languages and the disintegration of many others," Treuer observes. "It's one of the painful impacts of globalization and colonization." But it is not irreversible.

Hebrew is perhaps the most famous example of language revitalization. No one spoke it as a primary language from about the third century until early Zionists revived it in the mid-19th century as part of their effort to secure a Jewish homeland in Palestine, explains Philip Zhakevich, a lecturer in Near Eastern studies. It is now spoken by about 9 million people.

In New Zealand, fewer than 20 percent of Maori spoke their tribal language by the early 1980s, but new programs, which teach it to children from infancy, have been so successful that Maori is now an official national language. Maori revitalization efforts, in turn, inspired efforts to revitalize Hawaiian, which had been banned in island schools after the American annexation. At the time the first Hawaiian immersion schools opened in the late 1980s, fewer than 1,000 people spoke it fluently, half of whom lived on one isolated island. Today, there are more than 20,000 fluent Hawaiian speakers, and it is possible for children to learn it as their primary language from kindergarten through college.

"It's pretty inspiring to see what they did and how they did it," Treuer says. But on the American mainland, he adds, only a few other Indian tribes — most notably the Cree, Blackfeet, and Mohawk — have pursued extensive language-revitalization programs. Fluency in Navajo has been a prerequisite for holding tribal office, but the tribe is considering whether to drop the requirement after elections in 2014 had to be postponed when one of the leading presidential candidates refused to take a fluency test.

Courtesy Anton Treuer '91

Although one can pick up basic Ojibwe vocabulary with the help of books or even a few phone apps, Treuer says that immersion is the only reliable way to gain fluency. Even the classes he teaches, which meet for 50 minutes four times a week, are not enough. Now, several Ojibwe immersion schools seek to develop a new generation of fluent speakers. The most successful of these is the Waadookodaading Ojibwe Language Immersion School, founded in 2000 on the Lac Courte Oreilles Reservation in Reserve, Wis. Children in prekindergarten through seventh grade receive all their classroom instruction in Ojibwe and learn tribal customs and practices. A smaller K-3 immersion school on the Leech Lake reservation and an early-childhood immersion program in Minneapolis also have been established. Treuer has helped develop curriculum and conducted teacher assessments for all of them.

Although indigenous language loss can be blamed on globalization and assimilation, American Indian languages were also eradicated as a matter of policy. From the 1870s into the 1950s, Indian children were sent away from their families to government-run boarding schools where they were forced to cut their hair and forbidden to speak their native tongue or practice their religion, all in the name of helping them adapt to American society. Richard Henry Pratt, director of the Indian school in Carlisle, Pa., explained this ethos with harrowing clarity in 1892: "[A]ll the Indian there is in the race should be dead. Kill the Indian in him, and save the man."

With that legacy in mind, immersion schools reject assimilation. Many tribal members, Treuer says, see the American education system as "the tip of a long spear of assault on language and culture." Asked whether raising children with Ojibwe as their primary language might close them off from the broader American economy, he bristles.

"There is this assumption, first of all, that to be successful you have to exhibit whiteness, English language, materialism. Ultimately, there are a lot of different definitions of success," he says. There is also evidence that immersion programs work: Although reservation schools are plagued by truancy and low test scores, students at Waadookodaading exceed state standards for reading, math, and science. Furthermore, he adds, simply by living in modern American society, it is nearly impossible for Ojibwe children not to learn English.

People from a different culture require a different way of learning, Treuer believes, and learning in their own language is central to that: "Ultimately, if you go to school for 13 years and are taught everything you need to know to be successful in the world and none of it has anything to do with you, that's quite simply a lesson that you and yours are not important, not relevant."

Asked about his long-term goal, Treuer begins by quoting a Hawaiian proverb. The point of maintaining a language, he says, "is not just so we can hear another pretty bird singing in the forest." Nor, he continues, is it about restoring some sort of pre-contact idyll.

The goal, he concludes, "is about building strong human beings who are OK in their own skin as load-bearing members of the country and the world, and with a toolbox for health and happiness."

Mark F. Bernstein '83 is PAW's senior writer.

Morrie Baumgarten

Q&A: Saul Schwartz *15, on preserving Chiwere

The last fluent speakers of Chiwere, the language of the Iowa and Otoe-Missouria Indians, died in the 1990s. For his Princeton dissertation, anthropologist Saul Schwartz *15, a research assistant professor at the University of Miami, studied efforts to document, preserve, and perhaps revitalize the language, which is in the Sioux family. His interest took root when, as an undergraduate, he was introduced to Jimm Goodtracks, who was writing a Chiwere dictionary. During graduate school, he lived with Goodtracks for two summers and then spent 14 months living in White Cloud, Kan., the seat of government for one of the Iowa tribes.

How well do you speak Chiwere?
I tried to learn it as best I could. Jimm and I spoke to his grandson only in Chiwere when I lived with them. But I am very far from fluent.

How does Chiwere differ from other Native American languages?
Chiwere is relatively understudied and documented compared to other Siouan languages like Lakota or Dakota, which have a much larger speaker base. It has a lot of similarities to Ho-Chunk, which is also known as Winnebago. But we're still trying to figure out how exactly Chiwere grammar works and how similar or different it is from other Siouan languages. There is still a lot of work to do.

Do you think it will be possible to teach people to speak Chiwere fluently again?
I think it is possible if that is something tribal members themselves want. Other communities have had success bringing back their language working from historical documentation. Myaamia and Wampanoag are two examples of that. As a non-Native anthropologist, though, I'm mostly interested in understanding Chiwere and why people would want to revitalize it — and assisting those efforts, if I'm invited to participate. But it's not necessary for tribal members to speak their heritage language in order to maintain distinctive cultures and identities.

What is the reason for revitalizing Chiwere?
Ioways and Otoe-Missourians tell me that one of the most important reasons is to connect with their ancestors. The last fluent speakers only died 20 years ago. The parents and grandparents of the current generation still used Chiwere in their everyday lives. Current members of the tribe say that revitalizing it helps them understand the culture of the previous generations and how their ancestors viewed the world. *Interview conducted and condensed by M.F.B.*

BRIAN KERNIGHAN *69'S ELEMENTS OF STYLE FOR THE DIGITAL AGE

BY JOSEPHINE WOLFF '10

IN COMPUTER LANGUAGES, CLARITY IS KEY

IN THE FALL OF 1996, Brian Kernighan *69 brought scissors, a beard trimmer, and a pair of hedge clippers into the auditorium where he was teaching Harvard's introductory computer science course, CS50, to more than 450 students. It was Kernighan's first time teaching a college course — he was employed at the time as a researcher at AT&T Bell Labs — and he decided to use that first lecture to focus on the importance of giving computers specific instructions. He asked the students in the room to direct him in trimming his beard and, when they failed to be sufficiently precise in their directions, ended up cutting his beard with hedge clippers right there at the front of the classroom.

Those students — and hundreds of Princeton students over the last 15-plus years — were lucky to learn from a teacher who also happened to be a pivotal figure in computer programming. In 1978, while at Bell Labs, Kernighan co-authored a seminal book called *The C Programming Language* with his colleague Dennis Ritchie, who created the language. It was a short book for a programming manual — fewer than 300 pages — and, in fact, it was not so much a manual as it was a friendly and shockingly readable introduction to building basic programs with C.

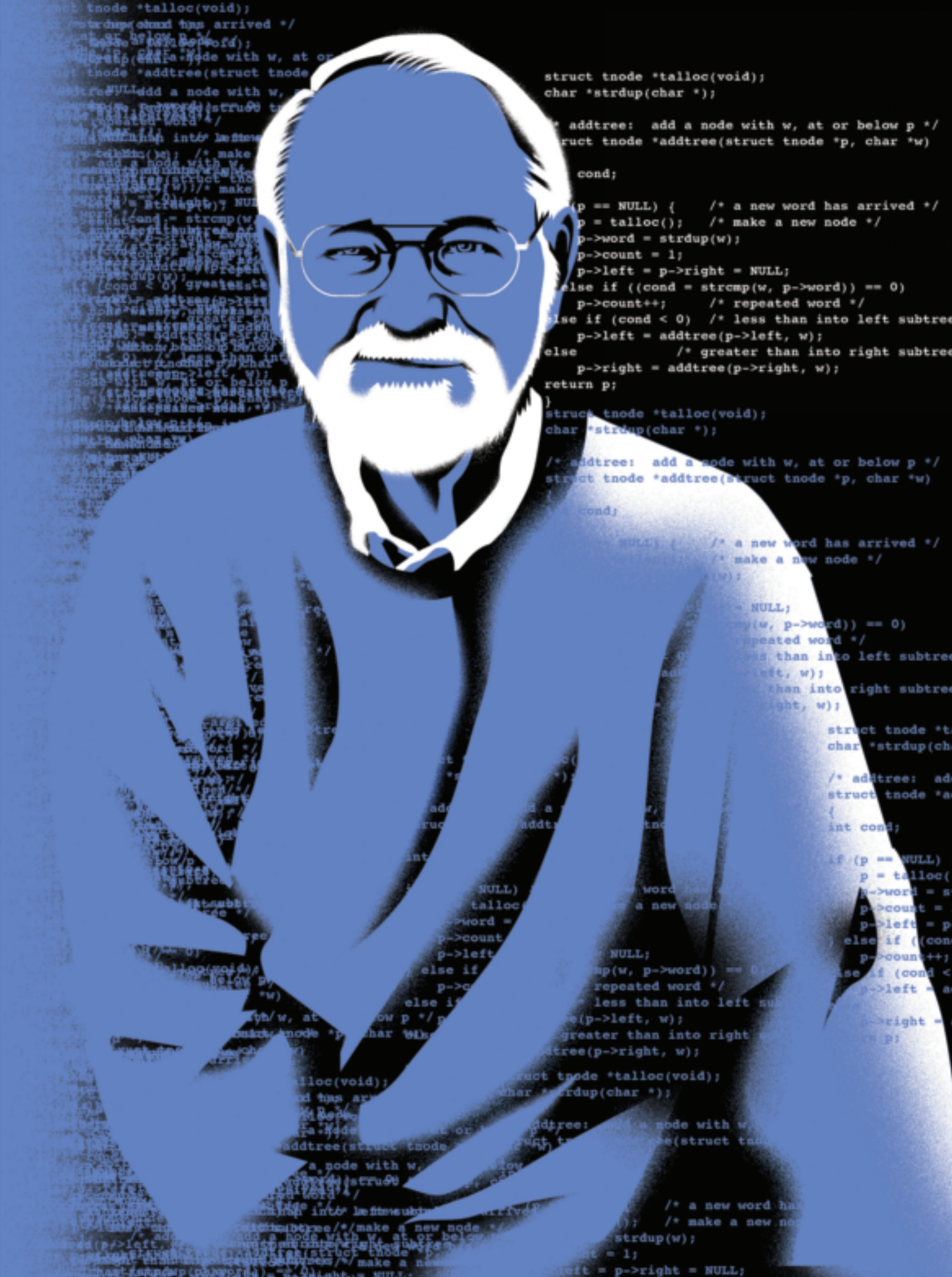
"Our aim is to show the essential elements of the language in real programs, but without getting bogged down in details, rules, and exceptions," Kernighan and Ritchie write at the beginning of the first chapter. "At this point, we are not trying to be complete or even precise. ... We want to get you as quickly as possible to the point where you can write useful programs." The book's emphasis on providing useful examples and encouraging readers to start writing interesting programs quickly instead of going through an exhaustive list of a language's features set a new standard for technical writing and a new model for how to teach programming languages.

"I think it's the most influential book in the history of computers," says Google engineer Alan Donovan, who co-authored a book on the Go programming language with Kernighan. "That's not to say it's the most technical, but it's the one that most people have read and has shaped the way they feel about computers and learned from and tried to copy in other materials since then."

The C book introduced the now-ubiquitous "Hello, World!" exercise to fledgling programmers: Walk into any introductory programming class today, and odds are the first assignment will be to use the new language to print those words. It's also likely that one (or more) of Kernighan's books will still be assigned as the required text. Kernighan has profoundly shaped how entire generations of programmers have been — and will be — taught. Since leaving Bell Labs to join Princeton's computer science department in 1999, he has become increasingly focused on changing how non-programmers are taught about computers and technical topics as well.

Through his Princeton course COS 109: Computers in Our World, Kernighan has sought to teach some of the basics of programming, computer technology, and mathematical estimation to students outside the computer science department. Those non-majors, he readily acknowledges, mostly wander into the class looking to fulfill their quantitative-

Raul Arias



reasoning distribution requirement but often leave with a deeper appreciation of how technology works and what numbers really mean.

Now, with *Understanding the Digital World* — a version of his previously self-published book *D is for Digital: What a Well-Informed Person Should Know about Computers and Communications* — set to be published by Princeton University Press in March, Kernighan is hoping to extend some of those lessons beyond the reach of his classroom. Coming from just about anyone else, it would seem like an impossible mission: to write a book about a fast-changing and technical field that introduces readers to a lot of new material without condescending to them or boring them, a book that can boil down to less than 300 pages a massive field and quickly provide readers with the tools to solve and understand real problems. But Kernighan has been writing precisely those kinds of books for more than 40 years.

KERNIGHAN, WHO IS CANADIAN, came to computing relatively late. An engineering physics major at the University of Toronto in the early 1960s, he didn't even see his first computer — an IBM 650 — until his second year of college, and didn't start programming until his junior year, when he learned some Fortran. "I was, to put it mildly, pretty bad," he says of his undergraduate programming efforts. "But it was enough fun that, since I didn't know what I wanted to do after college, I went to graduate school because it staved off decision-making."

He arrived at Princeton as a graduate student in 1964 before there was a computer science department. He pursued his Ph.D. in electrical engineering and discovered he loved programming during the summer of 1966, when he worked on a project at MIT and had his first experience with non-punch-card programming, learning the MAD language. "This was in the very earliest days of being able to talk to a computer directly with your fingers at a terminal," he recalls.

Punch cards would, however, continue to play an important role in his graduate research, and Kernighan, who is passionate about computer fonts and typesetting as well as programming languages, even used punch cards to produce what he suspects is the first machine-readable, computer-printed thesis at Princeton. Rather than typing his dissertation on a typewriter, he used punch cards, essentially large index cards with holes punched in them to represent inputs, to write a program that would format and print his thesis using the sole computer on campus, an IBM 7094 kept in an air-conditioned room in the EQuad. The final version of his thesis, on graph partitioning, required 6,000 punch cards: 1,000 with the typesetting program instructions and another 5,000 with the thesis text.

After he received his Ph.D. in 1969, Kernighan left Princeton for Bell Labs, where he had interned during graduate school.

Write clearly — don't be too clever. If someone could understand your code when read aloud over the telephone, it's clear enough.

He stayed there for 30 years. During the 1970s and 1980s, perhaps no place in the world was home to as many prominent computer scientists and computer-related inventions and discoveries as Bell Labs. Among Kernighan's notable colleagues was Richard Hamming, a mathematician who did pioneering work on how computers can identify and correct errors in communications.

"Dick was a classic curmudgeon," Kernighan says of Hamming. "One of the things he used to complain about was that people were bad programmers. He would say, 'We give people a dictionary and a set of grammar rules and we say, kid, you're a great programmer, and that's ridiculous. We ought to have style guides for programming the same way we have style guides for English.' "

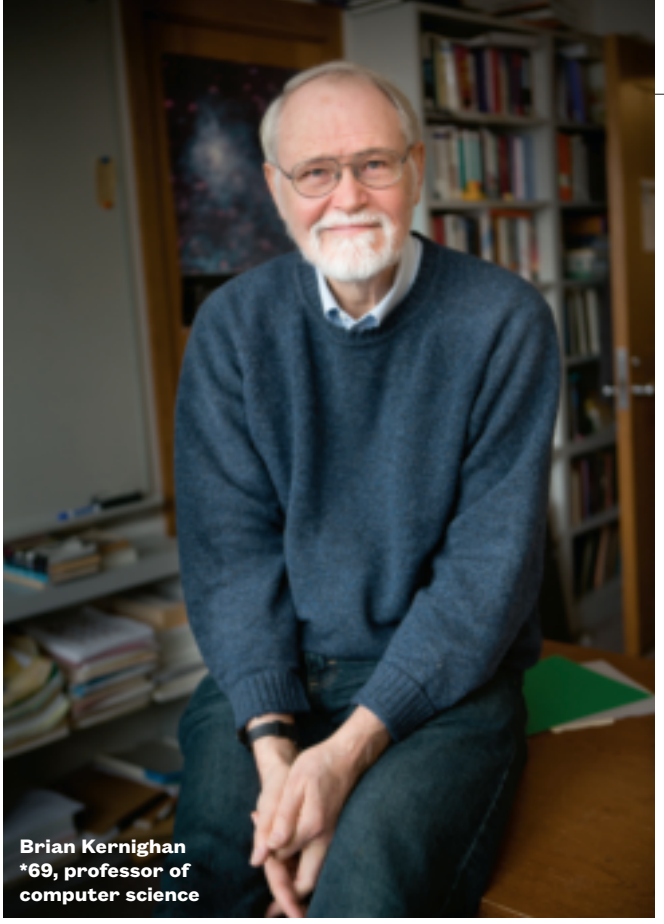
Those conversations with Hamming about the need for programming style guides to make people better programmers inspired Kernighan's first book, in 1974: *The Elements of Programming Style,* co-authored with P. J. Plauger. Consciously styled on Strunk and White's guide for writers, *The Elements of Style,* Kernighan and Plauger attempted to codify general rules for creating code by working through examples of poorly written programs and explaining how they could be improved. Their rules included, "Write clearly — don't be too clever," "Make your programs read from top to bottom," and "If someone could understand your code when read aloud over the telephone, it's clear enough. If not, then it needs rewriting." Of the rules enumerated in the book, Kernighan estimates that roughly 90 percent are still applicable, despite the considerable evolution of computing technology and programming since the 1970s.

A recurring theme of Kernighan's work is the idea that good computer programming is not just about whether your code works, or how fast it runs, but also its clarity and style. That was a prescient realization in the 1970s, when many people did not yet appreciate that software would have the longevity and significance it does today — that many people would have to work on the same programs, year after year.

Over the course of five decades, Kernighan has developed a keen sense of how to derive general, long-lasting principles in a field that has exploded with hundreds, if not thousands, of new programming languages. The new languages often build on older ones, and the foundational rules of style and syntax often still apply. "C is at the base of an enormous amount of what we do in exactly the same way that Latin is," he says. "There are many languages today that come from Latin, and there are many languages today that come from C."

This emphasis is undoubtedly one of the reasons that Kernighan's body of work ages so well in a field that has changed dramatically since his career began. Today, very few people rely on printed books or manuals to help them program. Instead, they search through forums on websites like Stack Overflow to find other people who have asked the same questions, and get feedback on their code. The programming language manual is all but obsolete — and yet Kernighan's books are as relevant as ever: their principles general enough to transcend the decades and insightful enough to offer something the thousands of answers available in online forums cannot.

Kernighan's ideas about the value of style for programming languages were, in large part, articulated before maintaining and developing code became such a vital activity and stemmed



Brian Kernighan *69, professor of computer science

Ricardo Barros

from a more basic insight: that clear use of language leads to clear thinking, and vice-versa.

"Programming style is first for the person who wrote the code, because I might write this program today and then put it aside and come back to it a few years later," Kernighan says. "The better it's written, the more I've adhered to these rules of style, and tried to be clear and simple, the more likely it is that I will be able to understand it — and the more likely it is that it will work properly. And the more likely it is that other people will be able to understand it."

NOT EVERYONE WANTS TO WRITE CODE. During the semester he spent teaching at Harvard, Kernighan discovered how much he enjoyed teaching, but also found it challenging to design an introductory course that worked for aspiring computer scientists as well as students in other fields who just wanted some basic understanding of computing.

"There was a population that was not well served by [CS50]," Kernighan recalls. "When I came to Princeton, I decided I wanted to create a course that would serve those students." The course he developed, COS 109, is aimed at students who are intimidated by math or computer science and want a gentler introduction to computing topics. It covers topics that range from how to estimate and understand large numbers to legal and privacy issues surrounding computers, as well as some basic coding in Javascript.

"The presiding thesis behind that course is to say computer science and computing technology underpin almost everything that makes society tick in the 21st century, and yet so few people actually get how it works and understand what goes on behind the surface," says Elizabeth Linder '07, who majored in French and Italian and took COS 109 her freshman year. She went on to work at Google and Facebook for several years before founding a media and leadership advisory firm called The Conversational Century. Working with governments and political leaders on issues related to technology, Linder often drew on her experience in Kernighan's class. "I think back often to Professor Kernighan who, on a different and deeper level, was doing a very similar thing to what I do now — helping to translate the world of computer science for a group of people to whom that doesn't come naturally," she says.

Even when he's not teaching, Kernighan's work often involves finding new ways to convey important computing concepts or programming languages to a wider audience. He recently co-authored *The Go Programming Language* with Donovan ("It was like writing a first novel with J.K. Rowling," Donovan said of the experience, offering some sense of how much Kernighan and Ritchie's book is revered by programmers). In *D Is for Digital* Kernighan's focus is also educational, though he's not trying to teach readers how to program so much as he is trying to help them understand what it means to program or use technology — all while maintaining his characteristic brevity, clarity, and lack of condescension.

Madeleine Planeix-Crocker '15, a French and Italian major, proofread the second edition of *D Is for Digital* after taking COS 109 during her sophomore year. Since graduating, she has made use of her COS 109 Javascript training in her current job doing back-end website management for an art foundation in Paris. But beyond helping prepare her for that role, she says, Kernighan's course was valuable to her in providing some history of technology and how it has changed over time. "I now understand the stakes which accompany the evolution of technology in society," says Planeix-Crocker.

Kernighan had a profound impact even on some of his earliest students, including those in that 1996 class at Harvard. David Malan, a sophomore majoring in government at the time, took the class only because Kernighan let him take it pass/fail; he ended up loving it and ultimately switched his major to computer science. Now a professor of computer science at Harvard, Malan has been teaching the CS50 course — the largest class at Harvard — for a decade.

"There was a friendliness to that class," Malan said of taking CS50 with Kernighan. "He would have one of the teaching fellows walking around giving candy to the people who asked questions, and I still remember the day I got up the nerve to ask a question in front of my hundreds of classmates. That was the beginning of my taste of community in a class. A lot of the things we do now in CS50 are sort of in the spirit of that, like giving out stress balls and little rubber ducks to students."

Years later, Kernighan's students recall how he regularly asked after their siblings, attended their plays, and knew the names of everyone in his class. Taped above his desk in the computer science building are large photographs of his current students. "The things I've learned about teaching are fundamentally to get to know the students, because if they're a name and a person then you do a better job," Kernighan says. "Other than that, jeez, I don't know, try to be organized, and let them out early."

Josephine Wolff '10 is an assistant professor of public policy and computing security at Rochester Institute of Technology.

PROFESSOR ESTHER SCHOR TAKES A NEW LOOK AT ESPERANTO, INVENTED TO UNITE THE WORLD

BY DEBORAH YAFFE

A LANGUAGE FOR IDEALISTS

THE SWEET-FACED TODDLER GAZES expectantly at the camera. *"Kie estas via nazo?"* asks an off-screen adult voice. *"Nazo,"* the little boy repeats, planting a pudgy index finger on the side of his nose.

It's just another cute-baby video from YouTube, except that this one shows something remarkable: an American child on his way to becoming a native speaker of Esperanto, a language invented 130 years ago by a Polish Jewish eye doctor on an idealistic mission to repair a broken world.

Alternately embraced and mocked, persecuted and ignored, Esperanto has stubbornly survived, and today it is spoken by an international community whose members are estimated to number anywhere from the tens of thousands to 2 million. Esperantists open their homes to Esperanto-speaking travelers and mingle at conventions where they wear the Esperanto color (green), sing the Esperanto anthem (*"La Espero"* — "The Hope"), buy Esperanto sex manuals and Shakespeare translations, and share the foods and cultures of their native lands. And a few of them raise *denaskuloj* ("from-birth-ers") — Esperanto-speaking children or grandchildren.

"You're in a room, and there's someone from Nepal and someone from Cuba and someone from China and someone from Japan and someone from Indonesia, and they're all speaking Esperanto and drinking mojitos," says Princeton English professor Esther Schor, whose history-cum-memoir, *Bridge of Words: Esperanto and the Dream of a Universal Language,* was published last fall. "It's just kind of an amazing feeling."

Esperanto was the brainchild of Ludovik Lazarus Zamenhof (1859–1917), who was born in the multilingual city of Bialystok, in Russian-controlled Poland, where Jews, Poles, Germans, and Russians lived in mutual hostility. From his teenage years, the linguistically gifted Zamenhof dreamed of inventing a new language that would bridge ethnic and national differences — not by replacing native languages, but by becoming a universally shared second language for people around the world.

The project wasn't as quixotic as it sounds, says Princeton history professor Michael D. Gordin, whose 2015 book *Scientific Babel* examines how English displaced predecessors like Latin, French, German, and Russian to become the primary language of scientific publication. At the time Zamenhof was developing his ideas, scientists were beginning to worry that important discoveries might be overlooked if researchers couldn't understand the languages in which they were published. A neutral "constructed language," which would short-circuit European nations' jockeying for linguistic predominance, seemed like a viable solution.

"It wasn't a bunch of weirdos," Gordin says. "It was always a marginal movement, but it was a serious movement that serious people took seriously. It was *grava,* as Esperantists would say."

In 1887, Zamenhof — by then a trained ophthalmologist who would eventually practice among the impoverished Jewish citizens of Warsaw — unveiled his new language in a pamphlet published in Russian under the pseudonym "Doktoro Esperanto" ("Doctor Hopeful"). The founding document, which Esperantists call the *Unua Libro* (First Book), laid out 16

Esparanto Jubilee Symbol (*jubilea simbolo*) icon: Jon Valk; photo: Peter Murphy

Professor Esther Schor reads *Retoriko (Rhetoric)*, a 1950 book by Esperanto advocate and scholar Ivo Lapenna.

fundamental principles and listed 900 prefixes, suffixes, and word-roots, but it left most of the work of vocabulary-building up to the language's users.

To make his new language easy to master, Zamenhof eliminated the irregular verbs and arbitrarily gendered nouns that bedevil language learners. Esperanto's roots are drawn from German, English, Russian, and especially the Romance languages; most of its conjunctions and particles come from Latin and Greek. Every singular noun ends in "o," every plural noun ends in "oj" (pronounced like the English "oy"), every adjective ends in "a," and every adverb ends in "e." Many common adjectives like *bona* (good) can be transformed into their opposites by adding the prefix *mal-* (*malbona* = bad), halving the vocabulary that learners must memorize. New words are coined by stringing together roots and affixes.

Spoken Esperanto sounds a bit like a Slavic-sprinkled Italian, and with no ethnic or national community to insist on a received pronunciation, every speaker invests the language with an individual accent derived from her own native tongue. Written Esperanto looks semifamiliar to an English speaker, even one with no prior knowledge of the language.

When Luke Massa '13, a Princeton philosophy major who now works as a software engineer, wanted a secret language he could speak with a friend at his suburban Philadelphia high school, Esperanto seemed the perfect choice. After four months of online study and conversation, the two friends were more proficient in Esperanto than in the German they had studied for years in school, Massa says.

As a vehicle for covert hallway gossip, however, Esperanto fell flat. "It really sort of failed as a secret language, because there are so many words in it that are cognates to English or French," Massa says. "People could figure it out."

Living amid the interethnic tensions of turn-of-the-20th-century Eastern Europe, Zamenhof had loftier goals for his project, which soon came to be known by his pseudonym. "He dreamed of a language as a tool for building something that he didn't have," says Carolyn Biltoft *10, a Princeton history Ph.D. whose forthcoming book on the interwar League of Nations includes a chapter on the language-reform and language-creation movements. "He thought that language might be a tool for achieving a transborder conception of a peaceful community."

In the decades after the publication of the *Unua Libro,* Esperanto gained adherents and suffered growing pains. Zamenhof's Jewishness repelled some early Esperantists, especially after he codified his universalist vision into a religious philosophy, eventually called *Homaranismo* ("Humanity-ism"), based on the ethical teachings of the Jewish sage Hillel. In 1907, Esperanto faced its most significant challenge when a conference that had convened to select an international auxiliary language from among some two dozen competitors passed over the leading contender, Zamenhof's Esperanto, in favor of a reformed Esperanto known as Ido. In the resulting uproar, perhaps a quarter of Esperanto's leaders, but a far smaller percentage of rank-and-file users, defected to the new language, which fizzled out in less than a decade.

As European nationalism devolved into world war and revolution, Esperanto's utopianism frequently inspired hostility, Schor's book shows. (An Esperanto history of the movement, recently translated into English, is titled *Dangerous Language*.) Esperantists — who, as Gordin points out, were often involved in other forms of social or political activism, from vegetarianism to pacifism — were persecuted by Stalin and by the Nazis; all three of Zamenhof's adult children died in the Holocaust. Efforts to make Esperanto one of the official languages of the League of Nations foundered. During a 1922 debate, a Brazilian delegate called Esperanto a language of "ne'er-do-wells and communists."

At a moment when governments were deploying language as a tool of propaganda and warfare, Esperanto aimed "to undermine the power structures embedded in language," says Biltoft, an assistant professor of international history at the Graduate Institute of International and Development Studies in Geneva. "It was moving against the grain of power sources that were increasingly using communication technologies and standardizing languages in violent ways, to consolidate power."

In post-World War II Eastern Europe, embracing Esperanto provided a way for dissidents to forge links to the West, via Esperantists and their organizations, and to express "quiet resistance" to their regimes, Schor says. But Gordin notes that some communist regimes actively promoted Esperanto as well, seeing it as a way for their people to communicate with others in the Eastern bloc. Esperantists like to portray themselves as embattled dissidents, "because it gives a sort of heroism to the story," he says. "And there's plenty of heroism without having to make up reasons."

Whatever the European situation, at least one Cold War institution assuredly associated Esperanto with communism: the U.S. Army, which used Esperanto as the language of a fictional enemy known as "Aggressor" in a training exercise employed from 1947 to 1967. "Onto Zamenhof's language of peace, equality, and world harmony, the Army projected its terror of — and disgust for — communist aggression," Schor writes. (Ironically, during the same period, the American Esperanto movement was tearing itself apart in a McCarthyite effort to unmask supposed communist infiltrators.)

Although Esperantists like to think of themselves as politically neutral, the language's countercultural thrust is inherently political, Schor argues. Esperanto "symbolized an alternative to the given, and certainly an alternative to totalitarianism, an alternative to repression and bigotry and to war," she says. "It's not partisan, but I think it's deeply embedded in the political nature of human beings."

In its oppositional nature, Esperanto differs radically

"Zamenhof's real insight, I think, is not the language itself, but it's that you can't have a language without a community of speakers. Building the language, he also built the community of speakers."

— Princeton history professor Michael D. Gordin

Esperanto inventor Ludovik Lazarus Zamenhof, who unveiled his new language in 1887

Bettmann/Getty Images

from English, which today serves as a de facto international language, performing some of the functions that Zamenhof once envisioned for Esperanto. English, which spread around the globe via the imperial might of Britain and the economic muscle of the United States, is far from the peaceful, neutral tool that Zamenhof imagined, Schor says.

"There's a power story behind it, and this is what Esperanto eschews," Schor says. "Esperanto is not a language that's promoted by power. It's a language promoted by conviction, by love, by idealism."

As a high school student in India, Avaneesh Narla '17 was attracted to Esperanto in part because of his annoyance at the postcolonial persistence of the language of British colonialists. "I hated the fact that everybody was learning English," says Narla, a physics major who speaks six languages but says he is no longer proficient in Esperanto, his seventh. "Why can't we just learn Esperanto? I liked the idea a lot."

In an English-centered world, native speakers have an edge over those who acquire English later — an inherent unfairness that bothers Alice Frederick '17, an anthropology major from Texas who is writing her senior thesis on the contemporary Esperantist community. "What I like about Esperanto is that it really removes my privilege as a native English speaker," says Frederick, who learned the language in order to attend international Esperanto conferences and consult the archives of the Netherlands-based Universal Esperanto Association. "It was like the tables were suddenly turned on me. I was obligated to learn this language if I wanted an 'in' in the community, and I'd never had that experience before."

The fact that virtually all Esperanto speakers start out as fledgling second-language learners — native-speaking *denaskuloj* remain a small minority, numbering perhaps 1,000 people, Gordin estimates — has helped forge Esperantists into a friendly, welcoming community. For decades, Esperantists have maintained the *Pasporta Servo* (Passport Service), a listing of Esperanto speakers around the world who are willing to host fellow Esperantists for a night or two. Massa, the 2013 Princeton graduate, has never used the service, but when he travels, he wears his Esperanto lapel pin — a green five-pointed star — to announce himself to any fellow Esperantist he might encounter (no luck so far). "It's something for me, to remind myself about what I think about languages and travel and the world," Massa says.

Schor joined the Esperanto community in 2007–08, not long after publishing a biography of the 19th-century American Jewish poet Emma Lazarus. As she cast around for a new project, she considered "other Jews who were thinking outside the box" and remembered hearing of Zamenhof.

In the course of her research, Schor took a three-week Esperanto immersion course in San Diego; attended Esperanto conferences in Turkey, Vietnam, Cuba, and Poland; browsed through an illustrated Hungarian-Esperanto sex guide; visited

ESPERANTA STENOGRAFIO

ALFABETO

P B T D F V S Z R K G

L M N Ĥ Ŝ Ĉ Ĵ Ĝ C H J

A E I O U J

ĜENERALAJ RIMARKOJ

1. — Ĉiuj alfabetaj signoj estas neŝanĝeblaj. Oni skribas ilin malsuprenirante ↓ aŭ antaŭenirante →, escepte R kaj Ĥ, kiuj estas skribitaj suprenirante ↑.

2. — Oni aldonas la helpajn signetojn, rektajn aŭ kurbajn, nur kiam la vorto estas tute skribata.

3. — Literon E oni skribas tiamaniere, ke ĝi faras angulon, se eble akutan, kun la literoj, kiuj antaŭas aŭ sekvas.

4. — Kiam la literoj A aŭ O komencas aŭ finas vorton, aŭ estas inter du konsonantoj, kiuj ne faras angulon, oni skribas ilin en kontraŭa direkto de l' kutima litero O. Kiam ili estas inter du konsonantoj, kiuj faras angulon, oni skribas ilin *ekstere* de la angulo.

5. — Literon J oni skribas : ĉe komenco de vorto per konsonanta signo ; post aŭ antaŭ konsonantoj J povas esti traktata kiel I ; ĉe fino de vorto oni uzas la duonvokalon.

6. — « Aŭ » antaŭ konsonanto estas skribata kiel O.

Laŭ AIMÉ-PARIS, Esperantigis A. LEFEBVRE

Postcard showing the Esperanto alphabet, ca. 1900

Online, today's would-be Esperantists can study for free through the website lernu! (www.lernu.net), which reports 200,000 registered users, or with the help of the language-learning app Duolingo, which claims 569,000 students of Esperanto. Esperantists can look up information on Vikipedio, meet in online forums to debate the most appropriate Esperanto coinage for terms like "smartphone" and "flash drive," or visit YouTube to watch clips of Esperanto rock bands and a full-length (albeit subtitled) version of one of the world's few all-Esperanto movies, the 1966 horror film *Inkubo* (*Incubus*), starring a pre-*Star Trek* William Shatner.

Despite this flourishing culture, however, Esperanto has always encountered plenty of dismissiveness and ridicule. In 1908, Theodore W. Hunt, the first chairman of Princeton's English department, told a gathering of the Modern Language Association that constructed languages like Esperanto "can never rise to the plane of language as the expression of thought for the highest ends." (At least one of his Princeton colleagues disagreed: Some years earlier, retired biology professor George Macloskie had translated the Gospel of Matthew into Esperanto.) A century later, late-night TV host Stephen Colbert attended the 2014 Comic-Con costumed as Prince Hawkcat, supposedly the star of "the most popular human-animal fantasy hybrid franchise ever published" — wait for it — "in Esperanto."

Earlier this year, Frederick, the senior anthropology major, found herself bristling unexpectedly when a professor jokingly compared Esperanto to Klingon, the language of the extraterrestrial villains on *Star Trek* — a language invented to serve the purposes of commercial entertainment, not utopian idealism. "I immediately wanted to jump in," Frederick says. "I kept my mouth shut, but it struck me as something that Esperantists might call an indignity."

From time to time, Massa was forced to defend Esperanto from the criticism or mockery of fellow students who passed by the poorly attended mealtime Esperanto table he founded in Rockefeller College. Esperanto is "the thing I'm the most irrational about in my life," Massa says. "I will defend it forever, and I know that, and I am ready to do that at the drop of a hat."

Esperanto attracts scorn in part because of the very nature of the project. "There's a silly notion that because it's an

a school and foster home run by Esperantists in rural Brazil; and spent a chatty day in Uzbekistan with the Esperanto-speaking director of Samarkand's International Museum of Peace and Solidarity.

"Zamenhof's real insight, I think, is not the language itself, but it's that you can't have a language without a community of speakers," says Gordin, the Princeton history professor. "Building the language, he also built the community of speakers."

And of readers: Zamenhof himself translated *Hamlet* and the Hebrew Bible into Esperanto, and today it's possible to read Esperanto-language versions of everything from Dante's *Inferno* to Tolkien's *Lord of the Rings,* as well as original works of prose and poetry. Schor, herself a published poet, tried translating Elizabeth Bishop into Esperanto (verdict: not easy).

Photo12/UIG via Getty Images

Schor (front row, second from left) with Esperantists Ursula and Giuseppe Grattapaglia, co-directors of the Bona Espero farm-school and children's home in rural Brazil, with staff and children.

Courtesy Esther Schor

invented language, it can't be a real one," says David Bellos, a professor in Princeton's comparative literature and French and Italian departments, who arranged daily Esperanto lessons for the Princeton students he taught during a six-week-long global seminar on multilingualism, held in Geneva, in the summer of 2014. "If you stop to think about it, most languages have been invented at some point. When they were invented isn't really relevant to whether or not they can be made to serve the functions that you want a language to serve."

Esperanto's earnest idealism also exposes it to attacks from the more cynical. Zamenhof wholeheartedly embraced the notion of an *interna ideo* (inner idea), a higher purpose to which his new language was dedicated, and even today, Esperantists call each other *samideanoj:* "same-idea-ers."

Exactly what that inner idea consists of seems up for grabs, however. Over the years, suggestions from scholars, movement leaders, and ordinary Esperantists have included not only Zamenhof's *Homaranismo* but also peace, social justice, language justice, interethnic harmony, anti-nationalism, and anti-fascism. Nor is it obvious that Esperantists must embrace any *interna ideo* at all. "It is possible to approach Esperanto and to make use of Esperanto without feeling that you have to be a vegan, long-haired, sandal-wearing peacenik," says Bellos. "It's about how you can ease the difficulties of the world by having a common interlanguage."

Narla, who has taught Esperanto mini-classes to local high school students and to fellow Princeton students during Wintersession, believes Esperanto's future may lie in its usefulness as a tool for promoting second-language acquisition. In Britain, a small program called Springboard to Languages claims that school-age children who first master Esperanto's transparent, regular grammar gain the confidence and structural grounding they need to tackle more complicated languages — just as learning the recorder prepares music students to play more complicated instruments. "French in the classroom is a bassoon," Springboard's creator, Tim Morley, argues in a 2012 TEDx talk. "Esperanto is a recorder."

Such modest goals seem a far cry from Zamenhof's vision of the *finavenko* (final victory) — an Esperanto-speaking world. These days, his ambition seems more distant than ever, and realizing it, were it possible, might not even be desirable, suggests Frederick, the senior anthropology major. "Esperanto is kind of in a bind in this way," she says. "It wants to be the second language for the world, but in order to do that, it would ultimately have to become so huge that people felt this sense of obligation to learn it, like if they didn't, they would be missing out. Esperanto would become invested with this power that it has really avoided trying to have. It can aspire to be like English, but I almost think it would lose some piece of itself if it did that."

In any case, Schor says, Esperantists no longer believe in that aspect of Zamenhof's dream. "*Finavenkismo* is finished, is over," she says. "No one thinks it's going to happen."

Not so fast, says Bellos, her Princeton colleague. Nowadays, English is firmly entrenched as the international language, he says, but once upon a time, so were Sumerian, Ancient Greek, Latin, and French.

"Over the course of human history, no central language has ever stayed central for more than a few centuries," Bellos says. "Something will change one day. Esperanto is a perfectly reasonable project, and people may come to it. I think it's utterly premature to say that it's missed the boat."

Deborah Yaffe is a freelance writer based in Princeton Junction, N.J. Her most recent book is Among the Janeites: A Journey Through the World of Jane Austen Fandom.

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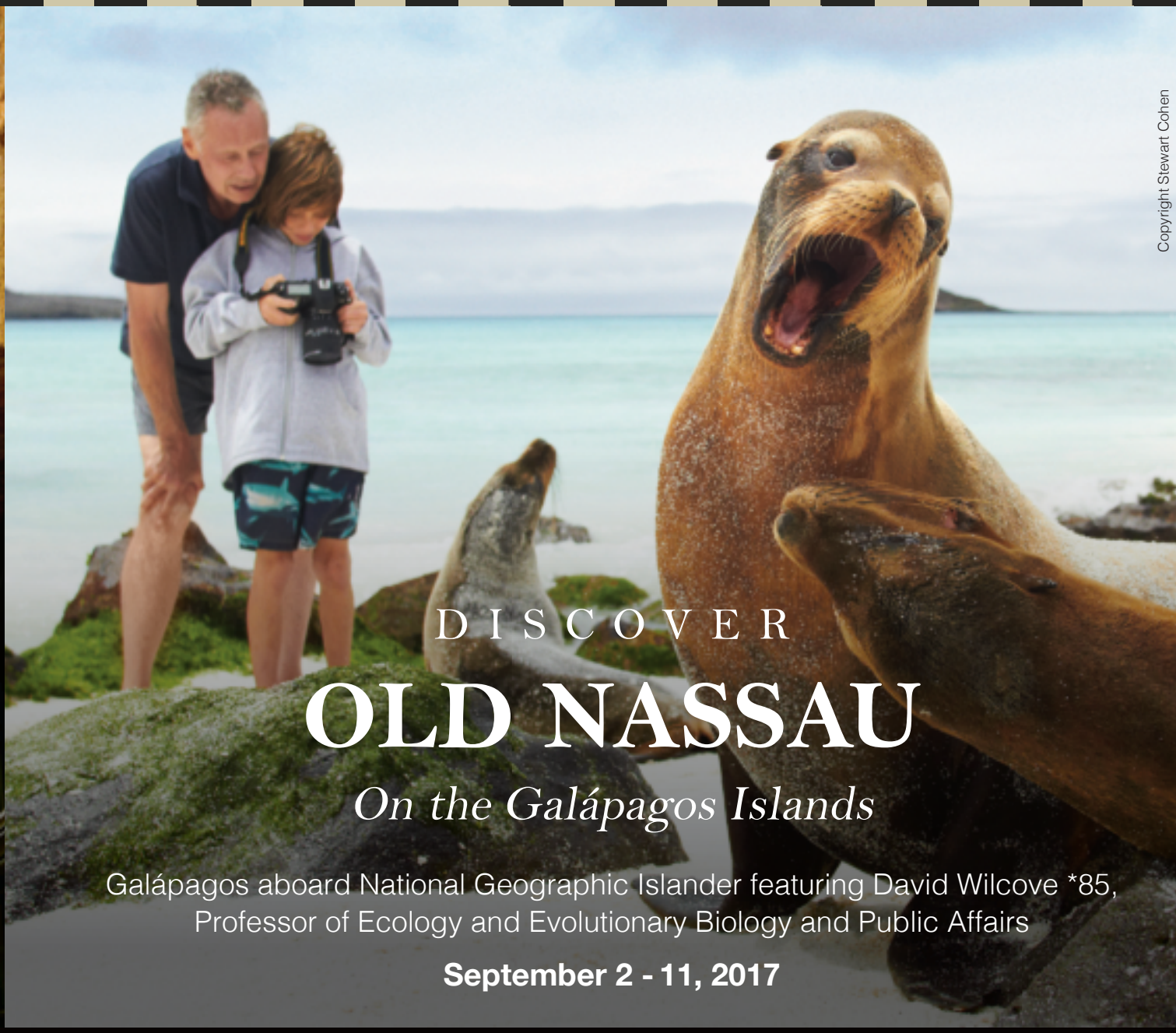

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HOW CHILDREN LEARN:
Q&A WITH CASEY LEW-WILLIAMS

THE LANGUAGE OF LITTLE ONES

CHILDREN LEARN THE COMPLEXITIES of sounds, words, sentences, and communication in a remarkably short period of time. At the Princeton Baby Lab, which was established in 2014, researchers are trying to figure out exactly how that happens, working with babies and young children from central New Jersey. Casey Lew-Williams, co-director of the lab (with Lauren Emberson) is an assistant professor of psychology. PAW spoke with him about what research tells us about learning language, both as babies and adults.

How did you end up doing research about babies and children?
I worked at a preschool when I was in college at UC-Berkeley. I watched kids learn and communicate, and that started my pursuit of developmental research. I'm simultaneously interested in questions about how learning gets off the ground in infancy and how language is learned. Those are very compatible questions to be asking. Language is a wonderful test case for how human cognition works.

What do you study at the Baby Lab?
Most of our studies use language as a window into understanding how babies detect, process, and learn from the structure in their environment.

Do we know how children actually acquire language?
Humans are equipped to learn language in that they have general learning processes that allow them to break into the very complex structure of language. In the first six months of infancy, two main signatures of human cognition interact: our species' capacity for detecting and remembering patterns, and our interest in communicating with others.

Infants are bombarded with millions of bits of data at every moment. They have the perceptual capacities to take it in: an advanced visual system, an advanced auditory system, advanced motor systems. They begin noticing what is said, and with whom, and when. Over months and years they put the pieces together and begin to understand sounds, words, and sentences. They understand the value that they have in communicating with other people. Those basic cognitive processes can give rise to the complexities of languages.

How do you study such young subjects?
The basic question we ask is "How do babies learn?" So we have to be creative with our methods, given that babies can't tell you what they're thinking. They can't perform sophisticated motor movements or engage in sophisticated communications. So we take advantage of their very simple, yet complex, behaviors. For example, they turn their heads to look at things to pay attention, then get bored with things and look away.

We use methods that capitalize on these movements. An eye tracker can tell you where they're looking at a certain point in time. We might teach them several words in the course of a few minutes, showing them one novel object at a time. Then we put two novel objects side by side and tell them to look at one of them. We can see the speed at which they get to the correct

"Infants are bombarded with millions of bits of data at every moment. They have the perceptual capacities to take it in."

Ricardo Barros

object by using the eye tracker. What's great about eye tracking is that it's been used in many labs and in many studies, and it's very easy to implement. Babies can sit on Mom or Dad's lap and passively look or listen.

Why is the speed at which a baby looks at the right object important?

Our ability to process language early on can predict outcomes later. Disparities in language learning are evident even in infancy.

What does that suggest about when to intervene with kids who are poor or otherwise at risk?

As a society we invest a lot more in the older ages, like our investment in preschool for 3- to 5-year-olds. And clearly our government funds elementary school and beyond. Not enough attention is devoted to the first 12 to 24 months of life as a critical time for setting the stage for what happens later.

So what do you think about some of the public-health campaigns urging parents to talk to their babies?

Interventions aimed at supporting early learning are becoming more rigorous with time. They draw from the basic science emerging from the field. So here's

"When children experience enrichment defined in almost any way that makes sense for them or their family, they benefit."

my opportunity to promote basic science! While some of our findings aren't immediately applicable to helping children learn, they are an important step that can eventually lead to concrete information for parents, teachers, and health-care professionals.

Should parents be narrating everything to their babies all the time?

No, I don't tell parents to talk all the time. I'd rank quality of speech first. Quantity comes second. The easiest message to convey to parents is that play is important. If you're sitting on the ground with a child playing, you're using language — probably in creative ways. The more play that happens, the greater likelihood that the child's learning will accelerate. You want to follow your child's lead, to expose him or her to ideas, to interact meaningfully. The byproduct of that is exposure to language.

What about reading to your kid? Is that just as good as chatting or playing?

Reading is another fantastic way to expose a child to language. Ideally you're not just reading the pages in a book. You're pausing to engage with the child: How does this relate to his or her life? Children's books are more diverse in terms of vocabulary and grammar than speech. So there's an extra value to reading, because it gets parents outside their own natural tendencies or conversational topics and into the language and ideas of an author.

What else are you learning from your research at the Baby Lab?

Our studies collectively suggest that babies are very good at hacking the statistical structure of language, and Ph.D. students in the lab have recently completed studies that approach this idea from several angles. For example, we recently found that 7-month-old babies don't learn any new pattern that comes their way. Instead, they learn better if they think a pattern will be useful for communicating. And we study how early pattern recognition helps with two important challenges in language.

First, Jessica Schwab [GS] recently showed that toddlers can best learn a new word if parents say the word in a few sentences over a short window of time. Second, we study how the ability to learn patterns gives rise to the ability to predict patterns, such as predicting what words come next. This is important. If your predictions are confirmed, they're reinforced. If they're erroneous, it becomes a learning moment so you can revise your view of how things work in light of new information. Tracy Reuter [GS] found that babies' ability to make and update predictions is a key part of early language learning. If babies are good at predicting — as revealed by very quick eye movements as they look and listen — they tend to have larger vocabularies.

What are you learning about bilingual kids?

As a field, we've shown that when babies get enough high-quality, high-quantity exposure to two languages, they can learn both simultaneously. They can segregate the languages; they learn that certain sounds are heard with other sounds. When they receive enough exposure to each language, they have the capacity to learn both in most cases.

Is their learning inhibited, since they're learning two languages at once?

Generally, the science on early bilingualism finds that bilingual children are less confused than we might expect. They're not more likely to have language difficulties or delays or disorders. They don't need neatly packaged information segregated by person or by space. Parents don't need to avoid mixing languages. In fact, being able to flexibly switch back and forth between languages is a hallmark of many bilingual cultures that babies are raised in.

So is it beneficial to go out of your way to get your kid to learn a second language?

My general answer is that it does appear that bilingualism has some advantage for cognition. But the effects are small, and not high-stakes.

Exposure to music might have the same effect. Other forms of enrichment could have similar effects. When children experience enrichment defined in almost any way that makes sense for them or their family, they benefit. And bilingualism is one example of a type of experience that allows you to flexibly communicate with people, to learn about two cultures, to learn to read.

Is there a difference in how people learn different languages?

The same learning processes are applied to all languages. They're learned differently only in that they offer different cues to their structure. For example, in tonal languages like Mandarin, rising or falling tones carry semantic meaning. In English, that's not the case. But babies can detect which cues are the most important and reliable for navigating their particular environments.

Is it impossible for adults to learn a new language very well?

The best summary is that learning is pretty much always better earlier in life! If you're 45 and want to learn Japanese, better to do it now than when you're 80. But there's no definitive threshold. There's the notion that puberty is when you lose the ability to speak like a native speaker, but that's unlikely to be accurate.

Another consideration is that adults don't really have the bandwidth to immerse themselves in a new language the way a baby does. Even if they're living in a country where the second language is spoken, they have much more to do than look and listen to a new language. *Interview conducted and condensed by Katherine Hobson '94*

LIT & LINGO

WHEN NEW YORKERS RIOTED OVER SHAKESPEARE

BY ELYSE GRAHAM '07

OH, THE DRAMA!

ONE OF THE DEADLIEST RIOTS in New York City's history was caused, perhaps foreseeably, by Shakespeare. In the decades following their break from the motherland, Americans made a national project of stockpiling language sufficiently lofty to match their dreams of a great civilization. They festooned the landscape with grand names from the Bible or classical antiquity: Babylon, Jerusalem, Mount Sinai, Troy, Ithaca, Syracuse, Rome. And, since Shakespeare was universally honored as the greatest author in the English language, they set themselves to the task of making Shakespeare an American. The historian Lawrence Levine writes that Shakespeare was by far "the most popular playwright of the colonies," his works mandated at every level of schooling and kept in homes as a staple alongside the Bible.

In the 1830s, Alexis de Tocqueville remarked of the young country, "There is hardly a pioneer's hut that does not contain a few volumes of Shakespeare. I remember that I read the feudal drama of *Henry IV* for the first time in a log cabin." A few decades later, Mark Twain apprenticed for a riverboat pilot who, he later recalled, would pass the time by reciting passages of the Bard. (In his novel *Huckleberry Finn,* a pair of traveling hustlers makes money by visiting towns along the Mississippi River and staging scenes from Shakespeare's plays. The gimmick assumes that frontier towns hold ready audiences for Shakespeare.) "Shakespeare belongs to two nations now," declared Willa Cather in 1894: the nation that reared him and the nation that he helped to rear. "Then," she wrote, "one always fancies if he had been born just a few centuries later he would have been an American."

In New York City, already a center of immigration in the mid-19th century, Bardolatry was aligned with the desire, on the part of city fathers and immigrants alike, for the newcomers to be Americanized. School curricula drilled down on Shakespeare to join the students in a common literature; immigrant-aid societies hosted performances of Shakespeare and lectures on his plays. ("A good percentage of the audiences have not long been masters of the English Language," one society boasted of these shows. "What a grand and inspiring entrance was here provided for them — the best English Literature ever cast in dramatic form.") Meanwhile, immigrants seized upon Shakespeare as an elevating figure. Inhabitants of the city's tenements decorated their homes with postcards and calendars featuring Shakespeare's characters, which they cut from the newspaper or bought from street peddlers. Cheap theaters on the Lower East Side staged Shakespeare for enthusiastic crowds — more enthusiastic, many commentators said, than those at the tony theaters uptown.

That this compound of nationalism and Bardolatry might one day ignite was therefore understandable. With blood still running hot from the Revolution and the borders mostly settled, it was natural that the territorial dispute between England and the States would move, as the 19th century advanced, to language. Noah Webster designed his American dictionary, first published in 1828, to "rationalize" the spelling of English, thus showing America to be a superior heir to the nations' common language. In the realm of education,

Lit & Lingo icon: Jon Valk

Theories about literature have killed a surprising number of people, but here the death toll was unusually high.

meanwhile, claiming the language of Shakespeare on behalf of the American elite could seem a way to assert the young nation's natural nobility and deter the threat of mongrelization. As late as 1886, an educator could propose that Shakespeare's language would purify immigrant students in the classroom: "Nothing would so withstand the rush into our language of vapid, foreign dilutions as a baptism into Shakespeare's terse, crisp, sinewy Saxon." (This is, of course, a strange description of Shakespeare's English, which is the definition of a melting pot.)

In short, the claim to a poet's "realms of gold" was, that night in New York, part of a larger field of regional animosities and territorial conflict. Historically speaking, theories about literature have killed a surprising number of people, but here the death toll was unusually high: 25 people dead, more than 120 wounded, and very few left the wiser about Shakespeare.

The immediate cause of the riot was a conflict between two actors, one American and one English. The first combatant was Edwin Forrest, a son of Philadelphia who billed himself as "The Native Tragedian." He preferred roles, as the historians Roberta Pearson and William Uricchio note, that enabled him to play purple as a tragic rebel and then die a magnificent death. In a rhetorical turn that was then commonplace, he associated his American artistry with the grandeur of the American landscape: His voice was as "the falls of Niagara," his thighs "carved out of the American forest." The second combatant was William Charles Macready, a Londoner who held a towering reputation as a Shakespearean. His style was pensive, ostentatiously intellectual; he told his diary that he did not believe Forrest understood Shakespeare's language.

Today, the rivalry would play out on Twitter. In the 1840s, the medium of combat was the popular press, which construed it as a diplomatic struggle. In 1845, Forrest told the American papers that Macready had used his connections in London's media elite to arrange for bad reviews of Forrest's London tour. (The reviews exemplified, he said, "that narrow, exclusive, prejudiced, and may I add, anti-American feeling which prescribes geographical limits to the growth of genius and talent.") In 1846, Forrest attended a show in which Macready played Hamlet, where, in a gesture that set the British press howling, Forrest hissed. In 1848, the two actors set out on simultaneous national tours in the United States, where — in an act of supreme mutual churlishness — they scheduled several stops on the same nights in the same municipalities.

On May 7, 1849, they were in New York City: Macready played Macbeth at the Astor Place Opera House, while Forrest played the same role at the Broadway Theatre. This being New York, real estate signified: Broadway meant popular theater, while the Opera House stood out as a symbol of conspicuous wealth. Forrest supporters filled the city's lower classes; they included, curiously, both Irish immigrants angry with the English for the potato famine and "American nativists" angry with the English for sending Irish immigrants their way. That night, they bought up blocks of tickets to Macready's Astor Place performance, where they threw rotten eggs, pennies, and chairs. The play had to stop early due to the disruption.

Macready tried to leave town, but a committee of distinguished New Yorkers, including Washington Irving, wrote formally to ask him to finish his run. He assented, and word went out that he would reappear as Macbeth May 10. According to a pamphlet that appeared the same year, this exchange only deepened the anger of Forrest supporters: "The question became not only a national, but a social one. It was the rich against the poor — the aristocracy against the people."

On the appointed night, Macready strode out before a packed house as Macbeth. (Forrest was again at the Broadway Theatre, but — ominously, in retrospect — half of the seats were empty.) The police were present at Macready's performance, and the play made it to the closing curtain undisturbed, with the exception of some hecklers whom the police escorted out partway through. However, the riot was already fomenting. Before Astor Place opened its doors, the surrounding streets had begun to fill with a muttering, aimless crowd. Soon the streets held 15,000 people. Eventually — perhaps when the police hauled the hecklers outside — the crowd surged into action, shoving at the doors of the Opera House and throwing paving stones at the windows. The theater's employees put up makeshift barricades; the police found themselves overwhelmed, and the National Guard arrived with bayonets to subdue the crowd and escort Macready's audience to safety. Finally, unable to use bayonets effectively against the enormous mob, the officers took out rifles and opened fire.

The following morning, the light rose on a soberer city. The troops had managed to clear the streets, although cannons now stood outside Astor Place as a warning. Macready had escaped by disguising himself as one of the rioters and — in the most dangerous role of his career — sneaking away in the crowd. It was left to the newspapers, which had done so much to stir up the public, to make sense of the aftermath. (One paper tutted on May 12: "For the last 36 hours, New York has worn the aspect of a civil war, all because two actors had quarreled!") In time, the event passed into theatrical history, there to be interpreted waggishly as the worst critical review of all time. The Shakespearean Michael Dobson hears echoes of the riot in a music-hall song that debuted in 1922:

I acted so tragic the house rose like magic,
The audience yelled, "You're sublime!"
They made me a present of Mornington Crescent,
They threw it a brick at a time.
Someone threw a fender, which caught me a bender,
I hoisted a white flag and tried to surrender.
They jeered me; they queered me,
And half of them stoned me to death;
They threw nuts and sultanas, fried eggs and bananas,
The night I appeared as Macbeth.

Elyse Graham '07, a former PAW student columnist, is an assistant professor of digital humanities at Stony Brook University. She is writing a book for Oxford University Press on language in New York City.

Illustration: Nate Kitch; photo: Michael Rubenstein

LIT & LINGO

SLANG, TIGER-STYLE

BY DAVID GALEF '81

PRINCETON PATTER

PEOPLE THOUGHT HE WAS JUST A FACEMAN, the kind who'd get swassed left and right, but then he started avoiding the Street, hitting the libe, showing up at the 'cepts, no more gut-hopping, and pretty soon he got known as a real wonk, the kind who buckles down on his thease well before closing time.

If you didn't go to Princeton in the 1960s, at least some of this description might puzzle you. Most of the terms were taken from the 1965 *Freshman Herald*. A liberal translation: "Everyone saw him as a superficial guy who'd get rejected at the eating clubs, but he deserted Prospect Avenue, went to the library, attended all his precept sessions, stopped taking easy classes, and soon acquired a reputation as a real studier who'd work on his thesis far ahead of the deadline."

Some of the terms, like *wonk* or *gut,* are still around, known to college students around the country. Yet where else but at Princeton would *the Street* be instantly recognizable as Prospect Avenue, home to the eating clubs? What Princeton student doesn't know about the dreaded senior thesis, unaffectionately known as the *thease* (and far worse)? People, places, and practices distinguish a group from those outside, producing a verbal shorthand for all manner of experiences. At their highest, they form a code or shibboleth, as sure as eating mystery meat at Commons makes you york.

Language at Princeton has lately endured scrutiny for its entrenched terms, including the "master" of a residential college — a title recently changed. But terms particular to an institution evolve as the place itself changes. What James Axtell in *The Making of Princeton University* calls Princeton patois includes such familiar terms as the *Dinky,* which was once known as the PJ&B, or Princeton Junction and Back. The term *campus* to mean a school's grounds is probably a Princeton coinage, the first known use dating to a student's 1774 letter describing the purloining and incineration of the steward's tea: "Having made a fire in the Campus, we there burnt near a dozen pounds, tolled the bell and made many spirited resolves." Previously, *yard* was the term, as in "Harvard yard," but this clearly was not a Boston tea party.

Back in 1953, a Princeton senior named Dave Burns published a piece called "The Cliché Expert" in *The Tiger.* A riff on Frank Sullivan's "The Cliché Expert" series in *The New Yorker,* Burns' version sticks to Princeton lingo, claiming, "I'm no simple tool," but the prospect of final exams is getting to him: "I've clutched. I'm all tensed up" (the opposite of nowadays, when to clutch is a saving maneuver). Earlier attempts to showcase Princeton patter include a roundup in PAW from 1929, which mentions *softie,* "one who lets his studies interfere with his education," and the all-purpose ejaculation *Geest!*

Princeton forms its own world, and to some extent it's a world built of words. Perhaps for this reason, Joshua T. Katz, the Cotsen Professor of Humanities and a linguist in the classics department (and a PAW board member), decided to offer LIN 220: Language at Princeton for the spring 2016 semester. As one student, Julia Fitzgerald '18, said: "Princeton seems to really work to create a language that strengthens its identity, its sense of its own difference and specialness." Her class project

Marc Rosenthal '71

Prospect Avenue ("the Street") and its eating clubs have provided grist for a lot of argot, from *getting hosed* or *cut* at Bicker to *humming right in,* perhaps by a *body bid.*

focused on Princeton's linguistic dichotomy, her term for the students' tendency to use disparaging vocabulary to describe their college experience to other Princeton students while romanticizing it to people off-campus. Another student, Anna Leader '18, wrote, "It gave me a chance to explore a place I've been living for four years." In fact, as Katz notes, "Students at Princeton have a remarkably limited sense of Princeton's history," and one way of deepening their outlook is through language.

Though what's specific to Princeton may be sometimes hard to claim (whose property is *townie*?), American linguists have long been interested in school slang. Volume 2 of *Dialect Notes* back in 1896 includes a section with the heading "College Words and Phrases," derived largely from a survey sent to colleges across the nation. Of course, a lot of slang expressions aren't new vocabulary so much as old words with new meanings, often humorous, so that *diploma* becomes *sheepskin.* It's edifying that *college* in this volume is slang for an outhouse.

So what belongs to Old Nassau and not Harvard Yard? Start with anything using Nassau, from the song "Old Nassau" to "the Nass," the diminutive for *Nassau Weekly.* Include all references to tiger (in the college cheer by around 1879) or orange and black (dating back to the late 1860s) or just sidelong tigrine references (like PAW, begun in 1900). Don't omit the curious rituals, from the annual Cane Spree to the Nude Olympics, honored in both the breach and the observance until banned in 1999. For performances with more conscious artistry, see *arch sings,* where a cappella groups like the Tigertones crooned in places like Blair Arch. Put on the list *Woody Woo,* which provided a career path for many students, even if Woodrow Wilson 1879's legacy has come under fire, and *the Wa,* which filled so many student stomachs. And don't forget offerings such as *'cepts* for (precepts) and *'zee groups* (for advisees).

Of course, Prospect Avenue ("the Street") and its eating clubs have provided grist for a lot of argot, from *getting hosed* or *cut* at Bicker to *humming right in,* perhaps by a *body bid.* The vernacular also includes euphemisms such as *library fines* from Chancellor Green Library, to mask drink tabs on a student bill after the library became a pub in 1973. On the other side of the table, so to speak, is what might be called Commons talk: *mystery meat, green death, snakemeat,* and *elephant scabs* (breaded veal cutlets). Allusions to drink are almost always alcoholic: *pre-game* (drinking), *crump* (to collapse after drinking), *hooker* (a drink, 1930s), *touching it* (1930s); also *chug, york;* see also *beast* for beer, *boot* for vomit, and *McCoshed* (to be sent to the infirmary because of inebriation).

As for sex, the average Princeton student from bygone decades at least talked a good game. Terms like *flush* or *flushogram* (a note backing out of the arrangement), *snow* (to come on strong), *queen* (a real babe), *Cliffedweller* (think Radcliffe), *import* (women brought in from off campus), *rack* (score), *snake* (to grab someone's date), and *wife* (a roommate who gets sexiled during a crucial night) showed the hopeful horizons of a male Princeton student.

In academics, the University offers not just killer courses and the grinds or wonks who ace them, but also guts that you can punt, such as Rocks for Jocks, Volts for Dolts, Nuts 'n' Sluts (Social Deviance), Physics for Poets, and Stars for Stoners, a nickname for AST 205: Planets of the Universe. Note: This last course is in fact a rather difficult class involving real math. Slang is often poetic but not necessarily accurate. Consider also the places where classes and other events are held, from the EQuad to the Greek twins Whig-Clio, the Stone for the Harvey S. Firestone Library, MoDo for Murray-Dodge Hall, and more recently RoMa, the nickname for the Rockefeller/Mathey College dining hall.

Princeton alums have also done their part, showing up annually and spawning the term *reuner.* And who could forget the locomotive, the Princeton cheer with its "sis, sis, sis," the sound of a steam engine?

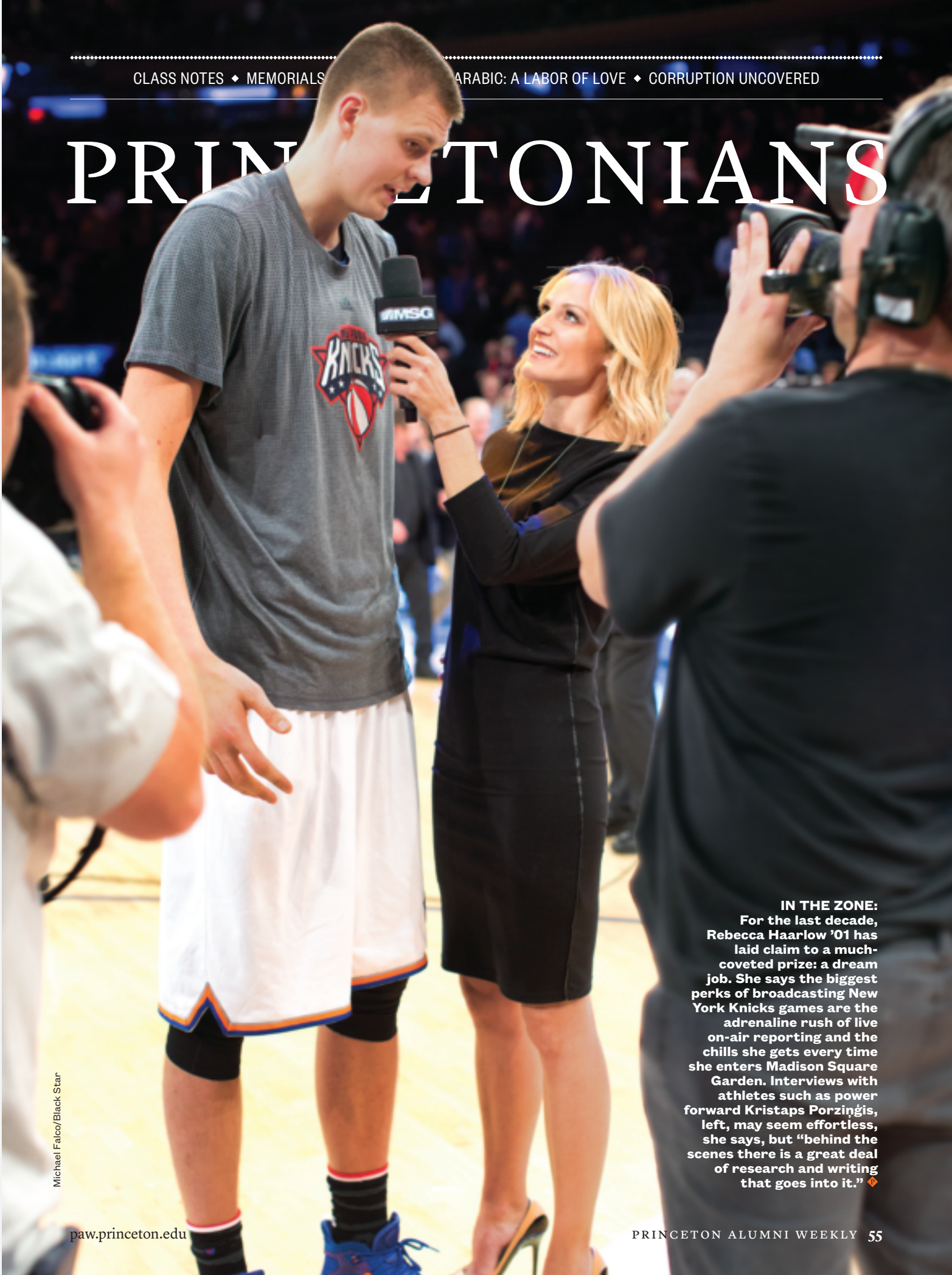
One recent instance of slang catching on, traced by research in Katz's class to a single source, is the term *f-shack* for Firestone Library. It stems from a mass email sent to the senior class by one student, who lifted the term from a friend, who heard it from a 2010 film called *The Other Guys.* The term combines insouciance and convenience with a dash of humor that eases the hours of studying. "Meet you at the f-shack," students now text each other.

So what's changed over the years? The all-important PUID is now the prox card, though, as Chance Fletcher '18, a history major and member of Katz's class, points out, "The U-Store clerk I spoke to didn't know the term." One fertile area for new terms, as Katz notes, lies in the abundance of outdoor art on campus and the labels attached to them. Henry Moore's Oval with Points was once known as "Nixon's nose." Stay tuned for the completion of the arts-and-transit project later this year.

David Galef '81 is a professor at Montclair State University. His most recent book is Brevity: A Flash Fiction Handbook.

TOUGHIES, SMOOTHIES, AND HIGH-CLASS WOLFING: View PAW's 1929 primer on the campus vernacular at **paw.princeton.edu**

PRINCETONIANS



Michael Falco/Black Star

IN THE ZONE: For the last decade, Rebecca Haarlow '01 has laid claim to a much-coveted prize: a dream job. She says the biggest perks of broadcasting New York Knicks games are the adrenaline rush of live on-air reporting and the chills she gets every time she enters Madison Square Garden. Interviews with athletes such as power forward Kristaps Porziņģis, left, may seem effortless, she says, but "behind the scenes there is a great deal of research and writing that goes into it."

ESSAY

FOR STUDENT OF ARABIC, A LIFELONG LESSON

Zora O'Neill '94

Zora O'Neill '94 is a writer in Queens, N.Y., and the author of All Strangers Are Kin: Adventures in Arabic and the Arab World *(Houghton, Mifflin, Harcourt).*

In the various Arab countries I've visited, I am an obvious foreigner, so I've never been able to slip into an Arabic conversation without comment. Just buying a bus ticket in Egypt, for instance, entails a detour for a mini-interrogation: "Where are you from? Where did you learn Arabic?" I can answer these questions in my sleep: I'm from America. I learned Arabic in college.

When I began studying, in my first year at Princeton, it was for the usual 18-year-old reasons, all self-centered: What could Arabic do for *me?* It could make me look smart and interesting and obscure — because nobody studied Arabic back in the early 1990s, and the language is ridiculously hard. It could take me away from my boring old home in New Mexico. In high school there, perversely, I had ignored the massive Spanish-speaking population and studied French. Arabic was a *really* foreign language that could take me to *really* foreign lands.

And it did. The summer after my sophomore year, I received a grant to study in Cairo. The crowds, the energy, the thrill of using a foreign language in everyday situations outside the classroom — I was hooked, and I decided to major in Near Eastern studies. (My roommate and I were the only undergraduates to join the department in our year: obscurity confirmed.)

I continued my studies at Indiana University for a master's degree in Arabic literature, then spent another year in Cairo. But after seven years of increasingly arcane work, I had ceased to feel particularly smart in Arabic, and there seemed to be few jobs outside of academia, at least for people specializing in pre-Islamic poetry. So I left school — but Arabic continued to serve me as I traveled, getting me better deals in markets and invitations into people's homes, and once, a much-needed lift in a Spanish village, when the only person awake was a Moroccan street sweeper.

For years, my Arabic was dormant. I traveled to other places, learned other languages (after Arabic, every other language is easier; I finally learned Spanish). About a decade ago, after scoring a writing assignment for a guidebook in Egypt, I found myself circling back to Arabic — and that repeated conversation/interrogation. I'm from America. I learned Arabic in college. That was a long time ago, and I've forgotten a lot.

Fortunately, native Arabic speakers are encouraging and patient. I've been happy to discover that not only do I not need sixth-century poetic vocabulary, but even the rudimentary words I do still have are enough to connect with people, enough to communicate and commiserate and laugh together.

More important, though, is the realization that now I can use Arabic not for myself, but to serve others. In 2011, I decided to write a book about culture and daily life in the Arab world, based on my experience studying there. In 2015, my knowledge of Arabic empowered me to help Syrian and Iraqi refugees in Europe. I helped by printing Arabic information packets, labeling maps in Arabic, politely telling people to line up for food — but most of all, just by listening to people's stories.

American antagonism toward the Arab world has flourished since 9/11, and news coverage of the latest terrorist activity drowns out reports of the kind, generous people I have met traveling there. Some days I feel powerless against this cultural tide, but I have made it my mission to relate the personal stories I hear from Arabs to people who might not otherwise hear them.

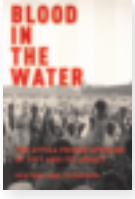
I'm from America. I learned Arabic in college. And I'm still learning and listening every day.

Illustration: Selçuk Demirel; photo: Christine Han Photography

Russell Oswald, chief of New York state's penal system, left, sits at the negotiation table with Attica prisoners, including "L.D." Barkley, standing second from right.

READING ROOM: HEATHER ANN THOMPSON *95

WELL-KEPT SECRETS BEHIND AN UPRISING ARE UNVEILED



On Sept. 9, 1971, an impassioned speech by a bespectacled 21-year-old prisoner at Attica Correctional facility made national news. "We are men! We are not beasts," proclaimed "L.D." Barkley, one of approximately 2,400 men at the upstate New York maximum-security prison. Inmates had been writing letters seeking improvements in their living conditions for years. Basic medical care was almost nonexistent, and each inmate received only 63 cents' worth of food and the equivalent of one toilet-paper square daily. An unplanned, violent uprising quickly evolved into an organized rebellion involving nearly 1,300 men in one of the prison yards. They elected speakers from each cellblock and requested outside observers to ensure the state of New York bargained in good faith. They also protected their hostages as bargaining chips.

"We again have a prison crisis of overcrowding and terrible conditions, and I think the book invites readers to rethink this moment in light of all that we now know happened at Attica."

— Heather Ann Thompson *95

Over four days of negotiations, the prisoners got closer to major improvements and a peaceful resolution. But behind the scenes, the state, including the Nelson Rockefeller administration, saw this as an opportunity to show that it was tough on crime. Heather Ann Thompson *95's *Blood in the Water: The Attica Prison Uprising of 1971 and its Legacy* (Pantheon), is the first comprehensive history of the rebellion. The book was a National Book Award finalist and will be adapted for film.

The child of activists, Thompson, now a history professor at the University of Michigan, grew up in Detroit during a time of great civil unrest and became interested in writing about social justice issues. Thompson spoke to PAW about her research into the Attica uprising — a project that took 13 years to complete.

What happened at Attica after police stormed the prison in order to retake it?

I was able to show from records — that the state had hoped I would not see — that it had no intention of settling peacefully. Though the state was told that if they went in with force hostages would die, they still sent in several hundred heavily armed troopers and corrections officers. What resulted was a massacre. Thirty-nine men, both prisoners and hostages, were shot to death, including Barkley, and a total of 128 men were severely wounded. And yet — even after the coroner made clear that every death during the retaking had come from guns, and that none of the prisoners had guns — the state of New York chose to indict 62 prisoners rather than to prosecute a single member of law enforcement.

I also make clear, though, that the hostages and prisoners who had suffered so much death and abuse at Attica never stopped fighting to get some modicum of justice. Today we again have a prison crisis of overcrowding and terrible conditions, and I think the book invites readers to rethink this moment in light of all that we now know happened at Attica.

What was your research process?

The state of New York has thousands of boxes of Attica-related documents, but my access to them proved almost impossible. For the last 45 years, police officials and state bureaucrats have

From top: William Sauro/*The New York Times*/Redux; Graham MacIndoe

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New York State Police assemble outside of Attica in 1971.

William Sauro/*The New York Times*/Redux

actively blocked all attempts to make the Attica records public. I managed to get some records by filing Freedom of Information Act requests, but they were often heavily redacted. Ultimately I had to dig to find this history in other ways. The survivors and the lawyers' records were invaluable to me, and I also got critical Attica files via state agencies that had copies of, or documents related to, records that the attorney general's office was making impossible to see. The most important research breakthrough came, however, after I began contacting every courthouse in upstate New York and finally located a huge cache of Attica files. Although these papers were in complete disarray, they were ground zero for me. They allowed me to see exactly what the state of New York knew, when it knew it, and how it was that law enforcement had never been prosecuted.

Notably, all of those records have since disappeared.

Another lucky break came in 2011 when the state police suddenly gave the New York State Museum thousands of artifacts that troopers had removed from Attica during and after the re-taking. They had been holding these items in a 30-foot Quonset hut in upstate New York and had decided to clean house. I was invited by a hapless archivist to help him understand what these items were, and I was stunned. I found myself holding, for example, the stiff, blood-stained clothes of the prisoners and the hostages and the ripped-up photographs of the prisoners' children. Those artifacts told me so much about how brutal this retaking of Attica had been. These also have been removed from public view.

How do you balance your personal views with the role of impartial historian?

I think if you're a good historian, it means you look at the documentary evidence no matter where it takes you. Many historians maintain that we must avoid "presentism" or thinking about what the past tells us about today, because that's sort of writing history backward. I could not disagree more. I think that if we research something within an inch of its life, and it has a bearing on contemporary issues, then we have an obligation to disseminate that research and make it relevant to contemporary policy debates.

I, for example, find myself deeply immersed in the questions facing our criminal justice system today and, whenever possible, I seek to inform the discussions politicians and policymakers are having regarding our prisons and our justice system more broadly, with some historical context. I can see, as a historian, that mass incarceration is one of the greatest civil-rights crises of the 21st century and, as such, we need to know how we got here so that we can remedy it. ◆ *Interview conducted and condensed by Elizabeth Vogdes*

CLASS NOTES

Online Class Notes are password protected. To access, alumni must use their TigerNet ID and password. Click here to log in: http://paw.princeton.edu/class-notes

MEMORIALS

PAW posts a list of recent alumni deaths at paw.princeton.edu. Go to Reader Services on PAW's home page and click on the link "Recent Alumni Deaths." The list is updated with each new issue.

THE CLASS OF 1939

Richard Edwards '39
Richard died March 25, 2016, at the age of 99. He was a descendent of Princeton's third president, Jonathan Edwards. To us, he was our "Pony" for our Latin translations and our distinguished professor of East Asian art.

With the exception of service as an ambulance driver and stretcher-bearer with the American Field Service during World War II in North Africa, Burma, and China, Pony's entire life was spent in academia. He received a master's degree and a Ph.D. from Harvard. He learned Chinese at Yale, where he met his wife, Vee Ling. He taught at Brandeis, Washington University, and for 26 years at the University of Michigan. He taught many of us at a memorable alumni college event in June 1978. His books include studies of the paintings of Shen Chou, Tao Chi, Wen Chen-Ming, and his last book, written when he was 94, was titled *The Heart of Ma Yuan.*

Fullbright scholarships brought Pony and Vee to China, Taiwan, and Japan. Their last stay took them throughout China, where they got to see the landscapes that inspired the paintings he knew so well, "the originals of the originals."

Writing in our 25th reunion book, Pony shared, "The modern world calls us to learn about the cultures of other peoples. Thus, despite what academic life implies, I feel that I am much 'in the world.' In a word, I have no complaints."

James T. Gearhart '39 *40 Jim died June 25, 2016, surrounded by his loving family. He was 99.

He was born in Shamokin, Pa., and he worked his entire career (minus one year) for Bethlehem Steel, a little more than 80 miles away. He started in 1940, after receiving his second engineering degree from Princeton. He began in sales and retired in 1982 as a vice president.

During World War II, Jim served in the Navy as a Seabee, building infrastructure on the islands of Guadalcanal and Kodiak, Alaska. After the war, he became a lifetime member of the CEC/Seabee Historical Foundation.

Jim served Princeton as a member of the advisory council of the civil engineering department. He was a faithful participant at Reunions and an avid reader of the *Princeton Alumni Weekly.* He authored several promotional and technical booklets for Bethlehem Steel and he was the commentator "and an actor" in the industrial film *Bargain in Steel.* We await its appearance on YouTube!

His wife of 59 years, Evelyn, predeceased him in 2001. Jim is survived by his two daughters and their families. To them and to his extended family and friends, the class extends its sympathy and expresses its gratitude for this loyal alumnus.

THE CLASS OF 1940

Gordon Griffin '40
Gordon died Jan. 29, 2016, in Skillman, N.J. He was born in Detroit, raised in the Princeton area, and came to the University from Trenton High School. At Princeton, he took his meals at Key and Seal.

During World War II, Gordon was in the Army field artillery and participated in five battles in Europe, including Normandy, and won a Bronze Star and a Purple Heart. After Penn Law School, Gordon co-founded Mason & Griffin in Princeton, which became one of the area's leading law firms.

The list of boards he sat on and other involvements with civic, legal, and charitable organizations is extensive and emblematic of Gordon's commitment to his community and his profession. For many years he was municipal attorney for the township and borough of Princeton and president of several bar associations, as well as active in the Princeton Lions Club and Westminster Choir College. Gordon was also the Class of 1940 reunion chairman from 2000 to 2004.

Gordon was predeceased by his wife of 57 years, Sallie, in 1999. He is survived by a daughter and two sons and their families, which include nine grandchildren and nine great-grandchildren.

THE CLASS OF 1943

John Brinster '43
John died Sept. 9, 2016, peacefully at home. He was our classmate and a loyal son of Princeton. John prepared for Princeton at Butler (N.J.) High School, where he was president of his class.

As an undergraduate he majored in chemistry and physics and graduated Phi Beta Kappa. In the summer of 1942, he held an assistantship and worked in the physics department.

Upon graduation he remained at Princeton under orders from the War Manpower Commission, where he created the first multi-channel radio telemetry devices. When the Army captured the German V-2 missile, he was appointed to the national V-2 panel and worked with scientists such as Wernher von Braun. He also enjoyed associations with Einstein and Oppenheimer at the Institute for Advanced Study.

Later, John became an entrepreneur and started several high-tech companies that were involved in data acquisition, telemetry, and thermoelectricity. Once retired, John became interested in neuroscience and the human mind.

As proof of his devotion to Princeton, he donated a prize in perpetuity for the best senior thesis on neuroscience, an initiative supported by the class. Later, the University established the Princeton Neuroscience Institute, and the Class of '43 Brinster Neuroscience Award continues.

John is survived by his wife, Doris Lacy Ayres; daughters Jaye White (Allen), and Meg; son John; nine grandchildren; and two great-grandchildren.

Peter V.K. Funk '43
Peter died peacefully Sept. 19, 2016, in Keene, N.H.

He prepared for Princeton at Montclair (N.J.) Academy, where he was on the football and track teams and served on the student council.

At Princeton Peter majored in biology and was a member of the track and cross-country teams. In 1942, he was the first in our class to get married. His marriage to Mary Pettit lasted for 74 years, and they had seven children.

After graduation Peter went to the South Pacific as a Marine officer. Mary left Vassar to join him in California before his deployment. Upon discharge from the Marines, Peter went into the magazine business, which led to his establishing an ecumenical magazine called *Faith Today.* He later left the publishing business to join the Wall Street firm of Karl Pettit & Co.

Eventually he returned to his first love, writing. Peter wrote a column for *Reader's Digest* called "It Pays to Enrich Your Word Power" for many years. His many novels included *My Six Loves,* which was made into a movie by Paramount. Religion played a strong

part in Peter's life, and he was ordained as a deacon in the Episcopal Church.

His is survived by his wife, Mary; sons Peter, John '67, Mark, and Paul; daughters Celine, Mary, and Eleanor; 15 grandchildren; and eight great-grandchildren.

Laurence Thomas Sherwood '43 Tom died July 31, 2016, at home in Kendal at Longwood, a Quaker community, in Kennett Square, Pa.

Tom graduated from Westtown School in Connellsville, Pa., where he was active in the Glee Club. At Princeton Tom was a member of Prospect Club. He majored in chemistry and graduated with high honors. After graduation he was a graduate student and teaching assistant at Northwestern University. This led to his earning his Ph.D.

Upon completing his academic studies, Tom moved to Wilmington, Del., where he began a career as an industrial chemist for DuPont. One of his major achievements was the development of Delrin, a thermoplastic that has thousands of applications. While working at DuPont, he enrolled in Temple University Law School and earned his law degree in 1970. Tom retired from DuPont in the 1980s and did research for Fox Chase Cancer Center.

After retiring, Tom moved to Kendal in 2000. He completed his master's in theology at Eastern Baptist Theological Seminary.

Tom is survived by daughters Mary Lyn Weinberg and Susan Alice Ward Sherwood; sons Laurence T. Sherwood III, John H. Sherwood, and the Rev. David A. Sherwood; nine grandchildren; and 11 great-grandchildren.

THE CLASS OF 1946

Brooks Noyes Edwards '46 Over the course of 46 years in Westhampton Beach, N.Y., Barney came to be considered a fixture in his neighborhood, known for his daily walks around the village. Friends delighted in his routine, with his genial greetings and zestful and sometimes irreverent humor, which he continued until only a month before his death Jan. 3, 2015.

Barney earned his bachelor's degree in architecture at Princeton in 1946 after serving as a Navy officer aboard a minesweeper in the Pacific theater. He was especially proud of co-owning his architecture firm, Edwards and Malone, where his independent spirit and attention to detail helped build his long-standing reputation.

Along with his walking through the seasons in Westhampton, Barney was known for his clamming and boating activities. His death left his wife, Joan "Moonie" Edwards; his nephew, John B. Edwards; and niece Pamela Patterson. The Class of 1946 sends condolences to the family of this congenial and accomplished classmate.

Frederick Albert Hermann Jr. '46

"If you sat next to Frederick Albert Hermann Jr. at luncheon, or talked to him about matters related to his world of God and country and family," said William Danforth, then chancellor of Washington University in St. Louis, "you felt his genuine warmth and experienced his generosity. You'd know that 'wonderful' fitted him comfortably as wrinkle-free as a bespoke suit."

In the 14th Armored Division, Cpl. Fred won the Bronze Star. Post-war, he re-established his family's Hermann Oak Leather Co., originally founded in 1881, and served as its CEO. "Fred's intellectual curiosity," said one associate, "yielded a wide range and depth of knowledge that he applied wisely, but displayed modestly. He was also a raconteur of the first order, and spoke eloquently of World War II experiences."

Fred served on the boards of the Barnard Free Skin and Cancer Hospital, Edgewood Children's Center, Family Resource Center, Care and Counseling of the Episcopal City Mission, Washington University Medical Center, Mary Institute-Country Day School, and Mercantile Library Association.

When he died Jan. 14, 2015, Fred was predeceased by Sally, his wife of 62 years; and survived by his children, Lawrence, Frederick, Holly, Evelyn, and Mary; and 11 grandchildren. The Class of 1946 is thankful for this wonderful life.

James Smith Marshall III '46

"After 10 years of house calls, office hours, and hospital rounds," wrote Jim some years ago, "I began to get concerned that I was not keeping up with advances in medicine." So from his home in Farmington, Conn., Jim commuted to University Hospitals of Cleveland to complete the medical residency that World War II had interrupted. As a result, he became a research endocrinologist — a specialist in diagnosing diseases related to the glands. Until he retired from Case Western Reserve University in 1987, he ran his own laboratory, concentrating on thyroid and breast-cancer research.

Jim's favorite moments were weekends spent in duck marshes and trout streams. Other special times were summer days at the helm of his beloved sailboat, *Whisper,* on Penobscot Bay in Maine.

When he died Feb. 14, 2015, he was predeceased by his wife, Betty. He is survived by his daughters, Melissa Marshall, Deborah Marshall Gates, Joan Marshall Losee, and Mary Marshall; three grandchildren; two great-grandchildren; and his much-loved cat, Myrtle. To them all, the Class of 1946 sends warmest condolences and thankfulness for Jim's dedicated life.

THE CLASS OF 1948

Allen Haslup '48

Allen was born Nov. 4, 1926, and died Aug. 16, 2016, at home in St. Petersburg, Fla.

His medical career included practice in the Tampa-St. Petersburg area, both before and after service as a medical missionary in Taiwan. He was born a U.S. citizen near Manila (the Philippines were then U.S. territory; his parents purposely had made a timely move from his father's duty station as a Marine officer in Shanghai). Allen served in the Marines and then graduated from Princeton in 1946. He went on to George Washington University Medical School and then to his residency at Johns Hopkins.

He married Eva Copley (Ebie) in 1951. They moved from Florida to Taiwan in 1978, where he spent 15 years as a medical missionary for the Presbyterian Church and as superintendent of the Changhua Christian Hospital. In 1991, they returned to St. Petersburg. Allen resumed his medical practice there until retirement in 1991, continuing to volunteer at the St. Petersburg Free Clinic.

Allen was predeceased by Ebie, who died of ALS in 2001. He is survived by children Allen, Elizabeth, Forrest, and Mary Jo; 12 grandchildren; and six great-grandchildren.

THE CLASS OF 1949

Frederick H. Clark '49

Fred died May 7, 2016, in Grosse Pointe, Mich.

Born Aug. 18, 1926, Fred had a number of Princeton relatives, including his father, John, a member of the Class of 1909. He came to us from New Hampton (N.H.) School. At Princeton, he played 150-pound football, sang in the Glee Club and the Tigertones, was a member of Terrace Club, and majored in SPIA. He earned a law degree from Harvard Law School in 1952.

After a short stint in the Army, Fred returned to Flushing, Queens, to begin his law career, first with the firm Townsend & Lewis, and then in 1964 with Columbia Gas System in Houston, Texas. By 1974, he was counsel for American Natural Gas Service Corp. in Detroit. At the time of his retirement, he had spent 36 years in this field.

Fred enjoyed singing, bowling, and participating in many Detroit arts activities with his wife, Gloria.

He is survived by his wife and three daughters, Harriet and twins Cynthia and Deborah (the latter now known as Sister Mary Magdalene). We offer our condolences to them all.

POST A REMEMBRANCE with a memorial at **paw.princeton.edu**

John F. Gardiner Jr. '49
Jeff died July 16, 2016, in Macomb, Mich.

Jeff was born Feb. 19, 1929, which made him slightly younger than the median age for '49ers. He came to us from Episcopal Academy. At Princeton, he majored in psychology and was a member of Prospect Club. After graduation, he took a position with Fidelity Bonding and Deposit Co. as a special agent. He later moved on to Seaboard Security, as a surety bond agent, and transferred to the Detroit area in 1967. He continued there as a surety bond agent with various agencies until his retirement.

Jeff's marriage to Joan Madeline Gentry Rodgers provided him with a lifetime dance and ski partner, and they enjoyed golf, tennis, and travel together.

He is survived by Joan and children William, John, Robert R. Fittrer, Judi Merrill, Peggy G. Moore, James A. Rodgers, and Julie A. Baker. With 14 grandchildren and 12 great-grandchildren, the Gardiner clan will stand as quite a major addition to our class roster of names and descendants! We offer our sympathy and condolences to the entire family.

Alexander F. Ix '49
Alex passed away Sept. 28, 2015, peacefully of natural causes in Spring Lake, N.J. He was 87.

Alex came to Princeton from Englewood (N.J.) School for Boys. He majored in mechanical engineering and upon graduation he joined the Navy during the Korean War. Alex spent his career at the family textile company, Frank Ix & Sons, and became president in 1970.

He married New York model Annrose Collins in 1952. They were blessed with six children, Alex III, Constance, Melissa, Sarah (who predeceased Alex), Charles, and Mark; and 10 beloved grandchildren.

Alex loved tennis and skiing, but his passion was croquet. He was a past president of the Green Gables Croquet Club and was inducted into the Croquet Foundation of America's Hall of Fame in 2010. He was a member of the Spring Lake Golf Club and the Spring Lake Bath & Tennis Club.

Alex will be remembered for his great love of family and friends, wit, and generous heart. Alex was a true gentleman. He had great pride in being a Princeton graduate and returned with his family for football games, class reunions, and campus visits whenever he could.

Robert B. Ruff '49
Bob died May 23, 2016, at the Center For Hope Hospice in Scotch Plains, N.J.

Bob came to Princeton from Newark,

N.J., majored in chemistry, and graduated in 1949. We know very little about his undergraduate years, but he went to work immediately afterward for P. Ballantine and Sons, the well-known New Jersey brewery. In 1950, like many '49ers of a certain age, Bob enlisted in the Army, expecting to be sent to Korea. After two years of being shuttled around (everywhere but Korea, it would seem), Bob left the service and took a job as a research chemist with DuPont in Wilmington, Del. The company subsequently transferred him to Parlin, N.J., and he stayed there until retirement in 1985. His primary research was with medical, lithographic, and X-ray films.

In Bob's own words, he suffered a "mild myocardial infarction" in 1983, but was able to continue with his work and his hobbies of golf, bowling, and photography until quite recently.

He is survived by his wife, Marjorie Ann; children Robert and Karen Sue Guss; and five grandchildren. We offer our sincere sympathy to his wife and family.

Alfred M.W. Saupe Jr. '49
Al died May 29, 2016, with his daughter, Dana LaGueux, and his granddaughter, Megan LaGueux, at his side.

Al came to Princeton in 1946 after service in the Marines. He joined his younger brother, Bill, who had already matriculated as a member of our Class of 1949. Al was an economics major and a member of Cannon Club. In June 1948, he married Valerie Corwin, and they lived at the Harrison Street Project his senior year.

After graduation, Al joined Berkshire Knitting Mills and spent 24 years there, first in New York, then Chicago, then back to New York. He then worked 18 years for Vision Hosiery Mills. After retirement, Al was a trustee of the Cheshire (N.J.) Home for the Physically Handicapped, a Meals on Wheels volunteer, and an elder in the Madison (N.J.) Presbyterian Church.

Al was predeceased by Valerie in March 2014 and by his brother, Bill. He is survived by children Theodore, Alfred (Billy), Peter, and Dana. We offer our sincere condolences to his family.

THE CLASS OF 1950

Peter D. Clark Jr. '50
Pete died June 2, 2016, in Houston, Texas, where he and his wife, Susan, had moved a few years ago to be close to their children.

He came to Princeton from Wyoming Seminary in Kingston, Pa. He majored in economics, wrestled as a freshman, and belonged to Terrace.

After graduation he entered the Army. He was first stationed at Fort Dix, then in Germany. Pete's career was spent in the Bell System: Bell Labs, Western Electric, and New Jersey Bell. After retiring in 1987, he moved to Spring, Texas, and lived there for 15 years; then he moved to Plantation in Venice, Fla., where he enjoyed another 11 years before returning to Texas.

Pete was interested in politics and was active on local boards of education in New Jersey and Texas. He enjoyed sports, especially tennis and baseball. He was especially fond of his Scotties.

Pete is survived by his wife of 58 years, Susan; son Douglas; daughter Amy; and six grandchildren.

Philip J. Engel '50
Phil died June 20, 2016, in Ridgewood, N.J.

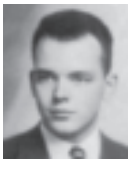
After graduating from Morristown (N.J.) High School in 1944, he joined the Army and served in Japan in the Counter Intelligence Corps. At Princeton, he sang in the Glee Club, was a member of Theatre Intime, and belonged to Court Club. He graduated with honors in politics.

He had scarcely begun working for Guaranty Trust of New York when he was recalled to active duty in 1951. His wife, Doris "Zim" Zimmerman, whom he married in July just after his recall, joined him while he was stationed on Okinawa.

He returned to banking in 1953 and had a long and successful career that took him from New York to London, Sydney, and Paris. He retired in New York as a senior vice president of HSBC, one of the world's largest banking and financial services.

Phil enjoyed travel, music, and tennis. He was past president of the Ridgewood (N.J.) Hobbyists and former grand knight of the Knights of Columbus.

He is survived by his wife, Zim; four children; six grandchildren; and four great-grandchildren.



Howard K. Gray Jr. '50
Howard died May 23, 2016, in Sioux Falls, S.D.

After Choate and banking and finance coursework at New York University, he came to Princeton, where his father was in the Class of 1923. Howdie, as he was known on campus, majored in history and belonged to Terrace.

Howard served as a lieutenant on a destroyer escort during the Korean War, then spent the next 20 years in corporate banking, mostly in the San Francisco area. In 1973, he began what was a 27-year involvement with international development. He started as country director of the Peace Corps in Malawi and then in Sierra Leone. He returned from Africa in 1978 to become executive director of Pathfinder International in Boston.

In 1985, he started his own international

consulting practice, focusing on the private sector in the sub-Sahara. In 1997, he took a brief sabbatical from consulting when selected by the State Department to help supervise the Dayton Peace Accord in Bosnia-Herzegovina, and later to monitor the cease-fire in Kosovo.

Howard took his international passion to the classroom, lecturing at high schools and colleges. He moved from Boston to Sioux Falls in later years to be near family.

A sister, nephews, and nieces survive Howard, who never married.

Charles A. Gutenkunst III '50 Charlie died June 22, 2016, at his home in Hartland, Wis.

He came to Princeton from Milwaukee Country Day School. He was a member of Key and Seal and graduated with a bachelor's degree in basic engineering. With the advent of the Korean War, he enlisted in the Air Force, completed Officers' Training School, and was assigned to the National Security Agency in Washington, D.C.

Charlie worked for several manufacturing companies in Milwaukee before beginning a fulfilling career as a management consultant, first with the Heath Corp. and then with his own firm. He retired in 2007.

Charlie was a longtime member and a leader of the Chenequa Country Club and board chairman of St. Coletta of Wisconsin, a provider of support services for adults with disabilities. He was an avid athlete, playing on several freshman teams at Princeton, and enjoyed tennis, golf, skiing, and bicycling throughout his adult life. He met his wife, Deeann, on a ski trip and married her in 1986. They traveled extensively, both stateside and abroad. In 2009 they hosted the last of our 26 off-campus mini-reunions in Milwaukee.

Charlie is survived by Deeann; two daughters from his first marriage, Anne and Nancy; stepson Hans; and five grandchildren.

Eric H. Stochholm '50 Eric died July 8, 2016, in Short Hills, N.J. He was a longtime lawyer and community leader.

He graduated from Millburn (N.J.) High School. He first attended Princeton in 1945 as a member of the Class of 1949, but his service in the Army interrupted college for a year. He returned to join the Class of 1950 and majored in history, played 150-pound football, and belonged to Elm Club.

Early on, he worked as an underwriter, house counsel, and a corporate secretary. He earned his degree from Columbia School of Law in 1957, where he won the coveted Kent Court Stone Honor Argument Award. In 1965 he entered private practice in New Jersey, then in 1980 became a solo practitioner. He retired in 2006.

Eric was extremely involved in the affairs of several New Jersey communities. He was co-founder of the Millburn Township Community Fund and founder of the Chatham Kiwanis scholarship fund. He was active in Millburn town government and with the Chatham Chamber of Commerce. He served on many boards of the Episcopal Christ Church in Short Hills.

Eric is survived by his wife, Laura, whom he married in 1960; their children Christian and Sharon; and two grandchildren.

Michael G. Turner '50 Michael died July 12, 2012, in New Jersey.

He attended Shady Side Academy in his hometown of Pittsburgh, Pa., and then served in the Navy from 1943 to 1946. At Princeton, he graduated with honors from the School of Public and International Affairs, was active in intramural sports, and was a member of Cannon.

He made advertising his life career, first with Benton & Bowles, and then with Ogilvy & Mather, which he joined in 1970 in Houston. While there, Michael built the office to become Houston's largest agency and expanded it to Dallas and Atlanta. After a brief stint as Ogilvy's creative director in Washington, he retired in 1985. He eventually settled in New Jersey.

As he was about to go off to the Navy, his mother suggested his birth name, Merton, "wouldn't be good," so he changed it to Michael. Reportedly he suffered only minor abuse when his middle name, Griswold, was revealed during mail call while on a carrier in the Pacific.

He was an avid Princeton football fan, starting as an undergraduate when he arranged football dances. Our last communication from him in January 2012 was about the 1946 upset of Penn.

Michael is survived by his wife of 60 years, Elizabeth; six children; 13 grandchildren and one great-grandson.

George Zabriskie II '50
George died July 19, 2016, in Bozeman, Mont., from complications of Alzheimer's disease. He was an Episcopal priest for 61 years.

From Episcopal (Va.) High School he served in the Pacific with the Navy. At Princeton, where his father was in the Class of 1920, he graduated with honors in religion, played 150-pound football, and belonged to Ivy.

He was ordained a deacon in 1954 at Virginia Theological Seminary, and a priest in 1955 while a chaplain at Groton. His callings included St. Thomas in New York City; Holy Trinity in Manila; Episcopal Divinity School in Cambridge, Mass.; Christ Church Cathedral in St. Louis; and St. John's Episcopal in Larchmont, N.Y. Throughout his callings, he strongly supported the fight for equality of all people.

He retired in 1992, and in 1998 moved to Bozeman, where both his daughters lived. He was active in the church, Habitat for Humanity, and the local food bank there. He enjoyed hiking, fishing, skiing, tennis, and, of course, his grandchildren.

George was predeceased by his brother Phil '50 in 2005. He is survived by his wife, Thyrza, whom he married in 1959 and who accompanied him to the Philippines, where their children, Laura, Anne and Gray, were born. He also leaves six grandchildren, brother Sandy '52, and sister Mary.

THE CLASS OF 1952

Robert Dodd '52
Bob came to Princeton after finishing at the Kiski School in Saltsburg, Pa., among the oldest all-male prep schools in the United States. At Princeton, he majored in art and archaeology, joined Charter and Westminster Fellowship, and roomed with John Emery and Giff Hart.

He left us for the Marines and then finished at the College of Wooster, graduating in 1956. He worked for IBM and, principally, as chief-of-billing for Cravath, Swaine & Moore. He was active in the Central Presbyterian Church and the Montclair Dramatic Club.

Bob died June 15, 2016. He is survived by his wife, Ruth Ann; their children, Susan, Carol '82, and James; and Carol's husband, Anthony Oliva '82. To them all, the class offers good wishes. We salute Bob for his service to our country.

THE CLASS OF 1954

Arthur Pitts Jr. '54
Arthur died Aug. 8, 2016, from non-Hodgkin's lymphoma.

Born in Corry, Pa., he majored in English at Princeton and was in the American Civilization program. He was active in many sports and committees and was a member of Tiger Inn. Art was voted president of the senior class and broke his jaw in a football game against Yale.

Upon graduation, he entered the seminary at St. Bonaventure and earned a master's degree from Wesleyan University. He taught Latin at the Landon School outside Washington, D.C., where he met his wife, Deirdre. They moved to Baton Rouge, La., and he pursued his doctorate in English. They went on to raise six children.

Art became a professor at Buffalo State College for the next 17 years. In 1967, he was awarded a Fulbright grant to teach Shakespeare at the University of Jordan, Amman, where he lived for a year. He gave up his tenured professorship in 1979 and moved to Bunkie, La., where he worked for five years as assistant principal at St. Anthony's Elementary School.

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In 1985, he became principal of the Pretty Eagle Catholic School in St. Xavier on the Crow reservation in Montana.

After his diagnosis of lymphoma, he moved to Westpark Village in Billings, Mont., where he worked as a Eucharistic minister.

Arthur was predeceased by his wife of 57 years, Deirdre. He is survived by his children, Anne, Mary Elizabeth, Jonathan, Monica, Timothy, and Daniel; 13 grandchildren; and two great-grandchildren. The class extends condolences to them.

THE CLASS OF 1955

Andrew Duncan IV '55
Born March 7, 1934, in Cleveland, Ohio, the son of Andrew Jackson Duncan III '30, Andrew had a brother, L. Fuller Duncan, and a sister, Thalia D. Williams. Before coming to Princeton, he attended University School in Shaker Heights, Ohio.

While at Princeton, Andrew majored in economics and was a member of Cap and Gown Club. Among his roommates were R.B. Beardsley and Martin Burns.

Andrew entered into a sales career; his biggest sale was when he persuaded an outstanding woman, Joanne, to become Joanne J. Duncan. They lived at 4730 Madison Hollow Lane in Cummings, Ga., where Andrew passed away Jan. 25, 2015.

Thomas G. Hall '55
Born Sept. 15, 1933, to Janet and Vinton Hall in Eugene, Ore., Tom died July 19, 2015, from injuries suffered in a fall. At 81 years old, he was the patriarch of a large and loving family.

From Highland Park High School in Illinois. Tom majored in history and joined Cannon. He roomed at 111 Cuyler Hall with Al Fasulo, Bob Del Tufo, and Dick Conroy. After service in the Navy, Tom went into advertising and worked for Procter & Gamble, Leo Burnett Worldwide, Foote, Cone & Belding, Wells Rich Greene, and Adville USA.

He loved the Chisox, the Bulls, and later the Los Angeles Clippers, but most of all, Oregon Ducks football and basketball and all things Oregon, Obama and liberal thinking — and a dry martini. Tom enjoyed exercise, particularly when it involved the sunset over the Pacific Ocean. Tom also did volunteer work for the University Religious Center.

He so clearly loved his collection of friends, old and new, from all walks of life, but most of all he loved his family. Tom is survived by his six children and grandchildren.

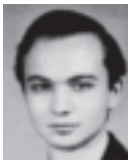
Although Tom's body has left this earth, his boundless love, at-the-ready smile, and considerate, compassionate, and youthful spirit will remain with all of us, always. Wisdom from Tom: "Refuse to be insulted."

Robert M. McCulloch Jr. '55 Robert was born Dec. 12, 1933, in New York City, the son of Robert M. McCulloch '21. He died Feb. 11, 2011.

Robert came to us from Lawrenceville. At Princeton, he majored in classics and wrote his thesis on early Christianity. He joined Key and Seal Club and earned numerals in freshman cross-country and track. He also won a varsity letter in cross-country and a J.V. letter in track. During his junior year, he participated in the Campus Fund Drive. Senior-year roommates at 34 1879 Hall included Frederic Thomas and John Coogan.

After serving out his Army ROTC commission, Robert graduated from Harvard Law School and took up the business of counseling. He married Olivia Hamilton, and they resided at 1150 Fifth Ave., in New York. They had a son, Robert J. McCulloch.

THE CLASS OF 1958



John R. Graebner '58
John died Jan. 22, 2016, in Hyannis, Mass.

He graduated from The Hill School. At Princeton, John majored in English, wrote his thesis on Henry James and D.H. Lawrence, and was a member of Campus Club. His junior-year roommates were Jake Page, Dave Leeming, and Bruce Grier.

After graduation, he lived in Paris, Vienna, and London, working odd jobs. Upon returning to America, he continued to travel, engaging in a wide variety of occupations, such as gardener, short-order cook, store clerk, English teacher, and encyclopedia seller in Philadelphia. Soon he settled in New York and became a freelance photographer, using his hotel room in the Times Square area as his darkroom. An inheritance provided him with sufficient funds to allow him to begin writing in earnest.

Eventually he moved to Hyannis and died with no heirs.

Robert W. Swanson '58
Bob died June 4, 2016, at his home in Oxford, Ohio, following a brief illness.

Bob came to Princeton from the Harvard School in Chicago. During his freshman year, he roomed with Bruce Handler, a fellow Harvard School alumnus, and Dick Johnson. Little is known of Bob's activities while he was with us other than he joined Quadrangle Club. He left Princeton and received a bachelor's degree in biology from Beloit College (Wisconsin) in 1959.

Bob attended Northwestern University Medical School in Chicago, earning his degree in 1963. He completed his neurosurgical training at Chicago Wesley Memorial Hospital (now Northwestern Memorial) in 1969. In 1972, he moved to Appleton, Wis., where he entered private neurosurgical practice.

Bob enjoyed sailing and woodworking, his two hobbies converging in the 1970s when he constructed a 27-foot Thunderbird sailboat.

He was deeply involved in the Appleton community, serving as an alderman on the Appleton common council from 1978 to 1988.

Bruce Handler reflected on his former roommate: "Bob was a steady-state individual, conservative in all things, properly cautious in viewing the world, its people, and its challenges. His common sense and core values reflected those of his family culture of striving and service."

Bob is survived by Ginny, his wife of 56 years; his children, Karin, David, Sarah, and Becky; and his seven grandchildren. The class extends its condolences to them.

THE CLASS OF 1960

Walter Hoesel '60
Walter died peacefully April 20, 2016, in Duvall, Wash., with his devoted daughter, Lisa, at his bedside.

While at Princeton, Walt majored in engineering, was a diver for the swim team, and a member of Cloister Inn.

Walt earned his master's degree in education from Temple University and went on to be assistant headmaster at Germantown Academy, in Pennsylvania, then headmaster at Lake Forest Academy, in Illinois, where he was instrumental in transforming it into a coeducational institution by merging with Ferry Hall, an all-girls' school. Walt then moved to Spokane, Wash., where he became headmaster at St. George's School.

Following semi-retirement, Walt served as assistant headmaster at Overlake School in Redmond, Wash., also teaching physics and mathematics. Walt became an elder of the Wilderness Awareness School, where he developed programs to introduce youths to a deeper understanding of the natural world as a source of healing and knowledge. Walt was an elder and pipe carrier for the Sungeska Family of the Lakota Sioux. As such, he was entrusted with supervision of the annual Sun Dance and the transmission of traditional spiritual values to Lakota youth.

Walter is survived by his wife of 55 years, Katherine (Katy); daughter Lisa and her husband Mike; son Chris and his wife Missy, and their daughters, Maddie and Katy.

THE CLASS OF 1962

William Jarman Sr. '62
Bill died Aug. 19, 2016, in Tucson, Ariz., of complications from an earlier ailment.

Bill came to us from Stony Brook School

after attending high school in Odessa, Texas. At Princeton he roomed with Alex Torre-Tasso, Ames Gardner, and Fred Bishop '61. He majored in Spanish and Latin American studies, graduating *cum laude.* Bill was the secretary and treasurer of Tiger Inn senior year. He went out for freshman swimming but earned his reputation as a mainstay in the 24x7 poker/bridge game (Tiger/Campus). Bill and Laurence Lasater '63 kept close all these years.

While spending six years in the Marine Corps Reserves, he ran a ranch in Nuevo León, Mexico, and then did cattle-trading in Laredo, Texas. There, he operated "crossing pens" with dipping vats along the border. Twenty years ago, Bill moved to Rio Rico, Ariz.

Bill was knowledgeable about Spanish-Mexican culture and the thriving United States-Mexican cattle trade. The premature death of his sister, Patricia, impacted him. His emotional side also came through at graduation: After skipping the ceremonies, he sobbed uncontrollably at Tiger Inn, saying his goodbyes. His external "cowboy" demeanor shielded a sensitive person.

Bill is survived by his wife, Regina; children Patricia, Norma, and Bill; and five grandchildren. The class extends its condolences to them all.

THE CLASS OF 1964

Randy Hall '64

Randy died Nov. 6, 2015, of a sudden stroke during his afternoon nap.

Born in Lake Worth, Fla., he was the first graduate of Lake Worth High School to attend Princeton. He majored in chemical engineering and took his meals at Terrace Club, where he served as president. Under his leadership, the club was able to lower its basement floor by several feet, which significantly increased its usable space.

Upon graduation, Randy joined Procter & Gamble in product development. After 17 years with P&G, he returned to Lake Worth to join the family business, Modern Venetian Blind, retiring after 20 years there. After retirement, he became a valued volunteer and trusted officer with the Genealogy Society of Palm Beach County and the Lake Worth High School Alumni Association.

Randy lived life to the fullest — birding with his wife, fishing with his buddies, and traveling extensively. He stayed in touch with his many friends by managing a March Madness pool every spring.

Randy and his wife, Mary Lou, were married for 51 years. She survives him along with their two daughters, Andrea and Cynthia; his sister, Valerie; and their two grandchildren, Randy and Lena. The class extends its sympathy to them all.

Dennis R. Horn '64

Dennis died May 11, 2016 in Spokane, Wash.

He attended Dover (N.J.) High School. A member of Cloister Inn, he roomed with Charlie Eisen, Chuck Schomann, and Dave Watt. Dennis earned a bachelor's degree in geological engineering. He wrote his thesis on "A Paleomagnetic Study of the Beemerville Alkaline Complex." Dennis had a dry wit, a brilliant mind, and an artistic soul.

Dennis earned his Ph.D. in environmental engineering from Johns Hopkins University in 1974. He served on the faculties of Northeastern University and the University of Idaho and as chair of the secretary of the Army's Science Board. He ended his academic career in 2012 as the dean of engineering and applied sciences at Gonzaga University in Spokane, Wash.

His personal journey was made sweeter by the fact that in 2007, he re-married Sandy, his college sweetheart and first wife. In retirement, Dennis and Sandy traveled and built a large and eclectic art collection.

Dennis is survived by his wife, Sandy; sons Darrin, Kevin, Justin, Christian, Brendan, and Colin; stepchildren Chris and Robyn; as well as his brother Roger and several grandchildren. The Class of 1964 extends its heartfelt condolences to Sandy and his family.

THE CLASS OF 1965

David A. Wynalda '65

Dave died July 17, 2016, in Westlake Village, Calif. He graduated as valedictorian of his class at Hazelwood High School in Hazelwood, Mo., before entering Princeton, where he played freshman football and took his meals at Cannon Club. His roommates included George Boller '64, Vince Monforte, Jon Parmer, and Steve Rakower.

He enjoyed a successful career with Marion Laboratories and was inducted into the prestigious Marion Laboratories "M Club" fraternity. Following his retirement, Dave opened Soccer Kick, a soccer store in Westlake Village, Calif., which he owned and operated for 10 years. He was also active in youth soccer, coaching his two sons, Brandt and Eric, and daughter Heather. Eric played in three World Cups for the U.S. soccer team, was the first American to play in Germany's Division I Bundesliga, scored the first goal in Major League Soccer, and was inducted into the Soccer Hall of Fame in 2004.

Dave, a devoted fly-fisherman, wrote a book, *Fishing with Sasquatch,* about his adventures fishing with his older son, Brandt.

Dave is survived by Sue, his wife of 52 years; children Brandt, Eric, and Heather; and eight grandchildren.

THE CLASS OF 1966

Donald McCabe '66

The class lost a valued member and the country lost a leading authority on academic ethics when Don died Sept. 17, 2016; his 50th wedding anniversary; after a six-year battle with progressive supranuclear palsy.

Don followed his father, Thomas '35, to Princeton after graduating from Bergen Catholic High School in Oradell, N.J. He joined Cannon Club, majored in chemistry, and played interclub sports.

After graduation Don earned an MBA in marketing from Seton Hall University and worked for some 20 years in the industry. In 1985 he received a Ph.D. in management from New York University and joined the faculty of the Rutgers Graduate School of Management.

His academic career was spectacular. He was professor of management and global business at Rutgers University and earned recognition as the nation's leading authority on ethics in academia, lecturing, and publishing, and was consulted widely on the subject. Don was the founder of the Center for Academic Integrity. When he retired in 2012, Rutgers and the Institute for Ethical Leadership honored him with an academic-integrity award in his name.

Don is survived by his wife, Dorothy; children Melissa, Thomas '91, and Elizabeth; six grandchildren; brother Rick; and sisters Colleen and Erin. The class extends its heartfelt condolences to them.

THE CLASS OF 1970

Robert L. Heimerman '70

Bob died May 22, 2016, of recurring heart problems.

He was one of our 14 Northwoods classmates from Wisconsin; at St. Mary's in Menasha, he was a National Merit scholar and was active in Scouting, student government, debating, Boys State, and football. With this breadth of talent, he earned an appointment to the Naval Academy, but chose Princeton instead.

Bob spent his time with us energetically, playing 150-pound football, as a member of Tiger Inn, and as a history major writing his thesis on Eugene V. Debs.

He kept in touch with classmates through his travels to Oregon and then to California, where he settled in Ventura County, raised his family, and worked in insurance for more than 30 years. With a photographic memory and as the life of any gathering, he quoted poets from Robert Frost to Felicia Hemans and wove tales of ancient civilizations. Always enthused, from rooting for the Packers to skiing or hiking, he even completed more than 1,000 dives.

Such a vibrant man will be sorely missed by his beloved sons, Christopher Heimerman

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Michaels and Scott; and his siblings, William, Kevin, Ted, Patricia Valko, Jane Wells, and Jeff, who requests reminiscences of Bob at heimermanjeff@gmail.com. Our memories of Bob, along with theirs, bring back the sunniest days of our youth and a smile even as we extend our condolences.

Philip L. Johnson '70
Phil died July 4, 2016, at his home in Wellesley, Mass., of pancreatic cancer. He was a truly generous classmate and friend.

He came to Princeton from Wellesley High School, where he stood out in both athletics and student government. At Princeton, his organizational skills were apparent; he worked for the Campus Fund Drive and wrote his thesis on the economics of job training under Daniel Hamermesh.

After being bitten by the computer bug while working for the Federal Reserve Bank in Boston, he got his master's degree at MIT's Sloan School and then embarked on an ever-morphing career at the inception of the tech explosion. He worked extensively with a wide range of computer-based companies, both as a consultant and as a software designer. He capped his career with 20 years at Oracle, while he generously aided many startups and not-for-profits in Boston with his management expertise. He also volunteered with the Alumni Schools Committee and remained an avid sportsman, including skiing, boating, cycling, and golf.

Phil is survived by his wife, Joanne; his mother, Patricia; his sister, Katherine; his children, Heather and Gregory; and four grandchildren. We grieve with them and his many friends in Boston for the loss of such a vibrant and creative classmate.

Robert Stanley Pieringer '70 Stan died June 10, 2016, following cancer treatment and a massive stroke at the University of Washington Medical Center, with his family at his side. He was one of our class leaders.

During our tumultuous undergraduate years, as the country seethed and the University transformed almost instantly, *The Daily Princetonian* became indispensable as a purveyor not only of information, but also of fairness and conscience in the community. Stan was our *Prince* chairman, a powerful and broadly respected symbol of our aspirations and striving on all sides — our better selves. In what must be a unique tribute, our class poll cited Stan as Most Likely to Succeed ... before the revolution, as editor of *The New York Times,* and after the revolution, as editor of *Pravda.*

His distinguished 40-year career with the law firm of Locke Lord in his native Texas, and his extraordinary reputation in his community for wisdom and generosity, will surprise no one. His leadership across decades at Houston's Christ Church Cathedral was remarkable, but perhaps more to be expected than his selfless role as the emergency coach of his twin sons' basketball team, the thought of which might have alarmed the *Prince*'s intramural hoops stalwarts.

We grieve for Stan with his wife, Kay Heffler Pieringer; and their sons, Walter, Daniel, and Stephen; but join in their fond memories and love. Many brilliant, talented people are admired or envied; Stan was the one we respected. We will miss him.

THE CLASS OF 1977

Berrylin June Ferguson '77 BJ passed away July 23, 2016, at her home in Fox Chapel, Pa., surrounded by the love and warmth of her family. She grew up in Florida and spent large portions of her life in North Carolina and then in Pittsburgh.

It was a full and varied life for a woman who was a member of the women's crew team at Princeton and who wrote her senior thesis on "Social Interactions at a Bird Feeder with Flocking Implications."

BJ graduated from Duke University's School of Medicine and did postgraduate work in surgery, otolaryngology, and medical mycology. She is well remembered for the skill and dedication she put into the care of her patients and for her extensive research and publications in the field of otolaryngology.

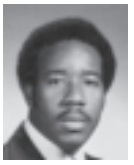
BJ was an associate professor in the University of Pittsburgh's department of otolaryngology, and was chief of the school's division of sino-nasal disorders and allergy. She was board-certified with the American Board of Otolaryngology, American Academy of Otolaryngic Allergy, and American Rhinologic Society.

She was an active member in the Fox Chapel Presbyterian Church community, whose support over the last few years gave her much comfort. She had much life in her years and was determined to explore the world — traveling from the Sahara to the Antarctic.

BJ was predeceased by her husband, Kenneth S. McCarthy Jr. She is survived by their children, Scott, Justin, Berryhill, Winston, and Merriweather; mother Jerry; and siblings Joann, Fran, Ginny, and Emmet.

CLASS OF 1978

Travis Emery '78
We lost Travis when his giant heart stopped May 29, 2016.



Travis was raised in Baltimore and graduated from Gilman School. At Princeton, he was a member of the Nassoons and Ivy Club, and graduated with honors in architecture.

After earning his law degree at the University of California, Berkeley, School of Law, Travis combined his training in architecture and the law in his work for John Carl Warnecke Corp. and later the Hill Corp. in Los Angeles. Moving back to Baltimore to assist in the care of his father, Travis then worked with distinction in the HIV/AIDS housing policy administration of the U.S. Department of Housing and Urban Development.

Throughout his life, Travis devoted his time and financial resources in support of others — tutoring children, restoring homes, purchasing tickets to send young people to cultural events, and covering medical costs for people without health insurance — living out his deeply held faith by helping those less fortunate than he was.

He is survived by his husband, Rob Berry; mother, Anne O. Emery; and brother, Vallen Emery Jr.

Our class, our college, and the communities in which Travis lived were blessed by the life of this remarkable, caring man.

THE CLASS OF 1981

William Clack '81
Bill died Aug. 10, 2016, at his home, in Stow, Mass. The cause was heart disease.

Bill was born in Pittsburgh, Pa., and attended Shady Side Academy. At Princeton he majored in physics.

For many years, Bill worked for Scholz Research and Development (a company run by Tom Scholz of the rock group Boston), where he designed Rockman electric-guitar products. More recently he worked as a sound designer for Boston when the group went on tour.

He loved music, rock climbing, and filmmaking, all of which he threw himself into with passion. He met his wife, Holly, a graduate of the University of Michigan, while instructing a rock-climbing class. He painstakingly renovated and rebuilt their beautiful old Victorian home in Stow, where they lived with their daughter, Miranda. Bill was also an enthusiastic soccer dad.

Bill was brilliant, independent-minded, committed to justice, and hilariously funny. He lived life with an irrepressible zeal, the memory of which will always bring a smile to the face of those who knew him.

In addition to his wife and daughter, he is survived by his sister, Barbara Yobp; and his brother, George Clack.

THE CLASS OF 1984

Elizabeth A. Coulter '84

Liz died Sept. 30, 2014, in Cambridge, Mass., of cancer.

Liz grew up in Washington, D.C., where she graduated from the National Cathedral School. She then took a year off before attending Princeton. At the University, she majored in history and wrote her thesis on British constitutional law in the Puritan era with Professor William Jordan. A talented musician, Liz sang in the Glee Club and played violin in the University Orchestra.

After Princeton, Liz moved to Arlington, Mass., where she worked in publishing and continued playing the violin in various community orchestras.

Liz is survived by her sister, Marian Coulter '87, and brother Alexander. The class extends its sympathy to them. Liz's smile and musicianship are fondly remembered and deeply missed.

THE CLASS OF 1991

Shea Gardner '91

Shea died Feb. 21, 2016, in Oakland, Calif., of metastatic lung cancer.

She came to us from Bellingham, Wash., participated in club sailing and gymnastics, and graduated with a degree in ecology and evolutionary biology. After Princeton, Shea earned a Ph.D. in population biology from the University of California, Davis, and completed a postdoctoral fellowship at Imperial College London.

Highly regarded as both a population biologist and bioinformatics scientist, Shea worked at Lawrence Livermore National Laboratory. Her work had an impact on both biodefense and human health at large. She produced major open-source software contributions, and the polymerase chain reaction assays she developed in 2003 are in use by the U.S. Food & Drug Administration as the new gold standard for hepatitis-A virus detection tests for food safety.

Shea was known for her love of the outdoors. Her hobbies included hiking; snowshoeing; cross-country skiing with her dog, Pooshka; as well as taking swimming, snorkeling, and sailing trips with her family. Shea visited more than 50 countries, and she especially enjoyed exploring ancient ruins and castles.

Shea is survived by her husband, Erik Yip; her mother; and her sister. Her father predeceased her. Shea honored our class and Princeton through her work in the nation's service and in the service of humanity. We lost her too soon.

GRADUATE ALUMNI

C. Ernest Dawn *48

Ernest Dawn, professor emeritus of history at the University of Illinois-Urbana, died Jan. 5, 2016, after a short illness at age 97.

Dawn earned a bachelor's degree from the University of Tennessee in 1941 and served in World War II and during the Korean War in Army intelligence. In 1948, he received a Ph.D. in oriental languages and literature from Princeton. He joined the University of Illinois as an instructor of history in 1949, rose to full professor in 1960, and became professor emeritus in 1989.

He traveled, studied, and worked extensively in the field of the modern Middle East. Dawn did research in Beirut, first as a Social Science Research Council fellow from 1948 to 1949, and then as a Fulbright-Hays fellow from 1966 to 1967. He was active in the Illinois Tehran Research Unit, and was its director in Tehran from 1972 to 1974.

Dawn was a fellow of the Institute of Advanced Studies of the Hebrew University of Jerusalem, and served on its faculty from 1981 to 1982. He was also a visiting professor at the University of Chicago in 1985.

Dawn was predeceased by his wife, Pansie. He is survived by two daughters and three grandchildren.

William R. Busing *49

William Busing, a retired senior research staff member at Oak Ridge National Laboratory (ORNL), died April 14, 2016. He was 92.

He graduated from Swarthmore College in 1943 with a bachelor's degree in chemistry. He then served in the Navy. After the war, he earned a Ph.D. in chemistry in 1949 from Princeton, after which he did postdoctoral work at Brown. In 1954, Busing joined the research staff of the ORNL, and retired in 1990.

At ORNL, Busing's work attained worldwide recognition for his pioneering development of computer programs to analyze the structure of crystalline materials and to automate X-ray diffraction measurements upon which studies of crystals are based. Reportedly, his work on a least-squares computer program for interpreting X-ray diffraction has been cited more than 3,000 times. He had been president of the American Crystallographic Association.

Among his community activities, Busing worked to improve the parity of mental-health care in Tennessee insurance policies. In 2008, he received the Ray Sinor "Ray of Hope" Award for his efforts to improve the treatment and lives of the mentally ill.

Busing was predeceased by Judy, his wife of almost 60 years. He is survived by three children, three grandchildren, and a great-grandchild.

Harry J. Lipkin *50

Harry "Zvi" Lipkin, professor of physics emeritus at the Weizmann Institute and a leading Israeli theoretical physicist, died Sept. 15, 2015, at the age of 94.

Lipkin was born in the United States and graduated from Cornell in 1942. During World War II, he worked at the MIT radiation laboratory on radar. In 1950, he received a Ph.D. in physics from Princeton. That year, he immigrated to Israel with his wife to join the agricultural kibbutz movement in the Upper Galilee.

Upon arriving in Israel, Lipkin was drafted by the government to participate in the establishment of the Dimona nuclear research center. He was one of two Israeli physicists sent to France from 1953 to 1955 to learn how to set up a nuclear reactor.

In 1956, Lipkin was one of the founders of the Weizmann Institute's department of particle physics and astrophysics. He became one of the pioneers in utilizing group theory. From 1956 to 1958, he was an adviser to the United Nations Atomic Energy Commission, and he later worked frequently with the Argonne National Laboratory in the United States. His many awards included the Wigner Medal in 2002, named for Eugene P. Wigner, Nobel laureate in 1963 and longtime Princeton physics professor.

Lipkin is survived by his wife, Malka; two children; and a grandchild.

Alden B. Ashforth *71

Alden Ashforth, professor emeritus of music at UCLA and a prolific composer, died of heart failure Jan. 29, 2016, at the age of 82.

In 1958, Ashforth earned an AB degree as well as a bachelor's degree in music from Oberlin College and then earned a Ph.D. in music from Princeton in 1971. He was a professor of music at UCLA from 1967 to 1998, after having taught at New York University and City University of New York, as well as at Princeton and Oberlin.

He composed many instrumental, vocal, and electronic works. His interests ranged from classical to jazz to electronic music. At UCLA, he also coordinated the electronic music studio. Ashforth was a highly skilled player of the piano, harpsichord, organ, and cello. As a jazz musician, he played the clarinet and piano.

Ashforth was an active jazz researcher, and contributed to the *Annual Review of Jazz Studies* and *The New Grove Dictionary of Jazz*. He also wrote articles on classical music in *Perspectives of New Music* and *The Music Review*.

Ashforth is survived by his partner, Steven D. Teeter; three daughters; his former wife, Nancy Regnier, and six grandchildren.

*This issue contains an undergraduate memorial for James T. Gearhart '39 *40.*

Graduate memorials are prepared by the APGA.

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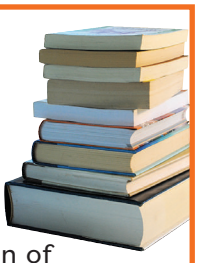

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Gorbachev accepts two-year term as visiting fellow at Wilson School

Gorbachev's hiring assures world-class status for program

By KRISTIN JENSEN and NOAM LEVEY

Professors, administrators and students expressed their excitement yesterday at the prospect of former Soviet president Mikhail Gorbachev's decision to accept a two-year visiting fellowship at the university.

"This move will boost Princeton to the number-one position among centers of Sovietology in the nation," said politics professor Steven Cohen, who directs the university's Russian Studies program.

Though Gorbachev will only be teaching a select group of Russian-speaking graduate students, Cohen added that his presence will attract a critical mass of scholars who will

Plans to write memoirs, teach graduate seminar

By LEO A. BALESTRI and MARC SOLE

In the aftermath of Mikhail Gorbachev's resignation as President of the Soviet Union, university officials confirmed yesterday that the former Soviet leader has verbally accepted a two-year visiting fellowship at the Wilson School.

The surprise announcement came after four months of informal negotiations between Gorbachev and Princeton faculty and administrators. In accepting Princeton's offer, Gorbachev turned down numerous offers from other American universities, including the John F. Kennedy School of Government at Harvard University, and the Averell Harriman Institute for Russian Studies at Columbia University.

Yes, says Gorbachev

cy to the Western world since the Cold War," Bienen said.

Bienen said that Gorbachev's main reason for coming to Princeton is to chronicle perestroika — in his memoirs due to be published in 1994 — from its inception to its conclusion with the break-up of the Soviet Union.

Educational opportunity

While at the university, Bienen added that Gorbachev has tentatively agreed to teach a graduate seminar in the Russian Studies program focusing on Soviet Foreign Policy in the post-war era.

Current Wilson School dean Donald Stokes GS '51 first approached Nassau Hall with the notion of wooing Gorbachev to Princeton immediately after the

Faking It: Princeton Gets Gorby

John S. Weeren

On Jan. 15, 1992, readers of *The Daily Princetonian* woke to the news that Mikhail Gorbachev was coming to Princeton. The man who had presided over the dissolution of the Soviet Union and the Warsaw Pact reportedly had accepted a two-year visiting fellowship at the Woodrow Wilson School, and his hosts, as quoted in the *Prince,* were elated.

"I never thought we'd get him," marveled Dean Donald Stokes '51. "I almost can't believe he'll be here after the summer." "This move will boost Princeton to the No. 1 position among centers of Sovietology in the nation," declared Stephen Cohen, director of the Program in Russian Studies.

Princeton had scored a coup, aided by Secretary of State James Baker '52, who was said to have delivered the University's invitation to Gorbachev. According to the *Prince,* an unnamed State Department official described the former president's appointment as a "major triumph in U.S.-Soviet relations" that would help "cement close ties between academic institutions in both nations."

Gorbachev and his wife, Raisa, were to live in Joseph Henry House, a far cry from the Kremlin, but a spot well suited to writing one's memoirs. The *Prince* reported that chronicling *perestroika* would be his primary occupation, but that he had agreed to teach a "select group of Russian-speaking graduate students." It was hoped he would also "guest lecture — with translation — in courses such as Soviet Politics and Soviet-type Economies," since hearing "how history was made from the man who made it would afford undergraduates a very rare and valuable educational opportunity."

Sadly, none of this would come to pass; indeed, it was all a figment of the *Prince*'s imagination and the *pièce de résistance* of its 1992 joke issue. Not everyone was amused. As one letter to the editor put it, "I don't think it's funny, cute, or anything but destructive." And yet, one year later, Princeton did attempt — unsuccessfully — to bring Gorbachev to campus, prompting the *Prince* to vow, "This is no joke."

John S. Weeren is founding director of Princeton Writes and a former assistant University archivist.

The Daily Princetonian/Larry Dupraz Digital Archives/Princeton University Archives

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