

Williams

The background of the cover is a dark teal color. It features a complex network of thin, white, wavy lines that resemble data streams or neural connections. These lines originate from a central point at the bottom, where a silhouette of a person is holding a smartphone. From the person's head, a dense bundle of these lines extends upwards, fanning out to fill the upper half of the page. Scattered throughout these lines are small white dots and some faint, illegible text fragments, giving the impression of a digital or data-driven environment.

MAGAZINE SUMMER 2019

THE COST OF PRIVACY

Alumni are working to protect
our rights in the digital age **p.10**

A photograph showing a line of graduates in black gowns and caps walking on a path during a commencement ceremony. The graduates are seen from behind, moving away from the camera. The background is a green lawn with trees and other people in the distance.

THE JOURNEY AHEAD

Williams' 230th Commencement on June 2 was full of memories, musings and musical highlights, including honorary degree recipient Kevin Roosevelt Moore (Keb' Mo') performing an iconic rendition of "America the Beautiful" to kick off the ceremony. Class Speaker Joseph S. Wilson Jr. '19 later made some music of his own, playing tambourine as he told classmates: "Our actions have impacted this institutional memory. With each hit of our tambourines, we disrupt spaces and bring awareness to issues. And with each ring of the cymbals, we use our experiences, knowledge and passion to produce change." See more coverage at commencement.williams.edu.

PHOTOGRAPH: ROMAN IWASIWKA



07



08



10



18



26



30



40

- 2 Report**
President Maud S. Mandel on campus activism.
- 3 Comment**
Readers respond to our coverage of Africana studies' 50th, anti-Semitism and more...
- 5 Notice**
Student and faculty fellows, science grants, a string quartet and more...
- 10 Privacy in the Digital Age**
Williams alumni are on the front lines of protecting our rights.
- 18 Justice for All?**
What happens at the intersection of race, class, gender and the environment.
- 26 Life in the Details**
A collection of photos taken each day of the academic year depicts the Williams experience.
- 30 The Unwinding of the Miracle**
Dying taught Julie Yip-Williams '97 about living, as she wrote in her posthumously published memoir.
- 35 Study**
Finding big answers in tiny plants, theatrical worlds, rat pups and Chicanx art.
- 40 Muse**
José Valenzuela '07 coaches students inside the classroom and on the wrestling mat.

-  facebook.com/williamscollege
-  [@williamscollege](https://twitter.com/williamscollege)
-  youtube.com/williamscollege
-  [@williamscollege](https://instagram.com/williamscollege)

Front cover illustration: Harry Campbell
Back cover photograph: Jay Corey

On Campus Activism

IT'S SUMMER IN WILLIAMSTOWN: A WONDERFUL TIME TO STEP OUT ONTO CAMPUS and feel the embrace of mountains on all sides. And yet this summer also feels like the quiet eye of a far-reaching storm, swirling with debate of many issues.

Williams is hardly alone in this experience. From Maine to California, my fellow college presidents report that they, too, are witnessing widespread upheaval on their campuses. This generation of students—incisive, passionate young adults that they are—is emerging into mature awareness of a complicated, messy and often unjust world. While every cohort has some version of this experience, the current one has access to technologies that broadcast their responses and subject them to public scrutiny in new ways. An app that can be used to mobilize positive action can also

generate counterreaction; one that can start a movement can also fuel a mob.

And yet, when asked whether I'm concerned by modern campus activism, my response, so far, is a gentle "No." I absolutely think Williams needs to teach people to voice strongly held views in constructive ways. That lesson is best learned within a community broad enough to accommodate conservatives and radicals, believers and agnostics, creatives and critics. Disagreement, in such a culture, should fuel intellectual vitality. But we can't assume students know how to debate effectively and respectfully. I plan to intensify our focus on that work, and I encourage you to read the recommendations from our Ad Hoc Committee on Inquiry and Inclusion, which will provide a strong, thoughtful basis for our efforts. (See bit.ly/wmsinquiryinclusion.)

But I'd be much more concerned if Williams were a community of people who did not hold strong views. Our students are as exceptional as ever. Our faculty and staff, too, shine in their chosen fields. These are smart, engaged people who want to make the world a better place. And

they should: Williams is in a Purple Valley, but it should not be in a purple bubble. I want us to make our geographic location into a usefully critical distance from which we can regard the world and imagine strategies for making it better. And we have great capacity for such work. In these pages, as on campus, you'll see that Williams has room enough for many views. There's room for yours, too: Whether you see Williams as nestled in a beautiful valley or buffeted by the winds of change—or both—I believe this community is generous enough to contain us all, and I look forward to working with you to make sure it remains so.



In these pages, as on campus, you'll see that Williams has room enough for many views.

Williams

SUMMER 2019 | VOL. 113 NO. 5

EDITOR IN CHIEF Amy T. Lovett

ASSISTANT EDITOR Shannon O'Brien

CONTRIBUTING WRITERS Julia Munemo, Greg Shook

STUDENT ASSISTANTS Ted Anderson '22, Carolyn Kim '22, Isabella Zorich '21

CREATIVE DIRECTION 2COMMUNIQUE

EDITORIAL OFFICES

P.O. Box 676, Williamstown, MA 01267-0676

TEL: 413.597.4278 **FAX:** 413.597.4158

EMAIL: magazine@williams.edu

WEB: magazine.williams.edu

ADDRESS CHANGES/UPDATES

Bio Records, 75 Park St., Williamstown, MA 01267-2114

TEL: 413.597.4399 **FAX:** 413.597.4178

EMAIL: alumni.office@williams.edu

WEB: alumni.williams.edu/updatemyprofile

Williams Magazine (USPS No. 684-580) is published in November, January, March, May, July and September and distributed free of charge by Williams College. Opinions expressed in this publication may not necessarily reflect those of Williams College or of the Society of Alumni.

All photography copyright © Williams College, unless noted.

Periodical postage paid at Williamstown, MA 01267 and additional mailing offices.

POSTMASTER:

Send address changes to Williams Magazine, 75 Park St., Williamstown, MA 01267-2114

WILLIAMS COLLEGE Board of Trustees

Maud S. Mandel, *President*

Liz Beshel Robinson '90, *Board Chair*

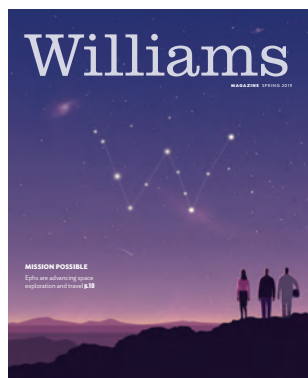
Keli Gail, *Secretary to the Board*

Elizabeth A. Andersen '87 | Timothy A. Barrows '79
Thomas M. Belk '77 | Jillian E. Charles '91
Noriko Honda Chen '89 | Valerie A. DiFebo '84
William C. Foote '73 | O. Andreas Halvorsen '86
Jeffrey S. Harleston '82 | Gretchen E. Howard '95
Cooper Campbell Jackson '89 | Leila H. Jere '91
Mariam B. Naficy '91 | Kate Queeney '92
Michele Y. Johnson Rogers '79
Nathan K. Sleeper '95 | Jonathan D. Sokoloff '79
Mark R. Tercek '79 | Sarah Mollman Underhill '80
Martha Williamson '77 | Gregory H. Woods '91
Tom Gardner '79, *President, Society of Alumni, attends meetings by invitation of the Trustees*



OTHER MISSIONS?

I read “Mission Possible” (spring 2019) with amazement at the hard work and creativity of Williams scientists. However, I couldn’t help but think how much money is being spent on U.S. space programs (as well as on educating space scientists) while countless people are suffering from cancer, Alzheimer’s and many other modern diseases. I simply can’t get excited about learning more about black holes while I know that family friends are sitting home not able to live their lives. If we could take all the money going to space science and channel it to finding cures and preventions for these diseases, think how far we could get. The money could help fix our food system (change it over to organic, sustainable farms featuring pastured, happy meat and veggies, and reduce the focus on ground strip-ping—and unhealthy—grains and soy) as well as overhaul the healthcare system that is so Band-Aid and pill happy rather than eager to find and eliminate root causes. Both our food and healthcare systems play a big role in this



“Amazing when you consider the academic rigor these athletes contend with.”

—STACEY O’ROURKE, PARENT OF A MEMBER OF THE CLASS OF 2019, IN A JUNE 12, 2019, FACEBOOK COMMENT RESPONDING TO THE NEWS THAT WILLIAMS RECEIVED ITS 22ND LEARFIELD/IMG COLLEGE DIRECTORS’ CUP IN THE 24-YEAR HISTORY OF THE AWARD. THE CUP, WHICH EPHS WON FOR THE SEVENTH YEAR IN A ROW, IS AWARDED BY THE NATIONAL ASSOCIATION OF COLLEGIATE DIRECTORS OF ATHLETICS TO THE BEST ALL-AROUND SPORTS PROGRAM BASED ON TEAM PERFORMANCE IN NCAA CHAMPIONSHIPS.

sickening of America. I just can’t see how we can look outside the Earth when we can’t even take care of the inhabitants (or the actual Earth) right here on Earth.

—BECKY (WETZEL) SODON ’93,
ATLANTIC HIGHLANDS, N.J.

While it was impressive to see so many alums aiming for the stars, I was sorry to see that the article did not include mention of another Eph helping us to explore space—Dr. Robert Hoyt ’90. Not only is Rob a true rocket scientist, but he has also built a company, Tethers Unlimited (TUI). This company has grown from a single idea to a significant enterprise that is using cutting-edge science to make real-world progress in space exploration. Led by Rob, the TUI team now creates high-performance components for small satellites, robotic assembly and fabrication technologies, optical fiber winding and deployment, navigation sensors, satellite communications

systems and other advanced technology areas. I’m not a scientist myself, but I love that I can look up at the sky at night and know that yet another Eph is helping us to understand just a little bit more about all the stars we see—and all the things we can’t.

—MATT LEVIN ’90, BERLIN, VT.

ANTI-SEMITISM IN CONTEXT

I read with great interest “Anti-Semitism in Context” (spring 2019), describing Professor Jeffrey Israel’s recently inaugurated course. The college’s formidable intellectual and pedagogical resources will no doubt prove valuable in their newly directed attention to this perennially thorny topic. I’m pleased to see that Professor Israel has chosen to move discussions in the classroom beyond religious considerations in order to expose racist dimensions of animus against Jews. However, given the explicitly racial ideology by which the Nazis loudly justified the Holocaust,

it surprises and concerns me that such exposure at this point is needed. Moreover, I’d question Professor Israel’s assertion that anti-Semitism has been “under-theorized.” Perhaps the reverse is true: Both anti-Semitic ideologues and critically removed commentators have filtered the flesh-and-blood humanity from living, breathing people who happen to be Jewish. Concrete results were acutely perceived by American GIs, who as liberators were overwhelmed by the stench of Dachau and Buchenwald.

—DONALD MENDER ’71,
RHINEBECK, N.Y.

FOR THE RECORD

Francis Oakley’s memoir (excerpted in “In Pursuit of Liberal Learning,” spring 2019) has it that the Latin requirement was dropped in the 1930s. I wish I had known that 10 years later, struggling to meet a three-year Latin requirement.

—VICTOR EARLE ’54,
AMAGANSETT, N.Y.

NOT NEGOTIABLE

There now exists in academe what is called the (University of) Chicago Statement, a declaration that supports full and open debate on campus about subjects that many may find not only offensive but unwise, immoral or simply wrong headed. Some institutions have adopted such a statement. However, President Mandel has not even mentioned that her new community—both students and faculty—has already rejected an initiative to adopt such a statement by stating, in part, the concern for “the potential harm it [could] inflict upon our community.” I mention the foregoing because the president’s initial commentaries in *Williams Magazine* have spoken to both a new classroom course (Free Speech and its Enemies, mentioned in “Intentional Joy,” summer 2018) and a study to “bring clarity” to the role of campus speakers so that both “free expression and inclusion” are protected (“A Position of Strength,” spring 2019). That is an impossibility, since true free speech is not negotiable. Apparently, the cultural weather report for Billville is a fixed phenomenon: Snowflakes.

—TED BAUMGARDNER '57,
WINTER PARK, FLA.

MORE ON ARMSTRONG

Your article “Histories in the Making” (fall 2018) failed to do justice to Samuel Chapman Armstrong, Class of 1862. The son of protestant missionaries in Hawaii, Armstrong graduated from Punahou School and came to Williams in 1860 after the death of his father. When the Civil War broke out,

he volunteered for service and was commissioned a captain. He raised a company of soldiers in the Troy, N.Y., area, which became part of the 125th New York Regiment. The regiment fought at Harpers Ferry and Gettysburg, where they helped to repel Pickett’s Charge. Armstrong then volunteered to lead black troops, which many officers decided to do, and became the colonel in charge of the 8th U.S. Colored

Troops in 1864. He ended the war with the rank of brigadier general. His experience led him to found Hampton Institute (now Hampton University) in Virginia as a training ground for black teachers. His most famous student and protégé was Booker T. Washington, who described Armstrong in *Up from Slavery* as the “noblest, rarest human being that it has ever been my privilege to meet. ... One might

have removed from Hampton all the buildings, classrooms, teachers and industries and given the men and women there the opportunity of coming into daily contact with General Armstrong, and that alone would have been a liberal education.” Sounds like James Garfield’s description of Mark Hopkins and the log.

—JOHN K. DIRLAM '68,
WELLESLEY, MASS.

FOR SUCH A TIME AS THIS

In “For Such a Time as This” (spring 2019) it is asserted that the seeds of the Africana Studies Department were sown in the agreement between Preston Washington '70 and Provost Steve Lewis '60 that ended the Afro-American Society’s occupation of Hopkins Hall in April 1969. That is not, however, historically accurate. Those seeds had in fact already been sown in spring 1968, when the society made a case for the establishment of an interdepartmental program in Afro-American studies. That idea, taken up in the fall by the Committee on Educational Policy (CEP), acting in consultation with the pertinent departments and the leadership of the society, eventuated in the formal proposal for the establishment of such a program that the CEP brought up for a successful vote at the February 1969 faculty meeting, two months before the occupation itself. Why emphasize the timing? Because it may serve to remind us that curricular innovations responsive to student ideas and needs may well be the outcome not of campus upheavals but of the college’s established governance processes. In that respect, the Afro-American Studies Program paralleled the Williams-in-India program and the interdepartmental major in the history of ideas that were both voted in that same year.

—FRANCIS OAKLEY, WILLIAMS PRESIDENT, EMERITUS,
AND CHAIR OF THE CEP, 1968–69

Professor Oakley courteously shared with me a letter he’d written and intended to have published in the summer 2019 issue. Since then, I have had an opportunity to participate in the beautiful commemoration of the 50th anniversary of Africana Studies, which brought Black alumni from across five decades, including five members of the 1968–1969 Afro-American Society (AAS) who occupied Hopkins Hall in April 1969. The recollections of these men and women, as well as institutional recordings of that moment, confirm Professor Oakley’s assertion that the “seeds” of the Africana



Studies Department had been sown in the spring of 1968, when AAS submitted a “proposal” for creating more physical, cultural and curricular spaces on campus for Black students, including an Afro-American Studies Program. However, the

original 1968 proposal, and the 1969 demands and occupation, were not at all disconnected actions but part of a stream of organizing that was consistent with those of contemporaneous Black student movements across the globe. The Hopkins Occupation was another, perhaps more publicly dramatic, stage of AAS’s long efforts to bring the college into a new age. It reminds us that the moral urgency of student agitation speeds the slow, grinding wheels of institutional governance.

—JAMES MANIGAULT-BRYANT, ASSOCIATE PROFESSOR
AND CHAIR, AFRICANA STUDIES DEPARTMENT

NOTICE

DRAG CULTURE

LaWhore Vagistan, alter ego of Tufts professor (and former Williams queer life coordinator) Kareem Khubchandani, discussed the dangers of performing in drag, pop culture influence—and why he keeps his body hair—during “Drag Me! Ethics, Performance and the Politics of Drag,” part of a yearlong series on performative ethics, presented by the Program in Women’s, Gender and Sexuality Studies at the ’62 Center in May.



FRESH FELLOWS

SPRING IS NATIONAL FELLOWSHIPS AND SCHOLARSHIPS season, and Williams students and alumni earned more than their fair share this year. With Rhodes, Mitchell and Schwarzman scholarships already announced in the spring issue of *Williams Magazine*, we reached out to several of the newest winners to learn more about their scholarly and career interests and how they plan to use their awards to pursue them in the years ahead.



▲
TANIA CALLE '20
Harry S. Truman Scholarship for juniors with exceptional leadership potential and commitment to public service; studying social determinants of teen pregnancy in Quito, Ecuador, with an NIH-funded research training program this summer



▼
DREW FISHMAN '19
Donovan-Moody Fellowship to attend Exeter College at Oxford University; combining intensive Mandarin language study with comprehensive classes on modern China, with plans to write a thesis on China and international political economy



▲
ELIZABETH HIBBARD '19
One of six Herchel Smith Fellows from Williams to attend Cambridge University's Emmanuel College next year; studying the British Equity Act of 2010 to understand how feminist theories influence law



▲
ALDEN TAYLOR '19
The college's first Yenching Scholar, studying at the Yenching Academy of Peking University in Beijing, China; examining China's burgeoning role in global governance, with the aim of becoming an international lawyer and strengthening diplomacy between the U.S. and China

▼
JEREMY SMITH '19
Junior Fellow at the Carnegie Endowment for International Peace; "advancing the cause of mutual understanding" between the U.S. and China by conducting research and co-authoring policy papers and journal articles for the Economics Desk in the Asia Program



▲
EMMA MANDEL '19
Thomas J. Watson Fellowship; traveling to France, Morocco, South Africa, Israel and Palestine to explore how theater is used to articulate women's experiences in places of censorship, suppression and oppression

VÉRTIZ WINS PEN AWARD

In late 2018, Vickie Vértiz '98 was awarded a PEN America Literary Award-Los Angeles for her poetry collection *Palm Frond With Its Throat Cut* (University of Arizona Press, 2017). The collection is a series of portraits of cities—including Los Angeles, Mexico City and Paris—and of rivers, freeways and people. *The Los Angeles Review of Books* says Vértiz's "poems transform displacement and a polluted cityscape into sources of resistance and aesthetic restructuring." Vértiz says that, at its core, the book is about home. "Wherever you are, home is still with you," she says. "When I was at Williams, home was ever-present because it was so absent." Here is the title poem, "Palm Frond With Its Throat Cut: After Danny Jauregui's Sculpture":



Vickie Vértiz

There is no one else but me for you / The shape you're in / What are we but lying single surface / subatoms / Your fronds decay / Your remaining life is spiky particles / A golden rot / Don't think / Tilt / You'll want to leave me / But let me smoke you down / The tallow of your heart / Wait to fall / On my body / Aestheticize me / Make me grass

RECENTLY PUBLISHED



Shaped by the State: Toward a New Political History of the Twentieth Century (The University of Chicago Press, 2018), edited by **Mason B. Williams**, leadership studies and political science professor, et. al.

The work of top scholars to understand how state structures—rather than moments of crisis or partisan realignment—shape political history informs the collection



Religion professor **Jeffrey Israel** explores how people from different backgrounds can pursue justice together, even as they play with divisive grudges,

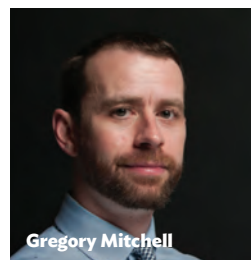
prejudices and desires in their cultural lives, in *Living with Hate in American Politics and Religion: How Popular Culture Can Defuse Intractable Differences* (Columbia University Press, 2019).



In Before the Mayflower: A Novel (Choir Alley Press, 2018), J.L. Rose, the pseudonym for **Jennifer (Hallett) Sinsigalli** '96, chronicles the lives of the fictional

Okes family, connecting characters via the printing press, in the 33 years leading up to the Mayflower voyage.

See more works and submit updates on new publications at ephsookshelf.williams.edu.



Gregory Mitchell



W. Anthony Sheppard

LEARNED FACULTY

TWO WILLIAMS PROFESSORS have received fellowships from the American Council of Learned Societies.

Gregory Mitchell, associate professor of women's, gender and sexuality studies, was named a Frederick Burkhardt Residential Fellow. The fellowship provides a \$95,000 stipend and a \$7,500 research budget and will allow Mitchell to spend the upcoming academic year at Princeton University to work on his book project, tentatively titled *40,000 Missing Girls: Moral Panics, Global Sporting Events, and the Spectacle of Sex Trafficking*.

W. Anthony Sheppard, the Marilyn and Arthur Levitt Professor of Music, was named a Susan McClary and Robert Walser Fellow in Music Studies. He will receive funding to support six to 12 months of full-time research and writing. His project, "The Performer's Voice: Timbre and Expression in 20th-century Vocal Music," investigates how European and U.S. composers and performers of vocal music wielded timbre as a tool of expression.

A CLOSER LOOK



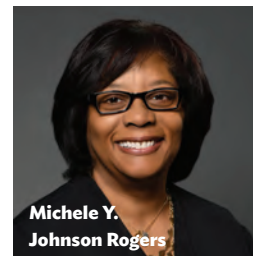
MUSIC MAKERS

AT THE WILLIAMS COLLEGE DEPARTMENT OF MUSIC'S I/O FEST IN JANUARY, THE student group Axxea String Quartet performed a suite by Sato Matsui '14 as well as a new piece by composer and visual artist Tristan Perich. Violinist Jeffrey Pearson '20 says it was "a rare and exciting experience to work with living composers and perform new music."

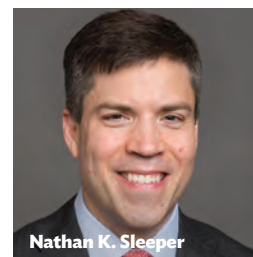
Founded two years ago, the group maintains a busy performance schedule, including an annual full-length spring concert, and a standard repertoire of Mozart, Brahms and Bartók. But the members agree there's something special about playing new compositions. "We really enjoy the challenges that seizing such opportunities presents," says cellist Caroline Tally '21.

Last winter they performed the work of local composer Stephen Dankner at Sweetwood retirement community. And in April they joined pianist and Williams artist-in-residence Doris Stevenson at Bargemusic in Brooklyn for a piano quintet by Williams music professor Zachary Wadsworth.

Each member has been playing since childhood and came to Williams with an interest in performance. Tally says the group gels, in part, because they "all share a level of intensity about music and an interest in seeking new challenges."



Michele Y.
Johnson Rogers



Nathan K. Sleeper

TRUSTEE
UPDATES

On July 1, Williams welcomed Michele Y. Johnson Rogers '79 and Nathan K. Sleeper '95 to its Board of Trustees.

Rogers, who was elected by the Society of Alumni and appointed by the trustees, is director of partnerships with Chicago organizations and a clinical assistant professor with the Kellogg School of Management at Northwestern University. She serves on the steering committee of the Williams Black Alumni Network and was her class's vice president from 2004 to 2009.

Sleeper is CEO of Clayton, Dubilier & Rice, LLC, a firm with offices in New York City and London, focused on investments in the healthcare, industrial business and energy services industries. At Williams, he serves on the Non-Marketable Assets Advisory Committee.

The Board of Trustees also reappointed Sarah Mollman Underhill '80 and Gregory H. Woods '91. Clarence Otis Jr. '77 retired when his term ended on June 30, as did Michael Eisenson '77, who was succeeded as board chair by Liz Beshel Robinson '90. Both Otis and Eisenson were named emeritus trustees.

WCMA'S SUMMER HOME

THE WILLIAMS COLLEGE MUSEUM OF ART (WCMA) IS TAKING IT TO the streets while Lawrence Hall closes temporarily for renovations. The Summer Space at 76 Spring St., open daily from 11 a.m. to 6 p.m. through Sept. 2, features the WCMA shop and an exhibition from the WALLS Collection. The weekly summer Ologies series continues at sites across campus. Visit wcma.williams.edu for more information.



SCIENCE, SUPPORTED

Microscopic fossils, artificial intelligence and solar eclipses are the research areas of three professors who received more than \$481,000 combined in National Science Foundation grants.

Geosciences professor Phoebe Cohen and her research partners are measuring organic carbon isotopes of microscopic fossils, a window into the evolution of life before the rise of animals.

Computer science professor Iris Howley is looking at how the relationship between instructor and student understanding of artificial intelligence algorithms underlying educational technology impacts decision-making in learning contexts.

And astronomy professor Jay Pasachoff and a team including students will travel to Chile, Argentina and Antarctica over the next three years to continue ongoing research on solar eclipses.

IN MEMORIAM



William T. Fox



Glyn P. Norton

William "Bill" T. Fox '54, the Edward Brust Professor of Geology and Mineralogy, died on Feb. 12. He was 86. Fox spent 35 years at Williams, serving as chair of the geology department and helping to plan and develop

Bronfman Science Center, one of the most innovative scientific facilities of any college when it opened in 1968.

On March 6, Glyn P. Norton, the Willcox B. and Harriet M. Adsit Professor of International

Studies, emeritus, died at the age of 77. Norton joined the faculty in 1988 and received prestigious fellowships from the Guggenheim Foundation and the National Endowment for the Humanities, among others.





PRIVACY IN THE DIGITAL AGE

BY LIZ LEYDEN
ILLUSTRATIONS BY HARRY CAMPBELL
PHOTOGRAPHY BY BRAD PARIS

Our smart devices are listening, our faces and bodies routinely scanned and our preferences tracked. But four alumni are leading efforts to make sure new technologies don't infringe on our civil and constitutional rights.

IT FEELS LIKE A HARMLESS TRADE-OFF: GIVE UP A little privacy, gain a little happiness—or at least a little efficiency. We connect with far-flung friends on Facebook and have instant access to the latest news and ideas on Twitter. We shop quickly and conveniently 24/7 and swap paper maps for digital devices that plot our routes in real time to the doctor, to Disney World, to protests on the National Mall.

Yet our footprints are forever left online, to be collected, analyzed and optimized. How that information is gathered and used, with or without our consent, presents challenges unforeseen by the founding fathers. What happens to public discourse, for example, when Facebook

algorithms influence what we read in our feeds? Or when a law enforcement agency builds a case against a person based on their social media “likes” and “shares”? Or when government leaders at all levels, including the president of the United States, block anyone they disagree with from their Twitter feeds?

Four Williams alumni are wrestling with these kinds of questions, raising awareness and holding public officials and purveyors of big data accountable. Jameel Jaffer '94, executive director of the Knight First Amendment Institute at Columbia University, focuses on freedom of speech and of the press in the digital age. Rachel Levinson-Waldman '95, senior counsel at the Brennan Center for Justice, studies issues related to government and law enforcement's use of surveillance. Andrew Guthrie Ferguson '94, a law professor at the University of the District of Columbia, researches predictive policing and whether Fourth Amendment protections include the data on our devices. And Jay Stanley '89, a senior policy analyst at the American Civil Liberties Union (ACLU), works to uncover emerging technologies that have the potential to prey on personal privacy.

“We all have a thousand streams of information about a thousand of the world's problems coming into our ears every day,” Stanley says. “Privacy is an issue most people care about, but often they don't understand the ways in which their privacy is being invaded, and they also often feel resignation about it. You know, ‘What can you do?’”

Plenty, these alumni believe.



Jameel Jaffer '94,
Executive Director,
Knight First Amendment
Institute at Columbia
University

PROTECTING PUBLIC DISCOURSE

When President Donald J. Trump began blocking his critics from his Twitter feed, those critics turned to the Knight First Amendment Institute for help.

The institute sent a letter to the White House asking that users be unblocked, arguing that the president's account operates as a public forum in which free speech is protected by the Constitution. The White House ignored the letter, so the institute sued—and won.

“The First Amendment applies to these accounts in the same way it applies to offline forums like town halls,” says Jameel Jaffer '94, the institute's executive director. “It seems clearer and clearer every day that political discourse that used to take place in these physical world, real world, analog forums now takes place online.”

Jaffer is no stranger to high-profile litigation. He spent 15 years at the ACLU, where his work on issues like national security and freedom of speech helped rein in widespread surveillance by the National Security Agency and prompted the publication of the Bush administration “torture memos” and the Obama administration “drone memos.”

“I got to work on the stuff that I really wanted to work on, the stuff you opened up the paper in the morning and

KEEPING TABS ON SURVEILLANCE

you'd think, 'Why isn't somebody doing something about this?'" Jaffer says. "And I could go into work and do something about it, or at least try to. It was an incredible privilege."

So, in 2016, when Columbia University and the John S. and James L. Knight Foundation created the Knight Institute, Jaffer was the natural choice to lead it.

He says a big reason behind the organization's founding "was the thinking that we needed an institute that can both engage in serious scholarly research and develop a vision for what the First Amendment ought to look like in this new era.

"And also fight for that vision in court," he adds.

In addition to the Twitter case against Trump, the institute sued the current administration for records detailing how the government scrutinized the social media accounts of potential immigrants and naturalized citizens. It cautioned that the indictment of WikiLeaks founder Julian Assange treats "everyday journalistic practices as part of a criminal conspiracy." And it joined in lawsuits seeking visitor logs at the White House and Mar-a-Lago, Trump's private club in Palm Beach, Fla., and challenging the government's authority to review the writing of former intelligence and military personnel.

Another priority, Jaffer says, is learning more about which voices are amplified and which are suppressed on social media. To that end, the institute is negotiating with Facebook to allow journalists and scholars to create temporary research accounts and use automated tools to mine publicly available data about users in an effort to study how information moves on the site and how algorithms respond to different profiles. Both practices are currently against Facebook's terms of service, but Jaffer says understanding how the platform works is important to the public interest.

"The most important journalism ... and research right now is focused on the way social media platforms shape and distort public discourse," he says.

But it's the Trump Twitter case that has received the most attention. In March, Jaffer returned to court to argue the appeal of *Knight v. Trump*. By then, the impact of the original ruling had already rippled across the country, with reports of people citing the case as they successfully challenged public officials—Republican and Democrat—on the local level who similarly blocked users.

While Jaffer calls the initial success "gratifying," he adds, "We need to come up with a way of ensuring that the rules that apply in this new digital environment are ones that will preserve rather than compromise the democratic principles that all of us want."

With police departments across the country embracing technology, especially social media, Rachel Levinson-Waldman '95 is paying attention.

As senior counsel for the Brennan Center for Justice at New York University, she has testified before the New York City Council about the need to disclose the source code used in policing algorithms. In Maryland, she urged lawmakers to clarify rules police follow in order to use fake cellphone towers, known as Stingrays, to track suspects. And, in Memphis, a federal judge appointed her to a monitoring team to help create guidelines governing digital surveillance following revelations that police had spied on members of the Black Lives Matter movement using a fake social media account.

Levinson-Waldman also works to educate the public about the impact of surveillance on privacy rights and to engage their help in pressing law enforcement agencies and politicians to distinguish between what is possible versus what is ethical.

"Are governments themselves going to put out policies that restrict what they can do?" she asks. "The history is often that governments do not come to that conclusion on their own."

Levinson-Waldman's path to a career defending constitutional freedoms began in Austin, Texas. Her father was a professor of constitutional law at the University of Texas, and her mother was a writer. The family's home buzzed with conversations about liberty, law and justice.

"I've always felt very strongly about serving the public interest in some way, at some basic level feeling like I'm making a contribution," Levinson-Waldman says.

At Williams, she volunteered with the rape crisis hotline. After law school at the University of Chicago, she worked with victims of domestic violence in Seattle, was a litigator in the Civil Rights Division of the Department of Justice and later safeguarded academic freedoms at the American Association of University Professors.

Today, Levinson-Waldman's work at the Brennan Center focuses on ways police use social media to monitor people's behavior. That might mean using a hashtag search to identify people attending a rally, or analyzing the social networks and activities of gangs to predict future crimes. Both have implications for political speech and privacy protections.

Among the cases that have drawn the Brennan Center's scrutiny is the 2012 arrest of a young New Yorker named Jelani Henry on attempted murder charges. Police had



Rachel Levinson-Waldman '95,
Senior Counsel, Brennan
Center for Justice

“There are so many reasons one would write something on social media. ... And the fact that it was taken as a signal of gang affiliation is incredibly worrisome.”

—RACHEL LEVINSON-WALDMAN '95

conflicting eyewitness testimony but linked Henry to a local gang based on his social media “likes.” He spent 19 months on Rikers Island before his case was dismissed. For his part, Henry testified that he “liked” certain posts to avoid being called out by his peers.

“The fact that he was seen as a member of a gang, really because of his social media activity, was basically what landed him in Rikers,” Levinson-Waldman says. “There are so many reasons one would write something on social media, look at something, ‘like’ something, retweet it. And the fact that it was taken as a signal of gang affiliation is incredibly worrisome.”

She recently helped write a bill limiting how law enforcement can use social media, tentatively dubbed the HASHTAGS Act—short for Halt Authoritarian Spying by Harnessing Transparency Against Government Surveillance. It would require police departments to have data policies, prohibit intelligence gathering around First Amendment activity and set limits on how long data can be retained. The act was expected to be introduced in the U.S. House of Representatives in late spring.

The Brennan Center also studied 157 law enforcement jurisdictions across the U.S. that spent at least \$10,000 on social media monitoring software, finding that only 18 had publicly available policies in place about how they would use and store the data gathered in investigations.

The lack of well-defined and transparent guidelines, Levinson-Waldman says, spills into all areas of digital surveillance. As technologies evolve, so does the potential for misuse. But on the local level, she is starting to see progress. Among other things, city councils across the country are beginning to pass surveillance transparency ordinances requiring disclosures from police.

“This is why the push for transparency is really important,” she says. “People don’t even know how to take action or what to take action on if they don’t know what’s out there.”



Andrew Guthrie Ferguson '94,
Professor of Law, UDC
David A. Clarke School of Law

QUESTIONING CRIME DATA

The journey of Andrew Guthrie Ferguson '94 into the world of high-tech policing began in a decidedly low-tech place: The Superior Court of the District of Columbia.

It was 2006, on the cusp of an era in which local policing would soon take a sharp digital turn. Ferguson, then a public defender, noticed that the officers he was cross examining were testifying, again and again, that his clients had been arrested in "high-crime areas." Data from the Metropolitan Police Department's growing team of crime analysts was being used to determine where these areas were located. So, Ferguson asked to see it.

"I started litigating it," he says. "If you're going to have crime data, you have to bring evidence."

Thus began Ferguson's work to shed light on the ever-expanding intersection of data collection and law enforcement. His 2017 book, *The Rise of Big Data Policing*, sounded the alarm on the use of new technologies, from automated license plate readers to networks of video surveillance cameras. While proponents consider these technologies to be objective tools that can help police locate suspects and solve crimes, critics say they gather data without consent and reproduce racial biases in policing practices.

"I realized there was a story to be told about how these changes in technology were distorting what police did, who they targeted, where they patrolled and how they investigated," Ferguson says. "And, in many ways, how it was changing the power relationship between citizens and police."

Now a law professor at the University of the District of Columbia, Ferguson is an expert on juries, the Fourth Amendment in the digital age and predictive policing—the effort to use data analysis to anticipate where crimes will happen. In his book, he refers to the data behind predictive policing as “black data,” because it is both “largely hidden within complex algorithms” and often embedded with racial bias.

“If you’re going to use this technology, you have to ask hard questions ahead of time,” he says. “Is it going to reinforce bias in communities? Is it going to empower police at the expense of citizens in ways we don’t want? Is it actually going to change the Fourth Amendment?”

Any time Ferguson gives a talk, he asks the audience two questions: How many people know what surveillance technologies are currently in use in your city? And where can you go to find out?

For the first question, a few hands go up. But for the second: “No one raises their hand, even city officials,” he says. “Big data policing is a democracy problem. It’s about having citizens be aware of the technologies applying to them and what to do about it.”

Ferguson is also a technology fellow at New York University’s Policing Project, whose goal is to help communities address potentially divisive policing issues before problems arise. He’s part of a team writing digital surveillance guidelines for police that will help define what technologies should be allowed, how they’ll be used and what policies and practices should be implemented before they’re deployed.

“That’s a piece of trying to educate and give the tools necessary to get the ultimate decision into the hands of our democratic leaders, to get communities interested in how they’re being policed and pushing back on unthinking surveillance,” he says.

Civic-mindedness has been a constant throughout Ferguson’s career. His first book, *Why Jury Duty Matters: A Citizen’s Guide to Constitutional Action* (NYU Press, 2012), led to his starring role in the official court video that’s shown to 30,000 jurors in D.C. each year.

“It’s like being the star of a low-rated, reality T.V. show,” he says with a laugh. But the video and book present an important case: that jury duty makes democracy work. So does the Constitution. Citizens need to own their rights and ask questions, Ferguson says, something he first learned in college during his political theory seminars.

“One of the lessons I got from Williams was that inquiry mattered, questioning mattered, and it was our obligation as graduates of Williams to keep inquiring, keep challenging and keep asking those questions,” he says. “And I see that thread in my work today.”



“The technology is just moving so fast that our legal institutions, our social norms, our intuitions can’t keep up. ... My biggest macro concern is ... we’re going to constantly feel we are being monitored and evaluated.” —JAY STANLEY ’89

FOCUSING ON THE FUTURE

When news broke last year that security personnel at a Taylor Swift concert in California secretly used facial recognition technology to scan the audience for stalkers, Jay Stanley ’89 weighed in.

Though he expressed sympathy for Swift’s security concerns, Stanley, a senior policy analyst who has spent nearly two decades at the ACLU, told NBC: “People should know about this, preferably before they buy their ticket.”

Once relatively obscure, facial recognition technology is now used by iPhone users to unlock their devices, casinos looking for high rollers and cheaters, and Facebook and other apps to identify individuals and even cats in photos. It’s one of the many new technologies Stanley has analyzed through a Constitutional lens. A member of the ACLU’s Speech, Privacy and Technology Project and editor of the “Free Future” blog, he acts as both educator and advance scout, looking ahead to anticipate what might infringe on civil liberties down the road.

“I tend to do the issues for the ACLU that are a little bit in front of the bow,” he says. “They’re so new they haven’t yet become subjects of litigation or lobbying, but the world still wants to know what we think.”



Jay Stanley '89,
Senior Analyst, American
Civil Liberties Union's
Speech, Privacy and
Technology Project

He describes his role as “think-tank,” a happy fit for a political science major with a philosophy habit on the side.

“I feel like I got such a fantastic education,” he says of Williams. “It gave me the breadth I need to think about brand-new technologies and where they may go.”

Stanley’s blog posts carry thought-provoking headlines like “The Costs of Forcing an Online Haven for Racists Off the Internet” and “How Lie Detectors Enable Racial Bias.” And he has spoken and written about a wide range of issues, from Amazon’s digital home assistant Alexa eavesdropping in living rooms to see-through body scanners used to screen for explosive devices in subway stations.

In 2013, Stanley heard that small-town police departments were beginning to use body cameras—a means of government surveillance that at the same time could provide oversight of the police. He wrote a report laying out how privacy threats could be mitigated by clear oversight and accountability policies, enabling the technology to serve both police and the public.

Less than a year after the paper’s publication, a white police officer, Darren Wilson, shot an unarmed black teenager, Michael Brown, in Ferguson, Mo. With conflicting eyewitness accounts and no video recordings of the confrontation, Brown’s family mounted a campaign to get more police around the nation to wear cameras. Stanley’s paper became a reference for city councils across the country in local debates about implementing the technology.

“Too many police departments are not adopting the recommended policies,” he says. “But we at least successfully raised a set of questions that were asked about the technology as it hit the big time.”

Stanley aims to reach as many audiences as he can. He regularly visits law schools and appears on panels from D.C. to Brussels, where he recently spoke about facial recognition technology at a conference about data protection and democracy.

“The technology is just moving so fast that our legal institutions, our social norms, our intuitions can’t keep up and adapt,” he says. “My biggest macro concern is that all these streams of data are going to flow together into a big river, and we’re going to constantly feel we are being monitored and evaluated.”

Ultimately, he says, no matter what the technology is or who is using it—government agency or private corporation—the key for citizens is transparency.

“People have a different sense of what the balance should be between government power and individual protections,” Stanley says. “But everybody, whether they agree with the ACLU or not, should agree we live in a democracy, and these technologies raise serious policy questions [that] should be answered democratically. But that can’t happen if they’re deployed in secret.” **W**

Liz Leyden is a writer living in New Jersey.



Justice for All?

What
happens
at the
intersection
of race,
class,
gender
and the
environment.





Left: The predominantly black residents of the Rust Belt town Braddock, Pa., struggle with pollution, toxic health issues and unemployment.

A grassroots movement for environmental justice is taking root at Williams. We see it in new courses being taught across the curriculum, in scholarship and research, in discussions and in activism—both local and global—among students, faculty and staff. To get an understanding of the scope and scale of campus involvement, *Williams Magazine* convened a conversation among a handful of people deeply engaged in the work. Together they discussed the impact of environmental racism, how justice is being pursued and the challenges around making sense of such a complex and seemingly intractable issue.

JAMES MANIGAULT-BRYANT: As a graduate student in sociology, I became aware of the challenges of environmental racism in the community I grew up in, in Florida, and began to see the same pattern throughout the Southeast. I designed a class at Williams called Race and the Environment, which I started teaching in 2011. That's how I came to environmental justice. Can you explain how you came to it?

LAURA MARTIN: I'm an environmental historian and a historian of science, and I teach Environmental Justice. As an undergraduate, I was a first gen, pre-med student and had not considered a career in environmental studies. I took Environmental Justice my senior year, and it blew me away.

BILAL ANSARI: I started as a chaplain at Williams in 2011. My first week, Hurricane Irene blew through the Berkshires and wiped out the Williamstown mobile home park, The Spruces. I got involved in trying to find homes for the 236 families who were going to be displaced. We found about 40 replacement housing units, but Williamstown is still fighting to build affordable housing.

JOSÉ CONSTANTINE: I grew up in a small, industrial city in central Virginia, a community that surely has suffered environmental injustice. But the smokestacks also meant jobs, money and security. As an undergraduate, I found myself in a traditional geology department valuing pristine places, without people, above all else. But, blink, and I find myself at a Williams-Mystic field seminar in Louisiana meeting people at the front lines of big changes happening within the Gulf. The people impacted were black, brown, poor. That got me thinking more critically about my work. It's led to a course I teach called Global Warming and Environmental Change.

CECILIA DEL CID: I was born in Guatemala and left to study environmental studies through a scholarship that brought me to Berkshire Community College. I went back to

Guatemala and then came back to continue my education in biology and Latin American studies at Smith College, completed graduate training at Yale and worked in Latin America in forest restoration and conservation. Now part of my role is to lead Root (a student orientation program in environmental justice) in collaboration with the Zilkha Center for Environmental Initiatives.

MANIGAULT-BRYANT: What is environmental justice, and how is it being pursued here at the college and in the local community?

DEL CID: We want students in Root to be able to express the intersections between identity, sustainability and environmental justice. We looked up the U.S. Environmental Protection Agency definition and found it limiting, because it was based on U.S. law. We wrote our own definition, because we know what is legal is not always what is just. The EPA defines environmental justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies." Root aligns and deviates from this definition, encouraging both fair access to healthy, sustainable environments globally and consideration of how these goals can be achieved legally, or through policy, and also culturally and socially. We see environmental justice as our right to have access to decent and safe environments where we live, learn, work and play.

ANSARI: It's interesting how the legal grips hold of what justice can be. Conservationists here in Williamstown have a legal tool to lock land up so that no affordable housing can be built—and that is the justice piece for the poor and working class who need homes. To preserve the forest, they have a blunt, legal instrument to strike against any efforts of affordable housing. If it wasn't for Williams College giving us a few acres down on the end of Southworth Street, we would have been able to build zero affordable housing units in town after the storm wiped out The Spruces. That's what environmental justice means to me: a blunt force that hurts.

Right: In 2011, 236 families were displaced after a hurricane destroyed The Spruces mobile home park in Williamstown.



James Manigault-Bryant
(moderator)
Associate Professor and
Chair of Africana Studies



Bilal Ansari
Director of Campus
Engagement and Acting
Director of the Davis Center



José Constantine
Assistant Professor
of Geosciences



Cecilia Del Cid
Assistant Director
of the Davis Center



Laura Martin
Assistant Professor of
Environmental Studies



MARTIN: It's exciting to see my students grappling with the definition and trying to expand beyond a legal definition. We start the semester reading a chapter by Robert Bullard and a chapter by David Pellow, with Bullard emphasizing court action and community mobilization and Pellow arguing for an anarchist, anti-statist position. That sets up the students to think about the promises of the U.S. legal system and its constraints.

CONSTANTINE: When many natural scientists hear "environmental justice," their minds go to pristine landscapes that unjust things are happening to. When confronted with alternative ways of viewing that term, there's resistance. But we can't ignore race, and what I find frustrating is that natural scientists sometimes don't see how racism impacts where people of color live or how those places are targeted as sites for chemical factories.

MARTIN: One of my intellectual projects is to introduce natural scientists and conservationists to the idea that they need to attend to the injustices of conservation and restoration, the locking up of land locally and internationally. In Envi 101, our introductory course, I talk about two examples of landscapes that were violently dispossessed. One is Central Park, which a lot of students assume has always been undeveloped and that the city grew around it. But African American and Irish communities were displaced in order to build it. Central Park was built to look like it was always there. Another is the Wichita National Forest, where the Kiowa-Comanche Reservation was dismantled under the Dawes Act, and a national forest was created as a result. Places some students might see as innocent have histories of injustices.

MANIGAULT-BRYANT: When I think about justice, I think beyond the legal realm. I'm aware of cases where a community gets a settlement that simply is not enough to repair the damage that was done. Environmental justice affects people's physical health, the structure of families when people die young from diseases. It affects communities when people leave. I'm wondering about what's happening here at Williams, both inside and outside of the classroom, relationships between the college and the local community. How is the idea of justice being pursued?

ANSARI: When the storm hit, there were different theories on why the flood impacted The Spruces the way it did. Half of the park was below the flood plane, and when it was created back in the 1950s, the policies of how you build weren't up to today's code. New landlords were never required to retrofit to meet new codes so that it could survive environmental impacts. Also, the deforestation to build the airport in North Adams created runoff, but the

"Environmental justice affects people's physical health, the structure of families when people die young from diseases. It affects communities when people leave."

—JAMES
MANIGAULT-
BRYANT

Right: African American and Irish communities were displaced in order to build Central Park in New York City.

Army Corps of Engineers had told them to make a larger system for the runoff. The town never made the owners do that, and water poured off from there. The river rose. It was a nightmare that nobody wanted to take responsibility for, except the people who lived there. After the storm, FEMA (the Federal Emergency Management Authority) gave \$6.8 million to relocate people, and that's it. They had to sign away their right to come back to Williamstown. They were told, "Go live in Adams, Pittsfield or North Adams, because that's where your type belong." That was the feeling. A lot of people died. I buried a lot of friends—older white people, most of them, who died because of breathing problems from the mold that grew until they were able to leave. How do you weigh that loss?

DEL CID: I once heard Heather Hackman (a teacher and trainer on social justice issues) articulate it very well: "We are in the climate crisis because of systems of oppression, and we are not looking at the connections." Who is brought to the table? Who is included in drafting our policies? How do we do development policies? Building a relationship between the Davis Center and the Zilkha Center allows our students to think about these terms as complementary, to recognize that capitalism, patriarchy, white supremacy have allowed corporations, colonialism, imperialism to continue to perpetrate many of these injustices. Working together and nurturing that relationship within Williams is trailblazing.

MARTIN: It's been exciting to see the people around this table strengthening ties with local environmental justice movements and organizations. Students in my class have spent time with Soul Fire Farm in Grafton, N.Y., an organization thinking about food justice and empowering farmers of color. Roots Rising in Pittsfield is another food justice organization that's doing excellent work. This semester, three students in Environmental Justice are collaborating with the residents of Rensselaer, N.Y., to research health and community impacts of an existing landfill site and to help them think about mobilizing against a second proposed waste processing facility. It's exciting to see increasing collaborations among staff, faculty, students and communities.

ANSARI: To work with faculty, staff and students who are interested—and there are some warriors out there fighting—helps you to believe in the greater good that exists. I think if any change is going to happen, it's going to happen with us around this table and others like us.

DEL CID: Everyone should be concerned with climate justice. We all live in this environment, built or natural. It's a reflection of our privilege when we can afford not to be concerned about these issues. When I travel to Latin



America, I always think, “Will these places be here when my nephews are old enough to make this trip?” Many of them won’t.

MARTIN: We see environmental justice on campus now through individual collaborations and infused in some classes. But there are rigid barriers, one being the Route 2 divide between Divisions 2 and 3 (social sciences and natural sciences) and Division 1 (arts and humanities), another being the faculty-staff divide. But the divide I hear students trying to navigate is between theory and practice. So many students are eager to apply what they’re learning in the classroom, and environmental justice as a discipline explicitly makes that connection.

ANSARI: Williams needs to get out of the forest, have more conversations and allow more people on the log. My great-grandfather used to take Williams students out there to hunt, and they captured the forest. All of the fraternities had their own parts. I think that mindset has stayed. But Williams has diversified, and it needs to be more inclusive and equitable in how it looks at what is environmental. Yes, the forest is valuable, but so are the rivers that run down into the flats from the forest and the water sources and the land the forest feeds from. Williams could get out of the forest and allow more people on the log. I would hope that we would have more diversity and inclusion, more ideas and influx of thought.

MANIGAULT-BRYANT: What strikes me is how central the forest is physically, but symbolically as well. What draws people here is an opportunity to have the privilege of being removed, of being in the wilderness to come to a sense of themselves. What you’re challenging us to think about is: At what cost is Williams able to sustain that forest?

MARTIN: Would you say that the myth of the forest, or the myth of Williams’ isolation, leads to a lack of sustained connection with surrounding communities? It is mind-blowing to hear the prevalent campus view that North Adams is very far away and has nothing to do with us when it is geographically contiguous with Williamstown.

DEL CID: The isolation, these pristine mountains relate again to privilege. Who has the privilege to come to Williams? Who has the privilege to live in Williamstown? Has the town made any efforts to connect with students, or is it by design that you keep them separate? I live in Pittsfield, and, 20 years ago, it was very similar to what I see in Williamstown now. But now I can find Colombian food, Mexican food, I can have tamales delivered to my door. I choose to live in Pittsfield because I cannot be separated from that

community. Berkshire County is actually quite diverse. I think of it as a tropical forest—you have a lot of species but very few individuals of each species per hectare. That might be designed: Williams or Williamstown is specifically separate and divided. Those are strategies of privilege, strategies of systems of oppression.

CONSTANTINE: I’m a river person, and I see the Hoosic River as emblematic of what we’re talking about. The Williamstown stretch is being used actively by fishing groups and for recreation. As soon as you cross that Williamstown/North Adams border, things change. The river was industrialized so it would perform functions for big companies that are no longer here. But the impacts they had on the river remain. It’s a legacy we don’t engage with as a community. We can ignore it, because it’s happening upstream. You talk to folks who live in that space, and they’re thankful that it’s been engineered to minimize hazard, but there’s a disconnect. The chutes are crumbling, the infrastructure is falling apart, and there’s no money to deal with it. We’re not involved in that conversation, and yet we have resources—intellectual and financial—that we could use to help address it. The watershed makes us all part of the same space.

ANSARI: But there are barriers to entry into the conversations we’re forging here right now. I’m hoping we can lower those so we can have more conversations among the diverse group of students we bring here.

CONSTANTINE: Environmental studies has long been geared toward principles of conservation, which one could argue are important in creating spaces for other types of life. But if it’s so wedded to that mission that it can’t be open to other perspectives—and also to the big problems on the environmental front—maybe there’s an opportunity for something new. Maybe instead of more space on the log, we need a new log.

ANSARI: We are in a transition period. We have a new president who comes to us from Brown, where social justice is in their DNA. She’s leading the charge in the strategic planning process, and I am hoping that we can forge change. I hope it starts all the way from the top.

MANIGAULT-BRYANT: The ways land is apportioned and protected for certain purposes has an effect on who comes and lives here. As the college continues to pursue this aim of diversity, particularly among faculty, this is central. Will people come here and stay? Can they imagine having a life here? It’s dependent upon the uses of land—the way you put it earlier, Bilal, about protecting the forest and how that comes into tension with other perspectives.

“We are educating leaders of the future, students going on to positions of power. If we don’t talk to them about what imperialistic ideas do as a part of environmental justice, they are going to replicate them.”

—CECILIA DEL CID

DEL CID: But the best protected and most thriving forests are in locations that take into account the communities already there. The wilderness used to be something you needed to tame to make productive. Now we have communities that could have been removed—these are protected areas—but what some in Latin America have done is actually worked with the people. These areas have fewer fires, people can thrive and have a livelihood and make a home. We need to stop thinking from scarcity and begin to think that there is enough for all of us. There's not enough natural resources to meet all the demands of a U.S.- or European-centric middle class life. But there are enough resources for all of us to have a thriving life in this world.

MANIGAULT-BRYANT: I really appreciate you turning us to other models. That's a very hard thing for us, particularly in the United States, to imagine.

DEL CID: There is a lot of knowledge in the Global South. But, also, we have a charge. We are educating leaders of the future, students going on to positions of power. If we don't talk to them about what imperialistic ideas do as a part of environmental justice, they are going to replicate them. We need to be asking: What kind of leader are you going to become at a firm financing a dam in Africa or Southeast Asia? What are your principles? Being a citizen of the U.S. or Europe is a privilege, and the Global North has benefited from the extraction of resources from the Global South. It continues to. So, I wonder if you three faculty could speak about what you do in the classroom to educate our future leaders?

CONSTANTINE: I'll start with a case in Illinois I'm working on and how students are involved. I personally have gone from not knowing to knowing, and I think once you know the problem exists and people are being unfairly affected, you have a choice to make. It's a moral choice, and I confront my students with that. This project is with a community that has suffered from decades of neglect, that's desperate for help. I feel fortunate to be part of this place with wonderful people who are quite giving of themselves and their talents and resources. We're sampling surface waters to assess sewage contamination. We're building an analytical framework to explain why unnatural flooding is happening—which makes use of the environmental analysis lab, a jewel on campus that's supported by the Center for Environmental Studies—to analyze water samples. This summer we'll produce maps of where water is going. We have a team of four undergraduates working on it. So, I have a sense that what's happening on campus—I don't want to jinx this, but it feels like a groundswell—is that we are going to see a meaningful, impactful movement happening from the ground up. And, hopefully, top down will reach us at some point.


MARTIN: I see students leading in the types of questions they're asking. A lot of students are interested in climate justice, and I think the broader field of environmental justice is catching up to the questions of climate justice. I also think about the final projects that students produce in my Environmental Justice course, whether collaborating with local communities to do a service project or the new areas of research students are identifying.

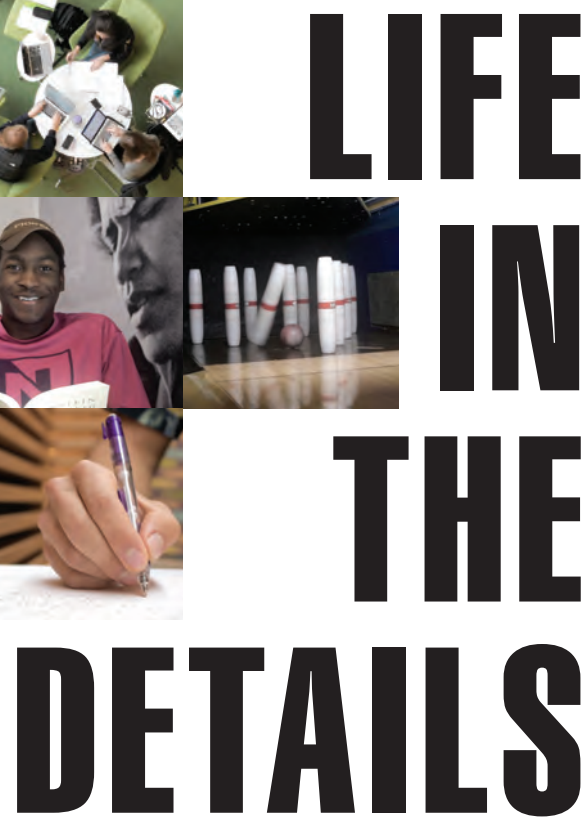
MANIGAULT-BRYANT: My Race and the Environment class has students from a number of different backgrounds who come with different levels of investment. Some want to think expansively about what race is. Others are thinking about alternative models of living. Students who have studied abroad and been among people who see the world in a different way look critically upon the U.S. and our lifestyle, and they're asking different questions. Some are already aware of environmental justice in their own communities. I've talked to students a year or two after they've taken the class, and they say, "I didn't really think about this while I was in the class, but I've been thinking about it now." And we'll have that discussion. From the Davis Center, how do you two interact with students on this issue?

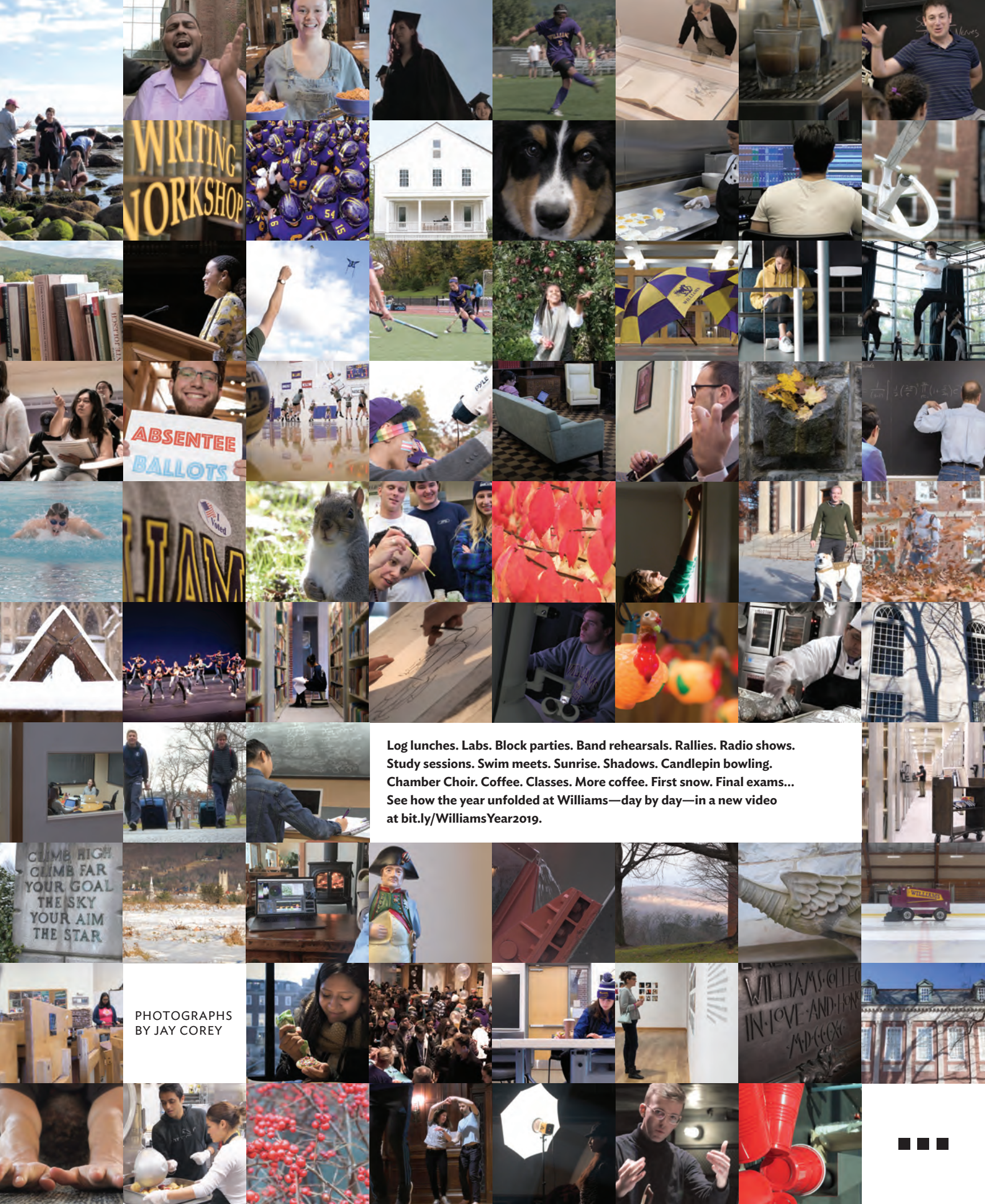
DEL CID: For me it happens through Root. We're going to Mystic this Saturday to do fieldwork on the ocean. Being a woman of color in science has always been very isolating, so modeling to students that we exist is important. Working through Root has been one of the ways I have interacted with students on campus on this issue, and it speaks directly to intersection of identity and environmental science. It's built for that type of conversation.

ANSARI: When you look at what the minority student groups choose to focus on, environmental justice is one of the top three things. The speakers they choose to bring, the causes they raise funds for—it's centered around environmental justice, whether it's connected through their identities, their historical relationship with the U.S. or their relationship with their environment back home. I'm seeing student leadership happening naturally, and we're responding and working with them. We're in a moment when we're all looking intentionally at ourselves.

MARTIN: That circles us back to James' opening question of what environmental justice is and to the imperative to think about justice as more than surviving but also as the ability to thrive.

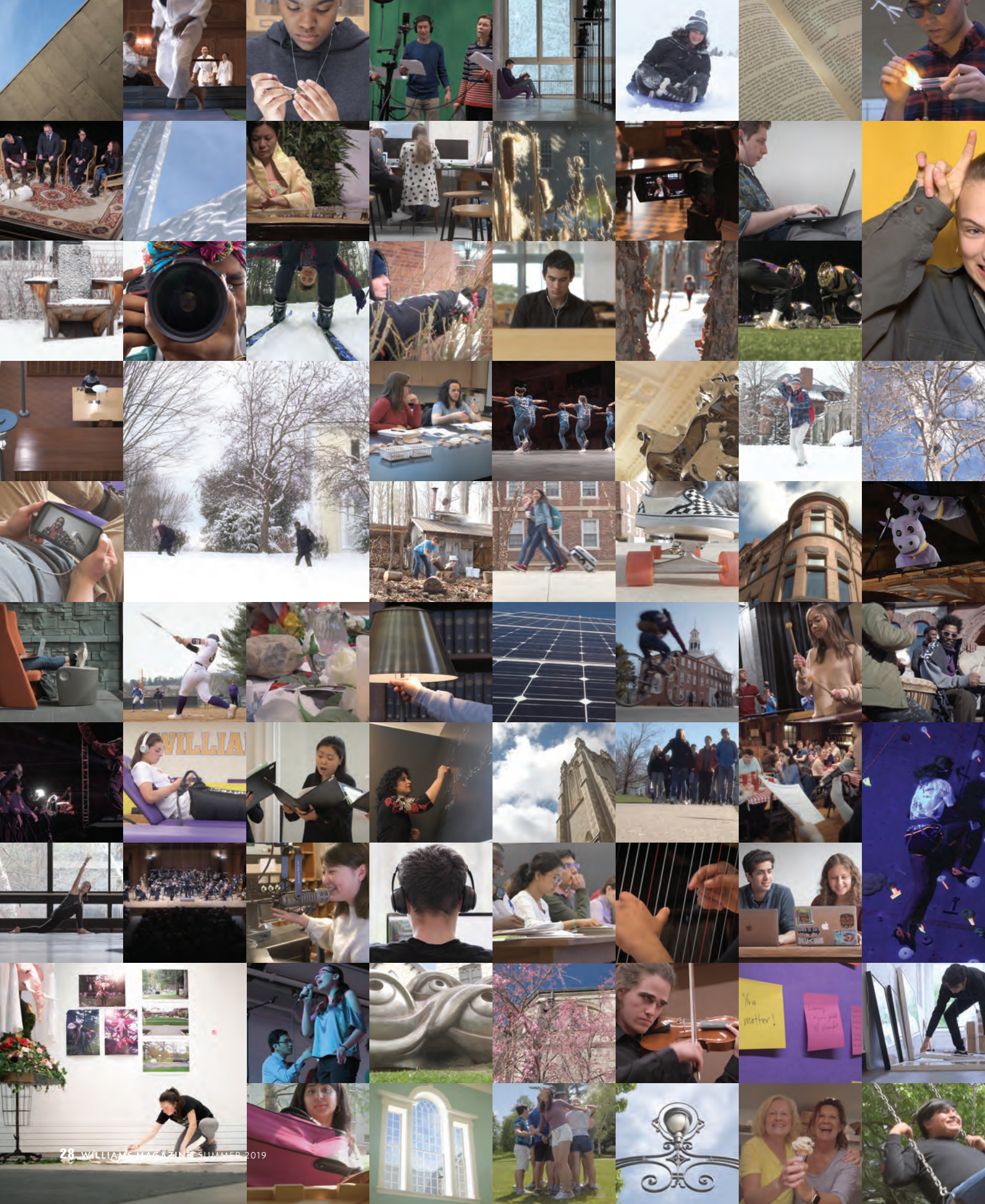
MANIGAULT-BRYANT: Yes, and through that comes an alternative, more inclusive definition of "environment," which is crucial to the conversation. 

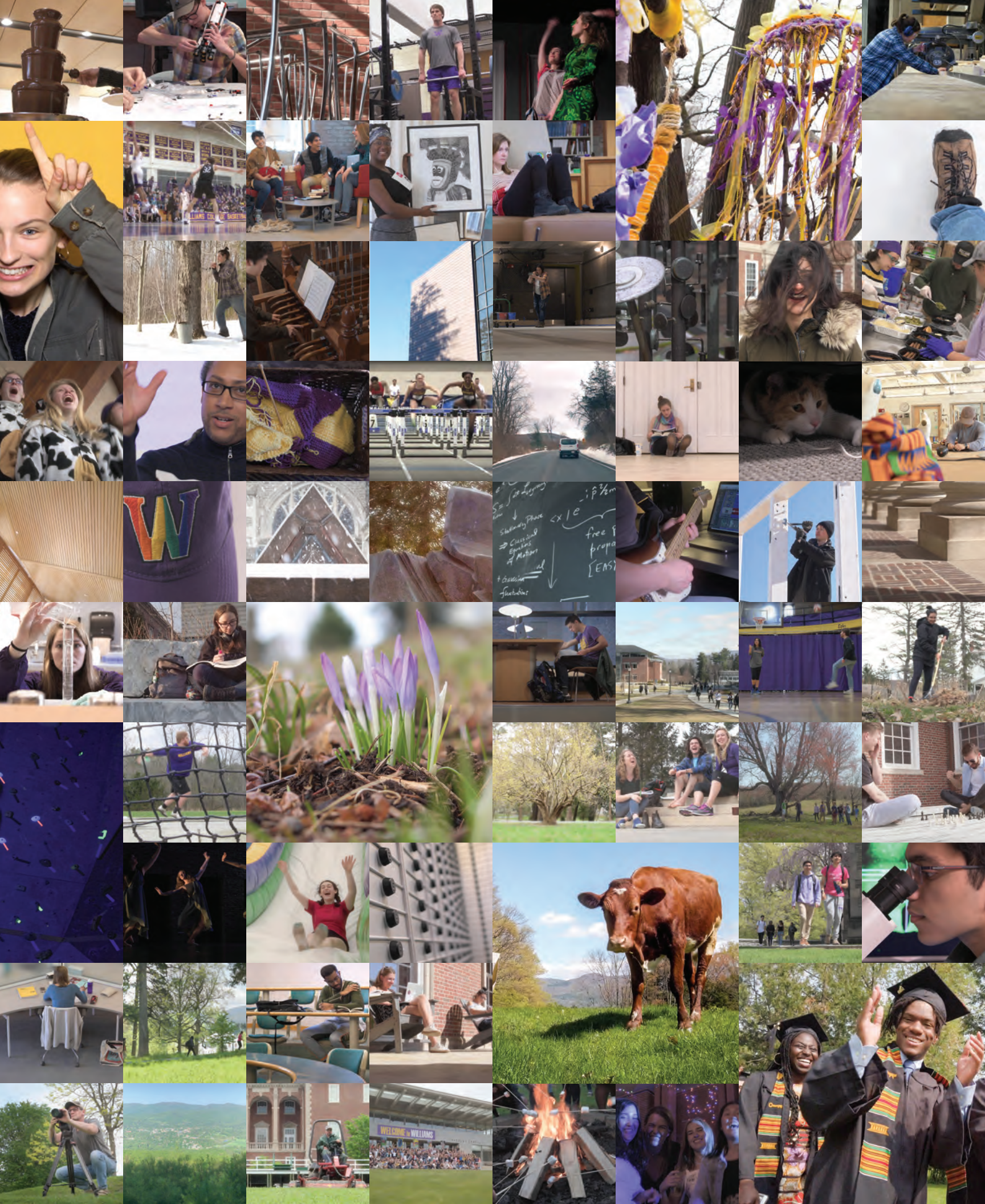




Log lunches. Labs. Block parties. Band rehearsals. Rallies. Radio shows. Study sessions. Swim meets. Sunrise. Shadows. Candlepin bowling. Chamber Choir. Coffee. Classes. More coffee. First snow. Final exams... See how the year unfolded at Williams—day by day—in a new video at bit.ly/WilliamsYear2019.

PHOTOGRAPHS
BY JAY COREY





The Unwinding of

ILLUSTRATION BY NOMOCO

BOOK EXCERPT BY
JULIE YIP-WILLIAMS '97

the
Miracle



“This story begins at the ending. Which means that if you are here, then I am not. But it’s OK. ... Dying has taught me a great deal about living—about facing hard truths consciously, about embracing the suffering as well as the joy. Wrapping my arms around the hard parts was perhaps the great liberating experience of my life.”



DEATH, PART ONE

March 1976, Tam Ky, South Vietnam

When I was two months old, my parents, on orders from my paternal grandmother, took me to an herbalist in Da Nang and offered the old man gold bars to give me a concoction that would make me sleep forever. Because I was born blind, to my Chinese grandmother I was broken. I would be a burden and an embarrassment to the family. Unmarriageable. Besides, my grandmother reasoned, she was showing me mercy—I would be spared a miserable existence.

That morning, my mother dressed me in old baby clothes soiled with brownish-yellow stains from my sister's or brother's shit that she had not been able to wash away, even after countless scrubblings. My grandmother had ordered my mother to put me in these clothes and now stood in the doorway to my parents' bedroom, watching my mother dress me. "It would be a waste for her to wear anything else," she said when my mother was finished, as if to confirm the rightness of her instruction.

These were the clothes in which I was to die. In desperate times such as those, there was no point in throwing away a perfectly good baby outfit on an infant that was soon to become a corpse.

Our family drama played out in the red-hot center of the Cold War. South Vietnam had been "liberated" by the North 11 months earlier, and a geopolitical domino came crashing into the lives of the Yips.

By 1972, the war had turned decidedly against the South, and my father was terrified of losing what little possessions he had risking his life for a country for which he, as an ethnic Chinese man, felt little to no nationalistic pride. In his four years of military service, my father never talked to anyone in his family during his brief home leaves about what horrible things he had seen or done. His mother's attempts to spare him the ugliness of war by using bribery to get him a position as a driver for an army captain had not been as successful as they had all hoped. He found himself driving into enemy territory, uncertain where the snipers and land mines lurked, and sleeping in the jungle at night, afraid of the stealthy Vietcong slitting his throat while he slept on the jungle floor, and then jerking into motion by explosions that ripped open the silence of a tenuous calm. In the end, the constant fear of death—or worse yet, of losing a limb, as had happened to some of his friends—overwhelmed whatever notions he had of honor and his fears of being labeled a coward. One day, he walked away from camp on the pretext of retrieving supplies from his jeep and didn't look back. For a week, he walked and hitchhiked his way to Saigon, the capital of South Vietnam, where he hid in Cholon, an old district inhabited by at least a million ethnic Chinese. Cholon was a place with such

bustling activity and such a large population of those not loyal to the war effort that he could hide while still being able to move freely about the community.

My grandmother, to whom my father managed to get word of his whereabouts, trusted no man's ability to remain faithful, including her son's, and suggested to my mother that she join my father in Saigon. And so my mother, with my 2-year-old sister, Lyna, in one arm and my infant brother, Mau, in the other, went to Saigon, and there they lived in limbo with my father until the end of the war, waiting until it was safe for him to return to Tam Ky without the fear of being imprisoned or, even worse, forced to continue military service in a rapidly deteriorating situation. It was not the time to have another child.

When Saigon fell on April 30, 1975, my parents rejoiced with the rest of Saigon, not because they believed in the new Communist regime but because the war was finally coming to an end. As Saigon changed hands, they celebrated by joining the feverish mobs ransacking abandoned stores and warehouses, taking tanks of gas and sacks of rice and whatever else their hands could carry away. They celebrated by welcoming the news of my pending arrival into this world, and after Saigon fell, they finally went home to Tam Ky, where I came into the world on an unremarkable January evening eight months later. I weighed a little more than three kilograms (between six and seven pounds), big by Vietnamese standards, but not so big that my mother and I were at the risk of dying during childbirth. Hospitals were filthy, and cesareans were not an option in those days; no one knew how to perform them, except maybe in Saigon. My father named me [莉菁], which is pronounced "Lijing" in Mandarin Chinese and "Lising" in Hainanese Chinese, and translated literally means "Quintessence of Jasmine." My name was intended to convey a sense of vibrancy, vitality and beauty. My mother, who had waited so long for a new baby, was thrilled. And so was my grandmother—at first, anyhow. Two months later, wrapped in my brother and sister's old baby clothes, I was in my father's arms, on a bus, making the two-hour trip north to Da Nang on Highway 1, sentenced to death.



“There is incredible value in pain and suffering. If you allow yourself to experience it, to cry, to feel sorrow and grief, to hurt. Walk through the fire and you will emerge on the other end, whole and stronger, I promise. You will ultimately find truth and beauty and wisdom and peace.”

LIFE

July 14, 2017, Brooklyn, New York

Dear Mia and Isabelle,

I have solved all the logistical problems resulting from my death that I can think of—I am hiring a very reasonably priced cook for you and Daddy; I have left a list of instructions about who your dentist is and when your school tuition needs to be paid and when to renew the violin rental contract and the identity of the piano tuner. In the coming days, I will make videos about all the ins and outs of the apartment, so that everyone knows where the air filters are and what kind of dog food Chipper eats. But I realized that these things are the low-hanging fruit, the easy-to-solve but relatively unimportant problems of the oh so mundane.

I realized that I would have failed you greatly as your mother if I did not try to ease your pain from my loss, if I didn't at least attempt to address what will likely be the greatest question of your young lives. You will forever be the kids whose mother died of cancer, have people looking at you with some combination of sympathy and pity (which you will no doubt resent, even if everyone means well). That fact of your mother dying will weave into the fabric of your lives like a glaring stain on an otherwise pristine tableau. You will ask as you look around at all the other people who still have their parents, Why did my mother have to get sick and die? It isn't fair, you will cry. And you will want so painfully for me to be there to hug you when your friend is mean to you, to look on as your ears are being pierced, to sit in the front row clapping loudly at your music recitals, to be that annoying parent insisting on another photo with the college graduate, to help you get dressed on your wedding day, to take your newborn babe from your arms so you can sleep. And every time you yearn for me, it will hurt all over again and you will wonder why.

I don't know if my words could ever ease your pain. But I would be remiss if I did not try.

My seventh-grade history teacher, Mrs. Olson, a batty eccentric but a phenomenal teacher, used to rebut our teenage protestations of “That's not fair!” (for example, when she sprang a pop quiz on us or when we played what was called the “Unfair” trivia game) with “Life is not fair. Get used to it!” Somewhere along the way, we grow up

thinking that there should be fairness, that people should be treated fairly, that there should be equality of treatment as well as opportunity. That expectation must be derivative of growing up in a rich country where the rule of law is so firmly entrenched. Even at the tender age of 5, both of you were screaming about fairness as if it were some fundamental right (as in it wasn't fair that Belle got to go to see a movie when Mia did not). So perhaps those expectations of fairness and equity are also hardwired into the human psyche and our moral compass. I'm not sure.

What I do know for sure is that Mrs. Olson was right. Life is not fair. You would be foolish to expect fairness, at least when it comes to matters of life and death, matters outside the scope of the law, matters that cannot be engineered or manipulated by human effort, matters that are distinctly the domain of God or luck or fate or some other unknowable, incomprehensible force.

Although I did not grow up motherless, I suffered in a different way and understood at an age younger than yours that life is not fair. I looked at all the other kids who could drive and play tennis and who didn't have to use a magnifying glass to read, and it pained me in a way that maybe you can understand now. People looked at me with pity, too, which I loathed. I was denied opportunities, too; I was always the scorekeeper and never played in the games during PE. My mother didn't think it worthwhile to have me study Chinese after English school, as my siblings did, because she assumed I wouldn't be able to see the characters. (Of course, later on, I would study Chinese throughout college and study abroad and my Chinese would surpass my siblings'.) For a child, there is nothing worse than being different, in that negative, pitiful way. I was sad a lot. I cried in my lonely anger. Like you, I had my own loss, the loss of vision, which involved the loss of so much more. I grieved. I asked why. I hated the unfairness of it all.

My sweet babies, I do not have the answer to the question of why, at least not now and not in this life. But I do know that there is incredible value in pain and suffering. If you allow yourself to experience it, to cry, to feel sorrow and grief, to hurt. Walk through the fire and you will emerge on the other end, whole and stronger. I promise.

You will ultimately find truth and beauty and wisdom and peace. You will understand that nothing lasts forever, not pain, or joy. You will understand that joy cannot exist without sadness. Relief cannot exist without pain. Compassion cannot exist without cruelty. Courage cannot exist without fear. Hope cannot exist without despair. Wisdom cannot exist without suffering. Gratitude cannot exist without deprivation. Paradoxes abound in this life. Living is an exercise in navigating within them.

I was deprived of sight. And yet, that single unfortunate physical condition changed me for the better. Instead of leaving me wallowing in self-pity, it made me more ambitious. It made me more resourceful. It made me smarter. It taught me to ask for help, to not be ashamed of my physical shortcoming. It forced me to be honest with myself and my limitations, and eventually to be honest with others. It taught me strength and resilience.

You will be deprived of a mother. As your mother, I wish I could protect you from the pain. But also as your mother, I want you to feel the pain, to live it, embrace it, and then learn from it. Be stronger people because of it, for you will know that you carry my strength within you. Be more compassionate people because of it; empathize with those who suffer in their own ways. Rejoice in life and all its beauty because of it; live with special zest and zeal for me. Be grateful in a way that only someone who lost her mother so early can, in your understanding of the precariousness and preciousness of life. This is my challenge to you, my sweet girls, to take an ugly tragedy and transform it into a source of beauty, love, strength, courage and wisdom.

Many may disagree, but I have always believed, always, even when I was a precocious little girl crying alone in my bed, that our purpose in this life is to experience everything we possibly can, to understand as much of the human condition as we can squeeze into one lifetime, however long or short that may be. We are here to feel the complex range of emotions that come with being human. And from those experiences, our souls expand and grow and learn and change, and we understand a little more about what it really means to be human. I call it the evolution of the soul. Know that your mother lived an incredible life that was filled with more than her “fair” share of pain and suffering, first with her blindness and then with cancer. And I allowed that pain and suffering to define me, to change me, but for the better.

In the years since my diagnosis, I have known love and compassion that I never knew possible; I have witnessed and experienced for myself the deepest levels of human caring, which humbled me to my core and compelled me to be a better person. I have known a mortal fear that was crushing, and yet I overcame that fear and found courage. The lessons that blindness and then cancer have taught me are too many for me to recount here, but I hope, when you read what follows, you will understand how it is possible to

be changed in a positive way by tragedy and you will learn the true value of suffering. The worth of a person's life lies not in the number of years lived; rather it rests on how well that person has absorbed the lessons of that life, how well that person has come to understand and distill the multiple, messy aspects of the human experience. While I would have chosen to stay with you for much longer, had the choice been mine, if you could learn from my death, if you accepted my challenge to be better people because of my death, then that would bring my spirit inordinate joy and peace.

You will feel alone and lonely, and yet, understand that you are not alone. It is true that we walk this life alone, because we feel what we feel singularly and each of us makes our own choices. But it is possible to reach out and find those like you, and in so doing you will feel not so lonely. This is another one of life's paradoxes that you will learn to navigate. First and foremost, you have each other to lean on. You are sisters, and that gives you a bond of blood and common experiences that is like no other. Find solace in one another. Always forgive and love one another. **W**

FROM THE BOOK *THE UNWINDING OF THE MIRACLE* BY JULIE YIP-

WILLIAMS '97. COPYRIGHT © 2019 BY THE WILLIAMS LITERARY TRUST.

PUBLISHED BY PERMISSION OF RANDOM HOUSE, AN IMPRINT AND DIVISION OF PENGUIN RANDOM HOUSE LLC. ALL RIGHTS RESERVED.



ABOUT THE AUTHOR

Born poor and blind in Vietnam after the fall of Saigon, Julie Yip-Williams '97 was sentenced to death by her grandmother, who deemed the infant a burden and embarrassment. An herbalist refused to carry out the grandmother's orders, and Yip-Williams' life was spared. Political turmoil mounted in Vietnam, and the family fled on a rickety boat with 300 other refugees. They made their way to Hong Kong and, later, the U.S., where a surgeon partially restored Yip-Williams' vision. Despite being legally blind, she thrived, attending Williams, where she majored in Asian studies and history, and Harvard Law School. She joined an international law firm based in New York and, with her husband, Josh, and two daughters, Mia and Isabelle, made a life that, she wrote, "came to so much more than I ever thought possible."

*At the age of 37, Yip-Williams was diagnosed with terminal metastatic colon cancer. And so began a different journey, one punctuated by surgeries, scans, rounds of chemotherapy, alternative therapies and trials in hopes of beating the odds—or at least buying more time. Unable to find clarity and guidance, she wrote her way through her experience in a blog titled, simply, "My Cancer Fighting Journey." Random House learned of her story and offered her a book deal, turning the online chronicle into the memoir *The Unwinding of the Miracle*, published in February 2019, 11 months after Yip-Williams' death at the age of 42.*

STUDY

TINY PLANTS, BIG ANSWERS

MARCHANTIA POLYMORPHA, A SPECIES OF LIVERWORT, WAS one of the first plants to colonize land roughly 470 million years ago. At the time, the tiny plants lowered carbon dioxide levels enough to trigger a mini ice age.

Today liverwort grows all over the world—and all over Williams' campus. The biomechanics of how it spreads is now the focus of research by Williams biologist Joan Edwards and physicist Kate Jensen, who both say their collaboration has resulted in something bigger than either of them could have achieved on their own.

Edwards, the Samuel Fessenden Clarke Professor of Biology, long has researched fast movements in plants and decided to study how liverworts propel their asexual gemmae to new locations. Gemmae are nearly-microscopic discs of tissue that grow prolifically inside tiny, urn-shaped cups on top of the liverwort plant's leaf-like thallus. When it rains, the cups fill with water, and the gemmae splash out as far as a meter from the base plant and grow into a new plant.

The speed at which the gemmae travel and the distance they cover are remarkable, yet the mechanism behind the action was poorly understood. In hopes of figuring it out, one of Edwards' senior thesis students, Adrian Mitchell '15, used a high-speed camera to record the release of gemmae.

Mitchell, who now works at a New York City architecture firm, collaborated with the Bronfman Science Shop to design and build model cups out of transparent acrylic, allowing him to see what was going on inside. He and Edwards found that the first raindrop to hit the cup fills it with water and stirs up gemmae at the bottom, which then pop to the surface. A second drop splashes the gemmae

into the air. "Using dyed water for the second drop, we found that it swooshes out and picks up the gemmae in the upper part of the cup," Edwards says.

The next step was understanding how the gemmae remained on the surface of the water. Edwards turned to Jensen, who came to Williams in 2017 and studies how different surfaces interact.

Jensen enlisted her summer research students to find a way to measure how gemmae interact with water. They built an apparatus to dip gemmae into water and found that the discs actually don't float. "It's more like they stick to the surface of the water," says Anneliese Silveyra '21, who plans to continue the project as an Allison Davis Research Fellow.

Says Jensen: "It's energetically favorable for gemmae to be at the interface of water and air, so they stick to it like glue until they're launched. More generally, this relates to one of the big questions in biophysics today: How much of what we see an organism do relies on it being alive, and how much is just material interactions or other physics?"

Jensen has collaborated with biologists in the past to answer this question in relation to how certain butterflies develop their brilliant colors, but her work in soft matter physics has mainly focused on non-living materials. Now, with Silveyra in her lab and their mutual interest in how physics plays into the evolution of biological organisms, they plan to expand their study to even smaller botanical particles, like pollen, as well as study other things gemmae do on water surfaces, such as move toward each other and dock together—all areas where Edwards' botanical expertise will continue to be key to the collaboration.

—JULIA MUNEMO

BUILDING WORLDS

WHEN DAVID GÜRÇAY-MORRIS '96 WAS A THEATER AND studio art major at Williams, he enrolled in Introduction to Staging and Design, a course that influenced the rest of his career. When he returned to the college 11 years later as a theater professor, he started teaching the course. He changed a lot, from how students access the material to its title, Worldbuilding. But the central focus on staging and set, lighting and costume design remains the same.

Gürçay-Morris says the spring-semester course is as crucial for actors as it is for those pursuing directing and design. "Everyone in theater is engaged in creating a world on stage and then telling a story in that world," he says. "I hope to give students a set of tools that can be used to build a set or to build the interiority of a character."

For their first assignment, students met at the Williams College Museum of Art to look at "Cornell Boxes" made by 20th-century artist Joseph Cornell out of found objects to represent complex ideas. Students read the T.S. Eliot poem "The Love Song of J. Alfred Prufrock" and made their own boxes in response. The catch? They had 48 hours to complete them. "Students can't overthink it, and the results tend to be sloppy and awesome," Gürçay-Morris says.

The 13 students, mostly sophomore theater majors, then critiqued each other's work, an exercise through which they learned the importance of feedback. "When we make things, we have blinders on, because we're so inside it," Gürçay-Morris says. "Hearing other people's feedback is the only way to remove them."

The rest of the semester focused on Suzan-Lori Parks' *The America Play*, about the legacy of slavery, and Tony Kushner's *Angels in America*, set in New York City during the AIDS crisis and the Reagan presidency. "Both contain big ideas about America and political and social justice," Gürçay-Morris says.

For one assignment, students interpreted a scene from one of the plays and created 3D collages ranging in size from that of a bread box to an end table and using materials Gürçay-Morris stocks in the design studio.

Teaching assistant Peter Matsumoto '21, who took Worldbuilding last year, explains: "After 20 minutes of working, students were told to move to someone else's spot. No one owns the piece they're making, but they don't know that going in."

Theater and English double major Nadiya Atkinson '21 says she gained a lot from collaborating with classmates. "Seeing what other people brought to a script challenged my notions of the piece and strengthened the choices I ultimately made," she says of her final project, a staging of a scene in *Angels in America*. "It pushed everyone in the class to take bigger and better risks."

That risk-taking is what Gürçay-Morris expects: "I set up conditions in which literal interpretations of text are impossible and students have to struggle and get frustrated and then come through the other side. The results are glorious messes that get students to think outside the box."

—J.M.

An interpretation of a scene from *Angels in America*, for the course Worldbuilding. Model by Tobias Delgado '21.



Neuroscientist Betty Zimmerberg's research on early brain development is the foundation for her tutorial and lab.



NATURE VIA NURTURE

WHAT DETERMINES BEHAVIOR: GENES OR THE ENVIRONMENT?

Neuroscientist Betty Zimmerberg and her students have worked to answer that question in the tutorial Nature Via Nurture.

The course explores topics such as child neglect, antisocial behavior, addiction, anxiety, risk-taking, empathy and depression in animal models. It's a traditional tutorial—with pairs of students under Zimmerberg's guidance alternately presenting and critiquing each other's responses to current neuroscience literature. There's also a weekly lab in which students get hands-on experience working with rats to understand the interaction of genetic and environmental factors in determining behavior.

Zimmerberg, the Howard B. Schow '50 and Nan W. Schow Professor of Neuroscience, has spent her career working with rats, which have an almost identical brain chemistry to humans. For two decades, she has worked with two lines of rats, developed over nearly 60 generations, by breeding those who were most anxious as pups ("High-line" rats) and those who were least anxious ("Low-line" rats). The level of anxiety is determined by the rate at which pups called out when separated from their mothers.

"High-line rats are more anxious and depressed as adults," says Zimmerberg. "Low-line rats are more active and able to learn faster, possibly because they are less anxious."

During lab sessions in the spring, tutorial pairs worked to breed female rats (called dams) and observe their pups' levels of anxiety. Using both lines of rats, the teams designed their own experiments for testing adolescent offspring. Questions centered on whether the two lines would differ in their response to an environmental factor: prenatal stress.

One pair of students explored the effects of oxytocin, a hormone associated with empathy and trust. Other teams looked at whether nature or nurture matters more in developing depression, anxiety or positive social behavior.

"Students have the opportunity to apply methods they learn about in scientific papers to the design of their own projects, focused on questions that haven't yet been explored," says Emily Harris '19, a teaching assistant for the course. "This experience is invaluable for students who want to pursue future research in neuroscience."

Zimmerberg, who has taught Nature Via Nurture for 15 years, says the work she does in the lab with students is an extension of her own research. She studies early brain development and the way adverse events during pregnancy or early in life can alter normal development and lead to behavioral dysfunctions. Many of her publications are co-authored by Williams students and involve research conducted with her lines of rats.

Zimmerberg published an article in *Physiology and Behavior* in 2010 with biology and psychology major Shivon Robinson '11, who's expected to join the psychology department at Williams in the fall. The article showed that the steroid allopregnanolone reduces anxiety in High-line pregnant dams and that their offspring were less anxious as infants and less depressed as adults. This past March, the U.S. Food and Drug Administration approved allopregnanolone to treat postpartum depression in women.

"Many students come to the class with a specific question in mind about anxiety or social behavior," Zimmerberg says. "I love that the tutorial model allows for the intimate connection between my scholarship and what students want to learn about."

—J.M.



Mundo Meza,
Self-portrait, 1983.
Acrylic on board,
48x48 in. (121.9x121.9 cm).
Gift of Gera Korte. ONE
Archives at the USC
Libraries. Photo by
Fredrik Nilsen.
Courtesy of Pat Meza.



MUNDO, RECOGNIZED

Art professor C. Ondine Chavoya's groundbreaking scholarship is the basis for a fall WCMA exhibition on queer Chicanx creative networks.

DESPITE HIS NICKNAME, "MUNDO," WHICH means world in Spanish, Edmundo Meza, a queer Chicanx artist, wasn't well known in the mainstream art world. His work all but disappeared from view after his death in 1985.

But Meza had a profound influence on other artists in his creative networks. His work—meticulously researched and gathered by Williams art professor C. Ondine Chavoya and co-curator David Evans Frantz—now forms the centerpiece of the award-winning exhibition *Axis Mundo: Queer Networks in Chicano L.A.*, which opens at the Williams College Museum of Art (WCMA) this fall.

"The exhibition flips the narrative on the more common exhibition model, which charts a famous figure and the lesser-known artists they influenced," says Chavoya. "The other artists of this generation, living and working in L.A. with Mundo—some of whom are better known—believed him to be the most talented among them. So, after the task of finding and preserving it, his work forms the conceptual framework for *Axis Mundo*."

The exhibition, which features art from more than 50 artists and groups, has traveled the country since it opened in 2017 at MOCA Pacific Design Center and the ONE Gallery in West Hollywood. Joseph Hawkins, director of the ONE Archives at the USC Libraries, writes in the foreword to the exhibition catalog that *Axis Mundo* takes "an exhaustive look at artistic practices and cultural politics between the Chicano civil rights, gay liberation and women's movements and the urgent activism that developed in response to the AIDS crisis."

In doing so, it shines a light on many artists who have been ignored or rendered invisible. Chavoya and Frantz, formerly

curator at ONE, spent years searching for works throughout North America, Spain and the U.K. and meeting with artists or their surviving family members and collaborators. In some cases, Chavoya says he found art works "rolled up in closets or buried in dusty library archives." That meant he and Frantz had to restore and conserve a great deal of the work in the exhibition.

Axis Mundo is the latest branch of Chavoya's extensive research that began when he was in graduate school at the University of Rochester. "I found it nearly impossible to study Chicanx artists from the mid- to late-20th century, because there was so little available scholarship at the time," he says. "I ended up mining the libraries and filing cabinets of Latinx art spaces where I took internships and making direct contact with the artists whenever possible."

In 2012, Chavoya co-curated *Asco: Elite of the Obscure, A Retrospective*, a WCMA exhibition presenting the work of a collaborative artists group he studied and chronicled over the years. "*Axis Mundo* is an expansion on that work and the first time the entire generation is being considered in the context of broader artistic and cultural movements," he says.

As Chavoya writes in the introduction to *Axis Mundo*'s catalog, which won the 2018 Association of Art Museum Curators' Award for Excellence for groundbreaking new scholarship as well as eight other book awards: "The *mundos* these artists fostered pushed back against social repression. [Their work was] intersectional, multiplicitous and defiant, often in the face of a racist, sexist and homophobic mainstream culture."

Axis Mundo runs from Sept. 7 through Dec. 9, 2019, at WCMA. —J.M.

LESSONS FROM WRESTLING

Coaching students inside the classroom and on the mat.

BY JOSÉ VALENZUELA '07

I'M STANDING ON THE SIDELINES OF A MIDDLE SCHOOL WRESTLING match, watching one of my students get beat. He's a little guy—just like I was at his age—and I've coached him for a couple of years. To the best of my ability, I've shown him what he needs to know to win this match. But right now, he doesn't believe he has what it takes. All I can do is stand over here and watch. If I call out reminders of the techniques we've gone over, he won't be able to put them into action. And even if that were my style of coaching, he wouldn't be able to hear me if I shouted at him. He knows as well as I do that everything he put in before he stepped onto the mat is exactly what he has access to right now.

I have seen the same thing in my public school classrooms my entire career. My students are fighting to push through language barriers as recent immigrants, or they're fighting the challenges of learning with a disability, or they're fighting societal norms. Whatever they're fighting, usually it means they're not learning. People who observe my classes tell me I seem more like a coach than a teacher, and I always thank them. In my classroom, just like on the mat, my goal isn't to teach at my students. My goal is to give them the tools they need to do the learning on their own.

In graduate school, I learned theoretical concepts, like Vygotsky's Zone of Proximal Development, which never seemed like a concept with a practical application until I stood on the sidelines of a match. In wrestling, as in school, we learn best when we are pushed beyond our comfort zone, as long as we have the support we need in place. In the classroom, that means allowing students to explore deep and difficult historical concepts—a few steps beyond what they think they can do but with scaffolding that allows all students to access the curriculum and to be critically minded in an increasingly complex world.

On the mat, it looks like what I'm watching now: A 90-pound seventh grader being pushed outside of his comfort zone by a kid with a little more experience, but there's scaffolding in place to help him along the way. The referee will blow the whistle if something looks unsafe, or someone will step out of bounds, or time will expire. By the end of the match, this kid will have a different look in his eye. There may be disappointment if he loses, but that won't be all I'll see. Wins and losses are not the only measure of progress and growth—and that's a lesson he will learn on the mat, just like I did.

When I was his age, I was drowning. I was an immigrant kid. Moving to Boston, I was stuck between two worlds: the only Latinx student in my classroom in a school where all the other Latinx students were labeled "English Language Learners" and were given instruction in Spanish. I tested into an elite private school for sixth grade, and, surrounded by predominantly white, wealthy faces,

my grades started to drop for the first time in my life. I felt isolated in that school, but it offered me a chance to play sports, a resource never offered in my under-resourced public school. So I joined wrestling. If I hadn't made it onto the team, I would have drowned in that school. But instead, I got a coach who cared about me. He made practices fun, and he didn't care that I wasn't winning. During that pivotal year, before I left for Boston Latin School in seventh grade, I learned to associate the experience of developing and growing as

the thing to strive for instead of focusing on the wins and losses. Pretty soon, I was able to apply those same lessons to what I was learning in the classroom. And, as a teacher and coach, those are lessons I want to teach all my kids—in school and on the mat.

When the whistle blows, I put my arm around this kid and tell him what my coach used to tell me: Winning isn't the measure of growth. The measure of growth is how

much you learned today and how to bring that self-reliance and confidence back to the mat next time—and into the classroom tomorrow, and into your heart for the rest of your life.

In wrestling, as in school, we learn best when we are pushed beyond our comfort zone, as long as we have the support we need in place.

After Williams, José Valenzuela '07 returned to his hometown and began a career teaching history in the Boston Public Schools. He's been teaching seventh-, 11th-, and 12th-grade history and geography at Boston Latin Academy in Roxbury since 2014. In 2010, he founded Boston Youth Wrestling, which brings the sport into schools all over the city and serves more than 500 students each year.



Vanessa Rico (right),
a student of East Boston
High School and participant in
Boston Youth Wrestling, at a
February 2016 competition.

Williams

EDITORIAL OFFICES
P.O. BOX 676
WILLIAMSTOWN, MA
01267-0676

A DAY AT WILLIAMS

See the entire year
in photos. **p.26**

