

ADAM RUBEN '01:
PINBALL WIZARD

YAIR MINTZKER
ON WRITING HISTORY

CODING AS
CHILD'S PLAY

PRINCETON ALUMNI WEEKLY

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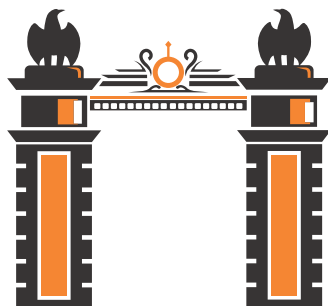
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PRINCETON ALUMNI WEEKLY

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A Home for the Arts 20

With the new Lewis complex, Princeton's arts programs — bolstered by a landmark gift from Peter Lewis '55 — are poised to grow even more.
By Jennifer Altmann

Scratch That 30

Mitchel Resnick '78 created one of the world's most popular coding languages, but unless you're 12, you might not have heard of it.
By David Walter '11

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Ruin and Resilience

At the cultural heritage site of Munsar Talav in western India, Jahnabi (Barooah) Chanchani '11 saw medieval temples choked by pollution — and found inspiration for a preservation campaign.

Q&A: Carolyn Rouse

Rouse, an anthropology professor, discusses her research trip to interview Donald Trump supporters in rural California, her "Trumplandia" project, and why she hasn't watched cable TV news this year.

Tiger of the Week

Browse the latest alumni profiles.

Everyday Treasures

As a benefactor and self-described "accumulator," Lloyd Cotsen '50 built a remarkable legacy.

Realizing a Bold Vision for the Arts

In mid-August, the protective fencing around the Lewis Arts construction project came down at last. Faculty and staff began to move into new offices. Community members wandered through the landscaped plaza, contemplating architect Steven Holl's graceful design of three new buildings dedicated to music and the arts. The grand opening was more than a month away and students were not yet using the stages or practice rooms, but this increasingly exciting corner of Princeton's campus had already been transformed in magical ways.

My first stroll through the complex brought to mind a conversation that I had with President Shirley Tilghman more than 13 years ago when she invited me to join her administration. I asked Shirley about her goals for Princeton. Her reply touched on several topics, but she became most animated as she talked about the arts. She spoke passionately about the place of creativity and imagination in liberal arts education; about the importance of attracting and training students with extraordinary artistic talent and also enabling every student to engage with the arts; and about Princeton's responsibility to support the arts in a world too often focused on narrowly practical concerns.

Shirley's emphasis on the arts was compelling to me, and it was one of the many reasons I was so happy to serve as her provost. She found an enthusiastic partner in Peter B. Lewis '55, who had already established himself as one of the most generous donors in Princeton's history. In 2006, Peter's record-breaking \$101 million gift to advance the creative and performing arts at Princeton served as a catalyst, propelling the University toward the bold vision for the arts that is being realized today.



Denise Applewhite

The Princeton University Jazz Ensemble practices in the Lee Music Performance and Rehearsal Room.

A legendary philanthropist, Peter's generosity may have been matched only by his maverick individuality. He had a larger-than-life personality. As chairman of Progressive, Peter created a corporate culture in which employees were encouraged to take risks and push the envelope in spaces filled with contemporary art. He cut an unusual figure in the C-suite, even attending one board meeting in costume as the Lone Ranger, the TV character with whom he identified.

Outside-the-box thinking was Peter's trademark. His ability to see the potential in markets that others had ignored helped Peter to build Progressive into a powerhouse with over 28,000 employees and \$16 billion in annual revenue at the time of his death. "The whole point [of management]," Peter once said in an interview with *Cleveland Magazine*, "is to give people the opportunity to excel. People who are given the freedom to do their best do spectacular work. My job is to figure out how to get them to do their best."¹

This type of imaginative excellence is on display in the work of extraordinary students and alumni such as playwright Branden Jacob-Jenkins '06, who debuted the world premiere of his play *GURLS* in the Wallace Theater during the Festival of the Arts earlier this month. A modern adaptation of Euripides' classic play *The Bacchae*, *GURLS* manages to encapsulate perfectly Shirley Tilghman's observation that the arts "are simultaneously ancient and avant garde: they are literally as old as human civilization, but they constantly renew our society with fresh perspectives on human experience."²

Branden is known for his ground-breaking works that satirize modern culture and illuminate the experience of navigating race, class, and identity. But before he was a two-time Obie Award-winning playwright and a 2016 MacArthur Fellowship recipient, Branden was a senior at Princeton, writing and directing his own thesis show at the Berlioz Theatre in the McCarter Theatre Center. The chance to produce a show in an extraordinary venue like the Berlioz is an experience that many college undergraduates will never have, and it gives students like Branden "the opportunity to excel" that Peter described.

Just over a decade since Branden graduated and Peter made his landmark gift to the arts, the recent launch of the Lewis Arts complex demonstrates the expanding role of the arts at Princeton and their enduring value in higher education.

With access to these beautiful state-of-the-art spaces and the remarkable faculty and fellows of the Lewis Center for the Arts and the Department of Music, our students have the opportunity to create boldly and express themselves with originality, imagination, and daring. Part of the beauty of this new space is that we don't yet know its full potential. In my experience, when our students and faculty work together to co-create, test limits, and explore new frontiers, the possibilities can exceed our wildest imaginations. Of that, Peter would be proud.

Many donors, faculty members, administrators, community leaders, and others rallied together to bring the Lewis Arts complex into being. I am confident that all of them would join me in recognizing and applauding the special leadership that Shirley and Peter provided. In the months and years ahead, I hope you will join us here on campus to experience the stunning venues of the Lewis Arts complex, and I hope you will reflect on the inspiring vision of Shirley Tilghman and Peter B. Lewis as you, too, stroll through its many inviting indoor and outdoor spaces.

1. O'Connor, Rory. "Peter Lewis' Balancing Act." *Cleveland Magazine*, June 1, 1987.

2. Tilghman, Shirley M. President's Report on the Creative & Performing Arts at Princeton. January 2006. www.princeton.edu/reports/arts-20060120/

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Inbox

'THE THOUGHT WE HATE'

As an attorney, I am dismayed by the lack of knowledge displayed in Marie Basile McDaniel '01's letter to PAW on free speech (Inbox, Sept. 13). Ms. McDaniel states that "[h]ate speech is not protected as free speech." This is simply wrong. There is no legal category known as "hate speech," and the Supreme Court has repeatedly stated that the right to free speech protects "the thought we hate." To cite just two recent examples, it protects the disgusting protests of Westboro Baptist Church and the Slants' use of a racial epithet to name their band. Nor would removing "hate speech"—however defined—from First Amendment protection help the disadvantaged. History teaches us that the disadvantaged have the most to lose from restrictions on free speech. If "hate speech" can be banned, how will we respond when a state prosecutes someone for calling others racist? ("How hateful!" the alt-right will exclaim.)

Ms. McDaniel's letter inadvertently makes this point. She cites Oliver Wendell Holmes' dictum that you cannot shout "fire" in a crowded theater. Holmes made this statement in *Schenck v. U.S.* in the course of upholding the convictions of socialist anti-war protesters for distributing pamphlets opposing the draft. *Schenck* is almost certainly not good law today, and my guess is that Ms. McDaniel would be appalled if she knew the provenance of that trope and the uses to which it has been put.

In light of this letter, I hope that

President Eisgruber '83 will not only continue to stand up for free speech, but to undertake efforts to ensure that current and future undergraduates have a better understanding of these rights and their importance.

Tom Cunniff '89
Mt. Prospect, Ill.

THE RISKS OF SILENCE

Re: The Sept. 13 President's Page, "Petitions, Divestment, and the Freedom to Think Otherwise": While I agree with President Eisgruber that Princeton and its president should take time for sustained critical reflection on weighty matters, and avoid hasty decisions or actions even in the face of pressure or controversy, I cannot agree with his argument that doing so nearly always requires both institutional silence on the issues of the day, and institutional inaction that by default protects the status quo.

When members of the University community raise ethically salient challenges to investments in private prisons, guns, or other politically charged commodities, they deserve a sincere and engaged response. President Eisgruber frets that avoiding such investments might "inappropriately use investment policy to advance a political cause." Yet his concern is fundamentally misguided, in that it mistakes the nature of political neutrality. Declining to act, thereby leaving in place the current acceptance of such investments, is just as political as explicitly backing change. Maintaining

FROM PAW'S PAGES: 12/3/74

Blow Pong or Puff Ball?

DEAR SIR:

The "On The Campus" column of Oct. 29 tells all about a Ping Pong blowing contest which must have sounded new to a lot of alumni.

However, way back in the early thirties we used to play it with two couples on each team, lined up across the table with the net in place and all players on just one side of the net trying to blow the ball off the other side. No score if it went off the end.

We called it "puff ball" and it was great fun, but it did have one serious drawback. It was a sure way to transmit colds and strep throats across the table. No doubt we could have kept the game alive if we had only thought of gargling with beer after each point.

HENRY W. FREY JR. '31
Southern Pines, N.C.

silence and extending tacit approval of existing policy are political acts. Critical scrutiny does not inherently require accepting any particular claim, but neither can it mean an inherent bias toward rejecting it.

Princeton University must be a place that insists on free speech and robust debate, just as our president urges. Free speech, however, cannot possibly be fostered by presidential or institutional silence. In his column, President Eisgruber speaks out in defense of silence, claiming that taking a stand risks being tantamount to dogmatism. I think otherwise.

Amanda Merritt Fulmer '01
Seattle, Wash.

As a lead organizer of the campaign to divest from for-profit detention companies, I was disappointed on several accounts by President Eisgruber's piece. For example, he mentions a Resources Committee guideline stipulating that "sustained interest" may require that an issue be raised over a period of two academic years — without acknowledging that the Princeton Private Prison Divest Coalition (PPPD) has been engaging with administrators, students, faculty, and staff for three academic years now (and

PAW TRACKS



A.B., WITH A BABY: After giving birth to a son as an undergraduate, J.C. Alvarez '77 stayed in school, juggling the work of a student, mom, and wife. "While it's not a journey I would recommend for everyone," she says, "I knew it was the right journey for me." Listen to her story at paw.princeton.edu.



J.C. Alvarez '77

Courtesy J.C. Alvarez '77

has yet, at the time of this writing, to receive any substantive written feedback on the divestment proposal from the Resources Committee).

Most egregiously, President Eisgruber echoes several questions that have been posed by the Resources Committee — without bothering to mention that PPPD has responded to these same questions time and time again before the committee and President Eisgruber himself, both in public and private meetings and correspondences. We will briefly repeat our responses here:

Would a divestment recommendation cite specific companies and practices? Yes, we have singled out 11 companies that run or contract exclusively with private prisons and immigrant detention centers. Is for-profit detention just one of many “political and social strategies” designed to protect human rights? No, it is not. Prison and immigrant detention contractors regularly perpetrate acts of violence and torture — including solitary confinement and sexual abuse by staff — that disproportionately target black, brown, and poor individuals and communities.

Max Grear '18

***The Princeton Private Prison
Divest Coalition***

PRINCETON ACROSS AMERICA

I questioned the underlying concept for “Road Trip!” (cover story, Sept. 13), but Mark Bernstein '83 does a terrific job of finding intriguing and often obscure references and relationships, and the geographic spread is impressive. Bringing in the ancient ones (prior to 1900) is especially good. I found myself asking “who knew?” at many points. I liked his driver and his Lotus, too!

Jeff Marshall '71
Scottsdale, Ariz.

As a lifelong “road warrior” (classmate Al Cerrone '76 and I took a cross-country trip after graduation), I found this article and guide interesting. I thought I would take the PAW guide and turn it into an interactive Google Map (<http://bit.ly/PAWRoadTrip>). I have a classmate visiting this week: Steve Dujack '76, a former PAW editor. We are headed out on

a road trip from Spokane, Wash., down to Joseph, Ore., and have adjusted our route on the way back to stop by Milton-Freewater to locate the grave of Harlan Peck 1862, who wrote “Old Nassau.”

Ron Hall '76
Cheney, Wash.

As a classmate of Jacques Istel '49 and one who has visited his Museum of History in Granite, I want to protest Mark Bernstein's casual treatment of the site. Much as I enjoyed Mark's breezy style recounting his cross-country voyage, I found his brushoff of Istel's project to be a gratuitous insult.

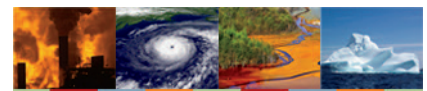
I was impressed with the amount of work put into the various history monuments, including that honoring our class. The museum deserves a visit from anyone heading toward Arizona or Southern California. And to fully appreciate its contents, plan to spend several hours and wear protective clothing against the sun!

Lew Miller '49
New York, N.Y.

THE ROLE OF TELOMERES

I was so delighted to read about Professor Daniel Notterman's research on telomeres (Life of the Mind, Sept. 13). My son was born with dyskeratosis congenita (DC), a rare and fatal disorder caused by exceptionally short telomeres. I often use the “shoelace cap” analogy to explain how telomeres act to keep our DNA stable while our cells divide. Often, bone-marrow failure is the first symptom of DC, since the blood-making cells divide faster than any others in our body. A person with DC is a naturally occurring example of what happens as we age and our telomeres become shorter and shorter.

My son passed away in September at the age of 22 from the combined effects of aplastic anemia, myelodysplastic syndrome, and pulmonary fibrosis. His genetic material is part of a research study at NIH that will ultimately help us understand the role telomeres play in the common diseases of old age, including cancer, osteoporosis, fibrosis, and organ failure. I'll never know if my son's telomeres were affected by both his genetic inheritance and life experiences, but I do note that he was separated from



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his birth mother on his first day of life and grieved her throughout his days.

Christine Futia '79

Easthampton, Mass.

RELIGION AND THE COURTS

President Eisgruber recently chastised senators for questioning a judicial nominee over writing and stating that she would recuse herself from a case if executing the law conflicted with her Catholic beliefs. Can he be so naïve as to insist “it is ... possible to probe those [judicial] philosophies without reference to the religious affiliation or theological views of a nominee,” when a judge who once defiantly displayed the Ten Commandments in his courtroom may soon be a senator? Given our history of judges flaunting faith-based animus while denying due process and equal protection to the LGBT community? When a Supreme Court with a majority of Catholic justices will decide if a religious right to discriminate against cake-buyers outweighs our right not to be discriminated against when buying cake? Now judges are the victims?

Oh boo-hoo-hoo; try being systematically oppressed, jailed, and murdered for centuries, then cry to me about how tough your job interview was. Being asked about your own words, or the conditions under which you would not do your job, isn't an unconstitutional “test.” I was devoutly Catholic at Princeton, but have no use now for any institution — secular, religious, or educational — that protects bulwarks of discrimination and abuse while ignoring the real injustices of our world.

Patrick J. Krug '92

Los Angeles, Calif.

REVIEW DIVERSITY EFFORTS

The 2007 Princeton publication “Princeton: Defining Diversity” states that one goal of the University's commitment to diversity is to ensure that students of different backgrounds learn from each other. From recent PAW articles it would appear that this goal is not being met. In one report, students of Latin American background seemed most concerned with learning about their own culture. They also wanted Princeton to consider a criterion other

than research and teaching ability in hiring new faculty. This criterion is ethnic origin, a factor that is decided on the basis of pure chance and has nothing to do with ability or accomplishment. Another article detailed the University's commitment of its funds to build a “safe” home for students “of color” from which white students will be excluded.

“Balkanization” seems a rather mild term for this policy. It is time to re-examine the way in which the diversity effort is being handled.

David S. Hodes '63

Dobbs Ferry, N.Y.

A GRAD STUDENT'S DAY

Re “A Day With ...” astrophysics graduate student Heather Prince (On the Campus, Sept. 13): Fun to read. Surely different from what I was doing as a grad student!

Timothy Butts *72

Arden, N.C.

FOR THE RECORD

Valerie Bell '77, who was featured in the September PAW Tracks podcast, was the first woman elected senior-class president at Princeton. Two women had previously served as class presidents: Abby Rubenfeld '75, freshman year; and Eva Lam '76, sophomore year.

Xiyue Wang, the graduate student sentenced to prison in Iran after being convicted of espionage charges, is 36 years old. His age was reported incorrectly in a Sept. 13 On the Campus story.

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On the Campus

A worker inscribes “Lewis Center for the Arts” on the wall of the Wallace Dance Building and Theater as the new arts complex receives its finishing touches (coverage begins on page 20).
Photograph by Ricardo Barros





Postbaccalaureate students Qiana Hunt, Khalil Hall-Hooper, and Shaquann Seadrow are enrolled in an astrophysics department program that helps them prepare for graduate school.

Upward Bound

New programs to help underrepresented students prepare to pursue Ph.D.s

Seeking to address a lack of diversity among faculty at U.S. colleges and universities nationwide, Princeton is launching new strategies to encourage more women and underrepresented minority students to pursue doctoral degrees.

At the end of September, the University was reviewing applications for a director of its new Presidential Scholars Program, which will bring female students and those from underrepresented minority groups to campus to prepare them to apply for and thrive in the nation's top Ph.D. programs. The program will consist of two tracks:

- ♦ The Pathways Program will bring 15 to 20 rising sophomores at nearby colleges to do research and coursework on Princeton's campus each summer for four years. Students will also take part in professional-development workshops and other enrichment programs at Princeton throughout the academic year.
- ♦ The Junior Society of Fellows will be open to non-Princeton students who have completed their undergraduate degrees but need additional courses

or want to get research experience before beginning the graduate-school application process. These students will live on campus for two years; they will get internship experience, take GRE workshops, and do whatever else is necessary to prepare, said Dean of the College Jill Dolan.

Students participating in the program will be fully funded by the University. The first Pathways Program students could arrive as soon as fall 2018, Dolan said, while the Junior Society of Fellows initiative will begin a year later. Some students may participate for all six years, while others will do just one component of the program.

The Presidential Scholars Program

"It's important for Princeton to be focusing on diversifying our program, because it will have a disproportionate impact on the national scene."

— Aly Kassam-Remtulla, assistant provost/acting associate dean

was suggested in spring 2016 by the Trustee Committee on Woodrow Wilson's Legacy at Princeton, which stressed that efforts to increase diversity in all academic ranks "must begin at the graduate-student level, as today's graduate students will become tomorrow's postdocs and faculty." Over the past five years, the number of graduate students at Princeton from underrepresented minorities has increased from 30 (8.8 percent of all U.S. students admitted) in 2013 to 39 (11 percent of U.S. admits) in 2017.

Aly Kassam-Remtulla, assistant provost and acting associate dean for diversity and inclusion at the Graduate School, said there are obstacles facing women and underrepresented U.S. minority students within every field and every discipline. For example, some scholars do not have sufficient funds to complete their Ph.D.s; some may not have had as many opportunities to connect and network with mentors who could help accelerate their careers; and some may face bias that makes it difficult for them to complete their careers, he said. Programs like the Presidential Scholars Program are designed to combat these problems, he added.

Other initiatives are underway in the departments of politics, physics, and astrophysics to close the gap between undergraduate coursework and doctoral programs for women and scholars from underrepresented groups. In these pilot programs, students who have graduated from other colleges take Princeton courses, work in labs, and receive mentorship from professors as they prepare to apply for graduate school.

All seven students who have completed these departmental programs — the earliest of which began in 2014 — have gone on to attend a Ph.D. program at a highly selective institution, Kassam-Remtulla said. This year, there are three students in the astrophysics program, one in physics, and six in politics.

"It's important for Princeton to be focusing on diversifying our program, because it will have a disproportionate impact on the national scene," he said. "Not just in terms of the numbers, but also the signal — if we start doing more, our peers will follow us." ♦ By A.W.

Princeton Invites Campus Portrait Suggestions

The University is asking for recommendations for up to 10 new portraits to be commissioned that will reflect the “increasingly diverse Princeton community.”

The new Portraiture Nominations Committee will collect ideas and recommend subjects, using criteria that include association with Princeton; representation of diversity; and excellence and achievement in the past 75 years in a particular field, “in the nation’s service and the service of humanity,” or in contributing to the culture of the University.

Since the mid-19th century, the only routine additions to the campus portrait collection have been those of the presidents and deans of the Graduate School and the engineering school.

To submit a recommendation, visit <https://evp.princeton.edu/portraiture-suggestion-form>.

Since the mid-19th century, the only routine additions to the campus portrait collection have been those of the presidents and deans of the Graduate School and the engineering school.

The portrait initiative is part of the work of the Campus Iconography Committee, which was created in response to a suggestion of the Trustee Committee on Woodrow Wilson’s Legacy at Princeton.

The University also plans to create walking tours to tell some of the lesser-known stories of Princeton’s history, establish physical and virtual historical markers on campus, and integrate those histories into student-orientation materials. Campus officials are also working to renovate campus sites “to reflect and connect with the diverse campus community,” including the EQuad Café and spaces in the residential colleges. ♦



HELD BY IRAN

Vigil for Imprisoned Grad Student

Hundreds of candles were lit as more than 100 colleagues, family members, and friends gathered in East Pyne courtyard Sept. 15 for a vigil to support Xiyue Wang, a Princeton graduate student who is serving a 10-year prison term in Iran after his conviction on two counts of espionage. He was arrested in 2016 as he was completing research in Tehran for his dissertation. The University has said that the charges against Wang are “completely false.” Wang’s wife, Hua Qu, described how her hopes for his release “have been shattered time and time again.” Jane Manners, a graduate student in history, told the gathering that “it’s critical that we continue as a community” to show support. Friends have created a group on Facebook, “Free Xiyue Wang.” ♦

PREPARING FOR TRANSFERS

In 2018, the University will accept **TRANSFER STUDENTS** for the first time since 1990. Here are some things to know:

- ♦ **Deadline to apply:** March 1
- ♦ **Number expected to enroll:** About 12
- ♦ **Target groups:** Princeton will “especially welcome” students who are exceptionally well prepared from low-income backgrounds, community colleges, and U.S. military service.
- ♦ **Academic standing:** Will be determined by faculty and college deans after evaluating transfer credit. Most A.B. students are expected to be admitted as sophomores and B.S.E. students as freshmen.
- ♦ **Housing/dining:** Freshmen and sophomores will be part of the residential colleges, with age- and family-appropriate housing options.
- ♦ **Academic requirements:** Transfer students must meet the same general-education requirements as others.
- ♦ **Campus life:** With a broader range of backgrounds, including age and family status, students will “participate in Princeton culture to the extent they wish to,” according to Keith Shaw, director of transfer programs.
- ♦ **Academic support:** Likely to include participation in the Freshman Scholars Institute, a summer program that introduces students to campus resources and offers two for-credit courses; a fall-semester course in research writing and methods; and a program offering a match with a graduate student to provide exposure to an academic field and exploration of research topics. ♦



Paulita Mejia '18, right, leads a discussion on life as a Princeton student.

A Day With ...

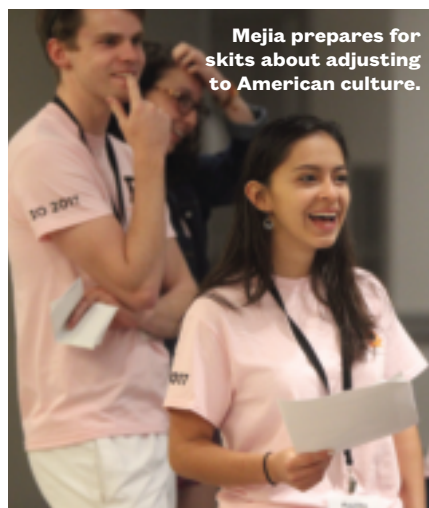
Paulita Mejia '18: Cheesy skits, shopping, and advice for 176 international arrivals

This is another installment of a new feature about a day in the life of a Princetonian.

Paulita Mejia '18 coordinates the International Center leaders at the Davis Center. Born in Ecuador, Mejia lived in Indiana for most of her life and has participated in International Orientation (IO) since arriving at Princeton. She worked closely with the Davis Center and led 23 international student leaders to welcome 176 international students this year. We caught up with Mejia on the second day of orientation, and she told us what it's like.

Forbes roundtable The way I like to describe IO is like a sprint marathon, because we work from very early till very late. Getting up was quite a struggle, but you're also really excited to keep going. The first thing that I went to was a breakfast and residential-college roundtable; I was in Forbes, so I went to the Forbes [College] roundtable. The deans talk about Forbes and they ask us what our experience at Forbes was like, so I always talk about the community. A lot of people throw a lot of shade at Forbes, so I like to pipe up and put in a few good words.

America 101 The students have their immigration sessions, and right after that is "America 101": skits essentially about adjusting to American culture. One of them is greetings and handshakes, so somebody from France is trying to give an American two kisses on the cheek and the American is like, "Whoa, I don't feel the same way about you." So it's a cheesy way to show how a typical Princeton/American adjustment would be for international students. My part throughout all of that is the narrator of all the skits. Everybody thought it was hilarious.



Mejia prepares for skits about adjusting to American culture.

Shopping After that we go to the Nassau Park shopping center [with Target, Walmart, and 47 other stores]. This is a good time for the freshmen to get anything that they may have not been able to bring to the States — bedding, some people buy fridges, hangers, all the basics. The leaders have to hustle to buy all the supplies we need for icebreakers. It's tradition for the leaders to get lunch at Penang, a Thai restaurant. I got the pad thai, although traditionally the leaders love getting the volcano pork chops because they come on fire.

Q&A I went over to Holder Courtyard, where we had a Q&A session with IC [International Center] leaders. We were trying to figure out a way to introduce them to Princeton life, prepare them for what's to come. Especially as international students, they go through a little bit of a different adjustment phase. You don't want to just get through Princeton; you want to get the most out of it. We talk about topics like, "Hey, winter is coming, get boots and a winter coat." We talk about Street culture, what social life is like, what nightlife is like; we have to talk to them about the drinking age, because here you cannot drink until you're 21.

Dinner on the Street We try to introduce the students to a lot of different aspects of Princeton, so this is their introduction to an eating club. Every time they walk into Quad they're like, "Oh wow!" They're very wide-eyed, bushy-tailed. They give me more energy and

Photos: Frank Wojciechowski

“We were trying to figure out a way to introduce them to Princeton life. ... As international students, they go through a little bit of a different adjustment phase. You don’t want to just get through Princeton; you want to get the most out of it.”

excitement about Princeton each year. I didn’t have a lot of time to eat — people are always telling me, “You need to do this with me right now.” But I grabbed corn, salad, and some of the steak, and then I took some cheesecake to go.

Icebreakers I’m the emcee for icebreakers. I’m pretty short, so I stand on a chair so they can see me. We played seven games, and it gets very intense. In one of the games you have to pass an orange around the circle using only your neck, so it looks like people might be making out — but that’s not what they’re doing at all. And it’s extra ridiculous because everybody is really competitive. At this point, everybody is really close with their groups, and if they’re not before this, then they definitely are after this. All of these things sound really silly, but I remember as a freshman, it was the biggest deal. You definitely get caught up in the moment: Everyone goes wild. We play “Eye of the Tiger,” and it’s for all the glory.

International at Princeton My freshman year there were something like 160 international students and at the welcoming dinner the coordinator did a roll call of nations, and I think 97 countries were represented. I was the only person from Ecuador there, and it’s so cool when there are people there who are actually representing a country. We have a student from Venezuela this year; we have a student from Syria. There’s all these things that happen that you read about in the news and you learn about in classes, and there are real live people who are experts on this because they lived through it. ♦ *Edited and condensed by Anna Mazarakis ’16*



THE '17 GLOBAL SEMINARS

Every Picture Tells a Story

Jason King '20, a participant in the PIIRS Global Seminar in China during the summer, pauses on the slope of a sand dune in Gansu Province.

“The steep, sweat-inducing climb to the top was challenging for everyone, but so fulfilling,” said Ryan Yao '20, who took the photo. The Beijing seminar was one of seven sponsored by the Princeton Institute for International and Regional Studies; others took place in Cuba, Germany, Greece, India, Namibia, and Russia. PAW invited students to submit photos of their experiences; see a selection at paw.princeton.edu. ♦

IN SHORT

The percentage of **A AND A+ GRADES** given to undergraduates rose from 27 percent in 2014–15 (when Princeton reversed its “grade-deflation” policy) to more than 30 percent in 2016–17. The percentage of A- grades stayed about the same, while grades of B+, B, and B- decreased, according to figures compiled by the Office of the Dean of the College.

“Increased grade compression at the top of the grading scale,” the office said in a report, “makes it challenging to distinguish among our best students when awarding honors and prizes at both the University and department levels.”

The grade-point average across all courses rose from 3.390 in 2014–15 to 3.435 last year, with humanities courses compiling the highest

average GPA and natural sciences the lowest.

Several student groups are participating in **DISASTER-RELIEF EFFORTS**. As of early October, students affiliated with Princeton for Puerto Rico had raised \$6,500 to help rebuilding efforts in the wake of Hurricane Maria, and the Princeton University Mexican Student Association (PUMSA) had raised about \$5,300 for earthquake-relief efforts in Mexico. (Both groups have set up Venmo accounts for donations: For PUMSA, send to @pu-mexhelp with the title mexdonation. For Princeton for Puerto Rico, send to diego-negronreichard.)

In addition, 10 students plan to travel to Houston during fall break with the Center for Jewish Life to join volunteer work following Hurricane Harvey. ♦



STUDENT DISPATCH

Selling Your Ph.D. to a Tech Company

By Nikita Dutta GS



There's a bulletin board of job postings in the EQuad that I walk past almost daily. The right, labeled "Academic," is covered in papers, piled

onto each other for lack of space. The left, labeled "Industrial," is frequently empty. Of what is there, few listings are for jobs in tech.

Princeton sends Ph.D. graduates to Silicon Valley every year, but in an industry in which college dropouts like Steve Jobs, Bill Gates, and Mark Zuckerberg have wielded such influence, it's hard not to wonder if a graduate degree is valued. As the internet empowers us to learn at home and smart technologies leave consumers hungry for new apps, jobs in tech are increasingly available to those without a formal education.

"Startups succeed because they have really good ideas," said Tiffany Moy, a sixth-year Ph.D. student in electrical

engineering, and good ideas can come from anywhere.

What does this mean for the Ph.D.? Moy is in the midst of answering that question. After graduating, she will start an engineering position at Apple Inc. that requires a Ph.D., but that was not the case for every job she considered.

"If you want to pivot into roles where not everybody has a Ph.D., it's a little harder," she said. "I've had interviews where their perception of a Ph.D. student is someone who only likes theory and doesn't do experiments."

Anyone who's spent weeks etching silicon wafers or aligning lasers knows this is not the case; a Ph.D. is as much about methods as it is about science. The challenge, then, is conveying this to employers. As Andy Zeng, a third-year Ph.D. student in computer science, put it: "Sell your Ph.D., not just the title." He believes Ph.D.s bring "creativity" to tech.

"You're more likely to take ideas

you've learned from different places and mix them together to create better solutions," he said.

This is not to say Ph.D. preparation doesn't fall short in some regards. Avi Wolf, a third-year Ph.D. student in chemical and biological engineering, worked at Intel Corp. before coming to Princeton and found it more team-oriented than academia.

"The ability to work with a team is crucial for most companies and is not emphasized in most Ph.D. work," he said. Zeng expressed similar concerns, calling the Ph.D. "more of a solo game" in which "you don't have as many opportunities to develop communication skills or leadership qualities."

Caroline Trippel, a fifth-year Ph.D. student in computer science with experience at several companies, sees it differently. "People value higher-education degrees for knowing that someone can drive and steer a project on their own," she said.

But while students are cognizant of the job market, Wolf said they should not lose sight of what brought them to Princeton: a "desire for creating new science." Indeed, many students believe that if they're passionate about advancing their field, a Ph.D. is irreplaceable.

"More and more startups are focusing on cutting-edge technologies instead of just writing an app and making a company," said Shuran Song, a fifth-year Ph.D. student in computer science. "Doing a Ph.D. and knowing the most advanced technologies puts you in a better position."

So maybe all students need is to remember the point of it all — to take a break from job postings and get back to the learning we came for. Ultimately, the curiosity that brought us here may be our most valuable asset. ♦

SEXUAL-MISCONDUCT POLICY TO REMAIN UNCHANGED

Federal education officials said in September that college officials will have more discretion in handling **SEXUAL-MISCONDUCT CASES** under Title IX, including the standard of evidence that must be met. But Princeton's policy will remain in place, including use of the preponderance-of-the-evidence ("more likely than not") standard.

"Our current policy and procedures, which apply to faculty, staff, and students, are carefully thought out

and fair to all parties," Michele Minter, vice provost for institutional equity and diversity, said in a statement.

Princeton revised its procedures in 2014 under pressure from the Obama administration as part of an agreement to resolve charges that the University had violated Title IX. New federal guidance "specifically indicates that such voluntary resolution agreements remain binding," Minter said. ♦ By W.R.O.



Sarah Reeves '18, Aaron Balleisen '21, and Maxwell McPherson '19 in a lab session on energy use and energy flow as specialist/lecturer Jason Puchalla looks on.

CLASS CLOSE-UP: PHYSICS FOR FUTURE LEADERS

Updating a classic Princeton course

Teachers Professor Peter Meyers and specialist/lecturer Jason Puchalla

Focus In this introductory physics course for non-science majors, students learn a mix of physics concepts, most of which have ties to current concerns such as nuclear weapons, energy conservation, hybrid cars, quantum computing, climate change, and radioactivity. Through demonstrations and an optional lab component, hands-on learning is encouraged.

"Physics for Future Leaders is emphasizing not 'physics for its own interesting sake,' but physics as a way of approaching the modern world," Meyers said.

Background This class evolved from "Physics for Poets," the nickname given to an introductory physics course taught at Princeton for many years. At one time, the course's content was similar to a standard high school physics class, but it has been altered several times and for the past 10 years has focused "more on things that are arguably more interesting and that would come up for any engaged citizen," he said.

On the syllabus Swedish professor Hans Rosling's TED Talk about the arrival of the "magic" washing machine; a letter that Albert Einstein wrote to President Franklin D. Roosevelt in 1939 about the possibility of a nuclear weapon; Richard Feynman '42's lecture on "What Is Energy?"

The power of demonstrations "We understand that almost everybody is taking this course because it's a distribution requirement ... so it's up to us to try to interest them. Gigantic sparks, things exploding, things falling large distances — the demos are memorable, and it's our responsibility to turn that into [something] also educationally worthwhile," Meyers said.

Local connections "We have a Van de Graaff generator, which people may have seen in science museums — it generates very large voltages and big sparks," Meyers said. "One of our Van de Graaffs actually belonged to [Robert J. Van de Graaff]; he was on the faculty here. ... And I have a plant that my wife got from some women at the Institute for Advanced Study, and the story is that it is from Einstein's begonia. I bring it to exams." ♦ By A.W.

Frank Wojciechowski

Holiday

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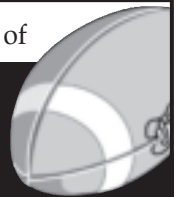
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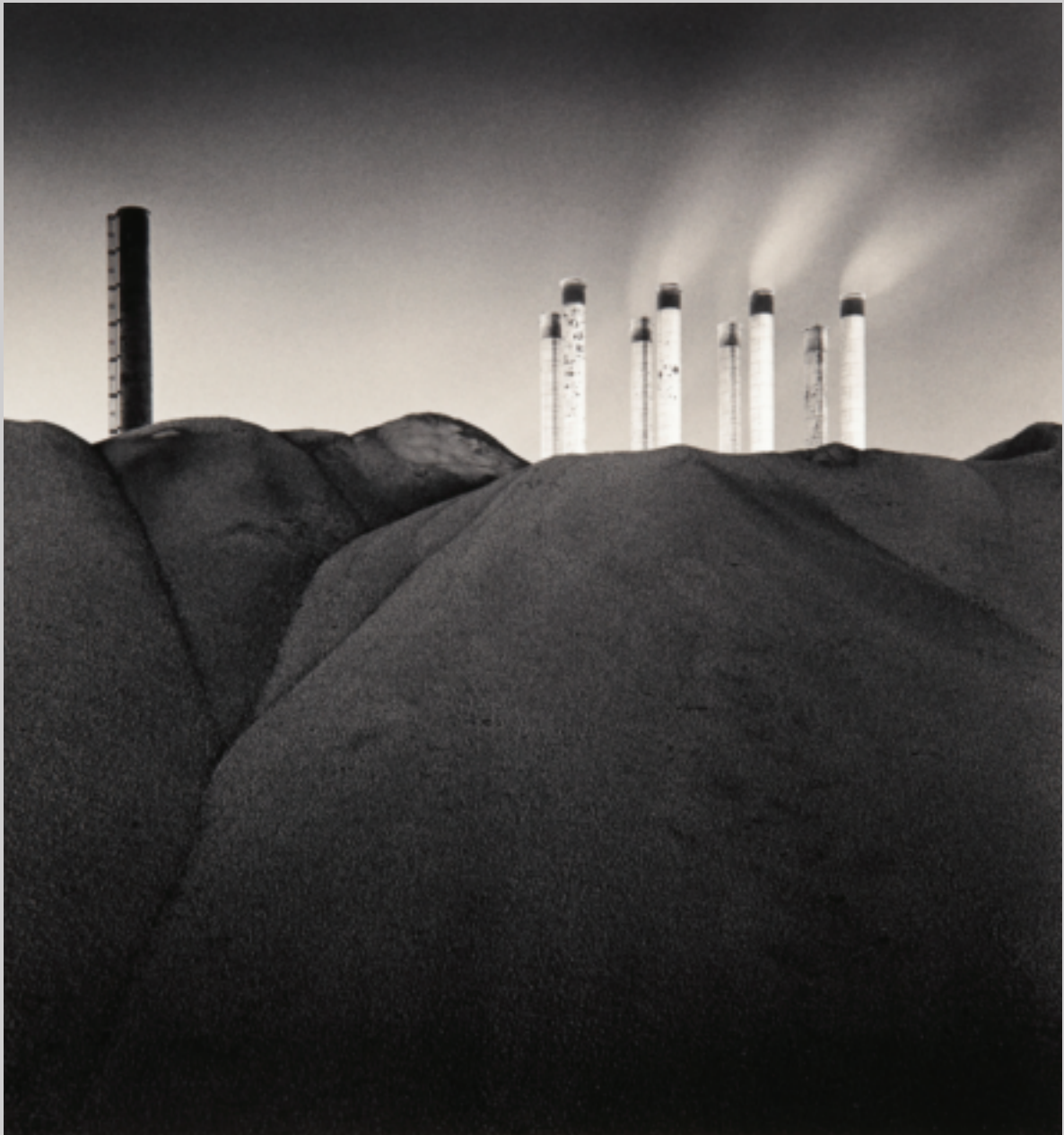
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Katie Pratt-Thompson '18 and the Tiger defense allowed two goals in the first 11 games.

WOMEN'S SOCCER

On the Defensive

Pratt-Thompson '18 helps to set the tone for nationally ranked Tigers

Lisa Pratt '80 was a star athlete at Princeton — an All-Ivy field hockey forward who played five sports as an undergrad — so she appreciates the countless hours her daughter, women's soccer co-captain Katie Pratt-Thompson '18, has spent playing her sport. But more than that, Pratt is fascinated by the role her daughter fills on the field, anchoring one of the nation's top defenses.

"Defenders are so smart and so tactical," said Pratt, who preferred the shark-like, instinctive role of goal-scorer. "She just amazes me — I watch Katie play and I don't know how she knows to do what she does."

Pratt-Thompson said defense fits her style of thinking. She'd rather break up a

scoring chance than score a goal herself. "I like having everything in front of me, I love leading people," she said, adding with a chuckle, "I love delegating, that's what it is."

Delegating takes a toll on Pratt-Thompson's voice, which often goes hoarse by the end of a 90-minute game, but that's a small price for the type of success the Tigers have had this fall. In its first 11 games, Princeton was 10-1, including a 2-0 start in the Ivy League, and had allowed just two goals, climbing to second in goals-against average among more than 300 Division I women's teams. Its only loss came in a 1-0 game against No. 6 West Virginia Sept. 15.

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THE BIG THREE

1 Princeton field hockey trailed Yale by a goal late in a Sept. 29 game at Bedford Field before striker **RYAN MCCARTHY '18** dramatically reversed the Tigers' fortunes.



McCarthy tied the score on a penalty corner with 2:56 left and then put her team ahead, 3-2, on a diving rebound shot with no time remaining. (Princeton had been awarded a penalty corner as the second half expired.) McCarthy, the Tigers' leading scorer, earned a spot on the U.S. women's national development squad in June.

2 **TOM GEORGE '18** stroked Great Britain in the men's pair final at the World Rowing Championships in Sarasota, Fla., Sept. 30, earning fifth place with partner Tom Jeffery. George, the only current undergraduate to race for gold at the World Championships, has rowed with the Tigers' varsity eight for three seasons. Former teammates Pat Elbe '16 and Nick Mead '17 earned silver medals with the U.S. men's eight.



3 Outside hitter **NATASHA SKOV '20**, a first-year starter who leads the Ivy League in kills and points, helped the women's volleyball team to a four-set victory at Yale Sept. 30, Princeton's first win in New Haven since 2007. The Tigers opened Ivy play 3-0, sweeping Penn and Brown before facing the Bulldogs. ♦





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On the Campus / Sports

continued from page 15



**Lisa Pratt '80, left, and daughter
Katie Pratt-Thompson '18**

The Tigers' offense, which lost all-time leading scorer Tyler Lussi '17 to graduation, has outshot opponents 2-to-1 and ranked second among Ivy teams in scoring through Oct. 3. Abby Givens '20 led the Tigers with nine goals, followed by Mimi Asom '19 and Courtney O'Brien '20, who each scored five.

For the first time since 2004, the Tigers reached the national top 20, climbing to No. 11 in early October.

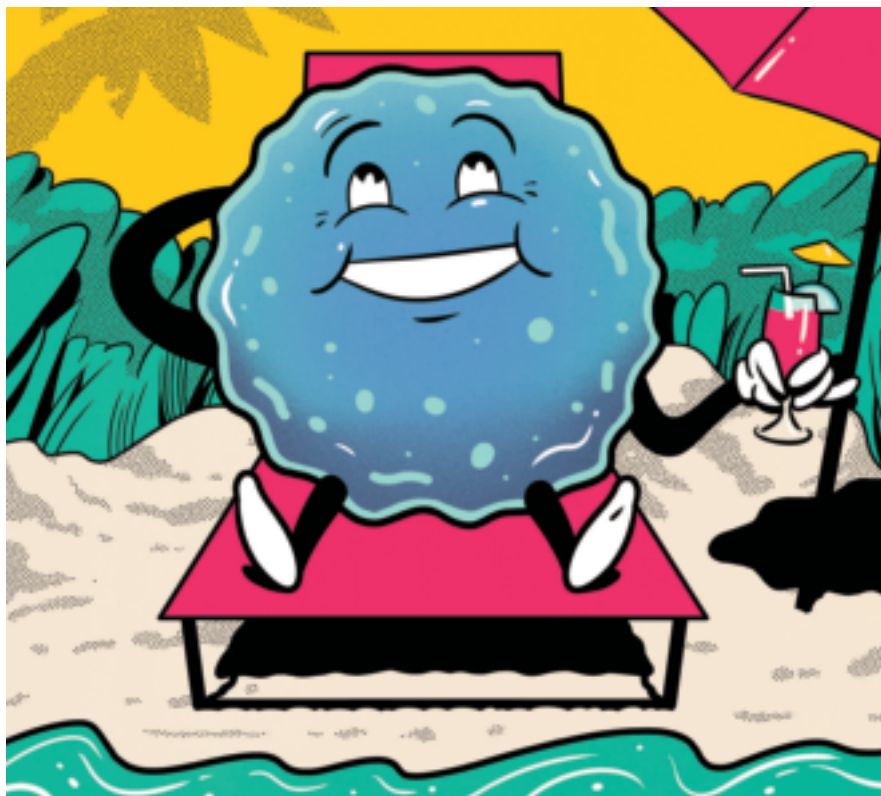
"We have a fantastic mix of people that really enjoy being around each other," Pratt-Thompson said. "And it shows on the field. If someone loses the ball, the person next to you is going to sprint for it to help you."

Pratt-Thompson is a third-generation Princeton athlete: Grandfather Robert Pratt '44 played basketball for the Tigers and rowed on the heavyweight varsity eight; Lisa played field hockey, basketball, squash, and lacrosse, and ran for the fledgling track team.

"I got a lot of Tiger energy growing up," Pratt-Thompson said, "but there wasn't an expectation that I needed to go here." In fact, even after she made it clear she had her heart set on Princeton, her mother insisted that she keep her options open and visit several schools. "It allowed me to appreciate what Princeton offered," Pratt-Thompson said.

Pratt is enjoying her daughter's final season at Princeton, and she also has an eye on scoring goals of her own. In February, she's slated to play for the U.S. masters field hockey team in Portugal, fulfilling a dream deferred from her senior year, when she was the last player cut from the 1980 U.S. Olympic roster. ♦
By B.T.

Life of the Mind



CHEMISTRY

Contradiction in Germs

‘Lazy’ microbes reveal their secret drugs when they must work to get nutrients

In 1928, Alexander Fleming discovered penicillin, thanks to a moldy petri dish. Nearly 100 years later, bacteria are fighting back. Infections such as pneumonia have become tougher to treat as germs grow resistant and antibiotics become less effective. But scientists like Princeton’s Mohammad Seyedsayamdost aren’t despairing. In their search for new medications, they’ve realized Fleming was onto something.

Of all the world’s antibiotics, Seyedsayamdost explains, roughly 70 percent originate from substances made by microbes, such as bacteria and



Seyedsayamdost

fungi. Vancomycin, a heavy-hitting antibiotic for intractable infections, came from a soil bacterium in the Borneo jungle. It isn’t only antibiotics that come from microbial sources — the forerunner of statin drugs for cholesterol came from moldy rice in a Kyoto grain shop.

Microbes are incredible chemists. Genome-sequencing technology can detect molecule-making machinery

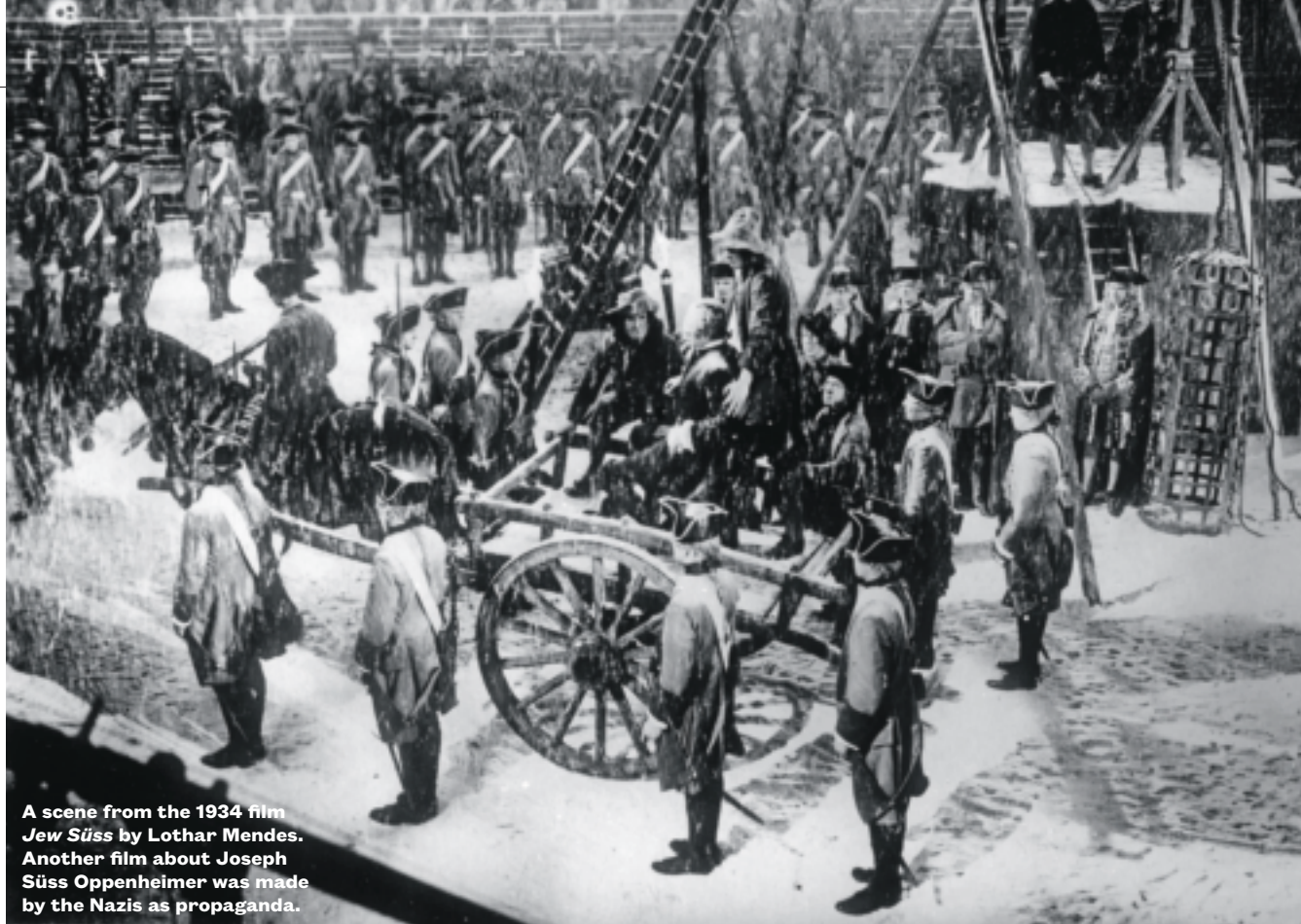
inside bacteria, and evidence suggests they are capable of making many more substances than scientists have found. There could be more blockbuster drugs from nature to discover. What’s keeping them hidden?

Experts like Seyedsayamdost think petri-dish conditions keep bacteria from reaching their full potential. Petri dishes provide unlimited nutrients and no competition with other species. It’s like vacationing at a resort with all-inclusive food and cocktails. Sure, bacteria could expend the energy to make all manner of exotic molecules, he says. “But why would you do that when you’re sitting on the beach?”

Fleming discovered penicillin when fungi came in contact with bacteria in his culture dish — when there was competition. Seyedsayamdost’s team in the chemistry department set out to mimic natural competition. They exposed bacteria to hundreds of bioactive molecules, including antibiotics. They didn’t give a high-enough dose to kill the bacteria. They gave only enough to annoy the bacteria, much like in the wild, where microbes use chemical signals to communicate. Sure enough, Seyedsayamdost’s bacteria spewed new molecules, some with anti-infective activity. What’s more, his team found genetic gatekeepers that, if removed, might uncover more hidden gems.

Other researchers have complementary strategies to Seyedsayamdost’s. New drugs, however, remain a long way off. “I don’t think the research community has sped up the process of finding antibiotics,” he cautions. “We’ve now accessed a new source.”

He’s eager to apply the technique to fungi next. There’s just one problem. “Once you start growing fungi in your lab, they contaminate everything,” Seyedsayamdost says. “It’s a pain in the neck.” Certainly Fleming himself would relate to that. ♦ *By Carmen Drahl *o7*



A scene from the 1934 film *Jew Süss* by Lothar Mendes. Another film about Joseph Süss Oppenheimer was made by the Nazis as propaganda.

ESSAY

Truth in History

By Yair Mintzker



Yair Mintzker is a professor of history at Princeton.

I remember the moment perfectly.

I was in Stuttgart, a few days after Christmas 2011. I had spent the previous three days in the central archive in the city center, reading through the records of one of the most notorious trials in German history. The trial took place in 1737–38, and led to the execution of a man named Joseph Süss Oppenheimer, better known to history as “Jew Süss.”

The archival materials I had been studying were both extraordinary and utterly frustrating, and I wasn’t sure how best to proceed. As I was leaving the archive, I lingered for a moment in the vestibule, looking at the large snowflakes slowly descending from the sky and recalling the last few meetings of the undergraduate seminar I had just

taught at Princeton. Then, too, snow was lying outside. And all of a sudden it hit me: The problem I was facing was not a problem at all; in fact, it was a solution.

Joseph Süss Oppenheimer is one of the most important figures in the history of anti-Semitism. Born in the Jewish community of Heidelberg in the last decade of the 17th century, he served as the personal banker of several princes in southwest Germany in the 1720s before moving to Stuttgart in 1733 and becoming the “court Jew” (financial and political adviser) of Carl Alexander, the duke of the small German state of Württemberg. For several years after 1733, Oppenheimer was highly successful, serving as the duke’s closest associate while also making large sums of money for himself. But when Carl Alexander died unexpectedly in 1737, the Württemberg authorities arrested Oppenheimer, put him on trial, and condemned him to death for a long

list of unsubstantiated accusations, including bribery, treason, and rape. On Feb. 4, 1738, Oppenheimer was hanged just outside Stuttgart, his body then locked for six years in a metal cage at the northern entrance to the city.

Although the legal proceedings against Oppenheimer concluded almost three centuries ago, his trial never quite ended. Ever since Oppenheimer’s execution, his story came to represent the contested topic of Jewish integration into German society. Oppenheimer was neither the first nor the last prominent Jew to rise and fall in a predominantly Christian society, but his story, taking place on the verge of the modern period, became a parable about Jewish fate in the transition to modernity. Particularly since the early 19th century, when questions about Jewish emancipation came to the fore in Germany, the story of this man acquired the status of a literary battleground on which different conceptions about the past, present, and future of German Jews were encoded and contested. Most notorious in this respect is a Nazi propaganda film from 1940, created at the behest of Joseph Goebbels. It is thus no exaggeration to say that “Jew Süss” is to the German collective

imagination what Shakespeare's Shylock is in the English-speaking world. "Jew Süß" is much more than a historical figure; he is a cultural icon.

Now put yourself in my shoes. As a historian of early modern Germany, I had come to Stuttgart to examine the records of Oppenheimer's trial. What I hadn't realized was just how extensive the records would be. The state archive in Stuttgart keeps them in more than 100 cardboard boxes in its secure, climate-controlled basement. Containing over 30,000 handwritten pages, these boxes include copies of the interrogation protocols of Oppenheimer and his associates; records of the judges' deliberations; reports made by Oppenheimer's defense attorney; and a great number of poems, pamphlets, and essays about Oppenheimer's final months, days, and even minutes. The archive contains a whole universe of sources about Oppenheimer's case, an unparalleled opportunity — or at least so it seemed at first glance — to write an extraordinarily detailed history of the case of the notorious "Jew Süß."

But while the richness of the sources about Oppenheimer's trial is remarkable, the sources themselves leave much to be desired. This is often the case with events that generate so many written sources. Because Oppenheimer was famous and powerful, and especially because he was very vulnerable after his arrest, few had reason to tell the truth, the whole truth, and nothing but the truth about his life. The judges assigned to his case lacked direct evidence against him, but wishing to make an example of him anyway, they left no fact in its right place in pursuit of their purpose. The testimonies of Oppenheimer's alleged accomplices, who were trying to save their own skins, are at least as problematic. And last but not least, Joseph Süß Oppenheimer was fighting for his life and can be considered anything but a reliable witness as far as his own deeds and misdeeds are concerned.

Therein lies the predicament I contemplated on that December day in 2011. I had a huge amount of material about Oppenheimer's trial, but almost all of it was extremely tendentious. How

could I, as a historian, write an account of Oppenheimer's trial based on such sources?

Anyone who had taken history classes in college probably would recognize two ways historians generally deal with such a predicament. The first is similar to the delivery of a course of lectures, where a professor tells students what happened without bothering them with the difficulty of gaining that knowledge. Consider it for a moment: Most professors deliver their lectures from a podium, using notes, and with a grave air of certainty. Very rarely do they allow for any questions or interruptions during their 50-minute monologues and almost never do they utter the words "I don't know." In academic jargon, we call this stance "omniscient."

I would not gloss over the many contradictions in my sources, but rather place them front and center.

The second approach couldn't be more different. Unlike in lectures, in seminars professors do away with the omniscient stance in favor of the Socratic method, the cornerstone of which is, of course, the dialogue between teacher and students. When led by the right professor, the seminar becomes a space where students' curiosity and intelligence are front and center, where doubt is encouraged and questions are welcome. In the seminar, truth is reached through a conversation between professor and students and between readers and texts. This is why I feel much more at home in the seminar room than in the lecture hall. I have never seen the point of inundating my students with information or pretending that I know everything. Rather, I try to inspire, to help my students discover important truths through dialogue and different points of view. For me, looking at problems from different angles is at the very core of what I do as a Princeton professor.

Six years ago, as I was looking at the big snowflakes parachuting from the Stuttgart sky, it suddenly dawned on me what kind of book I wanted to

write about Joseph Süß Oppenheimer. Rather than a lecture-like book in which I pretend to know everything about his case, my book would be a polyvocal, seminar-like work of scholarship. In it, I would not gloss over the many contradictions in my sources, but rather place them front and center in my narrative. If I knew something, I would say so, but if I didn't know something, I would say so too. In a nutshell: I would replicate on paper what I have always striven to do in class.

Six years later, Princeton University Press has just published that book. It's called *The Many Deaths of Jew Süß: The Notorious Trial and Execution of an Eighteenth-Century Court Jew*. The book draws on the rich archival material I found in Stuttgart to tell not one, but four conflicting versions of Oppenheimer's life and death as told by contemporaries: the leading inquisitor in the criminal investigation; the most important eyewitness to Oppenheimer's final days; a fellow court Jew who was permitted to visit Oppenheimer on the eve of his execution; and Oppenheimer's earliest biographer. All four narratives are based on archival evidence, but they often contradict one another and sometimes even contradict themselves. One early reader of the book compared it to Japanese director Akira Kurosawa's famous movie *Rashomon*, while another saw similarities with William Faulkner's *As I Lay Dying*.

What emerges from this storytelling technique is a lurid tale about "Jew Süß" that involves greed, sex, violence, and lies, but also a great deal that is moving and indeed true. Life, after all, is full of tensions and contradictions, so highlighting them in a history book makes it more, not less, truthful. In its polyphonic, multi-perspectival treatment of the notorious case of "Jew Süß," in its refusal to reduce this story to one thread only, and in the many moments of doubt and uncertainty it evokes, the book illustrates yet again what Plato said about conflicting arguments: that they are the stuff from which both thinking and life are made. In that respect, all thoughtful writing, like all meaningful teaching, is polyphonic in nature. ♦

PRINCETON'S NEW NEIGHBORHOOD ENSURES THAT THE ARTS ON CAMPUS WILL CONTINUE TO THRIVE



The New Music Building, part of the Lewis Arts complex. The top of the center's six-story tower, with offices and exhibition space, is visible behind.

A HOME FOR THE ARTS

By Jennifer Altmann



Ricardo Barros

It was not your typical subject matter for a work of musical theater. There was the requisite love story. There was mystery. But mainly, the plot centered on ... climate change.

The production, *The Great Immensity*, began in a 2009–10 atelier class offered in Princeton's Lewis Center for the Arts. It was an unusual collaboration, bringing together scientists and artists from the Lewis Center, the Princeton Environmental Institute, and the Civilians, a theater group that would go on to receive a grant of almost \$700,000 from the National Science Foundation to show how theater can increase public engagement with scientific issues. Students and faculty came not just from Princeton's arts programs, but from fields including bioethics, biology, engineering, environmental studies, and geosciences.

The Great Immensity is about a woman named Phyllis, whose husband, a nature documentary producer, disappears while on assignment on a tropical island. While searching for him, Phyllis discovers a plot to disrupt an upcoming climate summit in Paris. To tell that story, students in the atelier produced inventive work: Andrea Grody '11 and KC (Wade) Jean-Pierre '11 co-wrote a song about forest fires, based on their conversation with a North Carolina firefighter. Jackie Hedeman '11 spent weeks immersed in online chat rooms to research the predatory snakehead fish. Inspired by her interview with an ecologist, Erin Sherman '11 painted a watercolor that depicted how humans are affected by climate change.

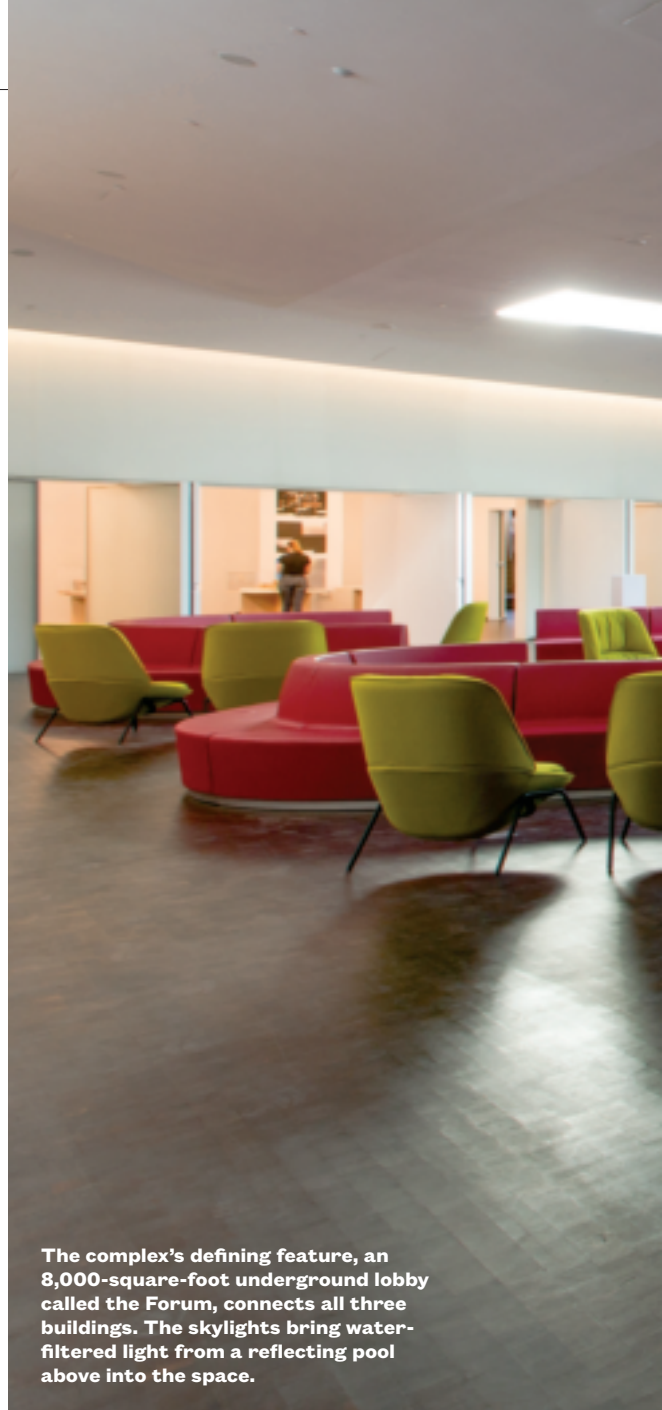
"We were turning statistics into songs," recalls Grody, who was the show's music director and is making her debut as a music director on Broadway this fall.

In 2010, the show was presented as a work in progress at McCarter's Berlind Theatre. Four years later, developed by the Civilians' artistic director, Steve Cosson, it debuted in New York. Since then, it has drawn national attention — and not just for its art. At a press briefing last spring, Mick Mulvaney, director of the Federal Office of Management and Budget, said the production exemplified the "crazy stuff" the Obama administration had funded. "Do you think that's a waste of your money?" he asked rhetorically.

Certainly not, believe faculty in the Lewis Center. They still speak of the class as perhaps the best example of how a university arts program could break new ground. Poet Paul Muldoon, director of the atelier program, explains the philosophy: "We reinvent the wheel with each course. It's a step in the dark. And that, one might say, is what all art making is about."

Muldoon was founding chair of the Lewis Center for the Arts, launched in 2006 with a \$101 million gift from the late Peter B. Lewis '55 and championed by former President Shirley Tilghman. Now the final piece is in place: a three-building arts complex that campus officials say will enable further expansion of the arts at the University and bring new life to the area around McCarter Theatre, where a new restaurant and a new bar have opened. The complex is part of a 22-acre development that also includes

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The complex's defining feature, an 8,000-square-foot underground lobby called the Forum, connects all three buildings. The skylights bring water-filtered light from a reflecting pool above into the space.

ARTS, MEET TECH

Latest technologies open new opportunities for students

At a Princeton gathering in 2008, then-chair of the Lewis Center Paul Muldoon spoke about the transformative power of the arts. A chance encounter with art, he said, could change a person's life.

Architect Steven Holl took Muldoon's words to his drawing board. Walk down the path from Blair Hall to the new three-building Lewis Arts complex and you will be afforded a view through a glass wall into the music building's two-story, 3,500-square-foot rehearsal room, where the



100-piece Princeton University Orchestra or a jazz ensemble may be practicing. Glance upward into the building's second and third floors, and you may glimpse a pianist or a violinist in a teaching studio or practice room suspended from the roof by steel rods.

Stand in the complex's defining feature, an 8,000-square-foot lobby called the Forum, which connects all three buildings. If the massive doors are thrown open, you can see into four performance spaces, perhaps getting a preview of a hip-hop dance rehearsal or an avant-garde theater piece. Look up to the mezzanine and you'll get a peek at the latest sculpture or photography displayed in the visual-arts gallery. The transparent, translucent, and opaque materials used for the exteriors — a combination of stone

and several types of glass — make the buildings glow at night.

"These chance encounters can draw students in and transform their experience at Princeton," says Noah Yaffe of Steven Holl Architects.

Located on the south edge of campus across from McCarter Theatre Center, the 146,000-square-foot complex is a major expansion of the facilities for the arts. The three structures — a music building, a dance and theater building, and a six-story tower — house the dance, music theater, theater, and atelier programs, as well as additional facilities for the music department.

The three buildings are arranged around a plaza with a reflecting pool and surrounded by landscaped plazas and green spaces. Nearby is

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a new train station and Wawa (see accompanying story).

The three buildings house the dance, music theater, theater, and atelier programs, as well as facilities for the music department, which is not part of the Lewis Center and remains based at the Woolworth Center of Musical Studies. (Two programs within the Lewis Center — creative writing and visual arts — are not moving.)

The project faced a contentious four-year approval process and lawsuits filed by local residents who objected to moving the Dinky rail station farther south to make way for the complex. Moving the train station “is still a sensitive issue,” says Princeton mayor Liz Lempert, but “there’s also a recognition that the new complex is going to be a great addition to the community.”

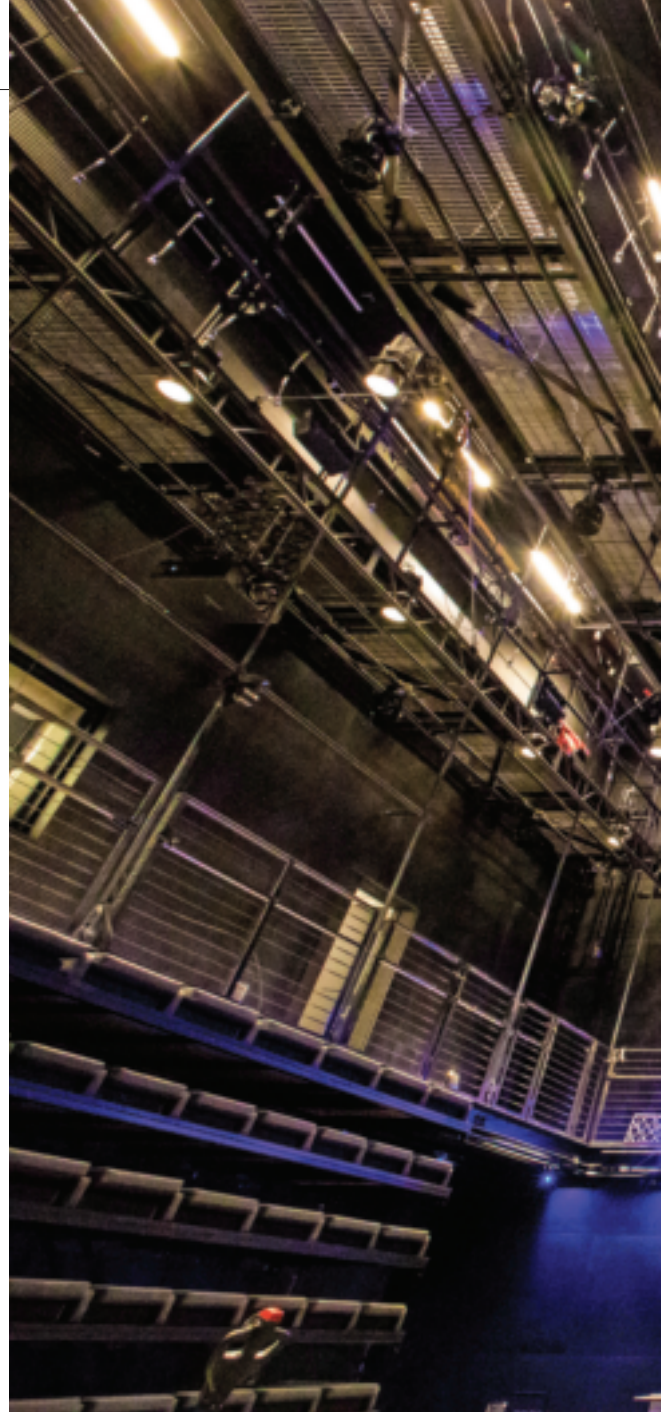
Unlike many other universities, Princeton does not offer majors in the arts, with two exceptions: music and visual arts. As theater program director Jane Cox says: “We are philosophically opposed to a major ... You don’t know enough about the rest of the world when you’re 18 to study theater full time.” The approach means students mix their love of the arts with a deep background in the liberal-arts fields they are studying. Obie-winning playwright Branden Jacobs-Jenkins ’06, for example, studied African American studies and anthropology at Princeton, preparing him to wrestle with issues of race and class — something he does in his plays today.

The lack of majors has not stunted the flowering of arts programs. In recent years, Princeton has expanded not just the numbers of arts faculty and courses, but the range and variety of its offerings. A program in music theater was launched in 2016. New fellowship programs have been created, bringing in a range of professional artists — both prominent playwrights and lesser-known stars such as David Bengali ’04, a projection and lighting designer fresh from Broadway, and award-winning Pakistani filmmaker Afia Serena Nathaniel. Since 2006, the Lewis Center faculty has grown about 70 percent, to 107, and the number of courses has increased more than 50 percent. Students enrolled in Lewis Center courses 1,673 times last year, up 70 percent from 10 years ago.

Arts alumni have gone on to stellar careers. Silas Riener ’06, now a world-renowned dancer and choreographer, first studied dance as a Princeton student. The graduate music-composition program (not part of the Lewis Center) has produced two Pulitzer winners in the last four years: Julia Wolfe ’12, who won in 2015, and Caroline Shaw, a doctoral candidate who won in 2013. In the creative-writing program, students have become top novelists, poets, and nonfiction writers after studying with writers like John McPhee ’53, Tracy K. Smith, Jeffrey Eugenides, Jhumpa Lahiri, Muldoon, and Nobel laureate Toni Morrison, a professor emerita. (Yiyun Li, a MacArthur “genius grant” winner known for her elegant writing about the experience of Chinese immigrants, joined the faculty in the fall.)

Novices are welcome. Walid Marfouk Layadi ’17, who majored in operations research and financial engineering and had no previous experience in the visual arts, took a course in digital photography on a whim. He got hooked. For a senior-thesis project, he used a large-format viewfinder film camera and halogen cinema lights — both commonly used in the 1950s — to capture images of family members in his native Morocco to offer a perspective on Muslim identity. He ended up winning

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the new Dinky station, a rebuilt Wawa, and two new restaurants, the Dinky Bar and Kitchen and the Cargot Brasserie, which are in the former train station and cargo-hold buildings. The entire project — known as the arts and transit neighborhood — cost \$330 million.

Each building features the latest technology. The Wallace Dance Building and Theater, named after brothers Monte J. Wallace ’53 and Neil W. Wallace ’55, who contributed \$15 million for the building, features a visually striking curved wall. The 3,600-square-foot Hearst Dance Theater has flexible seating for 120 that can be reconfigured in a variety of ways and a shock-absorbing sprung floor comparable to those in professional dance facilities. There are four studios built specifically for dance. The dance program never had a



The 3,600-square-foot Wallace Theater, called a “black box” because of its black walls, has flexible seating for up to 140 and features LED theatrical lighting.

purpose-built studio before.

The 3,600-square-foot Wallace Theater, called a “black-box theater” because of its black walls, has flexible seating for up to 140 and features LED theatrical lighting. There are smaller studios for rehearsals and small performances, equipped with catwalks that give access to lighting and scenery. Many studios have video-recording equipment.

Several theaters in the complex have stages at least as big as the one at the Berlind Theatre at McCarter, so they can host rehearsals for a Berlind performance, something not found before on campus.

The 23,000-square-foot New Music Building supplements the existing Woolworth Center of Musical Studies at the center of campus, where the music department was bursting at

the seams. Music performance, once primarily housed in the Woolworth basement in windowless rooms, “will come out of the depths and into this extraordinary new space, full of light and energy,” says Wendy Heller, the department chair. Here, as elsewhere in the complex, technology provides new opportunities. Musicians in the practice rooms and teaching studios have access to playback systems and audio-recording equipment. An acoustically isolated rehearsal room has equipment for making professional-quality audio recordings. (It also provides a place for the orchestra to rehearse, freeing up Richardson Auditorium for more performances by other groups.) New technology is not the only welcome addition in the complex: There are 48

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a Princeton arts prize.

“At Princeton,” he says, “no one was judging me for not fitting the typical definition of an arts student. All that mattered was the art I made.”

The opening of the Lewis Arts complex comes at a challenging time for the arts. President Donald Trump had proposed eliminating the arts and humanities endowments (a House bill retains them, with cuts) — making commitments such as Princeton’s all the more important, says Jordan Roth ’97, the president of Jujamcyn Theaters, which owns and operates five Broadway theaters. “It’s essential that Princeton has made this wholehearted and defining commitment. It’s not just, ‘Let’s put an arts building over there.’ It’s, ‘Let’s conceive of our community as one that is infused at its very core with the arts.’ That is the kind of bold, man-on-the-moon initiative that an institution like Princeton can do.”

Nonprofit arts groups face growing uncertainty. Sixty percent of the revenues of nonprofit arts organizations come from ticket sales, merchandise, and services, points out Robert Lynch, president of Americans for the Arts. That means these organizations may be reluctant to stage shows or exhibitions that take great artistic leaps but may not have wide popular or commercial appeal.

With their mission of teaching and advancing knowledge, however, universities don’t worry about ticket sales. Instead, liberal-arts universities play a critical role in encouraging experimentation and innovation in the arts. “Universities have a responsibility to push the field forward,” says Lewis Center chair Michael Cadden.

“The confines of a university are a haven that supports students’ artistry at a particularly exciting and expansive moment in their growth,” says James Bundy, who worked in the nonprofit arts world for 20 years before becoming dean of the Yale School of Drama. “They can have many productive failures with virtually no negative consequences.”

Princeton offers seemingly unending opportunities for low-stakes risk-taking, both in classes and in the thriving community of extracurricular arts groups. (In addition to well-known organizations like a cappella groups, Triangle, and Theatre Intime, there are dozens of ensembles pursuing all manner of art, from improv, Mexican folk dancing, and slam poetry to African dance, Chinese theater, opera, and Japanese drumming.) As a student, Lileana Blain-Cruz ’06 led an artistic rebirth of the student drama group Black Arts Company, which allowed her to stage obscure theater pieces.

“You get to live in an ideal dream space at a university because it is solely about the art; it’s like a theatrical research space,” she says. “The feeling was you could try anything.” Today, Obie winner Blain-Cruz is a busy New York City director with many theater credits and a reputation for innovative interpretations of classical and contemporary works. She returned to campus a few years ago to direct Shakespeare’s *Much Ado About Nothing*, a production she described as having the feel of “both a ballroom and a frat party.” Most of the play took place in a field of roses that filled the Berlind Theatre stage.

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WHAT'S IN THE NEIGHBORHOOD?

The Lewis Arts complex anchors a 22-acre development that also includes two restaurants, a Wawa convenience store, and the new Princeton train station, which has been moved 460 feet south.



- A** New Music Building
- B** Wallace Dance Building and Theater
- C** Lewis Center Tower
- D** McCarter Theatre Center
- E** Forbes College
- F** Dinky Bar & Kitchen
- G** Cargot Brasserie
- H** New South administrative building
- I** Whitman College
- J** MacMillan Building (facilities department)
- K** West parking garage
- L** Dinky train station
- M** Wawa convenience store



Northwest view of the arts complex from the Dinky train station: music building, right; Wallace Dance Building and Theater, back left; and six-story tower with office and exhibition space.

From top: University Office of Design and Construction (9-15-17 photo); Jaclyn Sweet/Lewis Center for the Arts

The theater and music theater programs “are unique in our commitment to supporting the creation, production, and performance of original, student-written, and student-directed work,” says Stacy Wolf, director of music theater. “This kind of opportunity typically doesn’t happen until a student is in graduate school or in the professional theater/musical theater world — if then.”

Innovation abounds in Princeton’s visual-arts studios as well. Anthropology major Amalya Megerman ’16 used art to examine childhood memories and the interplay of nostalgia and identity. She turned a gallery into a beach scene, hauling in hundreds of pounds of sand and decorating the space with mementos such as old family photos. Eggshells — which she had collected all semester from campus cafeterias — were scattered throughout the exhibit, and her father’s old button-down shirts were sewn into a curtain. Megerman’s project was a “poignantly moving meditation on the cycle of life,” says her adviser, senior lecturer Martha Friedman. Friedman encourages students to be “experimenting and making a mess.”

In the course “Transformations in Engineering and the Arts,” students explore design and composition with professors from computer science and engineering, as well as from creative writing, dance, music, and visual arts. A team of students in the class in 2016 made “Mother Womb,” in which people climbed inside a portable tent made of clear plastic and listened to sounds intended to make them pay attention to their sensory experiences. In “Extraordinary Processes,” offered this fall, students are focusing “on the strategic challenge of turning waste material into a viable consumer product” — in this case, hanging light fixtures. The waste material is the ash wood left after the destruction of ash trees by beetles known as emerald ash borers.

“Art is not about art. Art is about the world,” Cadden says. “If you’re thinking about art in a narrow way, there’s an excellent chance you will have nothing to offer except technique, and what we need is vision.”

Cadden believes the new complex will allow even more students to experience art. Additional studio space for dancers means that students working on their theses will be able to rehearse at convenient hours, not just during the 10 p.m.–2 a.m. slot available before. Senior dance lecturer Rebecca Lazier is especially excited about the dedicated faculty studio she will use to plan choreography and warm up before teaching. In the past, she tried out new steps in the hallway.

Low ceilings in a theater studio will enable students to experiment with different lighting configurations. “A student can say, ‘It’s all wrong. Let’s stand on a chair and change the lights,’” points out Cox, an award-winning lighting designer. “Students can get their hands up there and muck around with it.” Music practice rooms and studios have recording and playback systems, so students can better hear their work and make adjustments. Spaces have been set aside for collaboration, interdisciplinary projects, and multimedia presentations.

In short, the new space offers “lots of opportunity to dream big,” Cadden says — “and dream differently.” ♦

Jennifer Altmann is a writer and editor.



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new Steinway pianos.

The focal point of the arts complex is the Forum, below ground level, designed as a gathering place that serves as a physical connection among the different disciplines and encourages chance encounters and collaboration among artists. “It’s a place to congregate and socialize, and it will change how we interact with each other,” says Jane Cox, director of the theater program. Red leather serpentine couches can be reconfigured easily to provide spots for lounging and discussion. Above the Forum is a plaza with a 70-by-70-foot reflecting pool; skylights in the pool bring water-filtered light into the Forum. The Forum connects to the CoLab, a 75-seat space designated for



The three buildings are arranged around a plaza with a reflecting pool; skylights in the pool bring water-filtered light into the Forum below.

interdisciplinary projects and multimedia presentations.

A six-story tower includes staff and faculty offices, a box office, a library, and an art gallery where work produced in the visual-arts program will be displayed. The program itself will remain at 185 Nassau St. (Parking for the complex is free in the West Garage on evenings and weekends. On weekdays, visitors can park free in Lot 20.)

For sustainability, all three buildings in the complex have green roofs covered with a variety of plants from the sedum genus to provide insulation. There are 140 geothermal wells—420 feet below ground—that connect to radiant piping and use moderate ground temperatures to provide heating and cooling for the buildings.

And appropriately for an arts complex,

the area will showcase an important piece of outdoor art. Maya Lin, who designed the Vietnam Veterans Memorial in Washington, D.C., has been commissioned to create a work for the grounds adjacent to the center (as of mid-September, details were not available).

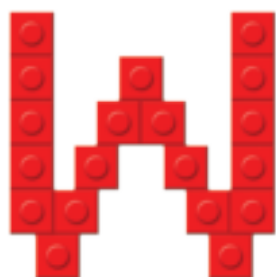
The complex, faced with glass and large stone panels, has a contemporary feel but also evokes continuity with the rest of the campus. The stone, similar in color to the stone in Nassau and Stanhope halls, comes from a quarry in Italy that has been active since Roman times. And the buildings form a three-sided courtyard, echoing other courtyards on campus. The courtyard, Muldoon emphasizes, has “three sides and no doors or gates. It says emphatically, ‘Come in.’” ♦

By Jennifer Altmann

Ricardo Barros



Mitchel Resnick '78
thinks coding is child's play
By David Walter '11



When is a toy more than a toy? When it's 2017, and you've got half an hour on your lunch break to run to the store and buy a birthday present for your niece Emma ... and Emma, meanwhile, has only 10 short years to ready her application to Princeton ... and Emma's parents have hinted that she can use all the help she

can get. (Her best friend at Sunday school already speaks three languages, while Emma occasionally sings along to the Spanish parts of "Despacito.") It's not enough, in other words, that the toys you buy avoid polluting Emma's imagination with lazy stereotypes and corporate branding. You're looking for a toy that makes your niece smarter, kinder, and — ideally — proficient in Mandarin. A toy that gives her that ineffable EDGE ... but in a fun way! You're looking, you think — because it's lunchtime, and you're hungry — for the BEETS of children's toys: a toy that's sweet like candy, nourishing like a vegetable, and largely guilt-free, give or take a few clothing stains.

Mitchel Resnick '78 can help. Resnick is MIT's Lego Papert Professor of Learning Research — yes, Lego as in the toy blocks — and directs that university's Lifelong Kindergarten research group, which, according to its website, seeks to evoke "the spirit of the blocks and finger paint of kindergarten." Resnick has spent the last three decades working with Lego to come up with toys that support creative learning, most notably helping to develop the company's Mindstorms range of robotic building blocks. Ten years ago, he and his team invented a computer coding platform called Scratch, which has transcended mere toydom and has become an entirely new language for thinking, playing, and creating for millions of kids worldwide. That you probably haven't heard of Scratch (or Resnick) is in a way a testament to Scratch's (and Resnick's) humble, resolutely kid-centric ethos. Scratch has never advertised itself commercially, relying instead on word-of-mouth from parents, teachers, and above all, enthusiastic youngsters. Resnick is like the kindly uncle — in temperament, more Mister Rogers than Willy

Wonka — working in the background so kids can have fun.

Last year, nearly 200 million people used Scratch — a simplified, visually based coding language — to create their own video games, serialized television shows, and dancing cat cartoons. About 20 million were active participants in Scratch's online community of makers. Forty-five percent of the users are girls. For kids, the appeal of Scratch is simple: It lets them invent their own stories, games, and animations and share them with an audience of their peers. But Scratch is also a bona fide programming language — one that's as theoretically consistent with the principles of computer science as heavy-hitters like Java or C++. It's fun, it's free (you can try it out at scratch.mit.edu), and it's globally minded: Its user interface has been translated into 50 languages. As of August 2017, Scratch was ranked as the 19th most popular coding language in the world — and the only one with a core user base of 8- to 16-year-old kids.

Ten years after its inception, Scratch accounts for 25 percent of MIT's web traffic and employs a small army of moderators, engineers, and researchers. And that's just the beginning: The upcoming release of Scratch 3.0, combined with a push by Scratch's philanthropic arm to promote the toy in the developing world, could send those numbers into the stratosphere.

But more on all that in a minute! First, let's get back to your toy-selection dilemma.

From his primary-colored, toy-strewn lab at MIT — picture pipe cleaners and Play-Doh, not protein sequencers or particle colliders — Resnick offers some guidelines for toy purchasing:

The first question adults should ask, he says, is: "What kind of thinking does a toy promote?" The hierarchy of thinking you might picture — mindless fun on the bottom of the pyramid, "critical thinking" at the top — doesn't jibe with current research on the science of play. Free play that engages the imagination is often more valuable than "educational" games that walk kids through a set of pre-planned puzzles.



Scratch inventor
Mitchel Resnick '78
with the program's
mascot in his
lab, part of MIT's
Media Lab.

Resnick compares many “educational” toys to the outdated learning methods he was exposed to back in the 1970s. In Resnick’s grade-school days, for instance, writing lessons focused heavily on grammar — diagramming parts of speech, fixing ungrammatical sentences, and so on, to the exclusion of much else. “That type of analytical thinking is valuable to learn, but if that’s all we teach kids, there’s a limit to how they can express themselves with language,” he says. “If all that kids look at is what words they spelled wrong and how they got their grammar wrong, they’re not going to be excited about writing.”

To Resnick’s mind, toys and games that focus on problem-solving to the exclusion of creative thinking commit the same sin. “There’s nothing wrong with systematic thinking, but we shouldn’t stop there,” he says. Instead, he tells me, adults should “look for more activities that allow kids to exert more control over the process, that allow them to create and share their own ideas with others, as opposed to just solving someone else’s problem.” For Resnick, the ideal scenario is one that places analytical thinking in the service of creative design. Picture a kid who in the process of building a Lego castle can draw on skills like geometry and multiplication.

The second question adults should ask when buying educational toys is: What kind of learner is my child? Again, the categories you might expect — visual learner, kinetic learner, etc. — aren’t the ones that Resnick favors. Instead, he uses terms like tinkers, planners, patterners, and dramatists. The latter two terms were coined by education researchers Dennie Wolf and Howard Gardner in the 1970s; Resnick features the categories in *Lifelong Kindergarten*, his recently released book on creative play.

“Patterners,” Resnick writes, “are fascinated by structures and patterns, and they typically enjoy playing with blocks and puzzles. Dramatists are more interested in stories and social interaction, and they often play with dolls and stuffed animals.”

A single set of toys can be designed to serve both groups, Resnick says, but play scenarios should be framed differently depending on the intended audience.

In his book, Resnick recalls a robotics workshop he ran a few years back in which children were divided into two groups: one that happened to include mostly patterners; the other, mostly dramatists. The goal of the workshop was to build an amusement-park ride out of building blocks, motorized parts, and robotics software.

The group made up of patterners immediately began working on a merry-go-round: “They carefully drew up plans, then used Lego bricks, beams, and gears to build the structure and mechanisms. After they finished building the merry-go-round, they wrote a computer program to make it spin around,

then added a touch sensor to control it. ... The whole project, from initial idea to final implementation, took just a couple of hours.”

The dramatists, meanwhile, decided to build a Ferris wheel. Resnick recalls that “after working for 30 minutes on the basic structure for the Ferris wheel, they put it aside and started building a refreshment stand next to the Ferris wheel. At first I was concerned. Part of the purpose of the activity was for students to learn about gearing mechanisms and computer programming. After finishing the refreshment stand, the students built a wall around the entire amusement park. Then, they created a parking lot, and added lots of miniature Lego people walking into the park. They developed an elaborate story about several families coming from different parts of the city to spend a day at the amusement park. Only then, after the whole amusement-park scene was complete, did the students go back and finish building and programming their Ferris wheel. To them, building the Ferris wheel wasn’t interesting until they had imagined a story around it.” It took the dramatists several hours longer to finish the exercise, but the result was no less technically impressive.

To Resnick, the lessons of workshops like these were profound — and troubling. “What if the amusement-park workshop had ended after an hour?” he wondered. It would have seemed that the patterners had an aptitude for robotics and programming, while the dramatists were doomed to lag behind. In reality, though, both groups of kids were capable of creating a sophisticated design.

These divisions in play style have implications beyond the toy chest. “Math and science courses, from elementary school through college, have traditionally been designed in ways that favor patterners over dramatists,” Resnick writes. “That’s a big reason why many kids get turned off by math and science.”

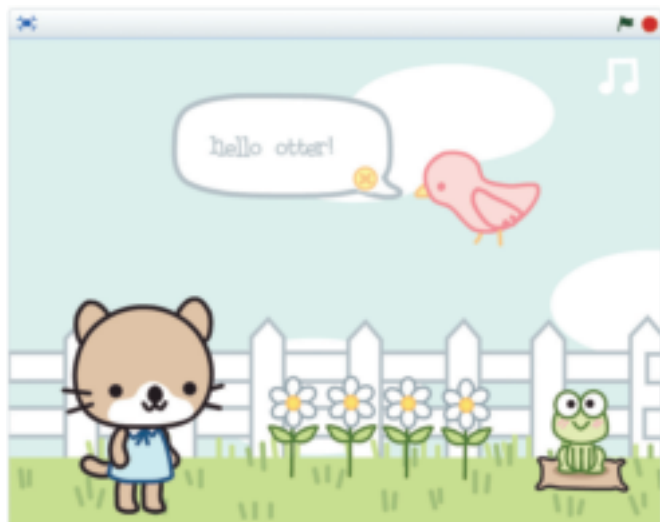
Resnick developed Scratch to provide children with an alternate path to creative learning. For a computer scientist — and MIT professor — Resnick is surprisingly platform-agnostic: He’d be equally happy if kids learned to create by writing, painting, or building in the real world. That said, he does not fear the perils of too much “screen time.” Spending hours in front of a computer is fine, he says, as long as the child is an active builder of what’s happening on screen, rather than a passive consumer. Do we worry about “page time” if a kid spends hours after school writing a story? he asks. No — we’re just happy that the child is flexing those creative muscles.

Computer coding happens to be the medium Resnick chose for Scratch, but not because it’s “better” than more traditional creative pursuits. For one thing, it’s easier — and cheaper — to distribute a program like Scratch across the internet than it would be to, say, send painting supplies to tens of millions of kids across the world. (And unlike paint, Scratch enables kids to create dynamic, interactive projects.) What’s more, Scratch makes it easier for users to rapidly make and undo mistakes in pursuit of perfection — the sort of “tinkering” mindset Resnick believes is key to design-based learning.

Ultimately, Resnick’s goal with Scratch isn’t to create a new generation of super-coders. Instead, Scratch is geared simply toward getting kids excited about creative self-expression. “So much of the education system is top-down. We need to give kids greater leeway to find their own path.”

Spending hours in front of a computer is fine, Resnick says, as long as the child is an active builder of what’s happening on screen, rather than a passive consumer.

Scratch offers its coders near-total freedom to be as serious or silly as they want to be.



Screenshots from Scratch games, from top: “Lemonade Time” by ipzy; an animated holiday card called “Holiday Card Eek!”; a collaborative animation called “I’d like to teach the world to code.”

Resnick’s own path through grade school and adolescence was more or less a conventional one. He grew up in the Philadelphia suburbs, the middle child of three in a family where “being able to succeed and achieve was seen as important.” He always took school seriously. Maybe too seriously, sometimes: Resnick’s teachers would observe that he was “too tense” when working on school projects. “I was someone who was following the rules and wanted to succeed within the system. I was good at the things schools value: certain types of intelligence, certain types of achievement,” he recalls. At Princeton, he majored in physics and wrote for *The Daily Princetonian*.

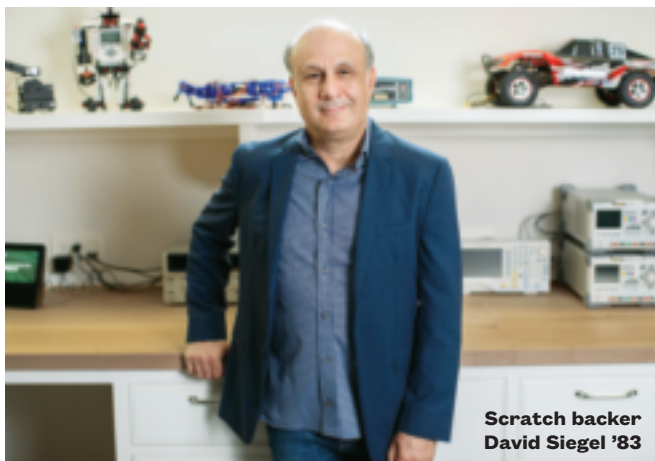
Along the way, however, Resnick realized that the rules he’d played by didn’t work for every (or even most) children. So he decided to work to change those rules. Resnick, who has no children of his own, had always been drawn to helping young people: from tutoring classmates in high school, to coaching a youth basketball team in Princeton, to working as a counselor at a summer camp. After a postgrad stint as a technology reporter at *BusinessWeek*, he began to chase a career at the crossroads of education and computer science, earning a master’s degree and then a Ph.D. in the latter discipline at MIT.

At MIT, Resnick found a mentor in Seymour Papert, a legendary professor who in his earlier days had done pioneering work in artificial intelligence. In his later years, Papert pioneered a “constructionist” theory of education that emphasized hands-on, experiential learning rather than rote drills and memorization. Today, Scratch represents a living lab for Papert’s hands-on ideals.

“It’s both a positive space but also an open space,” Resnick explains of his creation. Most online communities for children limit participants to a narrow set of responses and actions. Scratch offers its coders near-total freedom to be as serious or silly as they want to be. Kids have used Scratch to code Trump-themed “Build that wall!” video games, songs espousing LGBT pride, and animated simulations of violent flatulence. Paid adult moderators filter out anything that’s directly insulting to groups or individuals; in general, though, the Scratch community is kept in check by its population of eager underage coders — most of whom take the time to comment on, collaborate with, and “remix” the projects of their fellow Scratchers. There’s just not much incentive on Scratch for trolly: Coding projects can take hours to make using the language’s step-by-step command blocks (MOVE 10 STEPS FORWARD; WAIT 3 SECONDS, PLAY “ATOMIC FART” SOUND). Why would anyone spend hours building a nasty insult that will only be deleted post-haste?

The result of this kid-first ethos is a rarity on the internet: a genuinely popular, yet non-hateful, social network. One Scratch staffer refers to the site as “a magical unicorn place.”

Equally heartening is the Scratch team’s focus on kids who aren’t typically drawn to activities like coding — whether because of lack of exposure, lack of confidence, or a dramatist-type play style. “We’ve tried to put special focus on kids who haven’t had educational opportunities,” Resnick says. “We’re not just picking off the ones that are already succeeding.” While some patternner-type players might be drawn to Scratch solely to learn how to code, many new users are hooked by the chance to explore their existing passions. To this end, Scratch



greet novices with a number of tutorials and sub-communities geared toward subjects that have nothing (explicitly) to do with computer tech. Within a few hours on the site, for instance, they can learn how to make a basic hip-hop dance, design and sketch a prom dress, or create a “pong-style” sports-video game.

Scratch 3.0, which Resnick and his MIT team are prepping for release in 2018, should extend the platform’s reach even further. The release will be the first designed for use on smartphones and tablets, and will include new ways to link Scratch coding to the real world with robotics and sensors.

Supporting this effort is the Scratch Foundation, which was started by Resnick and David Siegel ’83 to spread the gospel of coding for all. The two men first met as graduate students in the computer science department at MIT. Resnick continued on to a career in academia, while Siegel founded Two Sigma Investments. Their paths crossed again earlier this decade after Siegel’s son got hooked on Scratch. “My son was able to write cool little programs,” Siegel recalls, “but what I most picked up on was that my son was starting to look at the world differently. He was starting to think about the world more as a series of processes, like algorithms working together.” The foundation’s support has allowed Scratch to remain free and not-for-profit and to employ the team of moderators and developers that keep the community vibrant at a time of rapid growth.

Beyond pouring millions into the Scratch Foundation, Siegel is eager to speak out on the need for the Scratch program. It’s not just about teaching children to code, he says, or even about helping them to land better jobs in an increasingly digital economy. What’s at stake is more fundamental, he says: determining how our youngest generation engages — or doesn’t — with the tech-saturated world around it. *(I’ll quote Siegel at length here because when he explained it all to me, I felt an exquisite shiver of doom that I’d like to pass on to you, my reader.)*

“Whether or not you are going to be a software engineer some day, for sure every person on this planet is going to be dependent on computers,” Siegel begins. “The big problem is, most people in the world have no idea what’s going on inside of a computer. They don’t know what software is. They look at their phone and they see an incredible black box. When you go to your computer and you’re typing into Microsoft Word, you have no idea what’s going on. When you go to a web browser

and you search for something, you have no idea what’s going on behind the scenes.” *(I nod.)*

“So is that OK?” he asks.

(I shake my head no, then look down at my phone with a newfound shame.)

“Well, I think that’s not OK, and I’ll tell you why.

“I think it’s not OK because it destroys curiosity. If you have no clue how the most important things you’re interacting with every day work, you begin to tune out from the world. Because it’s sort of like this world is too complicated for me to understand. It’s too complicated, it’s magic, I’m just basically going to ignore it and be oblivious to what is happening around me. I think [coding illiteracy] causes people in general to tune out and to become somewhat despondent. Because if you’re living in a world where you don’t know how it works, then that’s not a very good feeling, is it? That will cause you to feel like you don’t even have any opportunity.”

Another big problem, Siegel says, is that many parents and teachers also don’t know how technology works. If your kid asks why the sky is blue, Siegel offers, you’d tell him. If he asks how airplanes work, you’d tell him. But if he asks how software works ... chances are you wouldn’t know what to say. *(My shame intensifies.)* That’s where Siegel sees the Scratch Foundation coming in: “It’s critical that we rise to the challenge of demystifying computer technology. Whether or not you’re going to be a programmer, you need this form of education. And Scratch is providing this foundation to tens of millions of kids around the world every day.”

This is a bold, world-sweeping mission for a toy with a cartoon cat as its mascot. But it’s a vision that Mitchel Resnick, for all his professorial modesty, shares with his partner. At the end of last year’s Scratch conference at MIT, Resnick led the crowd through a round of Scratch’s official theme song. Written by Resnick, and recorded with the help of Scratchers worldwide, it’s set to the tune of Coke’s utopian ’70s jingle “I’d Like to Teach the World to Sing (In Perfect Harmony).” It’s a song, it’s a manifesto, it’s a prayer. (When is a toy more than just a toy? When it’s 2017, and we all need deliverance from the techno-illiteracy that enshrouds us.) And so the people sing:

I’d like to teach the world to code
And think creatively
Make art and stories come alive
While learning joyfully

I’d like to teach the world to code
It’s everybody’s right
It helps you think and share your thoughts
Like learning how to write

It’s time to code
SCRATCH! ON!
It’s time to code
SCRATCH! ON!
Design, debug, remix with friends
The learning never ends ... ♦

David Walter ’11 is a freelance journalist in New York.

PRINCETONIANS



BY DESIGN: Andy Chen '09, right, and Waqas Jawaid '10 met in 2006, and soon after Chen gave Jawaid a job with the Student Design Agency, which he had created. In 2013, Chen founded Isometric Studio; a year later, Jawaid joined the firm. Now, the six-person Brooklyn-based graphic-design consultancy creates and designs physical spaces, exhibits, and print and online material for companies and nonprofits. The studio designed this permanent exhibit for the Johnson Atelier at Grounds for Sculpture in Hamilton, N.J. ♦

Ricardo Barros



Kip Thorne *65, professor emeritus of physics at Caltech, during a news conference announcing his Nobel Prize Oct. 3.

KIP THORNE *65

A CELEBRATED FINDING, A COVETED PRIZE

Alumnus receives physics Nobel Prize for 'the discovery that shook the world'

Physicist Kip Thorne *65 had a night of interrupted sleep Oct. 3 for one of the best reasons of all: a call from Sweden. Thorne was told at about 2:15 a.m. that he, along with collaborators Rainer Weiss and Barry C. Barish, would be awarded the Nobel Prize in Physics for their pioneering work on the Laser Interferometer Gravitational Wave Observatory (LIGO).

A year after Albert Einstein put forth his theory of relativity in 1915, he posited the existence of gravitational waves, which he believed had the ability to send ripples through the fabric of time and space. Yet Einstein thought that the waves — which travel at the speed of light and are often created by large forces such as two black holes colliding — were impossible to measure.

Then one night in 1975, Weiss, a physics professor at MIT, and Thorne, now professor emeritus of physics at

Caltech, stayed up all night puzzling how these waves might be detected. Their work laid the foundation of what would take 40 years and \$1 billion to complete, resulting in the construction of LIGO: two L-shaped antennas — one in Livingston, La., and one in Hanford,

Wash. — that shoot laser beams through two perpendicular vacuum tunnels 2½ miles long. These two antennas, run jointly by MIT and Caltech, are sensitive enough to discern gravitational waves, which register as an infinitesimal difference in the lasers' length, generally 1/10,000th of the width of a proton.

Barish, also a Caltech physics professor, joined the LIGO effort in 1994. He and Thorne will share one half of the approximately \$1 million award, while Weiss will receive the rest.

In September 2015, an updated version of LIGO started up, and almost immediately it made its first record of a gravitational wave, which is heard as a chirp. That chirp made headlines across the globe, and since then, LIGO has sensed at least four more black-hole collisions. The Royal Swedish Academy is calling LIGO's detection of the waves "the discovery that shook the world."

According to Thorne, Princeton had everything to do with making LIGO a reality: In the late 1970s, the Caltech president was Marvin "Murph" Goldberger, who had been Thorne's professor at Princeton. After hearing Thorne's proposal for LIGO, Goldberger phoned Princeton physics professor Bob Dicke '39, who was familiar with Thorne's work.

"Goldberger asked if [LIGO] was a sensible thing to do, and Dicke gave his blessing," Thorne told PAW in an email. "Goldberger gave the final approval, and [Caltech] sunk \$2 million into the effort. So it all came about because of these connections with Princeton." ♦ By C.C.



The Livingston, La., LIGO was co-founded by Thorne and is part of a collaboration with more than 1,000 researchers from 20-plus countries.

From top: Jae C. Hong/AP Images; courtesy Caltech/MIT/LIGO Laboratory



Adam Ruben '01 at the 2014 Professional and Amateur Pinball Association World Championships in Carnegie, Pa.

READING ROOM: ADAM RUBEN '01

GETTING BACK IN THE GAME

*For many people, pinball evokes happy memories of a bygone era, which makes it even more surprising that the pinball industry is anything but bygone. Yes, in a time of unlimited entertainment available on a glass rectangle in everyone's pocket, somehow the bulkiest, least convenient game — a 250-pound wood-steel-plastic-glass behemoth with 3,500 parts and half a mile of wire — is enjoying its first renaissance in a quarter century. Molecular biologist Adam Ruben '01, who spent too much time at Princeton playing *Attack from Mars* in the basement of East Pyne,*



writes about the past, present, and future of pinball in this excerpt from his new book, Pinball Wizards: Jackpots, Drains, and the Cult of the Silver Ball.

As the years passed, I learned from the competitors in my weekly pinball league. I picked up advanced techniques, like the hold pass (holding the ball with one flipper, then passing it to the other), the bounce pass (letting the ball bounce off a lowered flipper to catch it with the other one), and the chill maneuver (doing nothing but chilling while the ball rockets down the middle, relying

on the benevolence of the center peg for rescue). The list of machines whose rules I knew grew, and according to the Professional and Amateur Pinball Association Advanced Rating System, I rose as high as 80th in the world.

In the world.

I put it on my résumé.

Seriously, I did, at the very bottom, under "Other Interests and Activities." An interviewer even asked about it once. "Oh sure," I said, nonchalantly exhaling onto my fingernails, "I dabble a bit."

I don't play sports. I have a physique like an Ethernet cable. Pass me a basketball, and I feel helpless. Put me on the volleyball court, and I'm counting the seconds until I can rotate out. But give me two quarters and a 1997 Medieval Madness, and suddenly the rhythm of the world makes sense.

Which is why I felt the physical symptoms of withdrawal when I stopped

According to the Professional and Amateur Pinball Association Advanced Rating System, I rose as high as 80th in the world. In the world. I put it on my résumé.

playing pinball for four years. I could pretend I dropped out of my league and stopped traveling to competitions because I wanted to retire at the top of my game. I could offer a respectable excuse, like carpal tunnel syndrome. But the real reason I stopped playing is far more common among men who suddenly quit the leisure activities they used to enjoy: I had a baby, and my wife wouldn't let me.

Don't get me wrong. I love my family, and I'd stop playing pinball forever if that would somehow avert some disaster from befalling them. Still, I missed the excitement of competition, the anticipation before releasing the plunger, the thrill of knowing I need to hit the left ramp and *I've just hit the left ramp*.

Shortly after my daughter turned 3, my son was born. *Now that's it*, I thought. *With two kids, I can scarcely justify a trip to the bathroom, let alone a night at pinball league or a weekend at a tournament. Pinball is history, and I'll just have to take up another hobby, like nothing. Yes, that's what I'll replace pinball with: nothing.*

Then something wonderful happened. For years, I'd dreamed of writing a book, but I kept procrastinating — not for any good reason, but just because writing a book is a lot of work, even when it's about something you love. To help me out, my wife, Marina, who is nothing if not a proponent of professional development, offered a deal: "If you write that book you keep talking about," she said, "you can play all the pinball you want."

Was this a trick? "But I don't want to play pinball!" she was expecting me to say. "I only love you and the children and laundry!" I then concluded she must be having an affair.

But no. The offer was genuine. In that wonderful way that spouses know exactly what their partners require to succeed, she had intuited my need for external motivation to write a book. I could play pinball, free and clear. And I could start with a triumphant return to the World Pinball Championships. ♦

Excerpted from *Pinball Wizards: Jackpots, Drains, and the Cult of the Silver Ball* by Adam Ruben © 2017 Chicago Review Press. Reprinted with permission.

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](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 1938



John H. Parke '38

John died March 15, 2017, in Springfield, Mass., due to complications from dementia. John was born Oct. 2, 1916, to the Rev. Hervey and Ethel

Parke in the Emily Dickinson home in Amherst, Mass., which his family owned for 50 years.

He graduated *magna cum laude* from the Kent School. At Princeton he graduated with election to Phi Beta Kappa.

After completing three years at the Episcopal General Theological Seminary in New York City, he was ordained to the ministry at Grace Church, Amherst, in 1942. That same year John married Joan Lee Cole from Dublin, Ireland. In 1944 he joined the Army's 65th Infantry Division as chaplain, serving in the European sector during World War II.

Upon returning home he served in parishes in Massachusetts; Newport Beach, Calif.; Scottsdale, Ariz.; and Falls Church, Va. For close to a decade he served as director of the International Order of St. Luke the Physician, leading healing missions throughout America and Australia.

Following the death of his first wife, he married Eleanor Anderson in 1982. In retirement they traveled the world. When home, John served as a canon at Christ Church Cathedral and held healing prayers for needy parishioners. He is survived by his wife of 35 years, two sons, a daughter, and many grandchildren and great-grandchildren. The Class of 1938 extends its condolences to John's family.

THE CLASS OF 1942



Charles E. Crandall '42

Charlie died April 15, 2017, after a brief illness. He had been president of our class since 2013. He grew up in Kearny, N.J., and graduated from

Kearny High School.

After graduating from Princeton with a degree in chemistry, Charlie enlisted in the Navy, thereafter completing Officer Candidate School at the University of Notre Dame and

engineering school at Cornell. After declining an assignment to shore patrol, he volunteered for the newly constituted rocket gunboat groups. Rocket gunboats were converted landing craft that were equipped with barrage rockets to support the underwater demolition teams that cleared the beaches of obstacles in advance of Marine landings. Because of their hazardous mission, only half of the rocket gunboats were expected to return home.

After returning from the central Pacific, Charlie decided to attend medical school so that no one ever would die on his watch for his lack of knowledge. At Columbia University College of Physicians and Surgeons, he met the woman who would be his partner for almost 70 years, Elizabeth Jones.

Charlie subsequently established a private practice in the South Orange-Maplewood, N.J., area and was on the medical staffs of the Hospital Center at Orange, East Orange General Hospital, and St. Barnabas Medical Center, serving all three institutions in multiple capacities.

Charlie was predeceased by his children Richard and David. He is survived by Elizabeth; his children Marilyn and Charles '74; and grandchildren Abigail, Joanne, and Warren '15.



John K. Torbert Jr. '42

Jack died March 11, 2017, while visiting his family in Halifax, Nova Scotia.

At Princeton Jack majored in history. He earned a law degree from Rutgers in 1953.

He served in the Army in the Pacific theater during World War II. He married Kathleen Flesch in 1946 and raised his two sons in New Providence, N.J., where he served on the town council in the early '60s.

Jack spent his entire working career at New Jersey Bell at various management levels. Jack was, first and foremost, a devoted family man. He was a lively, loving, and inspiring presence at family reunions, milestone birthdays, weddings, graduations, and countless one-on-one encounters with his children and grandchildren. He supported and encouraged

the dreams of his entire family.

Jack was an accomplished amateur violinist, playing in string quartets and local orchestras. He was active in the New Jersey Chautauqua Society and supported a variety of community youth services in Newark, N.J. Jack was a voracious reader, supporting local libraries in New Jersey and Connecticut.

Following the death of his wife Kathy and his marriage to Shirley, Jack moved to Litchfield, Conn. Jack and Shirley were active members of Trinity Church in Milton. Following Shirley's passing in 2006, Jack spent part of each year in Jacksonville, Fla., where he was an enthusiastic participant in the bell choir at Cypress Village.

Jack Torbert will be remembered for his keen wit, intense curiosity, optimistic outlook on life, love of family and friends, and abiding love of music.

THE CLASS OF 1945



James T. Gilmore '45

Jim died Aug. 20, 2016.

Jim followed his father and uncle, who were both in the Class of 1906, to Princeton. Jim prepared for Princeton at the Episcopal Academy. While at Princeton, Jim was on the freshman swimming team and was a vice president of Tower Club. His Princeton career was interrupted by service in the Eighth Air Force as a bombardier. He participated in 27 missions during World War II. After the war, he returned to Princeton to complete his degree.

Jim worked for a number of years at the National Publishing Co. in Philadelphia, which produced the Gideon Bible. Later, he was vice president of an electronic sealing company that produced sales aids out of vinyl.

Jim was predeceased by his beloved wife, Natalie, in November 2013. He is survived by his two daughters, Susan Carlson and Cindy Carlson, who married brothers. He is also survived by five grandchildren and two great-grandchildren.



Dudley B. Priester '45

Dudley died Jan. 23, 2017.

He was born in Davenport, Iowa, and attended the Lawrenceville School before entering Princeton. He earned a degree in civil engineering prior to enlisting in the Navy.

During World War II he served as a lieutenant in the Seabees, a construction brigade. He was a pontoon causeway platoon officer with the 111th Naval Construction Battalion, Navy Civil Engineer Corps in Samar, an island in the Philippines, and Guam. Following active duty he returned to Davenport in 1945 to join the Priester Construction Co., of which he eventually became president.

He married Jean Elizabeth Hansen in 1947. As a member of the Naval Reserve he



was called to serve in Korea in 1950. Dudley also gave back to his community as board member and president of the Quad City Symphony Orchestra and the Davenport Art Museum, as board member and vice president of the Putnam Museum, and as president of the Outing Club and the Town Club.

At Priester Construction Dudley oversaw projects such as the Modern Woodmen of America headquarters, the Davenport Public Library, the Scott County Courthouse, Temple Emanuel Synagogue, Northwest Bank Towers, and the Priester Building, which is on the National Register of Historic Places.

Dudley was an avid stamp collector, specializing in Scandinavian, British Colonial, and German stamps. He collected antique iron — including a Civil War cannon and a steamboat anchor. He was also a collector of nonfiction books about the Mississippi River and compiled a bibliography of them all.

Dudley is survived by his wife of almost 70 years, Jean; children Bill, Nancy, Ted '72, Charlie, and Mary; grandchildren Helen, Jane, Susannah, Sarah, Marion, John, Krista, Claire, and Joseph; and great-grandchildren Lily and Joaquin.



Dwight Sullivan '45

Bud grew up in Scarsdale, N.Y., and graduated from Phillips Exeter Academy. At Princeton he was a member of Cannon Club and Orange Key and

vice president of the Press Club. He played freshman lacrosse.

He left Princeton to enlist in the Army, serving as a B-24 bomber pilot as a first lieutenant in the 6th Army Air Force in the Galapagos Islands, Panama, and Guatemala. He was honorably discharged at the rank of captain and graduated *cum laude* from Princeton in 1947. He attended Harvard Law School.

Bud moved to Florida to work for Landis, Fish, Hull & Whitehair. Later he joined Steele, Hector, and Davis, where he was a partner for many years before going into private practice. He served on various committees of the New York and Florida bar associations and on the board of the Coconut Grove Civic Club. He was a member of the Biscayne Bay Yacht Club and Plymouth Church.

Bud died April 4, 2017. He was predeceased by his parents, John Dwight Sullivan 1915 and Evelyn Houghton Sullivan; brother Roger Houghton Sullivan '48; son Thomas Lord Sullivan; and wives Lucinda Gibson Sullivan, Joy Shaw Sullivan, and Rosamond Morgan. He is survived by his daughter Katherine Sullivan Lindseth and her husband, Andrew; and their children Anne, Caroline, and Jay.

THE CLASS OF 1949

Robert B. Dodd '49

Bob died peacefully May 14, 2017, at age 89.

Born in Beirut, Lebanon, and raised in

Turkey, Bob, the son of medical missionaries, came to Princeton in 1945 from Berea (Ky.) High School. He majored in engineering, and after graduation he joined the Merchant Marines, spending 15 months in the Philippines before entering graduate school at Columbia.

In 1953 he married Victoria DeVinny and went to work for Gulf Oil. He worked with the engineering firm of Burns & Roe Ebasco from 1956 to 1966. Among other assignments for Ebasco was a one-year project in Japan, which explains why he may be the only '49er who climbed Mount Fuji. In 1989 Bob left Ebasco and moved to AT&T in Kissimmee, Fla., still as an engineering consultant. He retired in 1996.

One of the memorable things about Bob was his warmth and sociability. "A true pleasure to be around" said all his friends. We wish that we could all be remembered so affectionately.

He is survived by his wife of 65 years, Victoria; and their five children, Nick D. Bolte, Cindy, Darcy, Dirk, and Stacy Dodd. Our condolences go to Bob's entire family.

Robert Dorfman '49

Bob died Feb. 12, 2017, in Binghamton, N.Y., at the Good Shepherd Fairview Home. He and wife Ruth moved there after living for many years in the Bayside neighborhood of Queens, N.Y.

Bob entered Princeton after a brief tour in the Army. While on campus, he roomed with Vic Parsonnet. He majored in chemistry and belonged to Court Club. Unfortunately, his father's untimely death forced Bob to leave Princeton early to take over the family business, E. Dorfman & Co., a manufacturer of braided trimming for the garment industry. He was president of the company for many years and retired in 1994.

Although Bob had multiple heart surgeries from the age of 50, he never lost his positive outlook; Ruth tells us that they called him "the bionic man" for his metal and plastic replacements. Despite serious health issues, he also served Temple Beth Shalom in Flushing as chairman of its religious school.

Bob married Ruth Goldberg Oct. 15, 1950. After 66 happy years of marriage, Ruth has many memories of their time together; they attended Reunions and many football games. She and their children, Eliot and Nancy, survive, and we express our deepest sympathy to them.

THE CLASS OF 1950



Lloyd E. Cotsen '50 *54

Lloyd, a former charter trustee of Princeton, died May 8, 2017, at his home in Beverly Hills.

The Los Angeles Times described him as a "multimillionaire

soap salesman who became an elite L.A. philanthropist."

Born in Boston, where he attended high school, he transferred to Princeton from

Rutgers in 1947. He belonged to Court and majored in history. Discharged as a Navy lieutenant junior grade after three years of service, he pursued graduate studies in architecture at Princeton, was a fellow at the American School of Classical Studies in Athens, and earned an MBA from Harvard.

In 1957 he joined his father-in-law's cosmetic company, which he built into a multi-million-dollar business by manufacturing and creatively marketing Neutrogena, an amber-colored, glycerin-based beauty soap that he learned to make in Belgium. In 1967 he became the corporation president. In 1994 he sold it to Johnson & Johnson. He then established an investment-management corporation.

Lloyd had a lifelong penchant for collecting, though he called it "accumulating." He amassed collections, which include folk art, Japanese bamboo baskets, and Chinese mirrors, that he donated to various museums. He gave his 40,000-plus illustrated children's books to Princeton for the children's library within Firestone that bears his name.

He is survived by his wife, Margit; children Corinna, Tobey, and Eric; and eight grandchildren.



Keith W. Loring '50

Keith passed away peacefully May 8, 2017, in Garland, Texas. He was quick with a joke and enjoyed bringing laughter to others.

He attended the Webb School in Claremont, Calif., and later established a scholarship there in appreciation of the education he had received. At Princeton, he majored in the School of Public and International Affairs, earned 17 intramural awards, and belonged to Terrace.

In 1954, after a two-year, stateside stint as a sergeant in the Army Ordnance Corps, he joined National Life of Vermont. In 1995, he retired after a 40-year career as a chartered life underwriter, specializing in the medical profession. For many years he qualified for National Life's Million Dollar Round Table. He was a card-carrying member of Mensa, which perhaps prompted his love of owls.

After surviving prostate cancer in his 60s, he dedicated much of his time to educating others on prevention and treatment. His insurance career was based in Florida, but in 2001 he moved to Texas to be closer to his family.

Keith is survived by his children, Scott, Bruce, Grant, and Catharine; seven grandchildren; five great-grandchildren; and six cousins. His three former wives predeceased him.

Richard F. Maag '50

Dick died May 26, 2017, in Charlotte, N.C.

He graduated from Lakewood (Ohio) High School. He left Princeton after his sophomore

year to enlist in the Army, where he earned a lieutenant's commission and served in Europe during World War II reconstruction.

We heard from him during our 50th reunion, when he reported he had married Dorothy Dwyer in 1953 and entered the banking business in the Cleveland area, where he was born. He spent his final 20 working years as a marketing and communications consultant to financial institutions. He retired in 1991 and moved to North Carolina, eventually settling in Pinehurst.

Baseball and golf were his sports passions. He was a lifelong Cleveland Indians fan and shot three holes-in-one. Along with community and church activities, he enjoyed gardening, painting, and model railroading.

He is survived by his wife, Dorothy; four sons; and five grandchildren.

Robert A. McKinley '50

Bob died June 14, 2017, in Bay City, Mich., the city of his birth. He was one of our World War II Army veterans who served in France and Germany.

Graduation from Deerfield Academy and Army service preceded Princeton. He sang with the Nassoons, was a member of Tower, and majored in psychology.

Bob retired from MCI Insurance in 1989. True to his Michigan roots, he spent summers at Point Lookout on Lake Huron for his entire life. There he enjoyed playing tennis and golf and the company of his many friends. He sang in a Bay City church choir for more than 50 years and served many years as a deacon.

He is survived by his wife of 65 years, Marian; daughters Helen and Amy; son Tom; four granddaughters; and two great-grandchildren.



William H. Taylor '50

Bill died May 29, 2017, in Haddonfield, N.J. He was a civil engineer who was proud of his record 48 years as the 12th surveyor general of West

New Jersey.

He came to Princeton from Merchantville (N.J.) High School. He was on the swimming team, belonged to Dial, and graduated with high honors in civil engineering.

He enlisted in the Navy in 1950 and served as an engineer officer on a destroyer escort. Upon discharge, he joined an engineering firm, working by day and studying by night for a master's degree in civil engineering at Penn, which he earned in 1956. Soon thereafter, he and his brother became principals of their own firm. Bill retired as president in 1981.

His work included historic restoration and development, always with concern for the environment and open space. He was also city engineer in Burlington City, N.J., for 22 years. Bill described his major hobby as using

"reinforced concrete, stone, timber, etc.," which he applied to expanding his British Virgin Islands home and doing home improvements for family and friends. His other hobbies included water sports, hiking, and model trains.

Bill is survived by his wife of 66 years, Helga; children Jeffrey, Anne, and James '76; two granddaughters; two great-grandsons; and brother David '48.



W. Redwood Wright '50

Red died May 8, 2017, in Woods Hole, Mass.

A Germantown (Pa.)

Friends graduate, he served briefly in the Army Signal

Corps. At Princeton, where his father was a member of the Class of 1918, he sang in the Glee Club and belonged to Cannon. He graduated with high honors in history and was elected to Phi Beta Kappa.

In 1960, after working for two newspapers, he became the public information officer for the Woods Hole Oceanographic Institution (WHOI). Fascinated by the sea, he resigned from this job to earn not only a master's degree, but a doctorate in oceanography from the University of Rhode Island.

Red rejoined WHOI's scientific staff. In 1976, he moved to the National Marine Fisheries lab as senior oceanographer. He was involved with the Bermuda Biological Station for nearly 20 years, serving as its unpaid president for nine.

He was active in politics and town government. He was an accomplished sailor, crossing the Atlantic Ocean in a 40-foot ketch and competing in four Newport-to-Bermuda races. For 30 years, he and his family cruised the New England coast in their 31-foot classic woodcutter, *Mocking Bird*.

Red is survived by his children, Catharine, Elinor, and William; brother Ellicott '50; and five grandchildren. Mary, his wife of 61 years, died in February 2017.

THE CLASS OF 1951



Calvin Gordon Rand '51

Cal was born May 15, 1929, in Buffalo, N.Y., to George and Isabel Williams Rand. His grandfather George F. Rand founded Marine Trust Co.,

forerunner to Marine Midland Bank.

He graduated from the Nichols School in 1947. At Princeton Cal was a history major and belonged to Charter Club. He roomed with Wells Eighmy, Art Mudge, and George Shafer. After earning a master's degree from Columbia, he was a longtime philosophy professor and philanthropist at SUNY Buffalo. Cal was president of the American Academy in Rome, which presents the Rome Prize awards

to artists and scholars.

He founded and chaired the George Bernard Shaw Theatre Festival and was a trustee of the Playwrights Horizons Theatre in New York City, the Albright-Knox Art Gallery in Buffalo, and the National Theatre School in Montreal, among other groups. He was president of the Irish Classical Theater in Buffalo and of the Arts in Education Institute, an adjunct to the Lincoln Center Institute.

Cal died Dec. 31, 2016, in Buffalo. He was predeceased by his wife, Patricia Andrew Rand; his brother, George F. Rand Jr. '45; and his sister, Isabel Rand Hunt. He is survived by his daughters, Robin Ellis, Melissa Robb, Jennifer Griffis, Lucinda Rand, and Elizabeth Rand; 10 grandchildren; and eight great-grandchildren.



William V. Skidmore Jr. '51

Bill was born Feb. 12, 1929.

He went to high school in Ridgewood, N.J. Bill contracted polio when he was 15, but he

was able after two years of rehab to recover fully except for complications with his left leg, which was seriously affected.

At Princeton he was a history major, belonged to Quadrangle, served on the Undergraduate Council, and was president of the Committee of Fifty. He roomed with Tim Barclay, Dick Howe, Clark Myers, and Bob Snable.

In 1952 Bill and Patricia "Trica" Brooks were married. While studying for his law degree at Yale, he was granted a Fulbright scholarship to study criminal law in India for two years. He earned a law degree in 1958.

Bill's 40 years of professional life were spent working for the federal government. His favorite times were with the Agency for International Development and the Office of Economic Opportunity, Lyndon Johnson's poverty program.

On his own time he founded the Levine School of Music and served on the board of Iona House, which provides essential services for older adults in the Washington, D.C., area.

Bill died Jan. 10, 2017, in Bozeman, Mont.

He is survived by Trica; their children Wende DuFlon, Rebecca Fogel, and Peter Skidmore; eight grandchildren; and Bill's sister Alice Culbreth.



David Arrender Smith '51

David was born June 12, 1929, to Cedric and Ellen Copen Smith in Brooklyn, N.Y., where he graduated from James Madison High School in 1947.

At Princeton he majored in history, belonged to Prospect Club, and sang in the Chapel Choir. He roomed with Langthorne Sykes. In 1958 he married Eve Pearlman.

David is the co-author of *The Minority Foster Child: A Comparative Study of Hispanic, Black and White Children*, and was the director of

systems support/research with the Planned Parenthood Federation of America, where he worked until retirement.

He died Oct. 29, 2016, in Pine Hill, N.Y., of cancer. He was 87. David was predeceased by his brother, Frank, and sister, Barbara Gondor. He is survived by Eve; their children Jonathan, Amity, Robert, Peter, and Alison; three grandchildren; and a great-grandchild. He is buried in the family plot in Woodlawn Cemetery in the Bronx.

THE CLASS OF 1952

John Oliver Gauthier '52

John died April 23, 2017.

He graduated from Iron Mountain (Mich.) High School, where he excelled at sports, winning the award for Best All-Around Athlete and a football trophy for most valuable player. He was also elected class president. He went on to Admiral Farragut Academy before coming to Princeton.

On campus he was on the freshman council, majored in politics, joined Dial Lodge and the Catholic Club, was in NROTC, worked as gateman in the Campus Center all four years, and was the manager of the student news agency.

After graduation he served in the Navy for 25 years and worked in defense industries for a number of years, then took a job as office manager for a law firm. In retirement he volunteered with Ecumenical Community Helping Others, an interest of his wife, Patricia, in their town of Springfield, Va. Along the way he earned a master's degree in public administration at the University of Oklahoma in 1971.

He is survived by Patricia and their children, John, Michael, Therese, and Daniel. To them the class sends good wishes, with a salute to their husband and father for his exceptional military service to our nation.



Robert A. Johnston Jr. '52

Bob died May 31, 2017.

Bob was a native of Houston and graduated from the Fountain Valley School in Colorado Springs, Colo. There he played football, which he continued at Princeton by playing on the 150-pound team. He also played on the golf team.

After graduating from Johns Hopkins Medical School he returned to Houston, where he and other doctors founded the Medical Clinic of Houston.

He is survived by his wife, Nancy Johnston; son Thomas M. Johnston; daughter Sallie Johnston; stepchildren S. Timothy Needham, Jennifer Lynne Needham, and Amy Lee Walker; three grandchildren; and five step-grandchildren. The class grieves with his family on the loss of a superlative classmate.



Samuel H. Tucker '52

Sam died April 7, 2017.

He came to us from Philips Exeter. At Princeton Sam joined Ivy, majored in astronomy, and served as manager of the cross-country team. He connected with a number of campus efforts, including Orange Key, the Junior Prom committee, Class Memorial Insurance Fund, Campus Fund Drive, the *Nassau Lit*, and Unitarian Fellowship, and he was the Ivy social chairman.

After graduation he earned a medical degree at Penn and did a residency at Pennsylvania Hospital and at Queens Hospital in London. His focus was pediatric neurology, specializing in epilepsy. He was affiliated with Children's Hospital of Philadelphia and taught neurology for 20 years at the University of Pennsylvania Medical School.

He served for 25 years in the Naval Reserve, retiring with the rank of captain. With his wife, Robin, he raised a flock of rare parrots and enjoyed sailing on the Chesapeake.

Sam is survived by Robin; his sons Alden and Robertson; their mother, Martha; his twin sister, Elizabeth Tucker Ripley; and five stepchildren, Susan, Jacqueline, Crissa, Ellisa, and Matthew.

To them the class sends its sympathies, with appreciation of Sam's naval service to our nation.



Roger A. Wilson '52

Roger graduated from Grover Cleveland High School in Caldwell, N.J. At Princeton he majored in chemical engineering, joined Prospect and was chairman of the club's permanent improvements committee, and served on the bicker committee. He was assistant editor of the *Princeton Engineer* and joined the American Institute of Chemical Engineers. He roomed with Don Kahn.

His military service was in the Army Security Agency at Fort Devens, Mass. Afterward he joined the Dupont Co. for a career in several parts of the company, including the explosives department, then the Dacron plant, and finally the Benger Laboratory in Waynesboro, N.C., from which he retired. Roger was active in Hope Community Church of Waynesboro as a deacon and elder and sang in the choir.

Roger died July 10, 2017. He is survived by his wife, Helen; son Bruce; daughter Janet; and twin sister Grace Millspaugh. The class offers condolences to his family and thanks for Roger's Army service to the nation.

THE CLASS OF 1954

Charles Calderini Jr. '54

Chuck died March 12, 2016, surrounded by family.

Born in Evanston, Ill., he attended New

Trier Township High School. At Princeton, he majored in economics, was a member of Cap and Gown, and served as a senior trustee. Chuck was also chairman of the Campus Center Committee and the Campus Blood Drive, president of the Chicago Club, and vice chair of Orange Key.

After graduation, he spent two years in the Navy as a supply officer on the USS *Wilkinson* with the rank of lieutenant.

Chuck spent the next three years at Northwestern Law School and then worked in the corporate financial field. An avid skier and hiker, he also spent time in numerous other community activities in Breckenridge, Colo.

The class is honored by his service to our country and sends condolences to his wife, Sherrie; sons David and Tom; daughter Sarah; and seven grandchildren.



William R. Irving Jr. '54

William died July 3, 2017.

Born in Gloucester, Mass., he prepared for Princeton at Phillips Exeter Academy. At Princeton he majored in

biology and was a member of Elm Club. He was active in WPRU, the Chess Club, the Glee Club, and the German Club. His special interests included amateur radio and the piano.

He graduated from McGill University medical school and completed graduate training in pathology. A member of the staff of Lawrence General Hospital in Massachusetts, he became chief of pathology and nuclear medicine.

The class extends condolences to his sisters, Carolyn and Marilyn; and his half-brother and sister, James and Elizabeth.

THE CLASS OF 1957



David F. Black '57

David died March 9, 2017, in Sewickley, Pa.

While at Princeton he majored in mechanical engineering and joined Elm.

He played hockey and freshman soccer and was a cheerleader. Upon graduation he earned an MBA from Northwestern University.

He joined U.S. Steel in Pittsburgh. Later he transferred to Chicago and subsequently transferred back to Pittsburgh. During his time there he worked in research, sales, marketing, and planning.

In 1983 he began a career in financial planning, which he pursued for the next 20 years. He became music minister for an Episcopal church for 12 years. In 2003 he retired and continued to be active for nonprofits and boards of directors.

His first marriage ended in divorce after 15 years. Two years later he married Ann, and they had a loving Christ-centered marriage that ended with her death from cancer.

To his children Karen, Heather, and Chase, and five grandchildren, the class extends its condolences.



John T. Strickland '57

John died March 9, 2017.

In 1949 he became an Eagle Scout. His three sons followed that tradition. John earned a service award of the Boy Scouts, the Silver Beaver. He always followed the Boy Scout pledge, "Do my best to do my duty."

At Princeton he joined Tower, majored in biology, and ran track. Duane Banks was his senior-year roommate.

John revered education, teaching biology at the Hawaii Preparatory Academy and later in the Akron public schools. In between he prospered as a management consultant.

He is survived by his wife, Sibyl; sons John, Timothy, and James; and grandchildren Harry and Wyatt. This decent gentle man will be missed.

THE CLASS OF 1958

Peter B. Alexander '58

Peter died April 1, 2017.

He came to Princeton from the Gilman School in Baltimore, where he played football, baseball, and was Maryland state wrestling champion in his weight class for two years. At Princeton, Peter was a member of Tiger Inn and majored in economics, graduating *summa cum laude*. Upon graduation he became an officer in the Marines.

Peter became CEO of Fleck-Marshall, a plumbing-supply business in Lancaster, Pa. His business success allowed him to pursue the Alexander family passion for horses and horseracing. In 1972 he purchased Deepmeadows Farm, a foaling and boarding center. Peter loved Delaware Park Racetrack — the backside of the track was his sanctuary. He was president of the Delaware Horsemen's Assistance Fund for more than 20 years, establishing programs such as health care and day care for horsemen who didn't have the means.

He loved working beside his oldest daughter, Margaret, as she was his assistant for 20 years. They made many trips to the winner's circle. One mare, Fionnghal, still holds the record at Delaware Park for 10 wins in a 100-day meet.

He lost Joann, his beloved wife of almost 57 years, April 30, 2016. His three daughters took care of him at his home after his loss.

Peter is survived by daughters Margaret, Julie, and Suzanne Alexander-Doncel, and four grandchildren. To all the class extends its condolences.

Sheldon L. Baskin '58

Sheldon died June 26, 2017, in Chicago following battles with several cancers over



the last decade.

He came to Princeton from Highland Park (Ill.) High School. At Princeton Sheldon majored in economics, roomed with Doug Weil during his senior year, graduated *summa cum laude*, and won a prize for his senior thesis on baseball and anti-trust laws. While the rest of us were in Firestone writing our theses, Sheldon was at spring training interviewing ballplayers. He was chairman of Hillel and advertising manager of *The Daily Princetonian*. Sheldon also earned a law degree from Harvard and a Ph.D. from the London School of Economics.

Sheldon was among the few who did well while doing good. At the height of his career he managed more than 15,000 moderate- and low-income housing units, mainly in the Chicago area. He also owned properties in Bolivia, Honduras, and Uruguay. Sheldon was an extremely generous person. He was a major contributor to Facing History and Ourselves and other charities.

A big sports fan, Sheldon never missed attending an Olympics. He satisfied a lifelong dream by becoming a partial owner of the Chicago White Sox and was buried in a White Sox jersey. The class extends its condolences to his wife, Judy; his three children; and two grandchildren.



Bernhard E. Deichmann '58 Bern died June 22, 2017, from liver cancer.

He graduated from Brooklyn Technical (N.Y.) High School. At Princeton,

Bern majored in mechanical engineering and was a member of Elm Club. Tom Hall was his senior-year roommate.

After graduation and a short stint in the Army, he joined DeLaval in Trenton, N.J. DeLaval manufactured turbines, compressors, and pumps for the oil and gas industries. In 1961, Bern married Joan Van Emburgh.

In 1971, the family moved to the Netherlands, where Bern helped establish a Dutch-American joint venture, DeLaval-Stork. They returned to the United States in 1980, and after 30 years with DeLaval, he left to become CEO of Schulmerich Bells, a manufacturer of hand bells, chimes, and electric carillons.

After his retirement in 2004, Bern dedicated his time to the German-American Heritage Foundation of the USA. His achievements included being recognized as the 2013 Distinguished German-American of the Year and receiving the Cross of the Order of the Federal Republic of Germany in 2015. Bern enjoyed gardening, photography, and classical music.

To his wife of more than 55 years, Joan; son Walter; daughters Evelyn, Robin, and

Holly '94; and his 10 grandchildren, the class extends its condolences.



John L. Heckscher '58

John died peacefully June 21, 2017, in Wayland, Mass., after a courageous battle with cancer.

A graduate of Haverford School (Pa.), at Princeton he majored in electrical engineering and was a member of Key and Seal Club. He was on the 1957 soccer team, which won the Ivy League Championship for the first time. During his senior year he roomed with Bromley, Dennis Day, Lankford, Van Dusen, and Wrenn.

John earned a master's degree in electrical engineering from Johns Hopkins in 1959.

He was commissioned a second lieutenant in the Air Force and subsequently worked for the Air Force as a civilian. John worked at Hanscom Air Force Base, outside of Boston, as a research and program manager for 42 years. His work projects in low-frequency radio waves and ionospheric research took him to Alaska, Greenland, Sweden, and Denmark. John was named "Outstanding Professional Employee" for 1994 by the Boston Federal Executive Board and was given the Outstanding Civilian Career Service Award by the Department of the Air Force.

He served on the board of the Wayland Historical Society, editing its newsletter for 11 years.

To Kathy, his wife of 49 years; his daughters Sarah '92 and Elizabeth '94; and his four grandchildren; the class extends its deepest sympathy.

THE CLASS OF 1959

James B. McGiffert Jr. '59

Jim McGiffert, grandson of a member of the Class of 1906 and son of a member of the Class of 1934, died May 27, 2017, in Palm Beach, Fla.

Journalism was in Jim's blood. He hosted a radio show, *Teen Age Review*, in Easton, Pa., at age 14. Coming to Princeton from St. Andrew's School, he joined Cloister. He made his mark heading up the new special-events staff at WPRB, broadcasting several shows of exceptional interest.

Leaving Princeton after two years, he worked as a disc jockey in Easton. Then he was a staff reporter with the *Easton Express*. In 1961 he moved to New York City to work at WINS, New York's first all-news radio station. Working as a reporter, news editor, then senior writer-broadcaster, he became the station's morning and special-reports anchorman, winning accolades for his coverage of the 1983 Beirut barracks bombing and the 1991 Persian Gulf War.

In 1962, Jim married Lynne Kaufmann. They raised two daughters before separating in 1992. Ten years later Jim retired to the West Coast, and in 2003 he married Anita "Nita" Reetz. Settling in Anacortes, Wash., they enjoyed

traveling and working abroad. They volunteered as English teachers at a university medical faculty in Banda Aceh, Sumatra, a year after the 2004 Asian tsunami, and taught in Rwanda at the Kigali Health Institute from 2007 to 2008.

Jim is survived by Nita; daughters Sandy and Nancy; stepdaughter Nile; two sisters; and five granddaughters. We have sent condolences.

THE CLASS OF 1960

George W. Beeler Jr. '60

Woody died May 7, 2017, after a long battle with lymphoma.

Woody came to Princeton from St. Louis Country Day School and majored in electrical engineering and physics. He went on to Cal Tech, where he earned a master's degree and a Ph.D. in biosystems research, as his interest moved into the application of computer science to biomedical research.

After marrying Selby in 1965, he served two years as a captain in the Army Medical Service Corps. He then joined the Mayo Clinic in Rochester, Minn., where he spent his career and pursued his calling, ultimately serving as chair of Mayo's Division of Information Architecture and Technology and becoming a health-industry leader in health-data sharing.

In retirement Woody became active in several international health-care-standards organizations, including Health Level 7, where he lectured and led tutorials in many countries and was named "Volunteer of the Year" in 2000.

Woody was an early tech adopter, from the first Apple computer to the Apple Watch. He was always the recognized neighborhood computer guru. He was an enthusiastic outdoor sportsman, enjoying bicycling, canoeing, fishing, and golf along with poker playing and bartending at his summer cottage.

He is survived by Selby, their two children, and five grandchildren. The class expresses our sympathy to them all.

THE CLASS OF 1961

Stephen P. Sachner '61

Skip died Feb. 3, 2017, at Waterbury (Conn.) Hospital after a catastrophic event following a long period of declining health.

Born in Waterbury, he came to Princeton from the Wooster School. At Princeton, he majored in English, played 150-pound football and baseball, and managed the ticket office. He was a keyceptor and served on the Undergraduate Board for Student Employment. A member of Quad, he roomed with Doug Hutchison, Mike Wurmfield, and Bumpy Loud.

After earning a law degree at New York University, passing the Connecticut bar exam, and being admitted to the Federal District Court and the U.S. Supreme Court, Skip practiced trial law for 50 years in Connecticut and was recognized by *The Best Lawyers in America* over the years as a top malpractice defense

attorney. He was active in the Connecticut Bar Association and was a trustee of the Morris Foundation. He loved books, crosswords, movies, his beloved Yankees and Giants, UConn women's basketball, the ocean, and the Connecticut shore, where he summered with his children and grandchildren for many years.

Skip is survived by Nancy, his beloved wife and sweetheart of 54 years, whom he met on a blind date at Princeton; daughter Heidi Dunleavy '85; son Peter '87; and six grandchildren.

THE CLASS OF 1964



William J. Most '64 '69

Bill died Jan. 28, 2017. He was a most active and enthusiastic classmate.

Bill came to Princeton from a Canton, Pa., high school,

where he played football and basketball despite an obvious height disadvantage. A typo in the local sports pages christened him Bill "Mouse," and so it was that Mouse came to Princeton to study aeronautical engineering. His thesis was written under the guidance of Professor Martin Summerfield. Mouse returned to Princeton to earn his Ph. D. in 1969.

After a stint at United Technologies, Bill joined Exxon as a research and development engineer in his specialty of solid propellants. After 25 years with Exxon, three of them in the United Kingdom, Bill retired to join former colleagues as Fuel Technology Associates. In his spare time, Bill volunteered at The Raptor Trust for 14 years.

Bill treasured his membership at Tiger Inn, where his infamous "bug juice" brightened many a festive occasion. Mouse lettered in lightweight football, but probably made his lasting impression as grand marshal for our 25th reunion. Those along the P-rade route may remember the Class of '64, led by an uncaged, cross-eyed, 500-pound Bengal tiger named Junette, procured by Mouse.

To Arline, Mouse's wife of 52 years; their two sons, Ryan and Zachary; and granddaughter Zoe; the Class of '64 extends its sympathies.

THE CLASS OF 1975

Elliott S. Horowitz '75

Elliott died unexpectedly March 18, 2017, at home in Jerusalem.

After graduation from the Yeshiva of Central Queens (N.Y.) and two years of study in Israel, Elliott entered with the Class of '76 and, with advanced standing, joined us. He majored in history, writing his thesis under Rudolf Mach.

Elliott was a leader of Princeton's fledgling observant Jewish community at Stevenson Hall. Among his close friends were David Shapiro '75, Jane Sherwin Shapiro '76, and Jonathan Bush '75.

Elliott and Pamela Kuflik were married before his senior year. They had three sons, Moshe, Dov, and Avishai; and a daughter,

Ateret, before the marriage ended. Elliott later married Netty Gross.

Elliott earned his Ph.D. in religious studies at Yale in 1982. Taking his young family, he made *aliyah* to Israel, teaching at the University of the Negev and later at Bar Ilan University.

He published widely, with innovative studies focusing on outsiders, forbidden rituals, cultural borrowings, and travelers — leading to visitorships at leading world universities. A restless, cultured intellectual, pious yet politically progressive, Elliott moved among professorships, with homes in Jerusalem, the Poconos, and New York City.

In addition to Netty and his children, Elliott leaves his mother, Edith; two brothers; 10 grandchildren; and friends on three continents. To all, the class extends its condolences.

THE CLASS OF 1998



Stephanie Edwards

Diehl '98 Stephanie died unexpectedly July 16, 2017, of cardiac arrest while waterskiing on Lake Powell in St. George, Utah.

Steph came to Princeton from La Jolla (Calif.) High School. At Princeton, Steph was in Butler College, where she made many enduring friendships. She majored in English and was a member of Cottage Club and Pi Beta Phi. Steph was a four-year starter on the volleyball team that won three Ivy League titles. She made the All-Ivy team three years, was the Ivy League Tournament MVP in 1997, and is No. 5 all-time in Princeton women's volleyball history for "kills." Steph had such an unrivaled love for Princeton that her family encouraged people to wear orange to her memorial service.

After graduation, Steph interned with the San Diego Padres during their World Series run in 1998 and then had a long, successful career in telecom sales. Steph met and married Chuck Diehl in San Diego, and they had three beautiful children: Jackson (11), Carson (9), and Nicole (6).

The class sends its deepest condolences to Chuck and the children; Steph's parents, Gary and Bobbe Edwards; and brothers Rex and Sean '92 and their families. Steph's life was cut tragically short, but the zest with which she lived will serve as a continuous reminder to those she leaves behind.

GRADUATE ALUMNI

Ernest F. Roots '49

Ernest Roots, recognized by the Royal Canadian Geographic Society as one of Canada's greatest explorers, died Oct. 18, 2016, at 93.

Roots graduated from the University of British Columbia with bachelor's and master's degrees in geology in 1946 and 1947. In 1949 he earned a Ph.D. in geology from Princeton.

He then joined the Scott Polar Research Institute as chief geologist for the 1949-

1952 Norwegian-British-Swedish Antarctic Expedition, the first of innumerable trips to the Arctic and Antarctic, which, among other things, showed that climate change was global and not limited. Returning to Canada, Roots was a field geologist for the Geological Survey of Canada, leaving in 1958 to help found the Canadian government's Polar Continental Shelf Program.

After 14 years, Roots became the science adviser to the newly created federal Department of the Environment. In 1989, he retired but remained an emeritus adviser. He also helped found Students on Ice, participated in their polar expeditions, and mentored hundreds of students. Among his many honors, in 2016, Roots received the Explorers Club Medal, previously awarded to Sir Edmund Hillary, Roald Amundsen, and Jane Goodall.

Roots is survived by his wife, June; and four of their five children.

Colgate S. Prentice *51

Colgate Prentice, who held high-level positions with the United States Congress and the State Department, died July 28, 2016. He was 92.

Prentice served in the Pacific in World War II with the Army as a gunner on a B-29. He then graduated from Swarthmore in 1949. In 1951, he earned an M.P.A. degree from Princeton's Wilson School. That year he began his long career in Washington, D.C. He worked for Sen. H. Alexander Smith 1901 of New Jersey, Sen. John Sherman Cooper of Kentucky, and Rep. Peter H.B. Freylinhuysen '38 of New Jersey.

For two years, he was an executive assistant to Vice President Richard M. Nixon. He held several key positions in the State Department, including deputy assistant secretary for Congressional relations from 1969 to 1973. Prentice retired from government in 1980.

In later years, Prentice moved to the Medford Leas retirement community in New Jersey after his wife developed dementia. He showed her great devotion, rarely leaving her side, which made him beloved by staff and residents.

Prentice was predeceased by his wife, Pamela, whom he had married in 1950. He is survived by three children; seven grandchildren; four great-grandchildren; and his long-term companion, Jean Henderson.

Gordon M. Jensen *56

Gordon Jensen, who had taught history at MIT and the University of Hartford, died March 25, 2014, of complications from open-heart surgery. He was 85.

Jensen graduated from Yale in 1950, and earned a Ph.D. in history from Princeton in 1956. He then taught history at MIT, and in the 1960s became chair of the history department at the University of Hartford.

Later, he did graduate work in mathematics and computer science at the University of

Colorado and taught computer science at Alma College and Illinois College. When his wife, Gwendolyn, served as president of Wilson College in Chambersburg, Pa., from 1991 to 2001, Jensen was a full-time presidential spouse.

In retirement, Jensen studied music theory and composition at MIT, took voice lessons, and sang in the Cambridge Community Chorus.

He is survived by his wife, Gwendolyn; two children; and two grandsons.

Fredric W. Schlatter *60

Fredric Schlatter, professor emeritus in the classical languages department at Gonzaga University, died Oct. 21, 2016, at the age of 90.

He earned bachelor's and master's degrees in 1949 and 1950 from Gonzaga University. After his ordination in 1956, he enrolled at Princeton and earned a Ph.D. in classics in 1960. He then spent seven years teaching the classics to younger Jesuits studying for the priesthood. In 1968, he joined Gonzaga and taught in the history and classics departments for the next 30 years.

After being named emeritus in 1997, Schlatter reduced his work and teaching load, but remained available for mentoring and guiding students and colleagues. He cared for and challenged students in his classroom, and worked to increase their confidence in their abilities to learn and grow.

In October 2014, he moved into a Jesuit infirmary but remained active until his last days. He was predeceased by his brother. Schlatter is survived by his sister-in-law; several nieces and nephews; and by many colleagues and friends from Gonzaga and brother Jesuits of the Oregon Province.

Frederick J. Sawkins *63

Frederick Sawkins, retired professor of geology at the University of Minnesota, died Oct. 6, 2016, at age 81.

Born in South Africa, Sawkins graduated from the University of Cape Town in 1957. He moved to England and graduated from the London School of Mines in 1960. In 1963 he earned a Ph.D. in geology from Princeton.

After post-doctoral study in Durham, England, and living in Lima, Peru, Sawkins went to the University of Minnesota in 1968. He was a professor in the department of geology and geophysics until retiring in 1991. He wrote two well-received books and more than 50 articles in professional journals. In 2016, he was awarded special recognition at the Geological Society of South Africa's 35th International Congress in Cape Town.

After his early retirement, Sawkins moved to Hampton, Va., to fulfill his passion for sailing, eventually logging more than 26,000 miles, including a trans-Atlantic sail. He regularly contributed to editorial pages of local and regional newspapers on the world's energy and

environmental problems.

He is survived by his wife, Virginia, whom he married in 1998, and her son. He is also survived by two children from his first marriage to Patricia and two grandchildren.

Robert V.C. Roche *72

Robert Roche, a long-time designer of power plants for the Foster Wheeler Corp., died peacefully at home in Chatham, N.J., Sept. 29, 2016. He was 70.

A 1964 graduate of College High at Montclair State University, Roche then graduated from Brown University with a bachelor's degree in engineering. While at Brown, he played on the golf team for three years, serving as captain in his senior year.

In 1972, Roche graduated from Princeton with a master's degree in mechanical and aerospace engineering. For 35 years, he worked and traveled the world designing power plants for Foster Wheeler, and then for Burns & Roe for five years before retiring. He also earned an M.B.A. from Fairleigh Dickinson University in 1983.

Roche is survived by his wife of 43 years, Karen; three children; and four grandchildren.

Eric R. Kuhne *83

Eric Kuhne, a noted architect, died July 25, 2016, in London of a sudden heart attack, at the age of 64.

Kuhne graduated in 1973 from Rice University, and in 1983 earned a master of architecture degree from Princeton. At Princeton, Kuhne said he was inspired by such professors as Michael Graves "to restore the pageantry of civic places."

In Fort Wayne, Ind., the flood of 1982 led to the redevelopment of its downtown. Former Mayor Win Moses recently said, "The type of success we're having today with Parkview Field and the Ash Brokerage development and the riverfront all started with Eric Kuhne's making a great design across the thumb of downtown Fort Wayne."

Later, through his London-based firm, Civic Arts/Eric R. Kuhne and Associates, he designed buildings on five continents. His design for the Titanic Museum in Belfast, Ireland, commemorating the 100th anniversary of the ship's sinking in 1912, was featured in PAW's April 4, 2012, Tiger of the Week article about Kuhne.

Diana Hartman, Kuhne's friend since high school, said, "He never stopped learning, he never stopped listening, he never stopped being fascinated by things." Nonetheless, he "was a very humble, down-to-earth man."

Graduate memorials are prepared by the APGA.

*This issue contains undergraduate memorials for Lloyd E. Cotsen '50 * 54 and William Most '64 *69.*

Classifieds

For Rent

Europe

Rome: Bright, elegant apartment. Marvelous beamed ceilings. Antiques. Walk to Spanish Steps, Trevi Fountain. 609-683-3813, gam1@comcast.net

Paris, Left Bank: Elegant apartment off Seine in 6th. Short walk to Louvre, Notre Dame. 609-924-7520, gam1@comcast.net

Paris, Marais: Elegant, 2 bedroom, 2 bath apartment, vibrant Pompidou museum/sidewalk café quarter on 13c pedestrian street, full kitchen, w/d, AC, cable. desaix@verizon.net, 212-473-9472.

France, Paris-Marais: Exquisite, sunny, quiet one-bedroom apartment behind Place des Vosges. King-size bed, living/dining room, six chairs, full kitchen, washer, dryer, weekly maid service, WiFi, \$1350 weekly. max@gwu.edu

Ile St-Louis: Elegant, spacious, top floor, skylighted apartment, gorgeous views overlooking the Seine, 2 bedrooms sleep 4, 2 baths, elevator, well-appointed, full kitchen, WiFi. 678-232-8444. triff@mindspring.com

Italy/Todi: Luxurious 8BR, 7.5BA villa, amazing views, infinity pool, olives, lavender, grapes, vegetable garden, housekeeper, A/C, Wi-Fi. Photos/prices/availability: VRBO.com, #398660. Discount — Princetonians. 914-320-2865. MarilynGasparini@aol.com, p'11.

Paris, Tuileries Gardens: Beautifully-appointed, spacious, 1BR queen, 6th floor, elevator, concierge. karin.demorest@gmail.com, w*49.

Paris 7th: Fifth floor, quiet, studio sleeps 3. Balcony. View Eiffel Tower. www.parisgrenelle.com, 207-752-0285.

England, Cotswolds: 3BR stone cottage, quiet country village near Broadway and Stratford-upon-Avon. Information: www.pottersfarmcottage.com, availability: pottersfarmcottage@msn.com

Provence: Delightful five-bedroom stone farmhouse, facing Roman theater. Pool, WiFi. 860-672-6608. www.Frenchfarmhouse.com

Paris, South Pigalle: Bright, spacious (600 sq ft) 1BR (queen). Fully-equipped kitchen, rain shower, washer/dryer, WiFi, TV. 2-floor walkup, 19th c. building, exposed beams. Sleeper sofa available. « SoPi » is the new Marais! k'54, k'80, k'92. linda.eglin.mayer@orange.fr

Central Berlin (Schöneberg): Charming, newly renovated, 3-room apartment, 4th floor. Quiet, modern conveniences, tree-shaded balcony — lively (“Akazienkiez”) neighborhood: shops, restaurants, cafes, weekly market nearby. S-, U-Bahn stations — walking distance. 6-month minimum. natascha.weisert@graduateinstitute.ch

Tuscany, Italy: historic village house, sleeps 4, walk to restaurants, shops, vineyards. Visit www.cozyholidayrentals.com for photos, info.

France, Dordogne-Lot Valley. Dream house. Mythic village. Couples, families. Wonderful restaurants, markets, vineyards, bicycling, swimming. (Alumni Discount). maisonsouthernfrance.com, 617-608-1404.

Paris: Weekly rental, \$175/night, Louvre Rivoli Quartier. 831-521-7155, apower7@icloud.com, w'49.

Caribbean

Bahamas, Eleuthera. Beachfront villa, 4BR, 5BA, swim, snorkel, fish. www.heronhill.net

Mexico

World Heritage San Miguel de Allende: Historic Center condo 2/2, fresh flowers and champagne await you! vimeo.com/167756672, mesonessma@gmail.com, k'85.

United States Northeast

Waitsfield, VT (MadRiver, Sugarbush): 1860 farmhouse, 6BR, 3BA, fireplace, sleeps 2-18, brand new Simmons Beautyrests. Stowe — 19 miles. 2 day minimum. snohouse@hotmail.com, 978-922-0010, w'51.

Northeast Kingdom of Vermont,

Craftsbury: Charming Zen-spirited cottage for 2 on 30 acres. Stunning views! Relax, hike, bike. Scull and ski at nearby Craftsbury Outdoor Center. Outstanding local food/beverage culture. \$150/night (2 night minimum), \$30 cleaning fee. Dickinson.x.miller@ampf.com, '75.

Manhattan: E. 49th Street studio, \$209 nightly, 3-night minimum. atchity@storymerchant.com or 212-421-0256.

Martha's Vineyard Summer 2018

Rentals: Chilmark, Katama, Vineyard Haven. Halcyon days of fall, too. Water is still warm. Elise Ryan '76 Realtor® ejr2629@gmail.com, 410-258-8237.

NYC: Fully furnished 1BR luxury condo, block from Central Park. pager1990@gmail.com, '85.

United States West

Big Sky Montana: Charming 4 BR log home on 20 acres beautifully furnished, spectacular views, Big Sky sunsets, skiing, hiking, fishing and golfing within 5 minutes. Close to Yellowstone National Park and Bozeman. Enjoyment all 4 seasons. 610-225-3286. jgriffi644@aol.com, s'67.

Park City/Deer Valley, Utah: 3 BR ski-out condominium in Upper Deer Valley. Newly remodeled, hot tub, beautiful views, available all seasons. Reasonable rates. 937-825-4137 or pjkolodzik@aol.com, p'12.

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Asia, India, Africa: Private Custom Tours. www.GoldenFishTravels.com, 914-763-6321, '66.

Real Estate for Sale

Arizona: Scottsdale, Paradise Valley, Phoenix and Carefree. Houses, condos and lots. Rox Stewart '63, Russ Lyon Sotheby's International Realty. 602-316-6504. E-mail: rox.stewart@russlyon.com

East Hampton, estate section. 1.2-acre buildable lot. \$4.75M. dwsphd@gmail.com, '73.

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Princetoniana

Vintage print of panoramic, bird's-eye view of the Princeton campus ca. 1920, elegantly framed, acid free matting. Also in University Art Museum collection. For photos/information: richardson5ch@comcast.net, '68.

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Elliott Young '89 speaks at a rally against CIA conduct. The protest was sponsored by Students for Social Responsibility.

A Stand on Campus Recruiting

John S. Weeren

“PROTEST THE CIA.” The heyday of campus political activism was long past when, on Oct. 24, 1988, Students for Social Responsibility issued this call in *The Daily Princetonian*. It was amplified by a letter to the editor in which Geoffrey Ng '92 assured readers that “to intimidate and harass individuals would be counterproductive to our cause.”

The individuals in question were recruiters from the Central Intelligence Agency and students eager to join its ranks. But when a modest crowd gathered in front of McCormick Hall, a different line was drawn: between demonstrators and counter-demonstrators, whose competing placards (“CIA = Criminal Imperialist Army” and “Don’t Insult Intelligence — Support the CIA”) captured the tension between foes and friends of the country’s best-known spy agency.

Although, as the *Prince* reported, the protest “seemed vaguely reminiscent of the ‘60s” — complete with a rendition of Bob Dylan’s “Blowin’ in the Wind” — old indictments of covert operations in other countries, from Iran to Chile, were coupled with a newer concern that ultimately prompted the University to change its guidelines for recruiters.

One speaker at the protest, Greg Christianson '89, president of the Coalition Against Homophobia, accused the CIA of discrimination based on sexual orientation, equating its position to an employer saying, “We don’t discriminate against blacks; we just don’t hire them.” In an op-ed published the next day, he urged the University to insist that all recruiters sign a document attesting that their organizations “do not discriminate on the basis of religion, national origin, race, sex, and sexual orientation.”

Two weeks later, the University announced that it would add “sexual orientation” to the non-discrimination statement by which recruiters were expected to abide. And within a month, the CIA signed on, although, as Christianson unhappily noted, the agency’s own hiring policy, which it submitted with the form, would permit sexual orientation to remain “a relevant consideration” in the recruitment process. Controversy flared anew, leading in 1989 to the temporary exclusion of CIA recruiters from campus. ♦

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



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