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December 4, 2019 Volume 120, Number 5

PRINCETO ALUMNI WEEKLY

An editorially independent magazine by alumni for alumni since 1900

PRESIDENT'S PAGE

INBOX

ON THE CAMPUS

Sexual-misconduct policies • DACA case goes to Supreme Court • PEI and ROTC mark anniversaries • Grad students keep up vigil for Xiyue Wang • Student Dispatch: Cornel West *80 and Robert George on truth-seeking • SPORTS: Men's basketball's Devin Cannady '20 • Training for Tokyo • The Big Three

LIFE OF THE MIND

Ning Lin: 100-year floods could come yearly • Michael Graziano '89 *96: Could a computer hold your mind? • Corina Tarnita, EEB

PRINCETONIANS

Fencer Jim Adams '61 • Henry Huntingdon '87 learns from the locals • Alumni-led theater company is off-Broadway star

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The Price of Upward Mobility

For many first-generation college students, climbing the ladder to success may involve sacrificing things they hold dear. By Julia M. Klein

30 The Laureate

Physicist James Peebles *62 has spent his life working to understand the universe and questioning his own theories. By Joel Achenbach '82



Podcast Spotlight

On her series Venture Unplugged, Mayra Ceja '03 interviews entrepreneurs and investors, covering a wide range of topics, from blockchain to direct-to-consumer retailers.



Tiger of the Week Hospice volunteer J. David Lind '18 turned his experiences into lyrics and music.

Princeton Verse

The poet Alfred Noyes made a lasting impression on his students — and helped publish their work.

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A City at War

Footage of the 1939 siege of Warsaw, filmed by Princeton Portrait subject Julien Bryan 1921.

"The Spirit of Truth-Seeking"

On Friday evening during First-year Families Weekend, I introduced an event about "The Spirit of Truth-Seeking," featuring Professors Robert P. George and Cornel West. This topic is core to this University's mission and to the mission of all great research universities. I was delighted to offer some thoughts about truth-seeking to the audience that night, and I am similarly glad to share my comments with readers of the Princeton Alumni Weekly. Here is an excerpt from what I said. -C.L.E.

onight's discussion addresses a topic, truthseeking, that resides at the heart of this University and, indeed, at the center of any research university worthy of the name. We have many kinds of schools in this country, with many kinds of goals. Schools may aim at skill-building, value formation, vocational training, or the transmission of expertise. None of these goals are absent from a research university's mission, but neither are they the core of it.

Research universities have a more radical, disruptive, thrilling, and demanding mission: they seek truth about questions that matter even when, perhaps especially when, investigating them may threaten conventional wisdom or societal pieties.

One of the reasons why students sometimes find the transition from high school to university to be difficult-and, since this is families' weekend, I want to stress that it's okay to find the transition difficult; I certainly found it difficult!is that too often high schools reward only the regurgitation of conventional wisdom,

whereas a great research university demands that its students simultaneously understand conventional wisdom deeply and think critically about it.

Earlier this week, Professor James Peebles *62, who has been at Princeton continuously as a student and faculty member for more than 60 years, received the 2019 Nobel Prize in Physics. He won the prize for his cosmological theory about the origins, evolution, and structure of the universe. At his press conference on Tuesday, Professor Peebles said that he hoped for many years that his theory was wrong! He kept formulating alternative theories that might deepen our understanding of the cosmos by disproving the theory that eventually won him the Nobel Prize. Professor Peebles also said that he loved teaching Princeton students because their thoughtful, probing questions forced him to improve his own understanding of the physics that he was teaching.

Professor Peebles's comments about teaching and research exemplify the truth-seeking spirit of this University. So, too, does a sign-on statement that Professors George and West published a year-and-a-half ago, titled, "Truth-Seeking, Democracy, and Freedom of Thought and Expression." Their statement begins with the following paragraph, which I heartily endorse:

The pursuit of knowledge and the maintenance of a free and democratic society require the cultivation and practice of the virtues of intellectual humility, openness of mind, and, above all, love of truth. These virtues will manifest themselves and be strengthened by one's willingness to listen attentively and respectfully to intelligent people who challenge one's beliefs and who represent causes one disagrees with and points of view one does not share.

You can find the statement online, and decide for yourself whether you wish to sign it. Thousands of people have done

> so. I should tell you, though, that I am not one of them. I am skeptical in general about mass petitions, which for my tastes involve too much conformity and peer pressure for a truthseeking environment that should encourage independence of mind. I accordingly try to avoid signing petitions unless I genuinely agree with every word of them-and, in this case, I do not. But I am sure that is okay with Professors George and West because they genuinely love disagreement and exemplify the truth-seeking spirit they recommend.

Their conversation tonight will, I expect, provide further

evidence of those values. Professors George and West have been two of Princeton's most prominent and widely known public intellectuals. Conventional wisdom, which, you may have noticed, I am urging you to question, labels Professor George a "conservative" and Professor West a "democratic socialist." Some people, I can tell you, have been shocked to learn that Professors West and George co-teach a seminar together. Their surprise is misplaced: Professor George and Professor West are united by a commitment to a shared set of questions, not a shared set of answers, and in a truthseeking university the commitment to questions is by far the more important one.

[At this point, I went on to provide brief biographies of the evening's speakers; space limitations preclude me from printing my full remarks here.]



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ACCEPTABLE PROTESTS

"A Churlish Protest." "Rude and Disrespectful." "A Self-Righteous Exhibition."

If the responses (Inbox, Sept. 11, and comments at PAW Online) to the overwhelmingly silent and peaceful protest at Baccalaureate ("Clashing Views," July 10) have made one thing clear, it's that no form of protest, no signaling of dissatisfaction, no staking of a moral claim, is acceptable. If we disrupt the event, that's shutting down free speech. If we walk out: a refusal to engage. If we merely turn our backs making no noise, and not disrupting the speaker's ability to speak in any way it's "churlish" and self-righteous.

It seems that when alumni tell students not to protest a certain way, what they really mean is don't protest at all. What they mean is don't think for yourself, don't let a little thing like moral conviction outweigh a duty to shut up and sit still. To those such as Jack Zimmerman '48 and Mike Devine '62: Let us know when you think of an appropriate way to protest. I won't hold my breath. **Micah Herskind '19**

Buffalo, N.Y.

DROPPING THE GRE

Re "Rethinking the GRE" (On the Campus, Oct. 23): Fourteen departments and programs will no longer require the GRE for graduate admission, but 29 will continue to require it. Are we to infer that two-thirds of graduate departments and programs don't need - or is it want? - any broader "diversity"? That they are

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satisfied with how well they "identify, attract, and develop the most promising individuals from as many segments of society as possible"?

Or maybe we're to infer that two-thirds of Princeton's graduate departments and programs discount Professor Zemer Gitai's claim – oops, I mean "suggestion" – that GRE scores "are not great indicators of graduate-school success."

Seems to me that somebody is wrong, either Gitai or two-thirds of the departments and programs. Is there some reason that Princeton hasn't researched and found out who is right and then brought the wrong parties into compliance?

Hey, wait! Maybe Gitai is wrong and the test is a great indicator of graduate-school success, but the 14 that are dropping the GRE requirement are less concerned with graduate-school success than they are with being "diverse and inclusive."

I'm wondering also if I'm the only one wondering why PAW didn't ask my questions in this article.

Terry Wintroub '69 Mountain City, Tenn.

Dropping the GRE will certainly enhance diversity by admitting less-qualified students. Emil M. Friedman *73

Hillside, N.J.

CONFRONTING THE PAST

I was fascinated to read of Regis Pecos '77's role in mediating the end of the continues on page 6

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

Inbox

UNFORGETTABLE GRIDIRON CONTESTS

READERS RESPOND TO PAW'S OCT. 23 FEATURE: 150 YEARS OF FOOTBALL



The football game our team can never forget was the Princeton-Yale game in 1954 at the Yale Bowl in front of a packed stadium (see photo above).

With less than a minute left in the game, with a 14-14 score, Princeton has the ball at midfield. Dick Emery '55 throws a long pass to Don MacElwee '57, who is brought down on the Yale 3-yard line. There is less than a minute remaining, with no timeouts. Royce Flippin '56, our tailback, calls for "Goal 44" running down the field. The ball is hiked to Royce, who carries it over the goal line with blocking from Bill Agnew '56 and Joe Grotto '56 with only a few seconds left — as shown in the photo for a final score of Princeton 21, Yale 14.

The next year, in the preseason scrimmage against Syracuse, Jimmy Brown ruptures the knee of Royce, our captain. Sid Pinch '56 fills in as our tailback for our successful season; Royce comes back after his knee operation and the team beats Yale 13 to 0 and Dartmouth 6 to 3 in a snowstorm at Palmer Stadium.

The 1955 Princeton team won the Ivy League, which was not officially recognized until the following year.

Joe Grotto '56 Westport, Conn.

Editor's note: Bill Agnew '56 recalls: "That photo has been on my office wall for 60 years. Joe and I worked our asses off so Royce could rest comfortably on his back in the end zone. Tailbacks get all the glory!"

As a former player, there are many Princeton football games that I'll never forget. On Nov. 11, 2006, we traveled to face Yale at the Yale Bowl in a matchup that would likely determine that year's Ivy League champion. Just a freshman, I watched as we fell behind 28–14 at the half. I entered the game after halftime due to injuries as our team rallied behind Jeff Terrell '07 and Brendan Circle '08 for a 34-31 victory. That day marked many firsts: my first collegiate football snaps, clinching the first Princeton football bonfire since 1994, and the first time I've seen visiting fans storm the home team's field. What an incredible day and memory that I'll have with me forever. Andrew Hauser '10 Royal Oak, Mich.

In 1966 Harvard came to Palmer Stadium undefeated and a threetouchdown favorite. It was a game of classic and storybook proportions (think Chip Hilton novels by Clair Bee). Hard-hitting, grind it out — a game traditionalists love.

Five times teams went for broke on fourth down. Harvard threatened to blow the game open, only to have Larry Stupski '67 throw the Harvard quarterback for consecutive losses and have Jim Kokoskie '67 intercept the next pass. It led to a 93-yard drive by the Tigers, starting with second-string quarterback Tad Howard '67 saying in the huddle on their own 7-yard line, "We are going 93 yards for a touchdown and if you don't believe that, go to the bench now!" Hard running by Dave Martin '67 and Rich Bracken '69 provided that touchdown.

The players on the sideline convinced Coach Dick Colman after the touchdown to go for two on the extra-point try, Doug James '67 to John Bowers '67 in the back of the end zone. Princeton captain Walt Kozumbo '67 and James stopped Harvard on 4th and 2 at the Princeton 18-yard line to seal the win. Uncommon resolve and incredible good fortune: Coach Colman called it his most thrilling game since Princeton upset Penn in 1946. **Ron Grossman '67** *Toano, Va.*

Certainly the most memorable (or momentous?) Princeton football game was against Penn my senior year, Nov. 4, 2006, at Princeton Stadium. The match turned out to be a thrilling doubleovertime victory made possible by an improvised lateral on a critical fourth and goal. That play ended up on ESPN's top plays of the weekend; but for me, it is just a personal footnote to the larger event of the day — being introduced to a sophomore I'd later marry. **Tom Brennan '07**

Philadelphia, Pa.

Editor's note: John B. Canning '65 similarly remembers the Yale game in 1962 "not because of any outstanding plays (although Princeton won) but because my blind date for the game was a young lady from Smith College whom I wound up marrying and to whom I've now been married for 51 years!"

No contest: Oct. 20, 2012. Princeton 39, Harvard 34.

With about 12 minutes left in the fourth quarter, the Tigers trail the Crimson 34–10. With fans leaving the stadium, my wife asked, "Do you want to go or stay?" Princeton had the football and I said, "Let's see what they do on this drive." The next play they scored, and made the two-point conversion. I said, "We're staying. This could get interesting." It did! With two more touchdowns, the Tigers get it to 34–32. Here are the three things I will never forget:

1. Harvard has 4th and one yard to go. They line up to go for it, and the Harvard quarterback is using every trick in the book to draw Princeton offside. The Tiger defensive line sat there like blocks of cement. Harvard has to punt.

2. With fourth down and the Tigers deep in their own territory, Connor Michelsen '15 goes back to pass and gets sacked. I'm thinking, "That's it." Then, much to my amazement, I see the Harvard safety taunting Connor, who is writhing on the ground, grabbing his hand. The ref saw it also. Out comes the flag. He announces, "Personal foul. Defense. Automatic first down."

The tears of joy were running down our faces as we sang "Old Nassau."

3. Quinn Epperly '15 replaces Michelsen. Quinn is left-handed. Harvard is baffled and vulnerable. Epperly marches the Tigers down the field, rolls left and floats the winning touchdown pass to Roman Wilson '14 with 13 ticks on the clock left. My wife and I are jumping up and down. The tears of joy were running down our faces as we sang "Old Nassau." Best. Game. Ever. John Drozdal '72

Haddon Heights, N.J.

Hearty congratulations on the wonderful article — it's a real gem, thoroughly researched and beautifully written. I'm sure it stirred vivid memories of gridiron glories for generations of Princetonians, as it did for me. I had flashbacks to our football classmates who were Ivy League co-champions with Dartmouth in 1963.

During that season my classmate, tailback Hugh MacMillan '64, set a record with a 92-yard punt return against Colgate. The fact that the record still stands today is a real testament to his achievement! **Gerry Skoning '64**

Beverly Shores, Ind.

I am aghast at the lack of any mention of my four-year roommate, Royce N. Flippin '56, in "150 Years of Football."

In 1952, Flip led the freshman team to an undefeated season, marred only by a

7-7 tie with Penn in which Flip scored on a 70-yard kick return. He would score 18 touchdowns that season.

The following year, NCAA rules forbade unlimited substitution, so he played tailback and safety each entire game. In 1953 Flip ranked 11th in the nation in total offense and 16th in rushing yards. Junior year, even after missing three games with a broken wrist, he still made All-Ivy honors on the Associated Press list. His hopes for senior year were dashed in a pre-season game against Syracuse when his knee was severely injured. As captain and always a Yale killer, Flip returned in the next-to-last game to squash the Bulldogs' aspirations for a championship season by scoring the first of two touchdowns in the 13-0 upset.

After the season, Flip was awarded the Poe Cup (now Poe-Kazmaier) for great moral character in addition to talent on the field. In later life he became Princeton's athletic director.

Tom Meeker '56 West Caldwell, N.J.

Without question, the most exciting football game I've ever seen was the 1981 Princeton-Yale game in Palmer Stadium.

Princeton had gone 14 years without a gridiron victory over its historic rival. Yale was undefeated, coached by the almost mythical Carm Cozza, and had (another) All-American running back in Rich Diana, who was amassing more than 100 yards a game.

Princeton had had only partial success during its season, but had some offensive weapons in quarterback Bob Holly '82 and two or three capable receivers.

Against Yale, Princeton fell behind in the first half by 21 points. A few fainthearted Princetonians among the 25,000 in attendance headed out.

As the game wore on, Holly and his receivers became stronger and stronger. Magic seemed in play as they caught pass after pass, converted on third downs, and gamely took the field when Princeton's defense held down the score, even if failing to contain Diana, God of the Tiger Hunt, who ran for 222 yards.

But Holly was unstoppable. With less than a minute remaining, Yale drew a pass-interference call, and the ball was spotted at Yale's 4-yard line. Four seconds remained as the Tiger runner "crashed through that line o' blue" ... to dump the Bulldog!

What an explosion from the Princeton fans — an ocean of white hankies to "salute" the "guests" and send them packing: Princeton 34, Guests 31.

In my memory, Air Holly's feat of 501 yards passing in that game is still a Princeton record. And I've carried my 1981 game program (with yellowing newspaper clippings) to every football game I've attended since.

David L. McLellan '74 North Andover, Mass.

The most unusual football game I ever saw was Princeton v. Dartmouth, the last game of the 1951 season. Dick Kazmaier '52 had earned the Heisman Trophy and had been on the cover of *Time* (sometimes considered to be a bad omen). Friday evening, Dartmouth fans boasted that Kazmaier would never finish the game. Football helmets had no nose guards then, and in the middle of the game Kazmaier was out with a broken nose. A few plays later a Dartmouth player suffered a broken leg. It was no longer a football game, it was a vendetta.

One of our professors was psychologist Hadley Cantril, a nationally known Dartmouth alum, and I sat in his 8 a.m. lecture two days later. His opener was something like this:

"Gentlemen" (no women at PU then):

"There was a football game last Saturday. In fact, there were three games. There was the game that Princeton fans saw. There was the game that Dartmouth fans saw. Then there was the real game.

"These three games did not even resemble each other."

Cantril then used psychology theory to demonstrate how most of us see what we want to see, and are blind to what we don't wish to see. I will never forget the game (Princeton won, 13–0), or the lecture. They deserve to be preserved in the history of Princeton football.

Ken Ackerman '53 Columbus, Ohio

READ MORE letters by alumni about their most memorable football games — and add yours — at **paw.princeton.edu**

Inbox

continued from page 3

Santa Fe Entrada (cover story, Sept. 11). Living north of Santa Fe, I was well aware of the bitter controversy and knew some of the Native people involved in the protests.

I was dismayed, however, to read John Fay *85's letter (Inbox, Oct. 23) pointing out that Native people could also be as brutal as Euroamericans.

This seems to be missing several points. First, Native people are still being mistreated and brutalized by us and having their lands stolen, which is what keeps these old sores from healing. We cannot imagine what it would be like to awaken every day in occupied territory.

Second, what Pecos helped to achieve (miraculously) is a solution based on truth and reconciliation. Unless we acknowledge the truth of the crimes of the past, committed by our own people, we have no hope of moving beyond them.

It is a process, and a tough one. No part of this is easy or comfortable. The sooner we start, the better. Liz Gold '79 Chimayó, N.M.

CHEMISTRY'S FEMALE PIONEERS

In reading the essays in response to the 50th anniversary of undergraduate coeducation (feature, Sept. 11), I was pleased to see a paragraph on the "invigorating" experiences with taking chemistry cited by Lisa Dorota Tebbe '73. However, I was disappointed when she cited the downsides, including the lack of a women's restroom in Frick Lab. That surprised me, since all of the secretaries, both in the main and departmental offices, were women. In addition, two female grad students in chemistry entered the Graduate School in 1963. Unfortunately, they left after one year for a variety of reasons.

As a co-educated male all through K-12 and college in Minneapolis, I was disappointed with what I saw for males-only education, both in and outside of the classroom at Princeton. My wife and I were married after my junior year in college, so when I was a teaching assistant and a pair of high heels could be heard walking past the lab on the terra-cotta floor, all 12 of my students swung their heads staring outside the door, and I did too. I went home that night and told my wife about my reaction, and said when we have kids they will be co-educated. She heartily agreed, and our two kids were.

Let me apologize to Ms. Tebbe for the boorish, misogynistic behavior of her chemistry TAs. Let me assure all that not all of us chemistry TAs were like that, and had I (or some of my friends) been her TA, she would not have had bad experiences.

R.E. (Bob) Buntrock *67 Minneapolis, Minn.

TWEETS AND CREDIBILITY

Re "#History in 280 Characters" (feature, Oct. 23): The profession of history will have no more credibility than the screaming meemies on *The View* if it contents itself with making snarky remarks on Twitter. Writing for *The New York Times* is only a mark of celebrity, not wisdom.



If a Princeton historian is to have any more value than a glib talking head, please show that you don't carry a political bias. Debate someone in your weight class like Mark Levin in public. Everybody would learn something from that.

Mark Ramsay '76 *Mαrriottsville, Md.*

CNN TIES RAISE QUESTIONS

Good that Princeton in the nation's service included Asha Rangappa '96, an erudite alumna who served with the FBI for five years (Princetonians, Oct. 23). Excellence is needed at all levels of law enforcement and the military. But when I read her comment about President Trump's assertion that he had been wiretapped ("This is impossible! I know how this stuff works"), I paused to regroup. What did she make of the May 16, 2017, story in *The New York Times* subtitled "Trump Campaign Wiretapped"? Or the imminent inspector-general's report on FISA warrants that facilitated surveillance on Donald Trump?

How does a Princeton education morph into an alignment with CNN as a paid national-security analyst with scant awareness of countervailing news? But then her final observation — about the depressing trend of efforts to reject news "as biased" when viewed as unfavorable — is more an indictment of her colleagues in national news and CNN's daily negative prattle, isn't it? Lawrence Cheetham '67 Bedford, N.H.

A FOSSIL-FUEL WORLD

Re "Group Urges University to Divest From Fossil-Fuel Companies" (posted Oct. 24 at PAW Online): We got to where we are by using petroleum products. Maybe in 50 or 100 years other technology will be economic. Meanwhile, only in your dreams will fossil fuels be eliminated in the foreseeable future!

John Marsden '65 Fort Myers Beach, Fla.

Re John Marsden '65's comment at PAW Online: Yes, the time scale will be long. Moreover, do we realize how embedded we all are in the fossil-fuel world? If the focus is on climate change caused by more CO_2 , then anyone who drives a car is just as guilty when he puts a foot on the accelerator and pushes the CO_2 out the tailpipe.

Living on the Princeton campus is one of the few places where a person can travel by walking and so feel a little bit self-righteous.

Richard Larrabee '73 *Houston, Texαs*

FOR THE RECORD

The overall course GPA for undergraduates has increased by .074 since 2014–2015, when the revised grading policy went into effect. The amount of the increase was incorrect in an On the Campus story in the Oct. 23 issue.

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Bird's Eye

Jan Andrew Buck '67

Jan Buck has just released his new book, Bird's Eye, a novel that embodies a transformational new discovery by Princeton scientists in the field of Chaos Theory. Bird's Eye is the story of how a troublesome young boy is transformed by a horrific experience into a highly successful achiever through newly imbued diligence and industry. His journey takes him from one random and unexpected development to another and surprisingly lands him in an ultimate paradise that gives meaning to it all. In the process the reader comes to appreciate that the universe of the random and unexpected, that is, chaos rather than order, is what brings life to our world.

Bird's Eye



Bird's Eye is available on Amazon or janandrewbuck.com

Mr. Buck's first two books, *Einstein's Mistake* and *Star Ship* have also received high praise and all 5 star reviews on Amazon. You are invited to check them out as well. "We at Princeton hoped that Mr. Buck could somehow capture our major new discovery in the field of Chaos in a fictional narrative that would allow the general public to appreciate it in a meaningful way. In Bird's Eye he has vastly exceeded our expectations and has written a beautiful and gripping story as well. We are thrilled. Bravo."

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- Julia Macalaster, Princeton '12, entrepreneur

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On the Campus

Two works by designer and architect Maya Lin were completed this fall between the Lewis Arts complex and New South. Extending back from the foreground of the photo is "The Princeton Line," an earth sculpture that takes its name from the Dinky rail line nearby. In front of the arts center's tower is "Einstein's Table," a granite "water table" 11 feet in diameter designed as an homage to Albert Einstein and his theory of black holes. A video of the site can be found at ricardobarros.com/maya-lin. Photograph by Ricardo Barros

On the Campus



On the Path to Reform As Title IX evaluations are released, students continue efforts for change

ith the public release of two reports and an hour-long discussion at the Nov. 11 CPUC meeting, Princeton outlined its response to calls by students to reform the University's handling of sexualmisconduct cases.

"Our shared goal is to ensure that Princeton remains a safe and welcoming place where all of our community members can thrive," Provost Deborah Prentice wrote in a letter to the University community. "Meeting that commitment requires us to make improvements when and where we can, and to learn from our past practices and the best practices of others." She said recommendations for action in key areas should be proposed by the end of December.

One report was completed by an external committee made up of Title IX experts from three other universities to review Princeton's practices and procedures. They found Princeton "has a strong Title IX infrastructure" but added, "some students feel that their needs are not being met." The other report was completed by an internal committee composed of members of the University Student Life Committee and the Faculty-Student Committee on Sexual Misconduct.

Prentice said efforts would focus on four areas where both groups agreed "the University could and should do more." They are: enhancing the resources offered to students involved in sexual-misconduct cases; changing the investigation, adjudication, and appeal process of Title IX cases; expanding training and communications to create "a more positive campus climate and culture around issues of sexualmisconduct"; and exploring alternative

An external committee made up of Title IX experts from three other universities found Princeton "has a strong Title IX infrastructure" but added, "some students feel that their needs are not being met." procedures and practices for resolving cases outside Title IX procedures.

Members of Princeton Students for Title IX Reform, which led a nine-day sit-in in front of Nassau Hall in May over the Title IX issue, said in a statement that the reports were "incomplete and biased" and cited a number of shortcomings.

Students said the reports failed to address funding specifically for lowincome students with mental-health needs, provide funding for various support services, and include input from students who have firsthand experience with the Title IX process. "How can you conduct a review when you don't talk to the people directly affected by the implementation of Title IX?" asked Aisha Tahir '21, one of the group's members.

In their statement, students described the external review as "extremely disappointing," saying it gave too much emphasis to administrators' perspectives. They also criticized the reviewers for challenging students to find ways to implement their proposals.

In contrast, students said there are parts of Princeton's internal report that they would be "excited to see come to fruition." Tahir said students will continue to press the University to act on changes that have been proposed.

The internal review group offered 19 recommendations, among them:

• Restructuring the Title IX office to allow the director to focus on oversight

• Providing more training to discourage retaliation and reassessing the current definition of retaliation

• Expanding help for students in navigating Title IX investigations and appeals

• Streamlining the procedures to apply for student mental-health funding and determining if funds are adequate

• Providing more alternatives to the full disciplinary process and studying examples of paths for restorative justice, defined as "a nonadversarial approach to addressing offensive behavior that seeks to identify and repair harm and rebuild trust through facilitated dialogue."

The internal committee recommended establishing a Restorative Practices Working Group to research areas including the "creation of safe spaces, building trust, attending to trauma and resilience, and setting community standards and norms." The committee noted that nondisciplinary options, including informal mediation, are available through the University's Ombuds Office. The group's report also said it is unclear whether restorative justice is permissible under federal Title IX regulations. Restorative justice was one of the original demands brought forth during the Princeton IX Now student protest.

Prentice said the CPUC would act at its Dec. 9 meeting to create a new ad hoc Committee on Sexual Climate, Culture, and Conduct to replace the Faculty-Student Committee on Sexual Misconduct. The change will formalize the group and expand its oversight to monitor progress and provide input on Title IX-related matters, as well as broader efforts to improve campus climate and culture.

Both reports pointed out that the U.S. Department of Education's Office for Civil Rights may change its Title IX policies, and that this could affect the University's policies and procedures. Φ By C.S.

READ MORE: The full reports released by the University can be found at http://bit.ly/ TitlelXreports. The response by Princeton Students for Title IX Reform can be found at http://bit.ly/PIXR-statement.



SUPREME COURT HEARS ARGUMENTS Making the Case To Protect DACA

President Eisgruber '83, Maria Perales Sánchez '18, and Microsoft president Brad Smith '81, above, spoke on the steps of the U.S. Supreme Court after attending oral arguments Nov. 12 on the University's legal case to support protections for young undocumented immigrants.

While justices on the court's conservative majority showed signs of skepticism, Eisgruber remained confident after the hearing. The arguments in court, he said, "were about the importance of the government speaking plainly and honestly in a straightforward way, so that people can hold it accountable for the decisions that it makes, particularly when it affects thousands of people."

Princeton joined Microsoft and Perales Sánchez in November 2017 in suing the Trump administration, contesting its decision to end the Deferred Action for Childhood Arrivals (DACA) program. The Obama administration created the program in 2012. Participants, including Perales Sánchez, are shielded from deportation and can qualify for other privileges, such as work authorization and driver's licenses.

Trump administration officials tried to pull the plug on the program in 2017. They argued that the program was illegal, a point fiercely disputed by immigrant advocates. A flurry of lawsuits followed. Lower courts have allowed DACA to continue for existing participants while the cases are litigated.

Eisgruber said it was an "easy decision" to join in the lawsuit two years ago. Perales Sánchez said the support of Princeton and Microsoft "shows how much we are part of this community, how important we are, and how much we are valued." The court's ruling is expected by the end of June. • By Daniel C. Vock

JOYOUS WELCOME FOR HOLOCAUST TORAH

Students and staff of the Center for Jewish Life celebrated the arrival of a Holocaust Torah, one of about 1,600 Torah scrolls rescued from Czechoslovakia after the end of World War II. Holding the scroll is Mark Biderman '67; he and his wife, Wendy, donated the torah to the CJL. \blacklozenge



On the Campus



PEI CELEBRATES 25 YEARS

Princeton's Hub of Environmental Studies Surveys the Global Challenges Ahead

As the 25th anniversary of the Princeton Environmental Institute approached, director Michael Celia *83 said its alumni had become "a fantastic asset to the world," but he wondered if that was enough in the face of the Earth's alarming environmental indicators.

"Somehow, the next generation of PEI needs to be thinking much more about how we can move the needle," he said.

Days later, President Eisgruber '83 joined that call, opening the Princeton Environmental Forum Oct. 24 to mark the anniversary. Moving quickly from celebration to action, he spoke urgently of environmental crises facing the world.

"Princeton's mission of service to humanity compels us to make understanding and protecting the natural world a top priority," Eisgruber said. "Given that the current environmental crisis is as much political, economic, and social as it is biological and geological, the world today needs a place like Princeton to bring these strands together to find workable solutions."

That didn't satisfy some of the students and alumni attending the forum. When Eisgruber took the stage in Richardson Auditorium, about a dozen audience members representing Divest Princeton — a new campaign calling on the University to divest its endowment holdings in fossil-fuel companies raised orange and black "DIVEST" signs. Others unrolled a large banner with the same message in the back of the hall.

The demonstrators remained quiet, and Eisgruber later noted their respect for the University's value of open dialogue. They did not interrupt his talk.

But the protest helped set the tone for two days of panels. Besides presenting science and ideas, panelists focused on politics, activism, and the role of academia in addressing the climate crisis, including the divestment issue.

PEI had come a long way from its early days of concentrating only on natural sciences. PEI professor emeritus Robert Participants in the opening session of the Princeton Environmental Forum were, from left, journalist Juliet Eilperin '92; Carl Ferenbach '64, chairman of the High Meadows Foundation; and Princeton professors Anu Ramaswami and Stephen Pacala.

Socolow — a physicist who arrived to accept Princeton's first environmentfocused faculty appointment in 1971 — recalled that President Harold Shapiro *64 originally brought together researchers from fields such as ecology, biology, hydrology, and engineering.

With Professor Stephen Pacala, an ecologist, Socolow in 2004 co-authored one of the most famous papers in the carbon-mitigation field, the so-called "wedges" paper in *Science* that for the first time illustrated how a collection of existing technologies could bend the carbon-emission trend downward. The rapid advance of solar and wind power has made the paper outdated, but only after it shifted debate from theory to the practical task of addressing climate change.

"Important work has gone on here at Princeton, incredibly important work — the foundation of modern climate science," said Kathy Hackett '79, executive director of PEI.

After its beginning with natural-science expertise, PEI added social sciences, and later humanities, architecture and urbanism, international study centers, and even a journalist on annual appointment. The institute now connects 120 faculty members in 29 disciplines.

Celia said PEI's mission today centers on synthesis, working on environmental problems by engaging across



On the Campus

disciplines. A planned new building for environmental studies, scheduled to open in 2024 on Ivy Lane, will house the institute and the departments of geosciences, and ecology and evolutionary biology. It will offer both modern labs for natural scientists and collaborative spaces to bring together diverse ideas.

At the anniversary forum, panelists modeled that kind of exchange, grappling with the activists' divestment proposal.

Pacala said divestment would be inconsistent with the University's and society's continuing need for fossil fuels. Carl Ferenbach '64, an environmentalist and investor who served two terms on Princeton's Board of Trustees, told the forum that divestment would be an ineffective strategy against climate change.

But Rob Nixon, professor of humanities in the environment at PEI, took an opposing view. "Princeton likes to be a moral leader," Nixon said. "We like to think of ourselves preparing students for their future, but if there is no environmental future, then all other futures are moot."

Robert Orr *96, a special adviser on climate change to the UN secretarygeneral, asserted that "the good of the planet and the good of the shareholders, or the stakeholders, is one and the same these days. ... It is not a good investment these days to be putting money into fossil fuels."

The range of voices demonstrated PEI's reach. Alumni filled the forum's panels — an array of the world's influential environmental minds.

Celia and other PEI professors pointed to these alumni as the institute's legacy. Hackett recently surveyed PEI's former students and learned that half remain employed in environmental careers.

But the meeting took hardly a moment to note this educational accomplishment. The problems at hand were too urgent to take time for back-slapping.

"We're talking about existential issues," Celia said before the forum began. "You cannot miss them if you keep your eyes open. No matter how much we're doing, we need to be thinking about doing more. And that is the challenge that we face." • By Charles Wohlforth '86



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800-763-1416 609-924-1416 www.stockton-realtor.com Attendees at events marking the 100th anniversary of ROTC at Princeton gathered for a photo in Frick Atrium.

Centennial Celebration

University marks 100th anniversary of ROTC, honoring those who have served

n 1919, one of the first permanent peacetime ROTC units in the country was established at Princeton, formalizing the wartime military training that had taken place on campus during World War I. One hundred years later, members of the University affiliated with the military — including current ROTC students, ROTC alumni, and veterans — gathered with administrators, students, and others to celebrate the unit's centennial.

The more than 200 people who attended the anniversary events Nov. 11 "collectively represent over 1,000 years of service in uniform to our country," said deputy dean of the College Elizabeth Colagiuri *99, a former Naval ROTC member at Cornell who served five years on active duty.

"This unbroken century-long tradition is a source of great pride for this University and for me personally," said President Eisgruber '83. "Princeton's ROTC programs have trained generations of leaders who have served this country — and continue to serve this country with courage, wisdom, and integrity." Gen. Mark A. Milley '80, who in October became chairman of the Joint Chiefs of Staff, the nation's highest-ranking military officer, addressed the attendees in a video.

Retired colonel Doug Lovejoy *68, who once commanded the Army ROTC unit, received the ROTC Alumni Service



Award for his work establishing the Alumni and Friends of Princeton ROTC.

"Our country deserves the service of the young men and women who attend an institution as respected and as quality as this one," said keynote speaker Lt. Gen. Christopher Cavoli '87, commanding general of the U.S. Army Europe since 2018.

Alumni, who came from as far away as Hawaii to attend, looked through the ROTC memorabilia on display as they reflected on their experiences. Raymond Young '64, who has worked as a business executive and for the federal government, said the instruction in leadership he received in Army ROTC while he was an undergraduate was "absolutely invaluable. No matter what you do in society, that leadership training helps you."

Douglas Prager '82, who served in the Army for 23 years as a doctor after his ROTC training, said, "The most important thing was the discipline ROTC gave me to do things I wasn't comfortable doing."

William Lucas '71 – known as Charlie

Lt. Gen. Christopher Cavoli '87, right, talks with Victor Prato '15, who received the Purple Heart after he was injured while serving in Afghanistan in 2017. as an undergraduate — recalled the challenges of being in ROTC during the Vietnam War. "Wearing an ROTC uniform on campus was polarizing," he said. "Princeton was very split. Students in the ROTC community became very close-knit." After college, Lucas served in the infantry and counterintelligence.

At its founding in 1919, the ROTC unit had eight Army officers, 30 enlisted men, and 90 horses. In the following two decades, it grew to comprise an estimated 25 percent of the undergraduate student body.

After the bombing of Pearl Harbor, an accelerated academic program was created on campus so that ROTC cadets could graduate more quickly and join the war effort. Six months after the attack, more than 2,000 alumni were serving in the armed forces. By the war's end, 355 Princetonians would be killed.

ROTC added a naval unit in 1946 with 115 midshipmen and an Air Force unit in 1951 with 89 students. By 1951, onethird of the undergraduate student body was involved in ROTC. But enrollment declined in the 1960s as tensions over the Vietnam War grew. In May 1970, the U.S. bombing of Cambodia led to huge protests on campus, and the ROTC offices at the armory were firebombed. Soon after, the University's faculty voted to eliminate ROTC.

Army ROTC experienced just a oneyear hiatus — it was reinstated in 1972. On the Campus

This year, 67 students serve in ROTC: 47 in the Army, 13 in the Navy, and seven in the Air Force.

The Air Force unit was reinstated in the 1980s. The Navy unit did not return until 2014. Controversy over the military's "don't ask, don't tell" policy led the faculty to vote in 1993 to remove ROTC from campus, but the Board of Trustees did not accept the resolution. In the last couple of decades, enrollment has ranged from under a dozen students per year to a few dozen.

This year, 67 Princeton students serve in ROTC: 47 in the Army, 13 in the Navy, and seven in the Air Force.

Army cadets spend 10 to 14 hours a week in ROTC class time, outdoor training, physical fitness training, and homework, said Lt. Col. Courtney Jones, director of the Army Officer Education Program. Freshmen and sophomores spend additional time in mentoring and rehearsing for events, while juniors and seniors spend additional time in planning, coordination, and training meetings. Students also devote several weekends to field exercises and marksmanship training at Fort Dix and West Point. Cadets are evaluated on leadership, character, and retention of coursework and training, Jones said. • By Jennifer Altmann

NOTABLE PRINCETON ROTC ALUMNI







GEN. MARK A. MILLEY '80 became chairman of the Joint Chiefs of Staff, the nation's highest-ranking military officer and the principal military adviser to the president, in October 2019.

LT. GEN. CHRISTOPHER CAVOLI '87 has been commanding general of the U.S. Army Europe since January 2018.

FRANK CARLUCCI '52 was secretary of defense under President Ronald Reagan and deputy CIA director under President Jimmy Carter.

DONALD RUMSFELD '54 was secretary of defense under presidents Gerald Ford and George W. Bush.

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On the Campus



READING XIYUE WANG'S WORDS Vigil Supports Imprisoned Grad Student, Promotes Safety and Freedom for Scholars

The hooding ceremony on Cannon Green last spring was a time to recognize the University's advanced-degree recipients, but Graduate School Dean Sarah-Jane Leslie *07 made note of one student who was missing that day: Xiyue Wang. Wang remained in Iran's Evin Prison.

Wang's imprisonment passed the three-year mark in August. Wang, who had traveled to Iran for his doctoral research, was convicted in Iranian courts on sham charges of espionage. The United Nations has called for his release and stated that his arbitrary detention is a "clear violation" of international law.

Most of those who entered the Graduate School with him have completed their degrees, but other grad students are ensuring that his story is told. Their group, Free Xiyue Wang, conducts advocacy, outreach, and a public campaign for his release. The group's president, history Ph.D. student Michael McGovern, had never formally met Wang. Third-year history student Hannah Stamler, who runs the group's social-media accounts, was never on campus with Wang.

In October, the group held a vigil.

They sent invitations to professors to speak, posted flyers, staffed tables in Frist Campus Center, and emailed listservs. The event had a particular focus — "really claiming [Wang] for Princeton," McGovern said.

"We want to make sure that the broader community — faculty, staff, students, anyone who interacts with the University — remembers this," Stamler added. The group asked speakers to address a theme they believed to be universal in the University community: "promoting scholarly safety and scholarly freedom."

McGovern said research is "a shared collective value" of graduate students and undergraduates that could bring the two groups together to support Wang's cause. Anyone at the University "might at some point in their career

"The voices of scholars are united in their support of Xiyue and the intellectual values that he embodies." — Hua Qu, wife of Xiyue Wang

On the Campus

find themselves in a project that takes them to a place that might put them at risk," he said.

Dozens of community members gathered in Chancellor Green Library that October afternoon.

In her opening remarks, Wang's wife, Hua Qu, explained how her husband's research acumen and language skills make him an especially capable scholar. Wang's research focused on Inter-Asia, a region that lies between Iran and China. Archival research is essential for him, she said: "Xiyue has an insatiable drive to know something in a very meaningful way that wasn't known before."

"The voices of scholars are united in their support of Xiyue and the intellectual values that he embodies," Qu said. But scholars "need the support of everyone who still believes that learning and cultural exchange still have a place in our world today."

Professor Molly Greene, who taught Wang in a class on the Ottoman Empire, said Wang's case represents the growing threat to scholarship worldwide posed by curtailing freedom of movement. While more foreign students are being denied access to U.S. student visas, scholars are struggling to get visas to travel for lectures and conferences, she said. "His problem's our problem, and Princeton's problem, too."

The importance of archival research to academic freedom and discovery was highlighted by Professor Anthony Grafton. "History is made in archives," he said. "Historians are made in archives, too."

At the vigil's end, two of Wang's friends in the Graduate School read aloud Wang's own writings from Evin Prison. Beginning with some French phrases, and interspersed with Persian phrases, Wang's words filled the rotunda.

His dream, Wang said through his friends, had been to study the part of the world where he pursued his research, "to unveil its historical mysteries." He learned Persian and journeyed "in sincere goodwill." But instead, he was unjustly convicted and now languishes an ocean away from his wife and young child. "For the Iranian authorities," he said, "I don't matter in my story." � By Marcia Brown '19



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Dear Readers of the Princeton Alumni Weekly,

Join us! We are winning the fight to keep Westminster Choir College at home on its historic campus in Princeton, where it has been since 1934. As alumni of Princeton University and trustees of the Westminster Foundation, we invite



you to participate in our efforts to return Westminster Choir College to independence, or to find an appropriate affiliation that would assure its future. Along with Princeton University, Princeton Theological Seminary, Institute of Advanced Study, and McCarter Theater, Westminster Choir College is one of the institutions whose presence makes Princeton such a vibrant and marvelous cultural and academic center. Westminster's prestigious programs and performing ensembles are internationally celebrated: its choirs have performed with the New York Philharmonic over 350 times – more than any other single ensemble. Westminster

is the only conservatory able to offer such professional appearances as a regular part of its curriculum.

In 1991, the Choir College merged with Rider College in Lawrenceville, NJ, now known as Rider University. Rider dedicated administrative and financial resources throughout the 1990s, which allowed Westminster to increase

enrollment to high levels and increase the endowment to a level that gave the Choir College financial stability. Unfortunately, because of its own decreasing student enrollment and increasing financial deficits, Rider has attempted to sell the school since 2016. This effort was successfully prevented due to a lawsuit filed by alumni and donor plaintiffs, and joined recently by tenured faculty from both campuses. Since the collapse of the proposed deal to sell the Choir College, Rider administration has announced that it intends to



displace Westminster from its historic 23-acre campus in Princeton, and transfer it to Rider's Lawrenceville campus by September 2020. These maneuvers have seriously damaged Westminster's current enrollment and its reputation. However, our mission to save Westminster Choir College has been reinforced and intensified by the filing of an additional complaint on October 29, 2019, with over 70 current students as plaintiffs.



Well-known as the world's premier choral music conservatory, the extent of Westminster's influence on choral, vocal, and sacred music for almost a century is impossible to calculate. It is estimated that over two million people around the world perform each week under the direction of Westminster graduates. Please join us in our effort to keep Westminster Choir College on its Princeton campus in the buildings that were expressly designed for that purpose by Sherley W. Morgan, former professor and director of Princeton University's School of Architecture.

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STUDENT DISPATCH From Two Noted Scholars, Personal Views on What 'Truth-Seeking' Means Today

By Allie Spensley '20



When professors Robert P. George and Cornel West *80 arrived at McCosh Hall on a Friday evening in October, the campus was awash with parents wearing orange visitors' lanyards. The professors' dialogue was one of many events open to the families of first-year students as a part of parents' weekend. While most were concerned with the particulars of Princeton life — tours of

the library, dinners in the dining halls — West and George's conversation focused, instead, on the high-minded abstract: the "truth-seeking" mission of Princeton and other liberal-arts universities.

George, a conservative, and West, a progressive, argued that a truth-seeking ethos should animate the best practices of a liberal arts-university: active learning, intense selfexamination, and the kind of civil debate for which the two are famous. When guided by it, students would not only gain knowledge but better understand themselves, "learning how to die" (as West put it) and leading "an examined life" (as George put it). They would learn how to stand up for their convictions and when to change their minds.

After an audience member asked about the personal sacrifices they've made for their beliefs, the two professors' answers reflected those practices. West has been to jail nine times for political causes; George, after encountering conservative ideas in college, reconsidered the beliefs instilled in him by his "hard-core Democratic family."

The well-known professors have given voice to many of these arguments on different stages and in the freshman seminars they co-taught before West left the University in 2010. But their message had a particular resonance at Princeton on the night of their talk. They noted the historical moment ("a vast moral and spiritual meltdown," West said) and the polarized political climate. The atmosphere on campus was charged, too, with a new marker rekindling the debate over Woodrow Wilson 1879.

And "truth-seeking" is a theme that President Eisgruber '83, who introduced the professors, has been threading through his campus speeches for the past several years. In his remarks that night, he said the "radical, disruptive, thrilling, and demanding" practice of truth-seeking "resides at the heart of the University."

George and West agreed with him, and all three spoke about the work of recent Nobel laureate and professor emeritus James Peebles *62 to make their point. The physics professor had spent years attempting to disprove his own theory in order to advance his understanding of the cosmos. To Eisgruber, George, and West, his openminded humility characterizes the essential spirit of searching for truth. \blacklozenge

IN SHORT

Princeton is seeking NAMING SUGGESTIONS

for 36 University Place, home of the U-Store and the Center for Career Development; and for Marx Hall, home of the Center for Human Values, Marx Hall will be renamed "because the donor's circumstances have changed, making him unable to fulfill his fundraising pledge," the University said. A new admissions visitor center is planned to open in the lower levels of 36 University Place next summer.

The CPUC's Committee on Naming advises the trustees on names that would bring "a more diverse presence to the campus"; ideas can be submitted at namingcommittee. princeton.edu.

IN MEMORIAM: JAMESON DOIG *61, professor emeritus of politics and



public affairs, died Oct. 19 in Lebanon, N.H. He was 86.

Doig earned his master's in 1958 and his Ph.D in 1961 from Princeton. He joined the faculty in 1961 and retired in 2004. He served in a variety of roles, including chair of the politics department, director of the Woodrow Wilson School's undergraduate program, founding director of the Mamdouha S. Bobst Center for Peace and Justice, and parliamentarian of the University faculty. He dedicated much of his career to studying and writing on American politics, constitutional law, and women's rights. ϕ



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MEN'S BASKETBALL

Second Chances Cannady '20 works toward finishing

degree and auditions for a spot in the NBA

idway through his senior year, Devin Cannady looked like Princeton basketball's next pro player — an agile, long-range shooter on track for a career in Europe, if not the NBA. But that came to an abrupt halt in the early hours of Jan. 18, when Cannady was arrested at the campus Wawa on charges that included assault, after allegedly trying to punch a Public Safety officer.

Cannady, a native of Mishawaka, Ind., has discussed the incident in interviews with the *South Bend Tribune* and *Indianapolis Star*: He was stressed, he tried marijuana, he argued with other customers at the convenience store, and it ended badly. His legal case was resolved in March with a conditional discharge that included 20 hours of community service. That was a few weeks after Cannady had decided to take a leave of absence from the University. The heavy lifting was still to come.

"Ultimately, it came down to checking in with myself physically, mentally, and spiritually," Cannady told PAW. "[Leaving Princeton] was one of the toughest decisions I've had to make but ultimately one of the best decisions I've made."

At home in Indiana, Cannady didn't touch a basketball for two and half months. He started therapy and confronted the things that had led to that night in January — feelings that he said many Princeton athletes experience: "stress, anxiety, depression, that feeling that the weight of the world is on your shoulders."

"I came to Princeton to get my degree and to be in the NBA," Cannady said. "At *continues on page 26*

Sports / On the Campus

THE BIG THREE

Linebacker JEREMIAH TYLER '21 led Princeton football in tackles in backto-back wins over Harvard

and Cornell Oct. 26 and Nov. 1. He also

made six tackles in Princeton's 27-10 loss to Dartmouth at Yankee Stadium Nov. 9, which snapped the Tigers' 17game winning streak (read more at paw.princeton. edu). Through eight games, Tyler led all Ivy players in tackles for losses (13).

MARYKATE NEFF '21

scored the most important goal of the lvy League season for Princeton field hockey, redirecting Sammy Popper

²23's shot into the cage in the fourth quarter to give the Tigers a 3-2 edge over Harvard Oct. 26. The Tigers also won the following week against Cornell, 3-0, to secure the league's bid to the NCAA Tournament and completed a perfect 7-0 Ivy season with a 3-1 win at Penn Nov. 9.

CAMREN FISCHER '23

finished fifth in the Ivy Heptagonal Men's Cross Country Championships at Van Cortlandt Park in the Bronx Nov. 1, leading a trio of

Princeton runners in the top 10. The Tigers placed third in a tight team race, eight points behind champion Penn. On the women's side, Princeton finished fourth in the team standings, led by Melia Chittenden '21, who placed sixth. \blacklozenge

On the Campus / Sports

continued from page 25

the time, I didn't think either of those things were going to be an option."

But with a fresh mindset and a greater awareness of how to seek help when he needs it, Cannady said, he is "back on that journey." This fall, he's completing his senior thesis and his final two Princeton courses, with plans to graduate in the Class of 2020. And since late October, he has been playing with the Long Island Nets, the affiliate of the Brooklyn Nets in the NBA's developmental G League.

In his pro debut Nov. 9, Cannady scored a team-high 23 points, including six free throws that clinched the game in the final 30 seconds, as the Nets topped the Fort Wayne Mad Ants, 121-117.

G League teams play a 50-game season from November through March — nearly twice as many games as college teams in roughly the same amount of time. Though the league is just one rung below the NBA, its pay scale is a world away from the multi-million-dollar salaries seen at the sport's top level: In 2018-19, G League players made \$35,000 for the full season. But the opportunity for promotion is real. More than 40 percent of players on the NBA's opening-day rosters this year spent time playing in the G League.

Princeton hasn't seen an alumnus in the NBA since Steve Goodrich '98 played nine games for the New Jersey Nets in 2002, and Cannady is determined to end that drought. "I'm proud to be a Princetonian doing this," he said. � By B.T.

FALL FINISH @ PAW ONLINE

Read more about Princeton's fall-season teams, including NCAA playoff updates, at paw.princeton.edu.





TRAINING FOR TOKYO

Dimoff '05's Winding Road Leads to U.S. Olympic Marathon Trials

Few athletes have as lengthy and circuitous a path to athletic success as Carrie Strickland Dimoff '05. After walking on to Princeton's cross country and track teams, she struggled to figure out her best event, trying middle-distance runs and the 400-meter hurdles before finding a niche in the 3,000-meter steeplechase. She set a school record in the steeplechase in 2004, but soon after, heel woes and stress fractures interrupted her training. "I had a great experience running at Princeton," Dimoff said. "But my running talents and abilities really didn't develop fully there."

After graduation, Dimoff headed to Portland, Ore., to begin working at Nike. Her running remained recreational until 2007, when friends and co-workers encouraged her to look toward larger goals. She took the bait. What transpired was undistracted, injury-free training that resulted in Dimoff making the Olympic trials final in the steeplechase twice, in 2008 and 2012.

Dimoff eventually was lured by the siren song of the marathon, and she qualified for the 2016 Olympic marathon trials, where she ran 2:44:58 to finish 40th on a sunbaked day in Los Angeles. Afterward, Dimoff joined the Bowerman Track Club and made steady improvement, running a personal-best 2:30:54 to finish third in the California International Marathon in 2017.

Dimoff was selected to represent the United States in the marathon at the 2019 World Championships in Doha, Qatar, in September. The race began at midnight, but the nocturnal start time did little to shield the marathoners from Doha's oppressive weather, with temperatures still in the 90s. Dimoff wisely adjusted her race plan, starting slower and finishing strong. She methodically weaved through the field, and by the end, she had moved all the way up to 13th (2:44:35) among 70 worldclass athletes, 30 of whom failed to finish.

The next big hurdle for Dimoff will be the U.S. Olympic Trials Marathon in Atlanta at the end of February. While Dimoff has a record of producing her best performances at the trials, she knows that she will need to unfurl a perfect race to make the U.S. team. But she also knows that every runner on the starting line has a chance to qualify. After all, that's why they conduct the trials. \Leftrightarrow *By Dave Hunter '72*

READ MORE in an expanded profile of Dimoff at **paw.princeton.edu**

Life of the Mind

In the Rockaway neighborhood of the New York City borough of Queens, the historic boardwalk was washed away and homes sustained irreparable damage, in part because of the flooding that came with Hurricane Sandy in October 2012.

ENVIRONMENTAL ENGINEERING

Here Comes the Flood

A study predicts a future full of catastrophic flooding in the United States

hen Hurricane Sandy barreled up the East Coast of the United States in 2012, the storm surge flooded coastal cities from Florida to Maine — especially inundating New York and New Jersey. As it flooded Manhattan subway tunnels and washed away coastal homes, the storm caused damage in excess of \$70 billion, making it one of the most destructive weather events in U.S. history.

Such catastrophic storm surges are exceptionally rare, occurring less than once a century. Comparatively less intense storms such as 2011's Hurricane Irene, which caused an estimated \$13.5 billion in damage from Maine to South Carolina, can cause 100-year floods, so called to denote their infrequency.

"We generally think about 100-year floods as rare, extreme events," says Ning Lin, associate professor of civil and environmental engineering. According to a paper published in August in Nature Communications, however, she and her colleagues predict that by the end of the century, a 100-year flood like the one Irene caused could occur on the East Coast yearly. Even the more extreme flooding caused by Sandy, or 2018 Hurricanes Florence and Michael (which caused \$17 billion and \$25 billion in damage, respectively) could occur every few years. The study was spearheaded by Reza Marsooli, a former Princeton research scholar who is now an

assistant professor at Stevens Institute of Technology in Hoboken, N.J., with assistance from Lin; Kairui Feng GS; and MIT professor Kerry Emanuel. While past models on flooding have used projections for climate-induced sea-level rise, this study was the first to factor in the effect of tropical storms for the entire U.S. East and Gulf coasts. In all, the group combined six different climate models, after independently verifying their accuracy.

The group then drilled down on flood risk, county by county, predicting that for the New England and the mid-Atlantic regions, 100-year floods will occur annually for most areas toward the end of the century. That change is almost entirely accounted for by an increase in sea-level rise. "As the storm-surge level is relatively low at high latitudes, sealevel rise, which is relatively high at high latitudes, causes a more dramatic change in flooding," Lin says.

For the southern Atlantic and Gulf coasts, the study predicts greater variation in the rate of 100-year floods,

Life of the Mind



In a paper published in August in Nature Communications, Ning Lin and her colleagues predict that by the end of the century, a 100-year flood like the one Irene caused could occur on the East Coast yearly.

ranging from every one to 30 years by century's end. That change, they found, will be due in almost equal measure to sea-level rise and increased storm activity. "The storm-surge level is high to start with, so the lifting of sea level can't change as dramatically," Lin says, "but since intense storms will likely happen more often, they can contribute to a bigger part of that change."

While the study adds urgency to efforts to slow climate change, the geographic specificity can also help areas plan for worst-case scenarios. Lin says there is much they can do to prepare, including building coastal barriers such as seawalls, house-elevation studies, and wetland conservation.

The study could be used on a larger level to influence environmental policy. Current Federal Emergency Management Agency flood maps are drawn with 100-year flood levels in mind. "They haven't included the effect of climate change, so the maps send people wrong messages about future risk," Lin says. Changing those maps could help the government better appropriate resources for disasters, influence future coastal construction, and even encourage people to live farther away from the shoreline - so that when these catastrophic storms do occur, they might cause less damage overall. ΦBy Michael Blanding

FACULTY BOOK: MICHAEL GRAZIANO '89 *96 You, Uploaded



The science-fiction fantasy of a computer with conscious self-awareness could become reality within a generation, according a new book by psychology and neuroscience professor Michael Graziano '89 *96. Rethinking Consciousness (W.W. Norton) explores Graziano's theory of consciousness, which demystifies self-awareness into a function that a software engineer could implement in

a computer. Its implication is that the minds of biological humans could someday migrate into computers, their thoughts continuing after death as data and code, with memories, aspirations, and neuroses permanently intact. Graziano spoke with PAW about how he imagines a world transformed by such immortal electronic minds.

How could a human mind be put on a computer?

There are really two technological questions. First, can we get computers to be conscious in the same sense that we are? And the answer to that, I think,



is yes, and much sooner than people think. You can build a computer that thinks it is conscious in the same way that we think we are and can attribute consciousness to the people around it in the same way that we do.

When do you expect this to happen? Oh, I think within a couple of decades. This field of artificial intelligence is moving at blinding speed. With theories like the one I'm working on

Michael Graziano '89 *96

and some others, we're looking at algorithms and code and engineering principles that programmers can really sink their teeth into. We're going to get computers that act in ways that we look at and say, "They must be conscious."

So that's one aspect of it. There is a different technological question: Can you read a person's brain in enough detail to migrate their specific mind to machine form? And that's much further in the future. Understanding the neurology, the brain, and what to scan, and what detail, and so on – that's very difficult, but it's not physically impossible. That, I figure, could be a couple of centuries from now. And that, I also think, is inevitable.

You discuss a future in which life is primarily preparation to join people living in computers. How would that society develop? Paradoxically, this revolutionary new society would be an inherently conservative society. It'd be very hard to change and move forward. I don't know if all change would stop, but we know that culture moves forward through new, fresh blood that comes in generationally. But the old generation would never leave, and never lose their intellectual capability or their stamina. They would accumulate political power.

Would you want yourself to be put into a computer?

Good Lord, no. I think I would get bored. It'd be like a video game with infinite lives. • Interview conducted and condensed by Charles Wohlforth '86

READ a longer version of Michael Graziano's Q&A at paw.princeton.edu

Tarnita's Studies: A Sampling

THE ANTS GO MARCHING During her Ph.D. studies, **Tarnita questioned** why worker ants forgo mating to help the queen procreate instead. "How do you get a society where millions and millions of individuals don't reproduce?" By pairing mathematical models with lab research, Tarnita's team was able to show the colony gained an enormous competitive advantage once six ant "daughters" were in the nest helping the queen. By splitting the tasks among the six, the whole colony became more productive — so while some ants focused on nursing larvae and cleaning parasites, others foraged for food and took out the trash.



DESERT PATTERNS Stunning honeycombshaped patterns formed by evenly spaced discs of dense vegetation or bare patches of earth stretch across landscapes in Africa, Australia, and South America. It puzzled researchers "that nature, at that scale, can produce such simple order," Tarnita says. Under each of these spots was exactly one colony of termites; her team found that those colonies will expand outward until they meet another of equal size, then "they always have skirmishes at the border. but neither of them can

really gain ground," she explains. The hexagonal organization allows them to maximize resources while keeping away from neighboring colonies. **Discovering that termite** ecosystems can create these patterns amends theories suggesting that such circles were indicative of an ecosystem on the brink of collapse.



LONERS AS INSURANCE When food is scarce, slime molds - singlecell organisms — band together to form slug-like structures that crawl around and, once in a safe environment, produce spores. However, some cells always stay behind. While most experts dismissed these loners as defective, Tarnita found this behavior was actually an evolutionary advantage. "What if something goes wrong with the multicellular development and somehow nobody survives? Then this whole species would die out," she explains. "So they leave a reservoir of individuals.... They act like an insurance strategy." • By A.B.





ECOLOGY AND EVOLUTIONARY BIOLOGY: **CORINA TARNITA**

Crunching the Numbers Behind Nature's Wonders

Corina Tarnita had no idea she'd become an expert on ants. Or termites. Or amoebas. The Romanianborn Princeton professor of ecology and evolutionary biology started out as a gifted math student, before coming to the United States at 19 to earn a bachelor's degree and Ph.D. in mathematics from Harvard.

As her numerical studies progressed, however, Tarnita feared going deeper into highly specific research areas. "It started to feel claustrophobic. I didn't really like the feeling of knowing only three other people in the world know about your problem and care about it."

As a diversion, she picked up a book called The Equations of Life, which offered "a math perspective on biology" and opened her eyes to a whole new area of study. "It was like putting on glasses and finally seeing something in what

Ilustrations: Agata Nowicka (top); Mikel Casal (at right) "I'm most passionate about auestions around how nature organizes itself." savs Corina Tarnita.

otherwise seemed like a blur before," she says of applying math to life sciences. Now, Tarnita develops the sometimes-illogical ways

mathematical models to explain living organisms interact and cooperate. • By Agatha Bordonaro '04

THE PRICE OF UPWARD MOBILITY

What do students leave behind on the path to success?

BY JULIA M. KLEIN

ennifer M. Morton '02 came to Princeton from Lima, Peru, a first-generation college student raised largely by her maternal grandmother after her mother immigrated to London in search of opportunity. That might sound like a background that would lead her to struggle on an Ivy League campus — and at times, she did. But Morton's history also helped her succeed.

Like her mother and grandmother, who had left her home in the Andes to find a better life in Lima, Morton expected to seek opportunities elsewhere — in her case, Princeton. "Before embarking on that journey, however, I had already had my eyes opened by this immigrant narrative to the potential costs (and gains) of this path," she writes in her new book, *Moving Up Without Losing Your Way: The Ethical Costs of Upward Mobility* (Princeton University Press). "When I got to college, my family, like that of many first-generation college students, couldn't help me figure out what to look for in an advisor, what classes to sign up for, or how to become a part of the campus community. But luckily, they had prepared me to be an immigrant — that is, to feel lonely, distant, and out of place."

As she explained to a gathering of more than 50 students and professors at Swarthmore College, outside Philadelphia, in October: "I had a very ready narrative: This is a different country, they do things differently here. ... I knew that I would miss home, and I also knew that there would be trade-offs involved."

Many first-generation college students, she says, do not understand those trade-offs or the sacrifices that may be required along the way. Morton, an associate professor of philosophy at the City College of New York and the Graduate Center, CUNY, wrote *Moving Up* to illuminate those tradeoffs — which she calls "ethical costs" — for both university administrators and the students themselves.

Morton describes low-income and first-generation students who view college as a means to transform themselves and their life circumstances as "strivers." Addressing them in her book, she writes: "You've heard from family and friends that college is your ticket to a more comfortable life, but you have seen few people in your life succeed in that path. You are excited to go to college, but figuring out how to make it through and how to pay for it is daunting."

The potential costs of upward mobility are not just monetary, Morton says: They include relationships with family and friends, connection to community, and a sense of identity. Struggling to fit in at elite institutions such as Princeton, strivers may feel isolated and disoriented, while also becoming increasingly estranged from their home communities. "The traditional narrative of upward mobility in this country acknowledges the academic and financial hurdles that strivers have to overcome to succeed," she writes, "but it does not do a good job of preparing students for the emotional, psychological, and ethical challenges they will confront. We rarely tell students that their success may come at the expense of some of the things that they hold most dear"

Aspects of students' personal identity, from their mode of speech to their values, may come under stress, Morton says.

Jennifer M. Morton '02, pictured in Shepard Hall at City College of New York. Strivers often need to "codeswitch," adjusting their behavior to different settings. But this strategy, she suggests, invites its own problems, including feelings of inauthenticity. "The ethical challenge," she writes, "lies in striking a balance between resisting the pressure to adopt the dominant cultural norms when those conflict with our values and being flexible enough to adapt and thrive in that culture." It's not just students who are challenged, Morton says. Family and friends, while proud of the striver's achievements, may experience distance and disconnection.

Morton encourages strivers not to become "complicit" in an unequal socioeconomic system after they have achieved a position of power. In the workplace, she suggests, successful strivers could use their power to provide the flexibility their employees need to care for children or parents at home; in hiring, they might look beyond job candidates with elite degrees. "An ethical narrative," she writes, "should help the striver think not only about the challenges and sacrifices that will have to be made on the path of upward mobility, but also about the potential impact he or she can have at various points along that path."

At Princeton, Khristina F. Gonzalez, associate dean of the College and director of programs for access and inclusion, says Morton has contributed a conceptual framework to understand problems the University has been grappling with. With both



"It's not about assimilation. It's about transforming the institution and using all the opportunities and resources and education that Princeton gives you to make good on the values you already hold."

> - KHRISTINA F. GONZALEZ, ASSOCIATE DEAN OF THE COLLEGE

financial burdens and ethical conflicts, firstgeneration and low-income students "are really running two marathons at the same time," Gonzalez says.

Among Princeton's support programs is the Freshman Scholars Institute (FSI), an eight-week pre-orientation program for about 80 first-generation and low-income students. The Scholars Institute Fellows Program, launched in 2015 to expand FSI, provides a fouryear "mentorship community" for students who identify as first generation or low income. It includes group meetings

with trained upper-class mentors, workshops introducing students to academic opportunities, and counselor-led discussions on ethical and psychological issues. Programming for families includes an orientation, newsletters, and socialmedia outreach.

"We recognize that there may be a gap between the [students'] home communities and what Princeton is like," Gonzalez says. "It's not about assimilation. It's about transforming the institution and using all the opportunities and resources and education that Princeton gives you to make good on the values that you already hold."

Morton's own path to Princeton and to an academic career was by no means assured. She was born to a Peruvian single mother and a Uruguayan father she never knew. The first of her three stepfathers, an American businessman, helped secure her admission to a private school, where she says she received a first-rate education amid the terror campaign of the Shining Path guerrillas. After Morton's mother and aunt immigrated to London in the 1980s, her grandmother encouraged her to leave Peru. "You're not going to be able to find a better life here," she told Morton. Her aunt's marriage to a wealthy man helped fund her education, Morton says.

Morton says she had "a pretty good experience overall" at Princeton, though she felt like an outsider and sometimes avoided academic risks. Rather than ask for help in an advanced math class, where she struggled to understand the material, she dropped the course. "I regret that I gave up so quickly," she says. "I didn't want to fail."

She earned a doctorate in philosophy at Stanford, then took a job as a visiting assistant professor at Swarthmore, where she was struck by the talent and polish of the many students from privileged backgrounds. "I realized that my [Swarthmore] students would be fine, no matter what," she says. Experiencing "a crisis of faith" about her vocation, she began reading in the sociology of education.

Her next job was at City College of New York, or CCNY, where her classes included undocumented immigrants, housewives returning to school, and men and women who pursued full-time jobs along with their studies. The contrast with Swarthmore could not have been starker. Morton felt she could have a greater impact at CCNY, where, she says, so many students were torn between family demands and academic requirements. When they missed class or assignments, she came to realize, "in most cases, there was some rather complicated story" involving obligations outside of school. Offering the usual advice, about putting themselves first, didn't seem adequate. "That's when I came up with the idea of the ethical costs," she says.

Next month, Morton — who is married to Jason Anderson *05, an architect, and has a 2-year-old daughter — starts a new job as an associate professor at the University of North Carolina at Chapel Hill. "It was a hard decision," she says, precipitated in part by deteriorating working conditions at CCNY. One of her UNC courses will be an interdisciplinary class targeted at firstgeneration students. Pairing philosophy and memoir, it is titled "Self: Aspiration and Transformation." �

Freelance journalist Julia M. Klein is a cultural reporter and critic in Philadelphia.

GABRIELA'S Story



Excerpted from Moving Up Without Losing Your Way: The Ethical Costs of Upward Mobility by Jennifer M. Morton. Copyright 2019 by Princeton University Press. Reprinted by permission.

abriela* grew up in Newark, New Jersey, and graduated from Princeton a little over a year before our interview took place. She is half-Brazilian — her mom was an immigrant — but grew up with

her White father after her parents' divorce. They struggled financially. Her father was unemployed for long stretches of time. Sometimes they had no heat in the winter. Gabriela attended a Catholic school in Elizabeth, New Jersey, on a full scholarship. The school was safe, but it wasn't like the kind of private schools that many of her classmates at Princeton had attended. It was majority non-White, and it didn't regularly send students to highly selective colleges.

Gabriela had a rough first semester. She didn't get adequate advising, took too many courses, and struggled academically. She told me that she internalized the "idea that [she] wasn't good enough ... that [she] was an affirmative-action admit or that [she] wasn't smart enough to be there ... an admissions mistake." She felt that others saw her as a token – that she was there to "represent minorities" and so she had to work extra hard to prove that she was as good as everyone else. Despite these initial challenges, Gabriela flourished. She joined two very different groups - the women's rugby team, which she described as more diverse in a variety of ways than the general population at Princeton, and a sorority, which provided a different kind of female bonding experience. These groups and a professor who "went out of his way to remind [her] that she deserved to be at Princeton" provided crucial support and guidance.

Even as she became more and more integrated into a diverse set of new social networks, Gabriela still went back home often, especially when her grandmother fell ill. In her senior year, when her grandmother's health deteriorated further, Gabriela lived at home at the beginning of the semester. She drove to school early in the morning to take classes and back home in the evening — an experience that probably very few of her classmates were having in their last year of college. Her relationship with her home community was complicated. She told me: "I get a lot of judgment from the community ... just because they couldn't understand my ambitions, people who didn't understand why I didn't come home from college every weekend, didn't understand why I wanted to study, didn't understand why I would study something stupid like politics."

Yet Gabriela wasn't entirely comfortable with the social life at Princeton either. The undergraduate experience at Princeton has long been dominated by eating clubs, controversial co-ed social and dining clubs that have been part of the university's history since the nineteenth century. Gabriela hated the eating club system. And the university itself has viewed the clubs critically, suggesting in a 2010 report that "the clubs ... continue to be a polarizing force, for reasons that seem to derive in part from a social stratification that persists despite a number of efforts to ameliorate it, with students from lowerincome families and minority groups participating less fully in the clubs than other students." But despite Gabriela's well-founded dislike of the eating clubs, she still joined one, feeling that it was important to have a club on her résumé when she went out on the job market. The alternative, being an "independent" (the name given to those who are not members of eating clubs at Princeton), meant in her view: "You're poor. Everyone knows it. Nobody wants to talk about it ... but having that club on my résumé is going to have political payoffs later on."

Gabriela became adept at navigating both worlds during college. But when I asked her about her community now, she found it hard to identify one. She no longer went back home; her grandmother had passed away, and her father had moved abroad. She told me she was comfortable among the other college graduates in her internship program but felt particularly close to her roommate, the only other minority. They were able to talk about their experiences in a way that she could not with some of the other people in the program. But she wasn't entirely sure how she felt about the ease with which she now fit in with her group of college-educated co-workers. She often discussed this with her roommate, wondering whether they were more at ease because of "assimilation and becoming comfortable with being a minority or getting tired

of pushing back and demanding to be treated better ... [or] how much of it is actual improvements." As we will see, the questions that Gabriela and her roommate are contending with here — How am I changing? And, crucially, why? — are at the heart of the codeswitching experience for strivers. *pseudonym



Gabriela became adept at navigating both worlds during college. But when I asked her about her community now, she found it hard to identify one.

THE LAUREATE WHY JIM PEEBLES *62 GOT THE NOBEL PRIZE

BY JOEL ACHENBACH '82



hen the phone rang at 5 a.m., Jim Peebles was already awake, but still in his nightclothes.

"Are you Phillip James Edwin Peebles?" asked the voice on the other end. Hearing an

affirmative, the voice said, "We are awarding you the Nobel Prize in Physics. Do you accept this prize?"

An easy question for a man who has spent his life trying to answer hard ones.

"Who was that?" asked his wife of 61 years, Alison. He told her he'd won the Nobel.

"Good God," she said.

What followed from that Oct. 8 phone call was a tumultuous, joyous, demanding period for a man comfortably retired for nearly two decades.

"This has been craziest week of my life," Peebles said when I visited him in his Jadwin Hall office eight days after he got the call. "You understand this is disruptive of our usually tranquil, quiet life."

When you're 84 years old and have been on emeritus status since 2000, a Nobel Prize arrives with supernova intensity. Peebles, the Albert Einstein Professor of Science, emeritus, has won many awards - including the Shaw Prize and the Crafoord Prize, two of the world's biggest. But the Nobel is many orders of magnitude larger in its repercussions. He was immediately bombarded with interview requests, invitations to give lectures, and emails from former students, some of whom had been out of contact for decades.

When I first asked to interview him, he demurred – "I'm totally swamped." But I pressed the case and he obliged, granting 90 freewheeling minutes in which we covered a territory spanning more than 60 years of life in Princeton and roughly 13 billion years of cosmic evolution.

The decision to give Peebles a Nobel (he shared it with two astronomers who discovered the first planet around a distant sun-like star) was met with what appears to be universal, tablethumping acclaim across the broader physics community.

"It was so obvious that he should get it," said Princeton physics professor Jo Dunkley. "He's done everything in cosmology."

The Nobel committee doesn't give lifetime achievement awards – officially the prizes go for specific discoveries – but Peebles assumes the honor reflects his long tenure in the field. "I have been working in this subject since 1964, 55 years, and during that time I've given endless lectures all over the world," he said. "I think pure longevity might be at the root of the whole thing."

"He essentially invented modern cosmology. He was there at the beginning," said Princeton astrophysicist David Spergel '82. Spergel played a key role in NASA's Wilkinson Microwave Anisotropy Probe – a space-based instrument, named after Peebles' Princeton contemporary, physicist David Wilkinson, that examined the cosmic microwave background radiation. When it came time to present the results, Spergel told me, he had a simple message for everyone: "The thing we learned is that Jim Peebles is right."

Physicist Michael Turner, who recently retired from the University of Chicago, said Peebles "took cosmology from a time when it was the province of astronomers, and maybe there were five or 10 of them around the world, to the present where cosmology is an activity done by thousands of physicists and astronomers. He really has been the dominant figure in the field."

Peebles still conducts research - his chalkboard is loaded with equations dealing with galaxy formation – but he doesn't publish as much as he used to. He's a sage now, a sounding board. He's the guy in the physics department who plays the role of skeptic when someone comes up with a shiny but overly fragile new theory.

"My children remember him as the guy who's like Dumbledore," said Princeton physicist Bill Jones. "I think that's very apt. He's in every way brilliant and benevolent."

When Peebles arrived at Jadwin Hall that Tuesday morning,
Nobel laureate James Peebles *62

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freshly laureated, his colleagues had already gathered, and greeted him with sustained applause. Peebles had to make an impromptu speech.

"It is astounding to think that nature operates by rules that we can discover, by trial and error, of course," he said. He spoke of Einstein's general theory of relativity, which is central to cosmology but remained largely untested when Peebles first began pondering the mysteries of the universe. In fact there was only one precision test back then, involving the orbit of the planet Mercury. But theorists believed the theory should apply at cosmological scale.

"That used to haunt me. Why in the world would you imagine that a theory that is tested on the scale of the solar system would apply to the universe? It is absolutely startling, yet true, very well checked," he said.

And then he said something very Peebles-like about the standard model of cosmology — the consensus narrative of the origin, composition, and evolution of the universe — which he played a key role in developing.

"I'm still hoping it's wrong," he said.

Meaning: He hopes that the work of cosmologists is not complete, that there will be new discoveries, new theories, a deeper understanding of the nature of the universe.

"Just the variety of theories we've discovered so far, and their incompleteness, leads me to wonder if there is such a thing as a complete theory," he told me. "Or is there just a succession of approximations all the way down?"



hen I visited Peebles, he'd begun to settle down after his wild and wonderful Nobel week. He'd had lunch alone that day, in the faculty dining room at Prospect House, his only companion *The New York Times*.

Early that morning he had walked to work, as always, as he lives just a mile away, east of campus. At one point during our interview he got a call from his wife, Alison, who was concerned that a pelting rain had arrived. He told her not to worry; he could still walk home. "I have an umbrella," he assured her. I'm reporting this trivial detail only to dispel any notion that winning a Nobel Prize means you start traveling everywhere by limo.

When he walks to work, he said, his mind wanders. I asked him if that's good or bad. Good, he said: "I think it's important that your mind wanders. It's kind of like being asleep. Odd things occur to you."

The universe is the ultimate odd thing: inconceivably more immense than we knew a century ago, and shockingly dynamic, the whole thing expanding at an accelerating rate. For a theorist strolling to work, the most entrancing fact of the universe is that it obeys mathematical equations. As Peebles said on Nobel day: Nature operates by rules we can discover. It was Newton who realized that the fall of the apple from the tree was governed by the same force that guides planets around the sun. A mortal mind, just a few pounds of flesh, can crack cosmic codes.

When I asked Peebles if he was humbled by the vastness of the universe in comparison to his own tiny slice of spacetime, he said no — to the contrary, it's empowering. In the old days his colleague Rubby Sherr *38 always used to say to him, "Isn't

"Just the variety of theories we've discovered so far, and their incompleteness, leads me to wonder if there is such a thing as a complete theory. Or is there just a succession of approximations all the way down?"

- James Peebles *62

that neat?" And that's how Peebles thinks of the universe. It's really neat!

He was born in Manitoba, Canada. His father worked for a grain exchange and his mother was a homemaker. Peebles remembers that his father was good with his hands and liked to build things. "I always loved to watch him do it, and I loved to build things on my own. I was never exposed as a kid to any real science," he told novelist and physicist Alan Lightman '70.

So he seemed on a path to be an engineer. Astronomy? Astrophysics? Cosmology? He wasn't even interested in the stars.

"I remember admiring the starry skies over the plains of southern Manitoba, and aurora, but took no particular interest in the names of planets or stars or constellations. I still admire the sky, and my career has fed on what astronomers are doing, but I still cannot get interested in where the planets are," he wrote in an essay titled "Seeing Cosmology Grow," published in 2012 in the Annual Review of Astronomy and Astrophysics.

He went to college at the University of Manitoba, where he met Alison, who was studying microbiology. As he tells the story, his career path was externally determined. An influential professor at the university, Kenneth Standing, simply informed Peebles that he would go to Princeton to study physics as a graduate student. And that's what Peebles did. He and Alison married and then arrived in Princeton in the fall of 1958. He would receive his doctorate from Princeton in 1962 under the guidance of physics professor Robert Dicke '39.

Dicke embraced the big bang theory, which held that the universe had emerged from a hot, dense state billions of years ago, expanding and cooling. The theory was not universally accepted. The great British physicist Fred Hoyle, for example, promoted a "steady-state" universe. Hoyle coined the term "big bang," which was meant to be derisive.

"It's a terribly inappropriate term," Peebles told me. "A 'bang' connotes an event in a position in spacetime. The theory describes not an event, but the evolution of the universe as it expands from high density and temperature to the present. There was not a position as you would associate with a 'bang.' The universe everywhere was expanding. 'Big' is OK. 'Bang' is silly."

But the name stuck and lost its patina of derision. One implication of the theory fascinated Dicke: The universe should be saturated with radiation. It should be



detectable and measurable. What scientists believe today is that the infant, expanding, cooling universe had a transitional stage in which photons (light) decoupled from matter and the cosmos became transparent. Dicke believed it would be possible to find the cosmic microwave background radiation the CMB.

"Bob's invitation to think about theoretical consequences of finding or not finding this radiation set my career," Peebles wrote in his 2012 essay. "I was uneasy about the slight empirical basis for cosmology, but could think of a few interesting things to work out, which led to others, which led to the realization that this was fertile ground."

What happened next is perhaps the most famous moment in the history of Princeton physics.

During World War II, while at MIT, Dicke had invented a radiation detector called a Dicke radiometer. He had designed it as a tool to help win a war, but two decades later he thought it could be used to detect the universe's "fossil" radiation. Dicke tapped Princeton colleagues David Wilkinson and Peter Roll to be the experimentalists, and they set up a contraption inside an unused pigeon coop that was then on top of Guyot Hall. The fourth member of the team was Peebles, serving as the theorist.

Peebles was aware that scientists at other institutions might also be searching for the background radiation, and he asked Wilkinson if it would be acceptable to mention the Princeton effort at a symposium in Maryland. No problem, Peebles was told: We're so far ahead of everyone, no one will catch us. So Peebles let the cat out of the bag.

Unbeknownst to the Princeton scientists, two researchers at Bell Labs in Holmdel, N.J., Arno Penzias and Robert Wilson, were also using a Dicke radiometer, but at a different wavelength and in hope of studying radiation from within our own galaxy. There was mysterious noise in their data, coming from all points of the sky. They tried to account for its origin and could not. Then Penzias and Wilson learned of the Princeton effort. Suddenly it all became clear. They called Dicke.

Peebles was in the room when the phone rang, and remembers Dicke speaking for just a few minutes, repeating what he was hearing from the Bell Labs team. Then Dicke hung up the phone and said, "Well, boys, we've been scooped."

They could have been crushed by the news. They weren't. Peebles said the team was relieved to learn that they weren't on a wild goose chase. There was something there, something detectable. And the faint radiation offered the first observational support of the theory of a hot early universe.

The research by Dicke, Wilkinson, Roll, and Peebles was well along when Penzias and Wilson announced that they'd found the CMB. As a result, both teams published papers in the same journal at the same time, referencing each other. It was a double-whammy event, theory and observation arriving arm in arm. The discovery became the cornerstone of what Peebles would spend his career doing — crafting theories about the origin, composition, and evolution of the universe that could be pushed through the fine filter of experiment and observation.

Bitterness over the "scoop" came much later. In 1978, the Nobel committee awarded its physics prize to Penzias and Wilson, but not to Dicke. It seemed odd, even capricious.

"Three was a no-brainer: Penzias, Wilson, Dicke," Peebles told me.

Why didn't they give it to Dicke? "I think they just blew it."

"I think it's important that your mind wanders. It's kind of like being asleep. Odd things occur to you." - James Peebles *62

n his essay, Peebles recalls teaching a graduate course in cosmology in 1969 as his colleague, the great physicist John Wheeler, sat in on the lectures and took notes. Then he'd give Peebles the notes at the end of the lecture, urging him to write a book collecting all his wisdom. And so Peebles did, authoring *Physical Cosmology*, a textbook for this young, emerging field.

Many of his students went on to careers in science. Andrew Appel '81, now a Princeton professor of computer science, took Peebles' class on quantum mechanics for two semesters in his junior year and persuaded Peebles to become his thesis adviser. Appel asked Peebles to suggest a topic involving computer programming. Peebles told him to find a way to "make his many-galaxy gravity simulations go faster," Appel recalls. "It was a great experience. In his relaxed and low-key way, he told me the physics I needed to know and let me figure out the computer science for myself."

Spergel says Peebles taught him quantum mechanics, statistical mechanics, and thermodynamics, and was renowned for his dry sense of humor. "We recorded his jokes and tried to duplicate his style," Spergel said.

When not in the classroom, Peebles played a key role in assembling the standard model of cosmology. The standard model is generally referred to as λ CDM, with the Greek letter lambda out front.

Lambda is the "cosmological constant," which has a bizarre history. Albert Einstein's original 1915 theory of general relativity implied that the universe should be either contracting or expanding, while he assumed that the universe is static. In a moment of desperation in 1917, he plopped lambda into his equations — a fudge factor, basically, which counteracted gravity and stabilized the cosmos.

But the universe is not, in fact, static. In 1929, astronomer Edwin Hubble announced that galaxies are moving away from one another, and their recessional velocity increases with distance. There followed many decades of debate, often acrimonious, about the rate of the cosmic expansion — the Hubble Constant — and even today there are contradictory measurements that have roiled the field. It's not clear if there's an error in one of the measurements or if there needs to be a major revision in the consensus theory of how the cosmos evolved.

But however that gets resolved, the existence of some kind of repulsive gravity — it's often labeled dark energy — seems to have passed observational tests and is central to the reigning theory of cosmic evolution.

Then there's the CDM: cold dark matter. It's what galaxies are mostly made of, as opposed to ordinary matter, which is a small component. The cold dark matter emits no radiation (it's cold and dark) and has a ghostly presence, its existence inferred from its gravitational effects.

The standard model posits that only about 5 percent of the universe is in the form of ordinary matter. Roughly 25 percent or so is cold dark matter. The rest, about 70 percent, is dark energy.

The standard model came together in chunks, over the course of many years. Peebles showed me an influential paper he published in 1982 that discussed the role of dark matter in shaping galaxies. Two years later he said there has to be a lambda — a cosmological constant — to reconcile everything observed about the universe. (Spergel provided an example: Without the lambda, galaxies would be moving much faster.)

Peebles didn't go around touting the standard model as gospel truth. To the contrary, he kept looking for alternatives.

"I was very uneasy that people were accepting lambda CDM so readily, and I spent much of my time inventing alternative viable theories. I was startled by the late 1990s at how well lambda CDM was working. And I'm still startled," he said.



ven as a Nobel laureate, Peebles is unpretentious. He doesn't default to jargon or give the impression that his interlocutor should know more about physics.

When we talked about the Dicke oversight, he said something that resonated: "The Nobel committee members are human beings."

Peebles is familiar with human frailty and tragedy: His youngest daughter, Margaret Ellen Peebles '84, a writer, died a year ago after a long struggle with alcoholism. He and Alison have two surviving daughters, Lesley and Marion.

The Nobel Prize comes not only with a substantial monetary award (his share of the prize will be about \$910,000) but also the requirement to give a speech in Stockholm. Peebles had to prepare that even as he proofed the pages of a book he's written on the history of cosmology, aimed at the scientific community and to be published by Princeton University Press.

I asked him why he was honored this year and not years ago. He didn't venture a guess. Another quirky thing about this Nobel was that he shared it with two observational astronomers. Isn't that apples and oranges — a theorist and two star-gazers? He doesn't think so. All three people in this Nobel clutch are explorers, looking into deep space, he said. "I feel comfortable with that connection," he said.

It was 5:30 and raining hard as Peebles headed outside to go home, leaving his nice blue blazer, which he described as a rare element of his wardrobe, safe and dry in his office packed with a lifetime's ideas and a chalkboard full of galactic mass density equations. As we walked down the stairs — even in his 85th year Peebles doesn't take an elevator — the Dicke matter burbled up again, and Peebles said his mentor was never bitter about being denied the Nobel. But Peebles said he — Peebles — was bitter about it for a long time.

I suggested he bring it up in his speech in Stockholm, graciously.

"It's awkward," he said.

After a firm handshake, and with a warm smile, he headed out into the rain with his sensible umbrella. \bullet

Joel Achenbach '82 is a reporter at The Washington Post.

BY THE SWORD: Jim Adams '61 arrived at Princeton a nonathlete, but the fencing team was recruiting: no experience necessary. By senior year, Adams had an array of medals and All-American recognition. Afterward, Adams continued to fence competitively, then took a 13-year "sabbatical" to raise his children. In 1995, he joined a national seniors team and is back at it: He is the only American to be national champ in all three weapons - foil, epee, and saber and he's done it twice, in 2010 and 2019. "I have countless friends in the fencing world," he says. "That is my greatest reward."



ARREN GEIST '05 AS LUCK WOULD HAVE IT A fortuitous set of circumstances, selfless instincts, and fast thinking end in a heroic rescue

It could have been a scene from a movie: After midnight, there's an unexplained noise followed by a crash on a deserted road. Our hero emerges from his home to investigate, but sees nothing. Then he hears muffled cries and discovers a car almost submerged in a nearby canal. He jumps in and pulls out the driver as the vehicle slips below the water's surface.

That describes what happened to Darren Geist '05 June 19, when he rescued a 27-year-old medical student whose car had plunged into New Jersey's Delaware and Raritan Canal.

For his bravery, Geist, the father of two, has been nominated for three awards — including the Carnegie Medal, given in the United States and Canada to those "who risk their lives to an extraordinary degree while saving or attempting to save the lives of others."

Geist "is deserving of any accolades," says Lt. Joseph Lech of the Lawrence Township Police Department, which nominated Geist for its annual Citizen Lifesaving Award. "Not being trained and without special equipment, what he did was really heroic."

In addition, Geist, an attorney for Colgate-Palmolive, is up for the Chairman's Global "You Can Make a Difference" Award, given to employees who make a commitment to their communities, among other contributions.

Geist and his wife, Lauren, recall hearing a "weird" noise after going to bed around midnight. Failing to find anything amiss in their home, they went back upstairs but almost immediately heard screeching and a crash. The couple's house is close to

Only about a foot of the car was above water, and inside, the driver was screaming for help. a sharp curve on a narrow road where a bridge crosses the D&R Canal, not far from Princeton's campus.

Outside, Geist heard faint cries that got louder as he neared the canal. With light only from his cellphone, he saw little until he crossed the bridge and glimpsed the car, mostly under water.

The vehicle was under the bridge with its passenger side pinned against a support rail. Only about a foot of the car was above water, and inside the driver was screaming for help.

Yelling for Lauren to call 911, Geist held on to a pillar and swung himself into the water. Making his way to the car, about 10 feet away, he pulled at the back door. It didn't budge. He tried the driver's door — and it opened. Propping the door with one arm while calling, "The front door is open!" Geist pulled the student's arm, helping him exit.

Geist later said he didn't wait for the police because could tell by the driver's screams that he was going to die. By the time the two men climbed out of the canal, police had arrived and the entire car was under water.

According to Lech, the canal was almost at flood stage due to heavy rains and had a faster-than-normal current. Geist doesn't remember many details of the rescue, explaining that he was "completely pumped on adrenaline. The water wasn't cold," he recalls, "but I was shaking when I got out."

The couple marvel at the fortuitous circumstances surrounding the rescue. "There were so many weird things the sound that got us up, so we already were awake; the fact we got out in time; and that the car door opened," Geist says. "And I was supposed to be in Canada for work that night, but my flight was canceled."

The medical student has visited the couple and wrote Geist a letter calling him his guardian angel.

Does Geist, who received a Spirit of Princeton award in 2005 for founding a project that addressed issues of child soldiers and genocide, feel like a hero?

"I don't look at it as 'I'm such a hero' but that I'm so lucky," he says. "All the things that had to go right. ... I feel lucky and blessed it worked out the way it did." *By Fran Hulette*



LESSONS FROM THE ARCTIC By Henry P. Huntington '87



Henry P. Huntington '87 lives in Eagle River, Alaska, where he works for Ocean Conservancy and as an independent Arctic researcher. Information

from the weather stations is available at www.clyderiverweather.org. This project is supported by the U.S. National Science Foundation under Award No. OPP-1733580. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the National Science Foundation.

The wind presses against my facemask and finds holes around my sunglasses, the low windshield of my Ski-Doo providing little protection at 35 mph. I am following Esa Qillaq, D.J. Tigullaraq, and Colorado State University researcher Glen Liston through a maze of broken sea ice on the way to our weather station at Ailaktalik, in Nunavut, Canada, 25 miles from the Clyde River community. The skies are clear and calm — not quite as chilly as they were yesterday when we visited Silasiutitalik, another weather station, farther from town. We reach the shore and drive up the rocky hill to the station, aiming to find out why it quit transmitting a week ago.

Our work is part of a research project funded by the National Science Foundation. Clyde River — home to Esa, D.J., and about 1,000 others — is a hamlet that's most of the way up the east side of Baffin Island and a couple of hundred miles north of the Arctic Circle. We want to understand how weather affects the Inuit, and thus what changing weather patterns may mean for them. The weather stations provide meteorological data that we can then try to connect with Inuit terminology and actions, to make sure we are all talking about the same thing.

Although the overwhelming majority of Nunavut's 38,000 residents are Inuit and have been running their own 800,000-square-mile territory for 20 years, the legacy of colonial dependence remains powerful. For a long time, the Inuit have been on the receiving end of governance, research, social policies, and economic support. Although mining, fishing, and tourism produce some income, government services — largely supported by federal funds — remain the largest sector of Nunavut's economy.

Here, global problems have local effects. Many industrial and agricultural

pollutants accumulate in the Arctic, where the climate is warming at twice the global average, though the Inuit have done little to contribute to these problems. The sea ice over which we are driving is one of Earth's most visible symptoms of climate change. By the end of summer, sea ice covers about 40 percent less of the Arctic Ocean than it did at the same time of year a few decades ago. In Clyde River, the ice forms later and melts earlier, throwing off seasonal rhythms for animals and people alike. One Clyde River resident, Joelie Sanguya, said he can still hunt seals, but it feels odd to be in his boat at a time of year when he thinks he should be on a Ski-Doo. Nowadays, the Inuit have to pay even closer attention when traveling on the ice because thin ice and cracks can be found in places where the ice used to be reliably thick and safe.

In this context, out on the wide-open tundra that is typical of Nunavut and the far north, a few remote weather stations hardly seem a vehicle for change. Yet they are part of a trend, a recognition of the capabilities of the Inuit and other minority and marginalized peoples at a time of growing demand by indigenous people to do their own work and make their own decisions. Which is exactly why Esa has led us out here this afternoon.

For a decade now, Esa has been a key part of our project, helping to choose the sites for our remote stations and carrying out routine and not-so-routine

maintenance. Anemometers, which measure wind speed, wear out and need to be replaced; memory cards need to be retrieved from cameras; and every now and then Esa needs to fix what has been damaged by a curious or perhaps irritated polar bear.

When we began our work, we visiting scientists naively assumed that we might have something intelligent to contribute to Inuit decisions about going out hunting, fishing, and traveling on land and sea. By now we realize that, no matter how much experience we have traveling this and other northern landscapes, we remain comparative novices. The Inuit do not want our advice. Instead, they welcome the information that comes from the weather stations, provided via a website in English and Inuktitut, as they make their own decisions.

A few years ago, the Canadian government authorized a program of seismic testing in the waters of Baffin Bay, off the coast from the community. Seismic testing consists of making sudden, extremely loud noises in the water and recording the echoes that come from the seabed and the geological strata beneath. Clyde River residents worried that the noise would harm marine mammals and other wildlife that are a mainstay of life and culture here. They were unimpressed by the potential for oil or mineral wealth beneath the sea and had little confidence in the assurances of officials and consultants from southern Canada; they wanted to hear from their cousins in northern Alaska, whose waters have seen extensive seismic testing and other offshore activity. Clyde River eventually took its case to Canada's Supreme Court, which found in the community's favor, halting the program and marking a major victory for local voices.

The question of what matters to the Inuit in decision-making is another one where we have a lot to learn. We had started the project with the premise that poor weather would be a deterrent to travel because of discomfort. After all, who wants to go out when the wind chill is -70, -80, or -90 degrees? Traveling with our Inuit partners and listening to their stories, however, we realize that comfort is not the issue — safety is. Thus,

I've seen a shift in the Arctic research community from "Why should we work with indigenous communities?" to "How do we work with them effectively and respectfully?"

in wintertime, the big hazards are flat light and whiteout conditions, in which it would be all too easy to drive your Ski-Doo off a cliff. In summer, wind and waves pose a risk to small open boats, by swamping if the waves are too big, or by blowing a boat out to sea if its motor dies in an offshore wind. Comfort can usually be achieved with the right clothing, though sometimes living in the Arctic just means dealing with what nature serves up, something we visitors try to accept with stoicism similar to that of our Inuit partners.

Our project is also part of a larger pattern here. To capitalize on local talent and to address local concerns, several years ago Clyde River founded its own research institute, named Ittaq, which is our local partner and home base while we are in the community. Ittag's offices are in a small building with stylish track lighting on a leaky ceiling, an apt symbol for progressive activities on a shoestring budget. Here, Inuit researchers are mapping the lands and waters on Inuit terms, through stories accumulated in a rich and deep oral tradition. Contemporary place names, sprinkled like confetti by early European visitors, are being restored to the Inuit originals, steeped in history and description and thus a vital aid to navigation across time and space.

For my part, driving a Ski-Doo and unscrewing a faulty anemometer seem a far cry from my undergraduate years as a rowing-obsessed English major. Writing my senior thesis, however, gave me a glimpse of the joys of independent research, leading to graduate school and then a career working with Arctic peoples and their environment. In three decades, I've seen a shift in the Arctic research community from "Why should we work with indigenous communities?" to "How do we work with them effectively and respectfully?"

Sitting in the sun with a cup of tea and snacks after diagnosing the problem with the weather station at Ailaktalik, Esa, D.J., Glen, and I chat about the project and about life in the North. The day before, on our way up the fjord, Esa found a seal den and in short order had fresh food to take home to share with his family and others. D.J. is disappointed not to find ptarmigan, which his pregnant partner seems to be craving. Tragedy is never far away, either, as we discuss the accidental death of a revered elder from Clyde River and a recent murder in a community up the coast.

Our time here reinforces the idea that learning how to work together with the Inuit, as with anyone else, is largely a matter of being there together. High-level policy interventions can help provide more opportunities for the Inuit to take control of their own affairs, as in a recent shift in Canadian government research funding that allows organizations like Ittaq to receive funds directly rather than through a university. Such steps are important, but do not provide academics or locals with an understanding of one another. In addition to our visits to Clyde River, Esa and other Inuit have come to Colorado to see the academics at home and work. They enjoyed speaking to a local high school class, were wary of riding horses, but enjoyed driving Glen's tractor through a field. Perhaps going to a professional hockey game was the true highlight for the visitors from Canada.

As we get back on our Ski-Doo for the journey back to Clyde River, we are a team not because someone far away told us to become one, but because we spend time together, listen to one another, tease one another, and find shared purpose in what we do. Building relationships of this kind takes time, patience, and humility. There is no other way to connect across cultures, worldviews, and personalities. The wind again in my face, I think about how lucky I am to spend time beyond what is familiar and comfortable, to recognize the limitations of what I already know, and to see so much of our shared world.



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STAGE WHISPERERS

How a group of friends who met at Princeton are holding the stage

Albert Einstein didn't dance — that we know of — but three of him are dancing, simultaneously, at a rehearsal for the Prospect Theater Company's new musical, *Einstein's Dreams*.

One is Einstein himself, the lead character (played by Zal Owen), dancing with his imaginary muse, Josette (Talia Cosentino). There are also two other pairs of Einsteins and Josettes, in parallel universes, as Einstein imagines multiple possible futures. The musical focuses on Einstein's life in the spring of 1905 as he developed his theory of special relativity while working in the Bern, Switzerland, patent office. Not exactly song-and-dance fodder, perhaps, but Cara Reichel '96, the show's director, is making it work.

Einstein's Dreams is adapted from the 1992 novel of the same name by Alan Lightman '70. Lightman's novel has been adapted for more than 100 theatrical productions over the years, but he calls this "one of the best." He says he appreciates the continuing interest in his book and is pleased to let others stage it in their own ways. "I've drawn inspiration from many other artists over the years, so it's gratifying to be able to pay back some of that debt."

The show's Princeton connections are overwhelming. Besides Lightman (and Einstein, who was never a University professor but was frequently found in the original Fine Hall), the Prospect Theater Company was founded in 1998 by five alums: Reichel, her now-husband Peter Mills '95, Melissa Huber '96, Tony Vallés '97, and Charles Perkins '96. All but Perkins remain with the company: Reichel is the producing artistic director; Mills, officially listed as an associate artist, writes the music and lyrics for many Prospect shows; Huber is managing director; and Vallés is communications director.

Prospect is dedicated to bringing new musicals to the stage, but in terms of its history a better theatrical analogy might be to those old Judy Garland-Mickey Rooney "Let's put on a show!" musicals from the 1930s. The company's founders met as undergraduates, performing in

Prospect Theater founders at their 15th-anniversary party, from left: Tony Vallés '97, Melissa Huber '96, Charles Perkins '96, Cara Reichel '96, and Peter Mills '95

campus productions.

Reichel and Mills met at Triangle auditions in the fall of her freshman year. Mills, who was playing piano, recalls that Reichel sang "My Funny Valentine," but with an unusually complicated piano score. "I was very flustered by the arrangement," he says. "Also by her."

For the remainder of their undergraduate years, the friends worked in Triangle shows and with the Princeton University Players, where Reichel got her first directing experience. In the summer of 1996, they remained on campus to do a full slate of shows with Princeton Summer Theater. It was their first chance to experience theater as a profession rather than an extracurricular activity.

After that, the friends went their separate ways, but their desire to reconnect was the seed from which their theater company was born. In 1999, Reichel was looking for a directing or producing class. "I decided that producing a show would teach us just as much as taking a class on producing a show," she says. The five dipped into their own pockets for their first show, an adaptation of *Everyman*, with several original songs. It ran for one weekend in a children's theater in the West Village.

The 15th-century morality play was an unusual choice to get a fledgling theater company off the ground. But, Reichel



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says, *Everyman* was in the public domain, so they could do it for free. Religious drama had also interested her. In 1995, for her junior paper in anthropology, she developed an "environmental passion play" exploring the relationship between religious ritual and theater performance, which she staged in and around the University Chapel with members of the Chapel Choir.

Freelance artists learn to seize any opportunity that comes along, so in the summers of 1999 and 2000, the group decamped to Reichel's hometown of Rome, Ga., to do summer stock, this time staging more traditional shows such as *As You Like It* and *The Pirates of Penzance*. Everyone lived together in college housing and cooked their meals communally to save money. Reichel calls it a "theater kibbutz." Returning to New York, Prospect staged its first full season in 2002. It has since produced more than 30 new musicals.

While some have complained that too many current Broadway musicals are safe adaptations of hit movies or glorified concert shows, several recent Tony Award-winning musicals started off-Broadway, including *Hamilton*, *Hadestown*, and *Dear Evan Hansen*. "Off-Broadway is where the most exciting stuff is happening," Mills insists.

Mills, once dubbed "Off-Broadway's Golden Boy" by BroadwayWorld.com, has collaborated with Reichel to develop several of Prospect's new musicals but has also worked on his own projects, including a musical adaptation of the classic TV show *The Honeymooners* in 2017. He won the ASCAP Foundation's Richard Rodgers New Horizons Award in 2003 and its Cole Porter Award in 2011. For the last 15 years, Mills has also commuted to Princeton as music director for the Triangle Club.

In many cases, Reichel and Mills co-author the show's "book" while Mills pens the songs and lyrics. Their 2005 show, *The Pursuit of Persephone*, focused on the college romance between F. Scott Fitzgerald 1917 and Ginerva King and was loosely adapted from Fitzgerald's novel *This Side of Paradise*. Mills received a Drama Desk nomination for his original score and orchestration. In 2014, he and Reichel reconfigured the show with new songs and restaged it under the title *The Underclassman*.

Hello Girls, which ran last year, told the story of the female telephone operators who worked on the front lines during World War I. Critics praised it both as history and as entertainment. "Move over, *Mean Girls* and *Wicked*," Raven Snook wrote in *Time Out New York*, "there's a new musical exploding with grrl power, female camaraderie, and uplifting songs, and it teaches an essential piece of history to boot."

Reichel and Mills returned to campus in 2017 to teach an atelier in conjunction with the Princeton and Slavery Project. Their course examined Princeton's historical relationship with slavery through the depiction of race on the stage. With a reading list that ranged from a history of 19th-century American song to Stephen Sondheim's autobiography and the script of *Hamilton*, students worked with primary source materials to create an original musical-theater piece.

Einstein's Dreams, which was written by Joanne Sydney Lessner and Joshua Rosenblum, was first performed in Portugal, where Lessner and Rosenblum had staged another musical, *Fermat's Last Tango*, about the famous 17thcentury mathematician. Reichel learned about it when she and Rosenblum worked together several years ago and bonded over a shared interest in physics. Rosenblum sent her the script, and Reichel was entranced.

Many new plays are developed in small readings and workshops, but musicals are more difficult and expensive to get off the ground. Huber, Prospect's managing director, believes that the company provides unique opportunities for emerging writers to get their shows on stage. "An audience," she says, "is integral to learning how a show is going to breathe." They can even get Einstein to dance. \diamondsuit By M.F. B.

Einstein's Dreams runs through Dec. 14 at the 59E59 Theaters in New York City.

Regional Roundup



On Oct. 19, about two dozen people explored the Log College, in Warminster, Pa., as part of a tour organized by the **PRINCETON AREA ALUMNI ASSOCIATION** and the **PRINCETON CLUB OF PHILADELPHIA.** The Log College operated from 1727 to 1745 under the tutelage of William Tennent, a prominent preacher of New Side Presbyterianism during the First Great Awakening. After Tennent died, five of

the college's alumni, including Tennent's two sons and Samuel Finley (who would become the College of New Jersey's fifth president) were inaugural trustees of the newly chartered College of New Jersey — which would become Princeton — in 1746. Princeton's roots have long been traced to the Log College, as are the roots of more than 60 other universities. The enthusiastic tour guides from the William Tennent House Association have inspired the Princeton Area Alumni Association to help with the historic structure's restoration. �

SUBMIT your regional group's news to paw@princeton.edu

CLASS NOTES

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



MEMORIALS

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

THE CLASS OF 1944



Herbert W. Hobler '44 Herb died Aug. 10, 2019, at Stonebridge, in Skillman, N.J. He was 96.

A Hill School graduate, at Princeton Herb was on the

basketball and track teams, winning varsity letters, as well as being a member of the Crusaders Club, Triangle Club, and Tiger Inn. He roomed with Bill Brooks, Yeates Conwell, Norman Conze, Walter Hughson, Tim Knipe, and Ferdie Baruch. He was majoring in Spanish before entering the Army Air Corps in 1943. He was a navigator on a B-29, flying missions over Japan. Later he was president of the 9th Bomb Group Association for 14 years.

In 1944, while still in the Air Force, he married Mary "Randy" Randolph in California. They moved to Princeton after the war and Herb commuted to New York, working in programming at Mutual Broadcasting and NBC-TV the day it started. He also worked at CBS Network, Teleprompter Corp., and was the head of Videotape Productions of New York City.

After all this experience, he came to Princeton and founded the Nassau Broadcasting System (WHWH), including WPST (Trenton), and six cable companies. He was named National Broadcaster of the Year in 1975.

Herb served on many boards in Princeton: the American Boychoir School, serving as chair for 22 years; the YMCA; the Hun School; Tiger Inn; the Nassau Presbyterian Church; and United Way. As chair of the speakers program at the Nassau Club, he brought more than 1,000 speakers to the weekly luncheons.

Herb's service to Princeton and the Class of '44 is legendary. He was secretary and president, and chaired many Reunions. Herb's allegiance to '44 created a special reincarnation of the class after the war. Known as the Ruptured Generation, the class became very close, as seen at their many reunions.

Herb was predeceased by Randy in 2017. He is survived by son Randolph '68; daughters Debbie, Nancy, and Mary Hyson; six grandchildren; and 11 great-grandchildren. He will be missed by all.

THE CLASS OF 1946



Richard Bartholomae '46 Dick died June 27, 2019. He was 93.

Born in Detroit, Dick graduated from Chatham (N.J.) High School in 1942 and

enrolled at Princeton, playing both JV soccer and basketball.

Enlisting in 1943, he graduated from Columbia's Midshipman's School and was assigned to the Pacific Fleet, serving in combat and occupation duty until 1946. Returning to Princeton, he enjoyed senior year at Tower Club, graduating with honors in economics in 1947.

Dick's career began at F.W. Woolworth in New England. He moved back to live in Chatham and went to work for Hearst Publishing in New York City and subsequently the AMA. He married Charlotte Kenney in 1955.

In 1963, they bought the Four Winds Motel in Manchester, Vt., and relocated. Dick served on the board of the Vermont Hotel Motel Restaurant Association and rallied support from the association to pass Vermont's landmark ban of highway billboards. A lifelong golfer, Dick and a few friends built the Manchester Country Club, and he served as its first president. He also served as director and chairman of the local bank and as trustee of the local high school. Dick sold the motel in 1978 and opened Bee's Hallmark Shop in Manchester.

Dick sold the shop and retired in 1995. With Charlotte he enjoyed many years golfing, traveling, and spending time with their sons and families. Named trustee of the Sarah deCoizart Charitable Trust, Dick worked until his death securing funding for many New England schools and not-for-profit organizations.

Dick was predeceased by his wife, Charlotte, and sister, Jane Keely. He is survived by son Greg and his wife, Cally, and their children, Justin and Ethan; and son Eric '82 and his wife, Janice, and their children, Eric Jr. '15 and Sarah.

THE CLASS OF 1949 John H. Richard Polt '49 John died in Oakland, Calif., April 12, 2019. Born in Czechoslovakia in 1929, John



was educated in America, his Czech father having retired here. He graduated from Lake Placid (N.Y.) High School. At Princeton he roomed in Pyne Hall all four

years, was on freshman crew and the varsity fencing team, belonged to Whig-Clio, and worked in the University Library. He majored in SPIA and graduated with highest honors. We never knew about his Phi Beta Kappa key until he mentioned it in our 10th-reunion book!

After Princeton John became a graduate student at the University of California, Berkeley, earning a Ph.D. in Romance languages in 1956. He began his teaching career there and eventually became a full professor in the Spanish department. His specialty was Spanish literature of the 18th century, and he also chaired Berkeley's Madrid Study Center. After his retirement he often worked as a translator of modern Spanish literature.

He is survived by his wife, Beverly Hastings, and children Richard, Elizabeth, and Anne.

Our contact with John was mostly limited to brief notices in our 10-, 25-, and 50-year directories, but we applaud his successful career in academe.

THE CLASS OF 1951



William E. Davis '51 Bill was born April 16, 1929, in Denver to Roblin 1907 and Margaret Davis, granddaughter of John Evans, Colorado's second territorial governor.

Bill came to us from Phillips Andover Academy. At Princeton he was a sociology major and graduated magna cum laude. He roomed with Bob Brush and Pete Langham and belonged to Prospect Club. At home he was an active member of the Colorado Mountain Club. In 1959 he earned a Ph.D. in psychology from the University of Denver and moved to Anchorage to teach at Alaska Methodist University. There he met Nancy Yaw, and they were married in 1962. After a brief period in Washington as a senior policy analyst he returned to Anchorage, where he became a member of the Cook Inlet Historical Society and was deeply engaged in volunteer work with his Episcopal church. In 2009 he and Nancy retired to Sitka.

Bill died Sept. 1, 2018. He is survived by Nancy and their children Caroline Goodwin, W. Scott '89, Roblin, and five grandchildren. His brothers Roblin '37 and David '41, sister Margaret Hayden, granddaughter Josephine Goodwin, and cousin John C. Davis '43 all predeceased him. Bill was bigger than life and a Westerner to his core. We were proud to know him.

THE CLASS OF 1952



Donald R. Weaver '52 Doc came from Mercer (Pa.) High School and roomed with Mike Ely. He left at the end of freshman year and finished his college years at

Allegheny College in its Class of 1952. He earned a medical degree at Temple University and practiced general medicine in Titusville, Pa., from 1957 to 1962. He did a residency in clinical pathology at the Cleveland Clinic from 1962 until 1967 and then served as chair of the pathology department at the Guthrie Clinic in Sayre, Pa., until 1991.

Doc died May 6, 2019. He is survived by his son, Alan, to whom the class offers condolences.

THE CLASS OF 1954

Dwight C. Harris '54

Dwight died July 11, 2019.

He prepared for Princeton at Wayland Academy in Beaver Dam, Wis., where he was active in football, basketball, and track. He left Princeton after his freshman year and completed his undergraduate work at Dickinson College and Ripon College, majoring in French and economics. He went on to the University of Indiana and University of Pittsburgh graduate schools of business to earn an MBA.

Dwight's career in banking spanned nearly 40 years, including Mellon Bank in Pittsburgh, where he began investment research and analysis; Farmers Bank and Trust Co., in Hanover, Pa., as president and COO; and People's National Bank in Lebanon, Pa., as president and CEO. In 1993 he joined the Pennsylvania Office of the State Treasurer as an investment officer and account manager, retiring in 2008.

During his career he served on various boards and community associations and was an avid fan of tennis, jazz, playing bridge, and gourmet food.

Dwight is survived by his wife of 36 years, Marlys; his children from his first marriage to Barbara Hegley, Victoria, Sandra, Judy, and David; 11 grandchildren; and one greatgrandson. He was predeceased by his son Daniel.



Historian and biographer of presidents Grant, FDR, Eisenhower, and George W. Bush, and of Justice John Marshall, and Gen. Lucius

Clay, Jean died Sept. 1, 2019, just a week after publication of his final book, The Liberation of Paris. He has been called "today's foremost biographer of formidable figures in American history."

At McKinley High School, in Washington, D.C., he was active in student government. At Princeton he majored in politics, wrote his senior thesis on "Law Enforcement under the Constitution," and served as a research assistant in the politics department. He was a member of Charter Club.

Jean served in the Army from 1954 to 1961 in West Berlin and Dachau, during which he married Christine Zinsel. He published his doctoral dissertation, "The Defense of Berlin," before earning a Ph.D. in government from Columbia in 1964. He also attended Harvard Law School and Stanford Graduate School. He taught at Dartmouth; the University of Toronto; Marshall University in Huntington, W.Va.; and as a visiting professor at several other universities.

Jean was an active participant in 1954 class activities, including giving an address to the class titled "General Presidents: Washington, Grant, and Eisenhower" at a mini-reunion held, appropriately, at Mount Vernon.

He is survived by his wife of 60 years, Christine; daughter Sonja '86, son Christopher, and four grandchildren. The class thanks him for his service to the country.

THE CLASS OF 1955

Carl Pope '55



When the parents of Carl Pope delivered their baby boy in Jamaica, Queens, N.Y., May 17, 1932, they had absolutely no idea that they were adding to

the world's weaponry. Carl, who died Aug. 16, 2019, at Brookdale Senior Living in Florham Park, N.J., made base runners aware that he had a rifle arm, and had he not had severe competition from Ed Stimpson and Reds McMillan, he could have started for Eddie Donovan.

A longtime resident of Mercer County, N.J., Carl had no problems moving on from baseball to lead a productive life. He graduated from Princeton High School, completed a postgraduate year at the Lawrenceville School, and was in the Class of 1955 at Princeton, where he graduated with a degree in psychology.

He served as an artillery officer in the Army from 1955 to 1957. Carl worked at Princeton University, Educational Testing Service, and the Institute for Advanced Study, and retired as a community-development officer at CoreStates Bank. He gave back to his community by volunteering for many nonprofit organizations and serving as campaign manager for several local township candidates in both the Democratic and Republican parties. For 40 years he was a dedicated member of Alcoholics Anonymous.

Carl is survived by his two daughters, Kimberly and her husband, Steven Jensen; and Cynthia Pope and her husband, Paul Yuhasz;

and two grandchildren, Kristen Jensen and her husband, Andrew McNamara, and Heidi Jensen and her husband, Daniel DeHelian. The family wishes to thank Brookdale and Serenity Hospice for their care and kindness.

THE CLASS OF 1957



Don Mayer led a good and full life traveling the world but always residing in the suburbs of Cleveland, Ohio, where he was born. He died Feb. 24,

2019, of injuries from a fall. He was an Ohio state wrestling champion, president of his high school class and co-valedictorian with his twin. At Princeton he majored in basic engineering, belonged to Cannon, and was a varsity wrestler and football player. He roomed with Squier Ball, Hugh Barnett, Ty Halsted, Jay Lehr, Dave Loeffler, John Nevin, Miles Seifert, and John Storm.

After Harvard Business School, he managed the family concrete construction company. In 1970 he started his own such business from which he retired three years ago, turning it over to his son, Rich.

He was a lay leader of a Unitarian Universalist Church that his parents helped found. It was there in 1980 that he met his wife, Mimi, who was the head of a school for the learning disabled.

Mimi brought two children to the marriage. In 2013, Don and Mimi became guardians to then 6-year-old granddaughter Eliza.

Don is survived by Mimi; children Rich '89, Maria '88, and Anne; several grandchildren; and one great-grandchild.

THE CLASS OF 1958



Arthur Ludlow Clark '58 Lud died March 25, 2019, in Leesburg, Va. He was 82.

He came to Princeton from Episcopal High School in Alexandria, Va., where

he participated in football and wrestling and was active in the literary organizations. At Princeton he was an NROTC regular, a member of Quadrangle Club, and a varsity wrestler. He roomed with Joe Roxe, Jim Ledwith, and Wilson Kinkead.

After graduation Lud entered the Marines and served nine years on active duty as an aviator followed by 22 years in the Marine Corps Reserve, retiring as a colonel.

Since high school he was an avid nature enthusiast and participated in hawking and falconry. He earned a Ph.D. from Cornell in ecology based on his field studies of the migratory habits of falcons in Morocco.

At our 50th reunion he said his main interests were "watching the Earth spin and doing what can be done with bird dog, duck

dog, and falcon."

Lud is survived by his three sons, Arthur '83, Thurston, and Perrin '93. The class extends its deepest sympathy to them all.



Bradbury P. Foss Jr. '58

Brad died July 4, 2019, in Washington, D.C., of complications of Parkinson's disease. He was 84.

He came to Princeton from Choate School, where he participated in football and wrestling and served on the honor committee. Then he had an English Speaking Union fellowship at the Leys School in Cambridge, England.

At Princeton Brad majored in English and joined Ivy Club. He served on the Jamesburg Committee, Undergraduate Schools Committee, and the Keyceptor program. He roomed with Arthur Allen, Jock Brooks, his cousin Paul Hicks, Guy Pope, Harry Rulon-Miller, Phil Smith, and Allan Rodgers.

Brad earned a master's degree in mathematics at the University of Georgia and spent his entire career with IBM in Paris and the United States. Moving to Washington, D.C., in retirement, he served on the boards of the Friends of Book Hill Park, Newark Street Community Garden, Camellia Society, Maryland Master Gardeners Program, and the D.C. chapter of the English-Speaking Union, and he was a proud member of the Society of Cincinnati.

To all who knew him he was a true gentleman with a passion for sharing his love of art, music, Greek literature, gardening, and baseball.

Brad is survived by his loving wife, Barbara, and his sister, Stephani. The class extends its deepest sympathy to them.

Thomas P. Lewis '58

Thomas died June 2, 2019, in White Plains, N.Y., after a long illness. He was 82.

He attended Milton Academy, Princeton, and Columbia University, where he earned a bachelor's degree in American history. He also pursued graduate studies at Columbia.

From 1956 to 1959 he served in the Army 82nd Airborne Division. For 20 years he helped manage the library promotion department at Harper & Row publishers, after which he formed his own company, Pro Am Music Resources.

Under that imprint he published many books by musicians and music historians, as well as his own music and mythology. His encyclopedic knowledge of all things related to classical music, philosophy, and great literature was celebrated and cherished by his family and friends.

Thomas was predeceased by his partner of 30 years, Karen R. Baker, in 2017. He is survived

by his children, Abigail Lewis Stovman, Peter Sloan Lewis, and Emily Ivins Lewis Fucheck; grandchildren Maxwell and Sophia Fucheck and Brandon Stovman; sister Dianne Lewis Bonney; former wife of 20 years Elizabeth Sloan Lewis; sons-in-law David Fucheck and Blake Stovman; and daughter-in-law Julianna Schley. The class extends its deepest sympathy to them all.



Howard S. Sussman '58 Howie died June 18, 2019, in Norwich, Vt., of heart failure. He was 81. Howie was our class president from 1993 to 1998. He came to Princeton from

the Bronx High School of Science and majored in chemistry, but decided in his senior year that his true calling led elsewhere. Having worked as an industrial chemist for a year after graduation, Howie then went to law school at Columbia and spent the rest of his working life in the law. He was at various times a private practitioner, a federal prosecutor, and a law professor. He also engaged in teaching and in translating, writing, and editing. Howie was deeply devoted to Princeton and to our class and worked to advance the interests of both.

At 60 Howie had an overwhelming spiritual encounter at an Episcopal church in Tucson. This led him, after much study and reflection, to his baptism at 63 in the Episcopal Church, an extraordinary blessing for which he was profoundly grateful. Howie remained active in the church for the rest of his life, including service for many years on the vestry of St. Martin's Episcopal Church in Fairlee, Vt.

Howie is survived by his wife of almost 18 years, Margaret Gilmore. To Margaret and to Howie's many friends, the class extends its deepest sympathy and sincere condolences.

THE CLASS OF 1960



Russell E. Stratton '60 Russ was born in Hawaii, and his first memory was of his parents' emotional reaction to the Pearl Harbor attack underway. He went on to

12 years at Punahou School on his way to Princeton. Here, Russ played freshman tennis, majored in English, dined at Key and Seal, was active in Triangle and Theatre Intime, and was in Navy ROTC.

After four years in the Navy as a lieutenant junior-grade, Russ was drawn back to Punahou, where he taught, coached tennis, and met Dana, a fellow teacher. Exiled — no married faculty couples were permitted — they moved to the Singapore American School, where both taught for four years. Russ also briefly coached the Singapore Davis Cup tennis team. Then he went to graduate school at the University of Southern Mississippi, where he earned a

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master's degree in 1975 and a Ph.D. in medieval literature in 1979. He taught four years at Peru State College, Indiana, and then was lured to the University of Alaska, where he taught English until retirement in 1998.

Returning to Hattiesburg, Miss., Russ continued in Princeton Schools Committee work while he and Dana jointly taught medieval art and literature courses to senior groups. Russ loved teaching English, playing and coaching tennis, playing the clarinet, acting, and enjoying theater and opera.

Russ died Aug. 27, 2019. Our sympathies go to Dana and son Scott and his family.

THE CLASS OF 1961



Simeon H. Rollinson III '61 Sim died June 25, 2019, in Bennington, Vt., after a courageous battle with lung cancer. A son of '30, he was born in West Orange, N.J.,

and came to us from Newark Academy and Pomfret School. At Princeton he majored in art and archaeology, played rugby all four years, and took his meals at Colonial. His senior year roommate was Ola d'Aulaire.

Sim worked his entire career at the family insurance agency of O'Gorman & Young, based in Newark, Chatham, and Princeton, rising to president. He was active in the New Vernon, N.J., community, serving on civic and nonprofit boards and holding several political positions, including deputy mayor and police commissioner for Harding Township.

In the late 1990s he sold his interest in the agency, and he and his wife, Judy, moved to Dorset, Vt., splitting their time thereafter between Dorset and Hobe Sound. He was an avid golfer, painter, and sailor, and spent time with his family at their homes and each summer at a family cottage on Michigan's Upper Peninsula.

He is survived by his wife of 54 years. Judy; sons Topher, Austie, Jamie, and Chip and their families, which include seven grandchildren; and a sister.

THE CLASS OF 1963



James R. Dwyer '63 Jim died peacefully May 9, 2019, in Norwalk, Conn., after an extended illness. He was a retired partner and head of institutional sales at Cowen & Co., having

worked more than 40 years on Wall Street.

Jim attended Notre Dame High School in New Haven, Conn., and was the first in his family to enter college. He worked summers as a union laborer in a coking factory to make enough money to fully enjoy school, especially the parties at Tower Club. Jim was proud to say he shot pool with Jerry Lee Lewis and bailed out Chuck Berry from a Philadelphia jail to

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keep Berry's Tower performance on schedule.

At Princeton Jim majored in English, writing his thesis on Joseph Conrad; played freshman hockey; belonged to the pre-law society; Orange Key and Whig-Clio; and perfected his bridge and billiards. He roomed with Don Nicol and Mike Eckles. Jim credited Princeton with changing the course of his life. It lifted him out of a limited set of options based on his family's workingclass background to have the freedom to pursue whatever he wanted to try to accomplish.

Jim is survived by his wife, Anne; daughter Catherine; sons Sean and Colin; grandchildren Elizabeth, Ted, and Victoria; brother Gerry; and several nephews.



Thomas P. Stossel '63

Tom, one of the nation's leading hematologists, died Sept. 29, 2019, while working out at a gym on Cape Cod. A gifted researcher who

pioneered medical products, he helped lead hematology-oncology treatment at Harvard Medical School and hospitals in Boston.

Tom entered Princeton with a contingent from New Trier High School in Illinois, majored in English, won a wrestling P, ate at Tower, played guitar and piano with the Rockin' Amadons, and roomed senior year with Eisenberger and Bill Riley. He then went to medical school at Harvard.

Known internationally for researching how cells move and change shape and for discovering two cellular proteins, filamin and gelsolin, Tom held more than 50 patents and authored hundreds of scientific papers. He was a clinical and research leader first at Massachusetts General and then at Brigham and Women's hospitals. He was the American Cancer Society Professor at Harvard Medical School from 1987 to 2017. He wrote op-eds for major newspapers and in 2015 published *Pharmaphobia: How the Conflict of Interest Myth Undermines American Medical Innovation.* In Zambia he helped create a medical charity for children and a sickle-cell clinic.

Tom is survived by his wife, Kerry Maguire; children Scott, Sage, and Tamara Sakala; three grandchildren; brother John '69; and his first wife, Anne Hanford.

THE CLASS OF 1964



Robert Haserot '64 Bob died peacefully Sept. 8, 2018, in New York City from complications of Parkinson's disease, which he had courageously resisted

for 12 years.

Reared in Williamsburg, Va., he attended the Asheville School, where he played football and basketball and was sports editor of the school paper and class valedictorian.

At Princeton Bob majored in history. He was freshman football manager, a member of Charter Club and Whig-Clio, and president of the Conservative Club. He earned a law degree from Cornell Law School in 1967, and then served for three years as an officer in the Navy Supply Corps. Starting in 1971 Bob practiced law as an associate and partner in New York at Haight Gardner Poor & Havens, concentrating in aviation law. He also received three pilot's licenses. He left law practice and earned an MBA from NYU/Stern in 1991 and pursued investing on his own account. Bob was a lover of cats, railroads, cars, and aviation, and a loyal attendee of several sports teams, especially the New York Mets, through torment and triumph.

Bob married Phyllis in 1966. Living in Manhattan, they enjoyed theater, music, and sports events. He is survived by Phyllis and their son, Zane, to whom the class extends our condolences.

William J. Howard '64

Bill died Nov. 3, 2018, after a long battle against pancreatic cancer.

He came to Princeton from Princeton, Ill., and played football and basketball for the Tigers. He was a starting end for the 1963 Ivy League Champion gridiron team. That winter Bill was the captain and undersized center of the basketball team, which won the league and knocked off Virginia Military Institute in the first round of the NCAAs. Bill was the last athlete to win Ivy titles in both of those sports in the same year.

Roommate and teammate Rick Johnston '64 describes Bill, a history major and Ivy Club member, as "a quiet and pretty studious guy off the field and court, and because he played football and basketball ... he wasn't necessarily around for a lot of casual conversation. He generally studied at the library and came back to the room to sleep."

After Princeton Bill studied business at the University of Chicago. In 1968 he married Jo Fish. He was CFO of two corporations before finishing his career as a consultant.

He is survived by Jo; their children, Sean, Seth, and Holly; and four brothers, Robert, Corbett, Tim '72, and James. The class extends condolences to them all.

THE CLASS OF 1965 Edward W. Kleckner '65

Ed died April 15, 2019, surrounded by his family and pets and with a view of the garden behind his house in Hansville, Wash.

He came to us from Shaker High School in Cohoes, N.Y., and majored in physics. After graduation, he and his first wife, Judith Fradkin, moved to Seattle, where he earned a Ph.D. in physics and went on to work at the Battelle Pacific Northwest Laboratories, studying the physics of the aurora and raising their children, Paula and Nolan, while Ed honed his woodworking skills — making furniture and musical instruments. He and Judy were active in local groups that played traditional folk music.

Ed served on the board of the Hansville Community Center and worked on the construction and maintenance of the Hansville Greenway trail system. After Judy's death in 2000, Ed married Bunny Cottingham, combining his two children with her two. They traveled extensively on cross-country trips in their Airstream, "the "Odyssey." Ed's curiosity led him to fly fishing, canoeing, kayaking, ham radio, photography, language study, and spiritual reflection.

We send our condolences to the family on the loss of this energetic and thoughtful individual.



Denis G. Meacham '65 Denis died March 20, 2019, in Nashville, surrounded by his family. He was born in New York City and spent his life between Newton, Mass., and Cape Cod.

He was predeceased by his wife, Janet Harper. Denis came to us from Browning School

in New York City. At Princeton he took his meals at Colonial Club. After graduation he earned a master's of public administration from Harvard and a master's degree and a doctor of divinity degree from Andover Newton Theological School.

He became a senior editor of American Heritage Dictionary and senior science editor of the *Columbia Encyclopedia*, while also serving as managing editor of *Blair & Ketchum's Country Journal*, editor and acting publisher of *Horticulture Magazine*, and founding editor of *Technology Illustrated*. He was also an assistant professor of communications at Boston University and a Unitarian Universalist minister, psychotherapist, drug and alcohol counselor, and chaplain at several teaching hospitals and hospice organizations. His publications include *The Addiction Ministry Handbook* and *A Ministry of Presence*.

A co-founder, with his sister Pam, of Dot Records' folk artists Children of Rain, he was legendary on Cape Cod for his songs, guitar and harmonica playing, and strong tenor voice along with an agile intellect, sense of humor, and nonjudgmental attitude.

Denis is survived by daughter Kate Langevin, son Sam, grandchildren Ethan and Brandon, and sister Pam Hutcherson. The class sends condolences to his family on the death of this multi-talented and energetic individual.

THE CLASS OF 1968

Paul A. Barber Jr. '68

Tod died July 13, 2019, after battling an aggressive form of Parkinson's disease. He was 73.



Tod was born in Oak Ridge, Tenn., and attended Pingry School. He was in student government and played soccer and lacrosse. At Princeton Tod majored in chemical

engineering and ate at Charter. He graduated *summa cum laude* with a degree in chemical engineering.

Tod worked for Exxon Chemical Co. in the paramins division for more than 30 years, reaching the managerial position of vice president of worldwide technology. The final 10 years of his career were spent as a key member of the litigation team.

He was a lifelong tennis player and a golfer. Over the years he enjoyed his membership at the Beacon Hill Club in Summit, Somerset Hills Country Club, and the Bay Head Yacht Club.

Tod is survived by children Ryan and Kelsey; grandsons Reid, Cole, Chase, Cooper, and Mason; and his sister Carol. The class extends its profound sympathies to them all.

THE CLASS OF 1970



Edward S. Binkowski '70 *74 Ed died June 16, 2019,

of multiple organ failure following years of health challenges. He was a true intellectual with broad interests

and infectious joy.

Ed came to us from Delbarton School as a university scholar with an inquisitive mind. He studied the new field of statistics with the great John Tukey *39, who was his mentor on his undergraduate thesis, "Information and Meaning in Statistics," and his Ph.D. dissertation "Statistics: Implications of Applications." Ed topped those accomplishments off with a law degree from Fordham. Meanwhile, we suspected his creation and management of the Student Odd Job Agency was really a tribute to the villain from *Goldfinger*.

Ed followed Tukey to Bell Labs, where he applied his acumen in years of work on statistical research and analyses, as well as groundbreaking strategic planning on, well, strategic planning. His interests evolved into other areas, including starting the awardwinning journal *Oxymoron*, teaching statistics at Hunter and space law at Fordham, while keeping up his statistics consulting on the side. None dared interfere with his notable Groundhog Day parties.

Ed is survived by his wife, Carol, and daughter, Alison, who, while still amazed by his many abilities, unfailingly speak of him with a smile, as do all of us.

Irvin Arthur Busse III '70

Of those of us who were truly children of the '60s, Art Busse was among the great exemplars. He died of prostate cancer Dec. 3, 2018. He came to Princeton with the delegation from New Trier, as a swimming star who swam for two years with us while becoming aware of the restive world beyond the gates. A Princeton professor fatefully advised that he might make more of his social conscience at Stanford, and he left us in 1968 for his adoptive home in the Bay Area. He graduated with honors and co-founded the Stanford SDS. He was a thoughtful leader of his friends there, as he had been with us.

He spent much of his career actively working in the community around him, first as a community organizer in the East Bay, then as a visionary designer and builder of homes and intriguing conceptual and often award-winning structures in the area with Busse Building, as well as his own unique rural residence in Sonoma.

Art is survived by his admiring sons, Brian and Eric; by his sister Bonnie Pauli; and by his many close friends stretching from college days to his architectural clients. Along with them, we will miss his presence, his inspiration, and his sense of humanity.

THE CLASS OF 1971



Alan Brinkley '71 Alan, our most celebrated and brilliant classmate, died June 16, 2019, from a progressive neurological disease at his home in New York City.

Son of the famous broadcaster David Brinkley, Alan came to Princeton from the Landon School in Washington, D.C. He graduated with honors in the Woodrow Wilson School and launched his academic career with his senior thesis on Huey Long that led to his National Book Award-winning book *Voices of Protest.* He lived with Jim Frierson, Mark Wine, and Nick Hammond senior year in Patton and belonged to Cap and Gown.

After earning a Ph.D. in history at Harvard in 1979, he taught there until 1989. He taught at Princeton for a year and then joined the faculty at Columbia, where he remained for his career and served as provost for five years. One of the pre-eminent historians of our generation, his specialty was 20th-century American political history from New Deal liberalism to the 21st century. Alan was a popular commentator on culture and politics, a Pulitzer Prize finalist for his biography of *Henry Luce, The Publisher* — and author of two widely used American history textbooks. He held the Harmsworth Professorship at Oxford University and the Pitt Professorship at Cambridge University.

Alan is survived by his wife, Evangeline, whom he married in 1989, and their daughter, Elly.

He was a loyal classmate and friend to many in 1971. The class extends its deepest sympathies to Evangeline, Elly, other family, and his many friends and admirers.



John Chitty '71

We lost one of our most respected classmates when John died in Boulder, Colo., Feb. 28, 2019, after an eightyear battle with Stage IV

prostate cancer.

He came to Princeton from Sewanee, Tenn., with a soft Southern accent and winning graciousness. On campus he was a recognized athlete (touch football speedster and wrestling letterman at 123 pounds), worked as a Commons captain, served as sports editor of *The Daily Princetonian*, and majored in sociology.

John married Anna in 1973 and homesteaded in British Columbia for seven years. Through study and lifestyle practice, he transitioned to a career in holistic health, incorporating ancient Eastern understanding of nature and modern Western psychological ideas.

John and Anna moved to Boulder in 1991. They founded and operated a vocational school that provides continuing education in alternative health. John also had a private therapy practice and authored three books on alternative health, touching many lives with his guiding words: "We are here to learn and grow, overcoming obstacles of all kinds to become wiser, kinder, more coherent, and more capable of giving and receiving love."

The John Chitty Memorial Scholarship Fund was established to provide scholarship aid to students in the Biodynamic Craniosacral Therapy Practitioner program at the Colorado School of Energy Studies.

John is survived by his wife, Anna '72; son Haley; daughter Elizabeth; grandsons Emerson and Azul; extended family; and his many friends. The class extends its deepest condolences to them all.



Pandelis Glavanis '71

Pandelis died Sept. 1, 2017, in the city of his birth, Cairo, Egypt. He was a distinguished international citizen and scholar.

Son of a Greek diplomat, Pandelis came to Princeton from St. Joseph's College, U.K., distinguishing himself in academics and rugby. At Princeton he participated in Orange Key and was a resident adviser. He majored in Near Eastern Studies. Roommates included Ray Ollwerther and Ed Smith, who recall how smoothly he adapted to American culture. Barbara Croken remembers his kindness in arranging her 21st birthday party.

Pandelis went on to earn a Ph.D. in economics and social history at the University of Hull, U.K. He married Kathy Grantham *71, a Princeton grad student and academic collaborator; they later divorced. He spent the majority of his academic career on faculty at universities of Hull, Manchester, Durham, and Northumbria in the U.K. He joined the faculty of the American University of Cairo in 2004, where he was honored for his teaching and many contributions to university policy and governance. Fluent in Greek, Arabic, French, and English, Pandelis served as a consultant to the World Bank, UNESCO, the Norwegian Refugee Council, and other nonprofits. He made significant contributions to the field of economics, development, and sociology through his countless articles in prominent journals.

We did not get to see Pandelis often in person but admired his accomplishments from afar and mourn his loss.

THE CLASS OF 1972

David G. Hanrahan '72

David died peacefully July 8, 2019, at his home in Kensington, Md. He was 69 years old.

David graduated from Stranahan High School in Fort Lauderdale, Fla. He entered Princeton in 1967. He majored in sociology and wrote his thesis on "The Quest for Subjectivity: The Problem of Faith in the Works of Søren Kierkegaard and Jean-Paul Sartre."

In 1975 David and his brothers James and Thomas founded Future View Inc. in Washington, D.C. He served as the CEO of this pioneering audio-visual firm for more than 40 years.

History, philosophy, music, and travel were lifelong passions, as was his membership in the recovery community. During his 33 years of sobriety he shared his experience, spirit, and hope with others.

He is survived by his wife of more than 40 years, Christine; daughter Carolyn; sons Daniel and Michael and Michael's wife, Aimee; grandchildren Adelaide and Ned; brothers James and Tom; and 12 nieces and nephews. The class extends its condolences to the family.



Elisa Tufo Marshall '72

Elisa, a serene, gentle soul in the vanguard of Princeton coeducation, succumbed to an extraordinarily rare cancer. She died in the arms of her beloved

husband, Michael Carr. She was 69 years old.

A native of Old Brookville, N.Y., Elisa transferred from Tufts University as a junior, when Princeton first admitted women. A sociology major, she was a member of Stevenson Hall. Her thesis, "Practitioner-Client Interaction: The Professional and Quasi-Professional," foreshadowed her 40-year career as a clinical social worker and psychotherapist in Lansdale, Pa. In 1974 she earned a master's degree in social work from the University of Georgia.

She served on the class executive committee

and was active in the Women of 1972. She was an active member of the St. Thomas Church community in Whitemarsh, Pa.

Lisa is survived by her husband, Michael; sons Vincent and his wife, Sophie; Andrew and his wife, Cheryl; brothers Guy and his wife, Susan, Vincent and his wife, Deborah, Chris and his wife, Hedy, and Steve and his wife, Sheryl; and brother-in-law Joseph Feuerman. The class extends condolences to them all.

THE CLASS OF 1976



Peter L. Blank '76 Peter died Nov. 7, 2017, at home in Annandale, Va., following a

long battle with cancer. Born and raised in

Philadelphia, Peter graduated from The Haverford School. At Princeton he majored in civil engineering. He roomed with John Wright, who recalled that "Peter wore his passions on his sleeve: Philadelphia sports especially his beloved Flyers — '50s oldies, and his friends at Tiger Inn."

After graduation Peter earned a law degree from Delaware Law School and an LLM in taxation from Georgetown University Law Center. His career at The Kiplinger Washington Editors spanned 34 years, with 16 years as editor of *The Kiplinger Tax Letter*.

Peter married Georgiann Oct. 4, 1980. He noted that this wonderful day in his life was also the day the Phillies clinched the pennant. He and Georgiann settled in Virginia. He was an avid runner and race walker, winning three Senior Olympics walking medals.

The class extends sympathy to his wife, Georgiann, and daughter Beth.



John P. Brosseau '76

John died Jan. 5, 2019, in Stony Creek, N.Y., following a long illness.

Raised in Cornwall-on-

Hudson, in the shadow of West Point, he graduated from Cornwall Central High School. At Princeton he majored in music, played the organ, and sang in the Chapel Choir.

Upon graduation John pursued studies in music at Yale. He took a job at RMS Associates in Maryland and worked on weekends as an organist at a local church. He became a mathematics teacher at Archbishop Spaulding High School, where he taught for years before accepting a position at the Department of Defense Dependents School in Germany. He returned to New York and served as organist at Church of the Holy Cross in Warrensburg.

John loved the music of Bach, the writing of Shakespeare, libraries, astronomy, and the science of space. But what he really loved was quiz shows. From his high school years as a member of the Academic Bowl quiz team to his decades as a teacher writing quiz questions for high school teams, he was a dedicated quizshow leader. Always fond of libraries, John served as president of the Stony Creek Free Library.

The class sends condolences to his sister, Jeanne Barner.



Randall G. Johnson '76

Randall died March 11, 2019, in his hometown of Los Angeles, after suffering a heart attack.

He graduated from Beverly Hills High School, where he participated in academics, athletics, and the Jack and Jill Organization. At Princeton Randall majored in psychology and took up fencing. He was a fouryear member of the team in sabre. His thesis was titled "Psychosomatic Origins of Essential Hypertension."

After graduation he returned home and aspired to compete in sabre at the Olympics. Tiger coach Stan Sieja suggested Randall study ballet to develop his footwork. That led to a lifetime of ballet, martial arts, and kung fu. Randall belonged to the Association of Black Princeton Alumni and participated in the Princeton Connect Initiative. He earned a doctorate in chiropractic medicine.

The class extends sympathy to his cousin, Yvette Johnson Williams.

Scott Lee Kuensell '76

Scott died Oct. 14, 2017, in Haverford, Pa., of heart-valve failure.

After graduation from the Haverford School, Scott began his college years rooming in Wilson College at Princeton. He majored in psychology, was a member of Cottage Club, and managed the Student Sweater Agency. Senior year, Scott served as the chair of the campus Undergraduates for a Stable America.

After college, Scott returned to Philadelphia and began his career in investment banking with Schroder, Wertheim and Co., where as a chartered financial analyst he became director of institutional equity sales. In 1995 he joined the firm Brandywine Global Investment Management, where he rose to the position of managing director and portfolio manager.

Scott is survived by his wife, Elizabeth Gowan Kuensell; daughter Clare Cabell Kuensell '12; and son Bayard Henry Kuensell. The class extends condolences to them all.



Gregory R. Snow '76

Greg died May 4, 2019, in Lincoln, Neb. He had been on medical leave from work. Greg came to Princeton

from East High School in Cheyenne, Wyo., where he excelled at mathematics, running, and playing the fiddle. He majored in physics, lived in a large suite in Wilson College, and joined Cap and Gown. After graduation Greg earned a Ph.D. at Rockefeller University, working at Fermi National Accelerator Laboratory.

During his career in academe, he founded the modern high-energy physics group at the University of Nebraska-Lincoln. He was promoted to full professor in 2008. He also helped establish the Cosmic Ray Observatory Project in Nebraska high schools and was a leader of education, outreach, and public relations for the Pierre Auger Project in Argentina. Greg made a significant contribution to the field of particle physics. He was a contributing member of collaborations that made key discoveries, including the search for the Higgs boson particle. The discovery led to theorists being awarded the 2013 Nobel Prize.

The class extends sympathy to his wife, Graciela Acedo; and his son, Everett Gutzmer.

THE CLASS OF 1978

Madeleine MacNeal '78

Mado died July 1, 2019, of ALS, known as Lou Gehrig's disease, with which she was diagnosed only about two years ago.

Mado was a dedicated mother, sister, wife, and friend. After attending Agnes Irwin School and Princeton, she spent many years raising her children and then found her professional calling as a teacher for high school students with special needs. When she did, she was also lucky enough to meet Jorge Torres, whom she married and with whom she shared the last two decades of her life. As Jorge said the day after she died, "I could look into her eyes and see my life in them."

To those who knew her during her high school days and at Princeton, Mado was a bright spark, an adventurous spirit, and a caring friend. She made connections that endured, and more than a few have carried that spark with them across the years.

Mado is survived by Jorge; their combined family of children, Cassie Schroeder, Megan Baker, Jessica Noe, Kathy Lyon, and Jorge Torres Jr.; their nine grandchildren; her parents, Ed and Priscilla MacNeal; and her sister, Catherine MacNeal.

GRADUATE ALUMNI

Solomon P. Hersh *54

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Solomon Hersh, professor emeritus at the College of Textiles of North Carolina State University (NCSU), died Feb. 7, 2019, at the age of 90.

He graduated in 1949 from the NCSU College of Textiles, and then earned a master's degree from the University of Virginia. In 1954 he earned a Ph.D. in chemistry from Princeton.

He worked for several years as a research

chemist for Union Carbide and Monsanto. In 1966 he joined the College of Textiles at NCSU as an associate professor.

During his career at NCSU, Hersh was named the Charles A. Cannon Professor of Textiles, and he retired as director of graduate studies. He was honored with the Alexander Quarles Holladay Medal and the O. Max Gardner Award.

He is survived by his wife of 65 years, Rosalie; two daughters; and four grandchildren.

John C. Traupman *56

John Traupman, retired professor of classics at St. Joseph's University, died Feb. 7, 2019, at the age of 96.

After graduating from high school, Traupman enlisted in the Army during World War II and rose to the rank of sergeant major. After the war he graduated from Moravian College with a bachelor's degree in Latin and classics. In 1956 he earned a Ph.D. in classics from Princeton, and then joined the faculty of St. Joseph's College (now University).

Traupman had a 38-year career as a professor at St. Joseph's, the last 30 years as chair of the classics department. He translated Latin and German dictionaries to English and was a prolific author of many Latin-related subjects.

He was president of the Philadelphia Classical Society for eight years and was important to its growth. Traupman also taught night school for many years at Villanova University. He published many books and was a sought-after public speaker, covering such subjects as Roman, Greek, and Egyptian history and archaeology. He received many awards, and his publications are still being used in universities today.

Traupman's wife of 70 years, Pauline, died Dec. 7, 2018. He is survived by a daughter and a grandson.

William D. Jones *58

William Jones, a retired lieutenant colonel in the Army, who had a 20-year career as a civilian health-care administrator, died Feb. 13, 2019, at age 86.

Jones graduated from West Point in 1953 and from Princeton with a master's degree in civil engineering in 1958. After active duty in the Army with the Corps of Engineers, and then in the Medical Service Corps, he retired in 1973 with numerous military awards.

He followed this service with a second 20-year career at Hunterdon Medical Center in Flemington, N.J., as director of facilities and then vice president of support services. He was a fellow of the American Society of Civil Engineers and the American Society of Healthcare Engineers of New Jersey.

Known as a very caring person, Jones was a frequent volunteer in his community. He and

his wife were avid travelers. A deeply religious person, he was a 45-year resident of Belle Mead, N.J.

Jones is survived by Nancy, his wife of 59 years; two children; and four grandchildren.

Aubert Daigneault *59

Aubert Daigneault, professor emeritus of mathematics at the University of Montreal, died Jan. 30, 2019, at age 86.

Daigneault graduated in 1954 and 1956 with bachelor's and master's degrees respectively, from the University of Montreal. In 1959 he earned a Ph.D. in mathematics from Princeton.

He began his teaching career in 1958 and it lasted until 2000, when he became a professor emeritus at the University of Montreal in the department of mathematics and statistics, where he had been the director for nine years.

Daigneault taught at the Royal Military College in Kingston, the University of Ottawa, and at the University of California, Berkeley. His teaching encompassed several aspects of mathematics, and in particular the axiomatic theory of sets, Galois theory, non-standard analysis, and the theory of measurement.

Daigneault believed in eternal life, in rational knowledge, and in love. He became a pantheist in the manner of Giordano Bruno, Baruch Spinoza, and Albert Einstein. He is survived by his wife, Monique; and two sons.

Sidney Verba *59

Sidney Verba, the Carl H. Pforzheimer University Professor emeritus of government at Harvard, died at home March 4, 2019, at the age of 86.

Verba graduated from Harvard in 1953. Enrolling in Princeton's Woodrow Wilson School, he earned an MPA in 1955 and a Ph.D. from the Department of Politics in 1959. He then was an assistant and associate professor at Princeton, and a full professor at Stanford and the University of Chicago, before returning to Harvard in 1973.

With Princeton professor Gabriel A. Almond, Verba co-authored *The Civic Culture: Political Attitudes and Democracy in Five Nations* (1963), which became a classic. Collaborating with others, he produced almost 20 other significant books on citizenship and political equality. Verba taught at Harvard for more than 30 years before retiring in 2007.

He also was the director of the Harvard University Library from 1984 to 2007. He directed the digital evolution of the library while still teaching. In his career he was chair of the Harvard University Press, president of the American Political Science Association, and chair of the human-rights committee of the National Academy of Sciences.

Verba is survived by his wife, Cynthia

Winston; three daughters; four grandchildren; and three great-grandchildren.

David E. Lamb *62

David Lamb, retired professor of computer science at the University of Delaware, died March 7, 2019, at age 86.

Lamb graduated from Yale in 1953 with a bachelor's degree in chemical engineering, and in 1962 earned a Ph.D. in chemical engineering from Princeton. He began his 36-year career at Delaware as an assistant professor of chemical engineering.

He became an early expert in computer science and was appointed director of the computer center at the University of Delaware. He founded its Department of Computer and Information Sciences and was its chair for several years. Lamb supervised graduate research projects and presented papers worldwide.

He continued to teach as a professor of computer science until his retirement. He was in steady demand as a consultant to government contractors and corporations such as Sun Oil and Bethlehem Steel, and even the Aberdeen Proving Ground.

Lamb greatly appreciated classical music, dance, opera, and art. He also researched and studied the stars, planets, and galaxies.

He is survived by his wife, Suzanne; five daughters; and eight grandchildren.

Frederick J. Roberts *67

Frederick Roberts, retired associate professor in the politics and government department at Illinois State University, died peacefully Feb. 26, 2019, at age 81.

Born in 1937, Roberts graduated from Wilkes University and in 1961 earned master's degree in politics from Princeton. He completed his dissertation for a Ph.D. in politics from Princeton in 1967. While working on his dissertation, he was an intern for the Brookings Institution doing research in city governance in New York City. From 1964 to 1968 Roberts was a full-time faculty member in the political science department at the University of Delaware, teaching introductorylevel courses.

In the fall of 1968 he joined the politics and government department at Illinois State. He immediately developed a new course in collective decision-making, which he taught until retiring in 2000.

Roberts was the long-serving director of the internship program and directed the Model Illinois Government program. A former student felt "his central goal was to teach his pupils how to think, about everything from the dilemma of governance to the ethics of individual choices."

Roberts was predeceased by his wife of 45 years, Carlene. He is survived by two siblings and many nieces and nephews.

Gavin E.H. Lewis *72

Gavin Lewis, a retired associate professor of history at the John Jay College of Criminal Justice at CUNY, died peacefully in Princeton Jan. 20, 2019. He was 75.

Born in England in 1943 to a concert-pianist mother and architect father, Lewis earned a bachelor's degree in history from Oxford University. In 1969 and 1972, respectively, he earned a master's degree and Ph.D. in history from Princeton.

For more than 30 years Lewis taught Western civilization to the undergraduates at John Jay College. He co-authored *A Brief History of the Western World*, a widely used undergraduate textbook. Among the other books he wrote are *Church and Party in Political Catholicism, Tomás Masaryk*, and *Close-Ups of the Past: Western Civilization Case Studies.*

His research and publications also included studies of Sumerian civilization, Athenian politics and religion, print and culture in the Renaissance, and the decipherment of Egyptian writing. He also was a book editor of many scholarly works for major university presses.

Lewis is survived by his wife of 40 years, Nadia; their four children; and five grandchildren. A longtime resident of Princeton, he was buried in Princeton Cemetery.

Marilyn J. Dawson *77

Marilyn Dawson, who had worked for the United Nations throughout the world and at U.N. headquarters in New York City, died Feb. 2, 2019, of cancer. She was 65.

After graduating from Brown University, Dawson earned an MPA degree in 1977 from Princeton's Woodrow Wilson School. She then moved to Washington, D.C., and worked for an international aid and development organization.

After a few years she joined the U.N. and began a career that took her around the world. Fluent in English, Spanish, Portuguese, and French, she had multi-year assignments in Brazil, Jamaica, the Philippines, and parts of Africa.

After years abroad Dawson was assigned to U.N. headquarters, where she worked with the U.N. Secretariat, U.N. Women, and UNICEF. When she reached the U.N.'s mandatory retirement age, she stayed in the city and devoted herself to volunteer work with the Calvary Baptist Church and later Fifth Avenue Presbyterian Church, where she became an elder. For Princeton, she was an ABPA member.

Dawson is survived by her life partner, Marvin Dutton; two brothers; her mother, Barbara Dawson; and a host of family members.

Clare Harwood Nunes *79

Clare Harwood Nunes, retired teacher of English at Concord Academy, died Jan. 10, 2019, of acute pneumonia. She was 84.

She graduated from Bryn Mawr College with a degree in Latin and English. She moved to New York City, worked for Oxford University Press, met Geoffrey Nunes '52, and married him in 1958.

In 1966 the couple moved to Princeton. She stayed at home and raised their three children until 1971, when she entered the doctoral program in English at the Princeton Graduate School. After she earned a master's degree in 1976, the family relocated to Lincoln, Mass., and she commuted to Princeton, earning a Ph.D. in 1979.

Harwood Nunes then taught freshman composition for two years at the University of Massachusetts, Boston. In 1981 she found her "true calling" as an English teacher at Concord Academy for the next 15 years, which she considered some of the happiest of her life. In 1988 she was the first faculty member selected by the senior class as the graduation speaker. After retiring in 1996, she volunteered as a tutor of high school students.

Harwood Nunes was predeceased by her husband, Geoffrey. She is survived by three children (including Jake '83 and Maggie Nunes Rogers '85); and seven grandchildren.

Nancy Norton Tomasko *95

Nancy Tomasko, the editor of the *East Asian Library Journal* at Princeton's East Asian studies department for a decade, died of cancer Dec. 28, 2018, at age 71.

She graduated from Illinois State University in 1969, and then taught English at the YMCA in Taipei, Taiwan. This began a lifelong fascination with China and things Chinese. In 1981 she earned a master's degree from Princeton in East Asian studies, and was in one of the first groups of U.S. graduate students to study in China in the early 1980s.

In 1995 she earned a Ph.D. from Princeton in East Asian studies. She taught at Connecticut College and Bryn Mawr, where she created a studio course on the history of the book in China. She also taught many workshops in Chinese bookbinding, with her greatest interest in documenting Chinese handmade paper.

Tomasko gave talks, wrote articles, and prepared sample books. In recent years she was a devoted volunteer in the Christian Science Reading Room in Manhattan, and was always fond of animals.

She is survived by her husband of 33 years, Mark D. Tomasko.

Graduate memorials are prepared by the APGA.

This issue contains an undergraduate memorial for Edward S. Binkowski '70 *74.

Classifieds

Classifieds

For Rent Europe

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 included, cook available, A/C, Wi-Fi. Discount for Princetonians. Photos/prices/availability: www.luxuryvillatodi.com, p'11.

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

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

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

Unique 1880s heritage Irish farmhouse on fourteen acres in Ox Mountains, County Sligo; Wild Atlantic Way; Fáilte Ireland Welcome Standard; a Hidden Ireland Property. Adventure, Culture, Food! info@oldirishfarmhouse.com, '77.

Stunning Paris apartments: original period details, high-end amenities. Best locations: Bac/St. Germain, Luxembourg Gardens, Marais! 1-3BR, 1-2.5BA. 917-746-8056, www.56paris.com/for-rent **Umbria/Todi**. Elegant restored 14thC convent. Walk to town. 4 ensuite BRs, A/C, gardens, olive orchards, pool, WIFI. 847-234-9171. jcrawford@TRIADCAPLLC.COM, '68.

Provence: Luxurious 5BR, 5BA villa with pool; private setting; walk to Lourmarin, "l'un des plus beaux villages" of France with cafes/ boutiques. Perfect location for day trips to Aix, Gordes, Avignon. MRS airport — 1 hour. Photos: rent-our-home.com/listings/villa-lemurier/, sylmcm@hotmail.com, k'26.

Umbria, Italy: Stunning, spacious countryside villa, olive groves, fabulous views. Sleeps 4-12, pool. Next to castle, golf course, cashmere shops. +44 7894420299; barbarasteino@gmail. com, www.umbriaholidayvilla.com *60 '98.

Paris near Louvre, Opéra, Ritz Hôtel. Family managed. Sleeps two, terms depend on season, 6 night minimum. apower7@icloud. com, 831-521-7155, w'49.

Rome, Italy: Breathtakingly beautiful artfilled apartment on via Gregoriana near Spanish steps. 2 bedrooms in a 17th century palazzo. Unsuitable for small children. Mariaceliswirth@ gmail.com, 212-360-6321, k'38.

Africa

Spectacular Indian Oceanside villa is your Princeton vacation home in South Africa. 2 bedrooms, 2 baths. www.phoenixcountryhouse. co.za, '82.

United States Northeast

Stone Harbor, NJ: Beachfront, 4BR, upscale. 570-430-3639, Stoneharborbeachhouses.com, radams150@aol.com

Stone Harbor, NJ: Houses ½ block from beach, sleep 10 each. Great for families, reunions, weddings. For photos, info: Bayberry10501@ optimum.net, 201-803-1669, p'18.

Wellfleet: 4BR beachfront cottage, spectacular views overlooking Cape Cod National Seashore, walk to town. 610-745-5873, warrenst@aol.com, '84, s'86.

Summer in Southampton Village:

Spacious & Pristine Condominium — walking distance to stores and restaurants. Short drive or bike ride to ocean beaches. 3 bedrooms, 2.5 baths.

Pool. August–Labor Day: \$22,000. Phone: 631-377-9490, Email: catherinecullen@fastmail.fm

Brooklin, ME. Shorefront house on Eggemoggin Reach, sleeps 9. Near WoodenBoat School, Blue Hill, Bar Harbor/Acadia National Park, and coastal adventures. www. mainevacationrentalsonline.com/5732/the-cove. htm, mcdallett@gmail.com. '78.

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. janegriffith655@gmail.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 p'20.

Madison Valley Montana: Jaw-dropping views, Near Yellowstone, Wildlife, Quiet. Photos/ details: MovingWater.org 801-419-7289.

Big Sky, Montana: 4BR, 4BA luxurious ski-in ski-out home and separate 1BR, 1BA apartment. Spectacular view of Lone Peak. Hiking: Beehive Basin in Gallatin National Forest. Book at Staymontana.com, property code: Big Sky — Little Plume Lodge or Little Plume Flat, '76 p'21.

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He Shared Images Of Life Under Siege

By Elyse Graham '07

On a cold autumn night some 80 years ago, a passenger train bound for Warsaw lurched to an unexpected halt. The train discharged the passengers abruptly — among them, Julien Bryan 1921, who was carrying movie cameras, still cameras, and rolls of film for a documentary he was making about peasant life in Europe. German planes had just bombed the main station, the beginning of a campaign of destruction. The date was Sept. 7, 1939. Bryan found himself a witness to the siege of Warsaw, which lasted 20 days and ended with the German invasion of the Polish capital.

At the American embassy, Bryan learned that the embassy staff, foreign diplomats, journalists, and the entire Polish government had left the city. "Maybe I should try to get out of here at once," he said to one of the few consular officers remaining.

Ultimately, Bryan chose to document the siege for the rest of the world to see. He obtained papers from the mayor of Warsaw, Stefan Starzynski, that gave him permission to photograph the city. Starzynski also gave him a car, a guide, and an interpreter, who helped him to interview the city's dazed civilians. (Bryan left Warsaw two weeks later.)

"Wherever one looked there were hundreds of people on foot, on bicycles, pushing wheelbarrows and even baby carriages loaded down with their bedding and a little food," Bryan later wrote. "Each night at 5:30 the Nazis sent over more bombers, and each morning a whole new section of the city was destroyed. So they went, not always wisely, to another part of town where they hoped they might be taken in. Poor and rich mixed together, but money no longer had any meaning. ... Blankets, mattresses, and bread were the most



precious possessions."

In 1940, Bryan produced a documentary film, titled Siege, that recorded these experiences. He also published a book of photographs, many of which appeared in *Life* magazine. A major theme of his images is the horror of warfare against civilians. Bryan recorded people standing in breadlines who were killed by shrapnel; the dead lay in place, for a time, while the living remained in line. He recorded a church destroyed, a hospital destroyed, a house destroyed – with a father, the lone survivor of the family in the home, bending to sift from the rubble bullets from German machine guns. In one field, where women dug for potatoes because they had no food, two German planes descended and dropped bombs on a nearby house, killing the inhabitants. The women kept digging – and the German planes returned, strafing the field with machine-gun bullets and killing two of the digging women.

"While I was photographing the bodies," he wrote, "a little 10-year-old girl came running up and stood transfixed by one of the dead. The woman was her older sister. 'What has happened?' she cried. Then she reached down and touched the dead girl's face, and drew back in horror. 'Oh, my beautiful sister!' she wailed. 'What have they done to you! You are so ugly!' Then, after a few seconds: ... 'What will become of me without you!'"

His book includes a photograph of the girl and her sister's body.

Bryan had served — at the age of 17 as an ambulance driver in France during World War I. In college, he shaped his diaries from the period into a memoir, which lamented his former eagerness to "get some excitement": "I have finally seen what I came over for, and a lot more besides – war, real war, stripped of glory. ... You realize how absolutely weak and helpless you are when a load of dead are brought in, some with arms and legs gone, others with heads and trunks mixed together; and quite often you learn there wasn't anything left to bring." Just a few years later, he found himself once again in a world of atrocities and brutal folly. 🔶

WATCH Bryan's short film, *Siege,* at http://bit.ly/BryanFilm

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