

# Washington



## HIGHLANDS HUNT

WashU researchers search for climate answers in a high-altitude lake in Peru.

See feature, pg. 20.

### Building at the River's Edge

The effects of climate change cannot be handled piecemeal, argues architect Derek Hoeferlin. And managing 21st-century waterways will require coordination on a continental scale, pg. 30.

### Checking Hackers

As we become more reliant on technology that interacts with the physical world, we need researchers like Ning Zhang to keep us a step ahead of the hackers, pg. 10.

### Making Sense of the Brain

Damien Fair, PhD '08, was named a 2020 MacArthur Fellow for his use of fMRI imaging in studying the brain's connectome and discovering a new map of autism, pg. 44.

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Background photo: Joe Angeles

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The effects of climate change cannot be handled piecemeal, argues architect Derek Hoeflerlin. Managing 21st-century waterways will require coordination on a continental scale — and a foundational understanding of how water shapes our environment.

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The university develops a new “curriculum” to help members of our community cope during the pandemic.

#### ON THE COVER

Climate scientist Bronwen Konecky, assistant professor of Earth and planetary sciences in Arts & Sciences, is pictured at Lake Sibinacocha in the central Andes Mountains of Peru. Konecky works in tropical regions around the world, gathering evidence of climate change in the geologic past, pg. 20. (Photo: Thomas Malkowicz)



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Photo: James Byard

Chancellor Andrew Martin records his first State of the University address in Edison Theatre.

## Forging ahead

Greetings from Washington University. Now more than a year into the pandemic, we are beginning to see some light at the end of the tunnel. Our Medical Campus colleagues have been vaccinated, and the public rollout continues locally and around the globe. I'm also happy to report, despite the challenges we face as a community, that we continue to advance our mission in education, research and patient care.

On Feb. 16, 2021, I delivered my inaugural State of the University address during which I shared the ways we are keeping our WashU momentum throughout the region, nation and world. I'm thrilled that we are making progress on our commitments to academic distinction, educational access, and our role and impact "in St. Louis and for St. Louis."

First, I'm immensely proud of the ways we have kept our momentum going through medical research and compassionate patient care. The pandemic posed numerous challenges for our Medical Campus and health-care workers. But time and again, our colleagues rose to the occasion, navigating shortages in personal protective equipment, prepping for and working tirelessly through COVID-19 surges, developing a rapid COVID-19 saliva test, and creating and delivering therapeutic treatments to patients. I'm so very grateful for their leadership and service.

I'm also pleased that we have kept our momentum by providing a world-class education. This past fall, our entire community adapted quickly to vast changes in the student experience, course delivery, and living and working conditions. While it certainly hasn't been the academic year any of us imagined for our students, I am proud of their resilience, flexibility and the ways they pursued their academic interests with equal amounts of rigor and dedication. See the feature starting on pg. 36 for more on our continuing efforts to help

our students and entire university community cope during the still-ongoing pandemic.

While our university-wide response to COVID-19 serves as an example of our academic distinction and commitment to improving lives, our faculty members have also continued life-changing work in other areas. In this issue, you'll learn a few of the ways in which vital scholarship progresses in areas such as climate change (pp. 20–35) and artificial intelligence (pg. 10), to name a few. During my address, I also shared that our research revenue last year was higher than anticipated — up \$25.5 million from the previous fiscal year — for a total of \$660.7 million. This is evidence that the pandemic has not altered our course.

Last June, I outlined a set of action steps to address issues of racial equity on our campus and beyond, and since then we have made positive inroads to address each of those steps. Look for more on this important work and the newly launched Center for the Study of Race, Ethnicity & Equity in future issues of *Washington* magazine.

Finally, in terms of educational access, we have made a lot of progress. Our incoming Class of 2024 is 16% Pell eligible, and 5% is in the newly launched WashU Pledge program, which provides a free undergraduate education to full-time Missouri and southern Illinois students who are Pell eligible or from families with annual incomes of \$75,000 or less.

Although the pandemic has caused great upheaval and loss, our momentum continues. Thank you, as always, for taking the time to learn more about our progress — and how we're making a positive impact in St. Louis and throughout the world. And I hope you are finding your own ways to embody our mission this spring.

Andrew D. Martin  
Chancellor



@WashUChancellor

## FEEDBACK



THE NOVEMBER 2020 ISSUE

"I was really moved by your November issue. As I sit in St. Louis, working from home for nearly a year, it was uplifting to read this issue from cover to cover. I appreciate learning from leadership — past and present — and I am proud to be part of a community that adapts quickly to address the world's most pressing issues — locally and globally. It was great to hear how Washington University helped small, local businesses try to navigate the pandemic. Plus, I love Left Bank Books and never knew about the WashU connection! Great work, as always, more important now than ever."

SHELBY SCHROEDER, MSW '08

"Kudos on creating a newly formatted Washington University magazine. It was a great surprise to receive it! Why? Because it is larger, the layouts make it enticing and easy to read, and the paper stock is luxurious! The written vehicles that I grew up loving seem to be either disappearing or scaled back.

"This magazine is contrarian, and I applaud you!"

GAIL (FUDEMBERG) ZUGERMAN, AB '75

Regarding the October '20 digital issue:

"What a lovely idea to have William H. Danforth as your lead story. He was a prime example of the outstanding character of so many at the university. My husband and I feel fortunate that two of our children were able to attend and graduate from WashU. They were certainly challenged academically and made great friends along the way.

"That being said, I have to voice a complaint that I have with several issues of your magazine this year: Why must you continuously write story after story about the negative things going on in our society? I realize that you are trying to raise awareness regarding various issues in our society, but it is becoming excessive, in my opinion.

"So perhaps you could add stories about unity, love and the many opportunities that our fine country has offered to countless millions of its citizens. Offer topics, or feature people, who have made strides in bridging divides. And please be fair and address all viewpoints, not just certain narratives."

PARENT OF ALUMNI

The editors are excited to report that the magazine has won a Gold Award from the Pride of CASE District V Awards Program:

"We appreciated *Washington* magazine's fresh take on content and the clean yet compelling design — both qualities that kept us turning pages and finding something of interest on each one. The variety of content and the smart, intriguing writing highlight the breadth and depth of the WashU experience. Clever design and illustration add to the personality and experience of reading the magazine, and a tight framework gives the design flexibility while still keeping the magazine feeling cohesive. Based on in-depth research, the staff has a clear understanding of its audiences' expectations and delivers a high-quality magazine that meets those desires."

CASE DISTRICT V COMPETITION JUDGES IN REDESIGN CATEGORY

Regarding the December '20 digital issue:

"I thoroughly enjoyed this magazine."

CAROL SEGAL, AB '52

**We want to hear from you!**

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# ST. LOUIS *In*

## Movement in stillness

Since the Performing Arts Department couldn't perform for in-person audiences, they developed Aperture, a Dance for Camera film festival. Here, **Jessica Huang**, an undergraduate in Arts & Sciences, performs choreography by **Cecil Slaughter**, professor of practice in dance and director of undergraduate studies in dance.



Photo: Danny Reise



### HISTORIC, HOPEFUL MOMENT AS COVID-19 VACCINATIONS BEGIN ON MEDICAL CAMPUS

In late 2020, personnel at the School of Medicine and BJC HealthCare began receiving the first doses of a vaccine against the COVID-19 virus. “We are thankful that it’s now possible to offer a safe and effective SARS-CoV-2 vaccine to our front-line personnel,”

**David H. Perlmutter, MD**, executive vice chancellor for medical affairs and the George and Carol Bauer Dean of the School of Medicine, said back in December. “Our health-care workforce has drawn from a deep well of purpose and perseverance to take care of patients with COVID-19 and allow our hospitals and clinics to provide for the community under the most incredibly trying of circumstances,” added Perlmutter, also the Spencer T. and Ann W. Olin Distinguished Professor. Some of the first vaccine recipients had to hold back tears.

“I’ve lost 12 family members to COVID this year,” said **Tyrone Simkins**, a sergeant with BJC security, after he received the shot. “I’m going to stop it in my family. ... Masks are great, but we’ve got to do something else, and now that we’ve got the vaccine, everybody should be trying to get it.”

### NEUROSCIENTIST NAMED A 2020 PACKARD FELLOW

**Carlos Ponce, MD/PhD**, assistant professor of neuroscience at the School of Medicine, has received a 2020 Packard Fellowship for science and engineering. Ponce’s research focuses on how visual recognition works in the brain and could have an impact on visual-recognition systems used in security, medicine, transportation and other fields. Packard Fellows are considered among the nation’s top early-career scientists, and each of the 20 selected receives a five-year, \$875,000 grant to pursue research.

Joan Niehoff, MD, gets a vaccine. Health-care workers received the first dose of the Pfizer-BioNTech COVID-19 coronavirus vaccine on Dec. 17, 2020. (Photo: Matt Miller/School of Medicine)

### SERIAL ENTREPRENEUR HELPS THOSE IN NEED DURING PANDEMIC

**Tejas Sekhar**, a graduate student in University College, is just in his early 20s and has already created several companies. In 2020, he won first place at the TFA Social Innovation Challenge at Northwestern University, where he was previously a student, and used the award money to start the nonprofit EndingCOVID, under his parent nonprofit TejHospitality.

“In light of the inequity created by COVID-19 and the socially responsible nature of the competition, I was inspired to use the prize money to buy 100-plus face shields for Mercy South Hospital here in St. Louis,” Sekhar told *St. Louis Business Journal* in a 2020 article. “After getting the opportunity to deliver the face shields to the medical staff at Mercy South, I learned through conversations about the extensive need in the St. Louis community for additional PPE.”

The nonprofit started working in the spring of 2020 to help address needs created by the pandemic. The group distributed information, PPE, food, toiletries and more to vulnerable populations at homeless shelters and veterans shelters. Sekhar has relied on student volunteers, particularly as EndingCOVID has spread to other communities. The reliance on students should come as no surprise, Sekhar says, “given the incredible talent I have been fortunate enough to have had surrounding me through my peers.”



# 25 TIMES MORE OXYGEN

## Getting oxygen from water

When we send astronauts to Mars, they'll have to make their own fuel. A new system developed by **Vijay Ramani**, the Roma B. and Raymond H. Wittcoff Distinguished University Professor in the Department of Energy, Environmental & Chemical Engineering in the McKelvey School of Engineering, can transform the briny water on Mars into 25 times more oxygen than current methods using the same amount of power.



## TWO SCHOOL OF MEDICINE FACULTY ELECTED TO NATIONAL ACADEMY OF MEDICINE

**Deanna M. Barch**, an expert in cognitive and language deficits in psychological disorders, and **Randall J. Bateman, MD**, a leading researcher in the field of Alzheimer's disease, have been elected to the National Academy of Medicine, a part of the National Academies of Sciences, Engineering, and Medicine, in recognition of their outstanding professional achievement and commitment to service. Being elected to the National Academy of Medicine is one of the highest honors in the fields of health and medicine. Barch is professor and chair of the Department of Psychological & Brain Sciences in Arts & Sciences, and the Gregory B. Couch Professor of Psychiatry and professor of radiology at the School of Medicine. Bateman is the Charles F. and Joanne Knight Distinguished Professor of Neurology in the School of Medicine.

## NOBEL AWARDED TO CHARLES RICE FOR HEPATITIS C DISCOVERIES MADE AT THE SCHOOL OF MEDICINE

The 2020 Nobel Prize in Physiology or Medicine was awarded to three scientists for the discovery of the hepatitis C virus. One of those scientists, virologist **Charles M. Rice**, conducted his seminal work while on the faculty of the School of Medicine from 1986 to 2000. Now, Rice is at Rockefeller University in New York. Rice said the real prize for the scientists who studied hepatitis C was "going from, basically, a mystery virus to having cocktails of drugs that can eliminate the virus without any side effects in more than 95% of infected people." His co-recipients were Harvey J. Alter, MD, of the National Institutes of Health and Michael Houghton of the University of Alberta in Canada.



## CENTERING ON RACE

In October 2020, the university launched the Center for the Study of Race, Ethnicity & Equity (CRE<sup>2</sup>). Led by inaugural director **Adrienne Davis**, the William M. Van Cleve Professor of Law in the School of Law, the center provides faculty grants for research related to structural racism, health equity, democratic citizenship, migration, justice and algorithmic bias. Davis also created the CRE<sup>2</sup> Research Workshop Groups, for scholars who want to dive deeper into a shared interest, and the CRE<sup>2</sup> Working Papers Series, for faculty who want feedback on their research. The center also helps graduate and undergraduate students develop research skills.

Relatedly, the university is in the process of hiring 12 new faculty members who will focus on research dealing with race and ethnicity in our society. And Davis imagines that CRE<sup>2</sup> will help connect the 200-plus faculty on the Danforth and Medical campuses who are studying issues related to race and ethnicity.

"This is our opportunity to forge a community to do the work that can lead to change," Davis says.



Hand painting on recycled medium by WashU student Jaya Tewari (Courtesy photo)

## SETTING UP SHOP

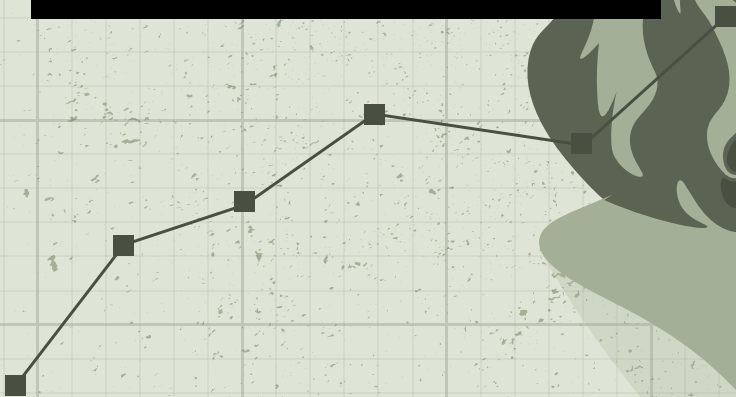
Olin Business School sophomores **Justin Reiling** and **Drake Shafer** started a new shop on campus, Gallery 314, which features items made by WashU students and members of the surrounding community. Items include earrings fashioned to look like favorite snacks, goat milk soap, body scrubs, bleach-dyed crewneck sweatshirts, and cardigans. People can shop the store online at [shopgallery314.com](http://shopgallery314.com).

"WashU provides an excellent foundation for student entrepreneurs," Reiling says. "Regardless of who you turn to, you'll find WashU's exceptional professors and staff are there for you along the journey."

In Reiling and Shafer's case, the Skandalaris Center helped them rent a storefront while their marketing professor showed them how to get the word out.

## Masks help the economy

We may not have to choose between the economy and stopping the COVID-19 pandemic. A new study out of Olin Business School shows that in communities where masks were mandated, consumer spending increased 5% on average. “The findings exceeded our expectations and show that we can have a strong economy with strong, commonsense public health measures,” says **Raphael Thomadsen**, professor of marketing and co-author of the study. “Mask mandates are a win-win.”



### NEW INSIGHT INTO HOW BRAIN NEURONS INFLUENCE CHOICES

**Camillo Padoa-Schioppa**, professor of neuroscience, of economics and of biomedical engineering, is senior author of a study recently published in the journal *Nature* about brain neurons and decision-making. He and his team studied monkeys as they chose between different juice flavors. Each option activated a distinct set of neurons in the brain. When the offer was more enticing, the corresponding neurons fired faster.

“In a number of mental and neuropsychiatric disorders, patients consistently make poor choices, but we don’t understand exactly why,” says Padoa-Schioppa. “Now we have located one critical piece of this puzzle. As we shed light on the neural mechanisms underlying choices, we’ll gain a deeper understanding of these disorders.”

### NEWLY DISCOVERED FOSSIL SHOWS EVOLUTIONARY CHANGES IN AN EXTINCT HUMAN SPECIES

An international research team of anthropologists that included **David Strait**, professor of biological anthropology in Arts & Sciences, discovered that an extinct human species, *Paranthropus robustus*, underwent a rapid evolution 2 million years ago due to local climate change. The result was that the males became much larger than the females. The transition took place over only a few tens of thousands of years.

### RESEARCHERS WORKING TO IMPROVE EMERGENCY CARE FOR PATIENTS WITH DEMENTIA

Treating patients with dementia in an emergency can be difficult because the patients often can’t express what’s wrong or how they wish to be cared for. The National Institutes of Health recently awarded four institutions \$7.5 million to share to study and improve care in emergency departments for these patients. The School of Medicine is one of the four institutions. **Christopher Carpenter, MD**, a professor of emergency medicine and one of the principal investigators, says the study will have two phases. The first will identify areas where more research is needed, and the second will award more than \$1.1 million to fund nine pilot studies.

### REGULATING SODA CONSUMPTION IS NO EASY FEAT

**Ruopeng An**, assistant professor and lead author of a new study from the Brown School, has shown that labeling sugar-sweetened beverages (SSBs) with a warning, particularly if the warning is in the form of a graphic, is effective at dissuading consumers from purchasing them. However, legislation requiring such warnings has been blocked in court or failed to pass state legislatures. “SSB warning labels tend to be a low-cost, scalable and effective ... to reduce calorie intake and prevent unhealthy weight gain in the population,” An says. But passing relevant legislation in the U.S. remains a battle.



## How to make people comfortable with a COVID-19 vaccine

New research shows that consumers strongly prefer “natural” over synthetic products to prevent ailments — a problem as health-care workers race to distribute vaccines for COVID-19 that are not natural. “Vaccines are unnatural insofar as humans create and alter them,” says **Sydney Scott**, assistant professor of marketing at Olin Business School and lead author of the study that appeared in the *Journal of Consumer Research*. “Some people refuse vaccines as a preventative measure, preferring not to “interfere with nature.” Scott, an expert in consumer behavior and decision-making, says, “The research suggests that if consumers view a vaccine more like a curative to the epidemic, rather than as a preventative for the self, they will be more receptive to it.”

### MATERIALS IN LITHIUM-ION BATTERIES MAY BE RECYCLED FOR REUSE

A team of researchers led by **Zhen (Jason) He**, a professor of energy, environmental and chemical engineering in the McKelvey School of Engineering, is developing a method to recycle lithium-ion batteries. In 2020 alone, China generated roughly 2.5 billion end-of-life lithium-ion batteries from portable electronics, most of which were discarded even though the metal inside them was still valuable. The research is looking at using components of lithium-ion batteries to make useful compounds such as lithium cobalt oxide.

### NEW DISCOVERY COULD HELP IMPROVE CANCER VACCINES

Cancer vaccines, while promising, have limitations. The vaccines, which are not given to prevent cancer but as an immunotherapy when patients have cancer, target proteins. These are abundant in a tumor, but also exist in healthy tissue; targeting the latter can cause dangerous side effects. A research team co-led by researchers at the School of Medicine have found that the mutated DNA of cancer cells often produces abnormal proteins. These can be distinguished from healthy tissue and could help develop vaccines that fight the tumor with fewer side effects. The research team has made the computer model and dataset freely available to the research community to speed development of cancer vaccines.

### NEW IMAGING AGENT DEVELOPED

Researchers at Washington University have developed an experimental imaging agent that illuminates the location and intensity of inflammation. Many diseases, including cancer, diabetes, lung disease and COVID-19, are linked with chronic and excessive inflammation. The agent, known as Glauminox, could help doctors better diagnose and treat disease. “A tracer like this could give doctors more information to make clinical decisions,” says **Vijay Sharma**, professor of radiology at the university’s Mallinckrodt Institute of Radiology and a professor of neurology and biomedical engineering.

### SICKER LIVESTOCK MAY INCREASE CLIMATE WOES

Research funded by the Living Earth Collaborative at WashU and led by **Amanda Koltz**, a senior scientist in biology in Arts & Sciences, describes how parasites cause animals to produce more methane, a greenhouse gas with an effect on global warming 29 to 36 times more potent than carbon dioxide. Methane is emitted when an animal passes gas. Animals with a parasitic infection pass more gas and grow more slowly, so it takes longer for them to be ready for slaughter. With the current rate of global livestock production, methane emissions could increase as much as 82% by 2050. A paper about the study was published in a recent issue of *Trends in Ecology and Evolution*.



## Keeping hackers at bay

As we become more reliant on technology that interacts with the physical world — self-driving cars, delivery drones, medical equipment — we need researchers like Ning Zhang to help keep us a step ahead of the hackers.

It's unlikely — but possible — that right now, someone, somewhere, is trying to hack the components in a pacemaker from hundreds of miles away.

Hacking a pacemaker is an extreme example, but Ning Zhang uses it to emphasize the very real threat posed by vulnerabilities in the interactions between the cyber and physical worlds. And Zhang says these vulnerabilities extend beyond medical equipment to objects such as delivery drones and much more.

Zhang is an assistant professor in the Department of Computer Science & Engineering in the McKelvey School of Engineering. He joined the faculty in 2018 after 11 years at Raytheon, a defense contractor, where he worked to protect critical network and cyber-physical infrastructures.

“Clearly, no one has the free time to exploit the vulnerabilities inside the pacemaker to kill you from hundreds of miles away,” he says. “However, it’s still not good knowing this is possible.”

Recognizing those vulnerabilities is Zhang’s first research goal: “We want to recognize the possibility and then, as a second goal, try to stop it before it manifests into a bigger threat.”

Although a super strong pacemaker disrupter may not show up anytime soon, Zhang says the idea of a cyberattack encroaching on the physical world in a direct and deadly way isn’t just a hypothetical.

“Ransomware is already doing just that at hospitals,” he says. In 2020, a patient died while being transported to another hospital after hackers shut down the computer systems at Düsseldorf University Hospital, where she was being treated.

Although he is a specialist in the technological side of things, Zhang says it’s often the hidden complexities

of the physical world that we can use to our advantage. Take deepfake videos, a somewhat new technology that allows anyone to make a video that looks and sounds real, using real people’s images and voices. This technology is widely available, and some people think it has the potential to do enormous harm, including ruin a marriage with a fake rendezvous or start a war by issuing fake videos of heads of state.

“It might be possible to leverage the properties of a physical phenomenon to prove that an image is not a deepfake,” Zhang says. “Fabricating physical properties is very difficult, as opposed to copying bits of 0s and 1s.”

In September 2020, Zhang and collaborators were awarded a \$1.2 million grant from the National Science Foundation to strengthen the security and safety of cyber-physical systems across a variety of fields, from defense to the medical industry.

“Our project aims to develop technology,” he says, “and to push this technology to the limit to see where it breaks down, so the broader community can build on top of our results and make an informed decision.”

It’s this method of developing and testing technology that pitted Zhang against a cell-phone personal assistant. He exposed a vulnerability in the security that would allow a person to take control of a cell phone from a distance by using ultrasonic waves. And then, he proposed ways to use the physical world to protect against such an attack: the interlayer-based defense, which uses a soft, woven fabric to increase the “impedance mismatch.”

In other words, put the phone on a tablecloth. Or better yet, just keep it in your pocket.

■ BRANDIE JEFFERSON

QUOTED

THE NEW NORMAL

Undergraduates share how they've adjusted to attending college during a pandemic.

**"The social aspect of college can be hard. On the one hand, you want to be social. On the other: COVID. I'm treading very lightly. Big groups scare me, even without COVID."**

**AD'MIREL DURDEN,**  
A FIRST-YEAR STUDENT  
STUDYING IN POLITICAL  
SCIENCE AND ECONOMICS  
IN ARTS & SCIENCES



Photo: James Byard

**"I kept St. Louis time, so I would be up from 3 p.m. until 7 a.m. and then sleep until 1 p.m. It was an experience, for sure."**

**ASTRELLA SJARFI,**  
AN ECONOMICS MAJOR IN ARTS &  
SCIENCES, LEFT CAMPUS IN THE  
SPRING OF 2020 AND RETURNED  
TO HER HOMETOWN IN JAKARTA,  
INDONESIA. HAVING A NORMAL SLEEP  
SCHEDULE WAS ONE REASON SJARFI  
RETURNED TO CAMPUS IN THE FALL.



Photo: James Byard

**"I'm setting reasonable goals for myself that put my mental health first. So instead of getting all A's, I set goals like communicating better with my teachers and organizing my time."**

**ELLA HOLMAN,**  
A JUNIOR MAJORING IN  
DANCE IN THE PERFORMING  
ARTS DEPARTMENT IN  
ARTS & SCIENCES

**"The isolation is hard for everyone. You can go an entire day without seeing another human being. Going to my one or two on-campus classes is quite enjoyable because I get to see people. Even if it's not people I know, it feels good."**

**CONNOR SEGER,**  
A SOPHOMORE  
MAJORING  
IN FASHION DESIGN  
AT THE SAM FOX  
SCHOOL OF DESIGN  
& VISUAL ARTS. LIVES  
OFF CAMPUS.



Photo: Joe Angeles

**"I'm in Eliot B, which I think is the best dorm on the South 40. I think the fact that we can't go to other people's dorms has made me really close to the people in my dorm. We have a group chat for the building, so I'll just post, 'Anyone who wants to play this board game, come to the common room.' I've been pleasantly surprised by the bonds I've been able to form."**

**JUSTIN LEWITUS,**  
A FIRST-YEAR  
STUDENT  
STUDYING  
FINANCE AT  
OLIN BUSINESS  
SCHOOL

SOC 3510 Sick Society: Social Determinants of Health and Health Disparities in the United States

# What determines your health?

In her course “Sick Society,” Hedwig (Hedy) Lee, professor of sociology, asks students to consider what aspects of our society impact our health. The answer is broader than it appears.

“If we want to understand what’s driving health, we have to look beyond what happens in the doctor’s office or the hospital,” Lee says.

There are social determinants to health. Those are things like your neighborhood, your housing, your education, your income, your job and your stress levels.

In the course, students define the nature of population health and study various populations and the issues surrounding their health, including people of different races, genders and sexual orientations; people with varying levels of education; and vulnerable populations such as children, undocumented immigrants and people in prison.

Income level, employment and circumstances determine a lot. A doctor may see a patient with hypertension and recommend exercise and diet modification. But the person may be a truck driver or working three jobs because a family member is incarcerated, making implementing these potentially beneficial changes difficult. Plus, “there’s research that shows chronic stress can lead to hypertension independent of changes in health behavior,” Lee says.

Our health, therefore, is influenced by nearly every aspect of our lives. And America has exceptionally bad health compared with other high-income nations. While a lack of universal health care plays a role, it isn’t the only factor in America’s health problems.

“In the course, we read a paper that compares millionaires in the United States to millionaires in other high-income countries,” Lee says. The expectation is that the millionaires are healthy because they can get the best health care, live in the best neighborhoods and eat the healthiest foods. “But we find that Americans have poorer health compared with other individuals of the same income. So students have to think about what the cultural and social features of our society are that might also be impacting health.”

Students also define what health is. “Does healthy mean the absence of any illness? Or is it about being able to live your life fully every day?” Lee asks. “Is health about mental and physical health? Should happiness be a part of health, or is not having a mental health disorder enough?”

Lee wants students to have an expansive view of health, so they will understand the importance of distal interventions. These policy interventions don’t seem related to health but can have a big impact on people’s well-being, such as housing policy, voting policy and criminal justice policy. At the end of the course, students have to make recommendations about health interventions that could be effective, and they often talk about distal interventions. Engineering students have proposed that hospitals be redesigned to be more accessible and address health-care disparities. Pre-med students have suggested how medical training can be improved. Others suggest better funding for schools or public transportation.

One issue that gets at the complex nature of social determinants is infant and maternal mortality rates. The United States has a high infant mortality rate compared with other high-income countries. In 2017, more than 22,000 infants (babies in their first year of life) died in the United States, for a death rate of 5.79 per 1,000 births. The infant mortality rate is nearly twice as high for Black mothers: 10.97 per 1,000 births.

“Infant mortality rates for Black mothers who have at least a college degree are similar to those for white mothers with only a high school degree,” Lee says. Typically, higher education levels lead to better health outcomes, for a variety of reasons, including higher income and better health literacy. While racial discrimination in health care could be part of the reason for this disparity, Lee encourages students to look “upstream” for solutions — that is, to look at what happened before the point of care that may be influencing these numbers.

Anecdotally, doctors noticed emptier NICUs at the start of the pandemic. This could indicate that better maternity leaves might be an effective proximate intervention. (The most common cause of death for an infant in the United States is short gestation and low birth weight.)

Lee was not teaching “Sick Society” when the COVID-19 pandemic hit in the spring of 2020, but she taught it in the fall and added material to address the pandemic. Many of the issues around health disparities that COVID-19 has raised are familiar ones that the course already discussed. “COVID-19 has amplified how we think expansively about health,” Lee says.

■ ROSALIND EARLY

Illustration: Monica Duwel

Because social determinants can have a huge impact on your health, positive health outcomes can sometimes feel like a game of chance.



### WHAT'S REALLY MAKING YOU SICK?

Here is a look at statistics related to five major social determinants of health.



**34.5% of households with a child 18 or under are food insecure** during the COVID-19 pandemic, an increase of about 130%. People who are food insecure are at risk for more chronic diseases.



**Higher education helps people secure higher paying jobs** with fewer safety hazards. High school graduates earn \$117,000 to \$322,000 more over their lifetimes than those who dropout.



Levels of unhappiness, loneliness and depression are about **30% higher for women who reported experiencing recent discrimination** than for those who did not.



**41.1% of Black patients receive lower quality of care** than white patients according to the 2015 *National Healthcare Disparities Report*. And 36.7% of Hispanic patients and 32.4% of American Indian/Alaska Native patients receive lower quality of care.



**22% of children in public housing have asthma** compared to 7% of children in single-family homes. People in public housing also report more exposure to mold, cockroaches and second-hand tobacco smoke.

## Risk as evolution

As a teenager growing up in rural Massachusetts, Carl Phillips would wander trails with his dog. “The house [was] surrounded by cranberry bogs, and I spent a lot of time observing the changes in the landscape, the two swans that lived on one of the bogs, that sort of thing,” Phillips says. From this experience, he crafted his first poems.

Throughout his career as a poet, which now stretches across 14 books, Phillips, professor of English in Arts & Sciences, has intertwined nature — wind, clouds, bees, foxes, horses — with ruminations on love, vulnerability, doubt, regret, desire. His latest collection, *Pale Colors in a Tall Field*, relies on those same powers of observation he sharpened years ago and brings in a touch of “linguistic sorcery” (according to one review) that Phillips has become known for. His complex

syntax leads readers to experience the regret, the doubt, the longing that Phillips writes about.

“On Being Asked to Be More Specific When It Comes to Longing” is the second poem in Phillips’ collection. It begins in the midst of a walk and ends “with people lying down naked in a field as these creatures approach them,” Phillips says. “This is echoed in the poem that ends the book, where two people, despite not believing in rituals, take each other’s hand and make a kind of union as a way to move forward into — what? Who can say? But a move toward the unknown is a move toward change, toward disaster maybe, but maybe toward the next great adventure.

“I’m all about risk as a form of evolution. Otherwise, what’s the point of our time here on Earth?”

■ ROSALIND EARLY



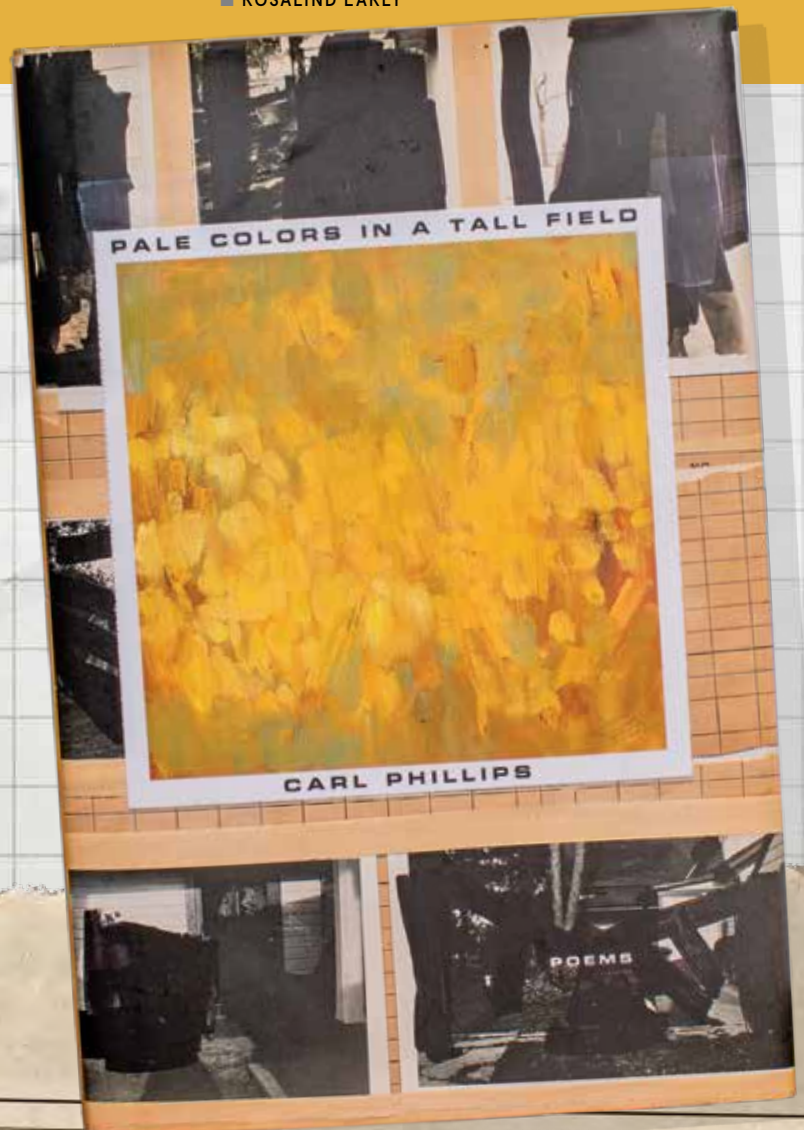
April is poetry month. See more poems from university faculty and students at [source.wustl.edu/2021/4/washu-poetry](https://source.wustl.edu/2021/4/washu-poetry).

### On Being Asked to Be More Specific When It Comes to Longing

When the forest ended, so did the starflowers and wild ginger that for so long had kept us company, the clearing opened before us, a vast meadow of silverrod, each stem briefly an angled argument against despair, then only weeds by a better name again, as incidental as the backdrop the ocean made just beyond the meadow ... Like taking a horsewhip to a swarm of bees, that they might more easily disperse, we’d at last reached the point

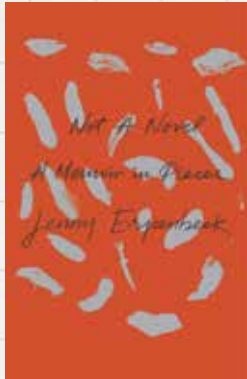
in twilight where twilight seems most a bowl designed to turn routinely but as if by accident half roughly over: bells somewhere, the kind of bells that, before being housed finally in their towers, used to have to be baptized, each was given—to swing by or fall hushed inside of, accordingly—its own name; bells, and then—from the smudged edge of all that seemed to be left of what we’d called

belief, once, bodies, not of hunting-birds, what we’d thought at first, but human bodies in flight, in flight and lit from within as if by ruin, or triumph, maybe, at having made out of ruin a light, something useful by which, having skimmed the water, to search the meadow now, for ourselves inside it where, yes, though we shook in our nakedness, we lay naked as we’d been taught to do: when afraid, what is faith, but to make a gift of yourself—give; and you shall receive.



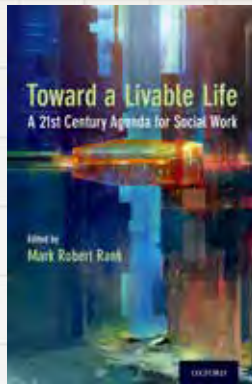


**FACULTY**



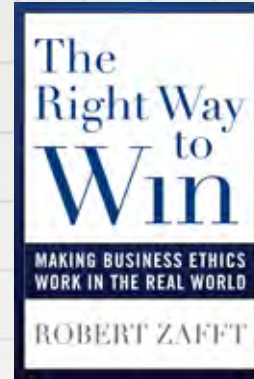
**Not a Novel: A Memoir in Pieces**  
**JENNY ERPENBECK (AUTHOR)**  
**KURT BEALS (TRANSLATOR)**

German writer and director Jenny Erpenbeck has published novels, stories and plays. Now she tackles the essay in *Not a Novel*. This acclaimed memoir discusses growing up in East Germany, her work in a bakery, migration, literary influences and her path to becoming a writer. It was translated from the German by Kurt Beals, associate professor in Germanic Languages and Literature.



**Toward a Livable Life: A 21st Century Agenda for Social Work**  
**EDITED BY MARK RANK**

In this collection of essays, leaders in the field of social work, many from the university's Brown School, assess the field's most pressing problems on both global and domestic fronts. Edited by Mark Rank, the Herbert S. Hadley Professor of Social Welfare and professor in sociology, the book includes essays on the importance of alleviating poverty, engaging older adults, preventing child abuse and neglect, and reforming incarceration.



**The Right Way to Win: Making Business Ethics Work in the Real World**  
**ROBERT ZAFFT**

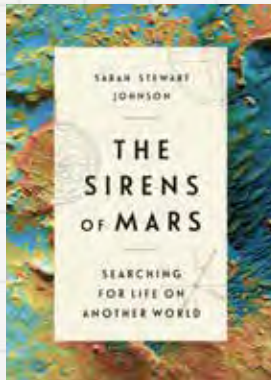
In *The Right Way to Win*, Robert Zafft, adjunct lecturer in Olin Business School, talks about the "seven habits of highly effective people" for business ethics. Full of practical advice on how to drive and enforce ethical behavior in the real world, the book also shows how business ethics lead to long-term business success.

**ALUMNI**



**The Great Pretender**  
**SUSANNAH CAHALAN, AB '07**

In the 1970s, a Stanford psychologist and seven other people pretended to be mentally ill and went into asylums. They wanted to see how people understand and treat mental illness at institutions. The undercover patients emerged with troubling diagnoses and disturbing stories. Cahalan, author of the *New York Times* bestseller *Brain on Fire*, recounts the bold experiment, which was not everything it seemed.



**The Sirens of Mars: Searching for Life on Another World**  
**SARAH STEWART JOHNSON, AB '01**

Georgetown University scientist Sarah Stewart Johnson has a fascination with Mars and the search for life on other planets. In this book, she describes how she became a scientist and tells stories of other explorers, including Percival Lowell, who was convinced there was a utopian society on Mars. This natural history of a planet no human has set foot on reveals a lot about our own history.



**The Invisible Life of Addie LaRue**  
**V.E. SCHWAB, BFA '09**

Addie LaRue strikes a devilish deal: She will live forever but will be forgotten by everyone she meets. Is this a blessing or a curse? While LaRue's life fills centuries and she travels the world, she discovers she wants to be remembered. Then one day, a young man in a bookstore tells her he remembers her name.



# Anjan V. Thakor: How can businesses benefit from having a higher purpose?

About four years ago, I became interested in the topic of higher purpose, purely by chance. Bob Quinn, a good friend and former colleague at the University of Michigan's business school, had just returned with his wife from a three-year stay in Australia. Bob had been asked to lead a Mormon church there. He described his stay as the greatest experience of his life, because "we created an organization of higher purpose."

Nothing he said about his organization made sense to me as an economist. Everything seemed to violate the basic economic principles on how to create incentives for desired behavior in organizations. After a long conversation, we decided to research whether organizations of higher purpose existed outside places of worship and, if so, how they operated. And what impact did this have on their business results?

We wrote a theoretical paper that introduced organizational higher purpose into an economic model. Over a two-year period, we conducted about 40 in-depth interviews of leaders from for-profits, nonprofits, private firms and public firms to learn their approaches to the issue. After analyzing our data, we published an article in the *Harvard Business Review* as well as a book, *The Economics of Higher Purpose*, in 2019.

In our writings, we define organizational higher purpose as a (prosocial) contribution goal that transcends the usual business goals, such as shareholder value and profit maximization, yet acts as the arbiter of all business decisions. An organization of higher purpose is a social system in which the greater good has been envisioned, articulated and authenticated.

Like all organizations, one with a higher purpose is a cauldron of conflict. But because the higher purpose is the arbiter of all decisions, people find meaning in their work and in their relationships in spite of the conflicts. They strive to transcend their egos and sacrifice for the common good. Despite constant pressures to regress to the norm, people interact with one another with respect and engage in constructive confrontation.

The employees have a win-win mentality, and positive peer pressure emerges to support high levels of collaboration. Leadership flows from the top down and also emerges from the bottom up. Meetings are generative, and members of the organization co-create the future. Employees believe they work in an organization of excellence, and customers and other external constituents are drawn to and confirm the excellence by joining in the co-creation of the organization's future.

When adopting a higher purpose, the organization often makes short-term economic sacrifices but benefits from long-term economic gains. In organization after organization, we found that if the higher purpose was authentic — that is, the leader truly believed in the purpose and it was not a public relations gimmick — then the impact on the economic outcomes (profits, market-share growth, employee engagement, customer satisfaction, shareholder value) was significantly positive.

But if purpose is undertaken solely for economic gain, it loses authenticity and credibility and fails to produce positive economic outcomes. Cynicism sets in, and employees view it as an exercise that is no more meaningful than the countless posters on company walls about values. As a result, employees fail to connect with their work.

We also uncovered two other rather surprising findings: Most organizations that had an effective higher purpose discovered it; they didn't invent it. And many of these discoveries occurred during times of deep crisis, some existential, when the organization had plenty of other distractions, even possibly how to survive.

Our research enabled us to develop an eight-step process for organizations to effectively discover and implement their higher purpose:

- Envision a purpose-driven organization
- Discover the purpose
- Meet the need for authenticity (fidelity to the truth and genuine passion for the purpose)
- Turn the higher purpose into a constant arbiter of all business decisions
- Stimulate learning
- Turn mid-level managers into purpose-driven leaders
- Connect the people to the purpose
- Unleash the positive energizers

Our *Harvard Business Review* article and subsequent book explain these steps in detail, with numerous examples of real-world organizations. In the book, we also provide exercises organizations can do to begin the journey of finding and implementing higher purpose.

■ ANJAN V. THAKOR

## WHO

Anjan V. Thakor

## TITLE

Director of Doctoral Programs and of the Wells Fargo Advisors Center for Finance and Accounting Research, and the John E. Simon Professor of Finance

## EXPERTISE

Banking and financial institutions, corporate finance and corporate governance

## ON A PERSONAL NOTE

Thakor's work also covers individual higher purpose, "a personal contribution goal that transcends goals like promotions and wealth accumulation, yet it's a goal that influences how one makes professional decisions in one's life."

"An organization of higher purpose is a social system in which the greater good has been envisioned, articulated and authenticated."

# Public health after COVID-19

The COVID-19 crisis could reshape public health for the better.

Few are happy with how the COVID-19 pandemic was handled in the United States in its first year: staggering infection rates, hospitals running out of beds, a death toll that topped 500,000 (as of March 1, 2021). Restaurants and small businesses closed, opened and closed again, with many going out of business; unemployment numbers climbed; and in the midst of it all, misleading and conflicting information was both rampant and worrying.

## SO WHAT WENT WRONG?

“There’s a saying that when politics and science collide, too often politics win,” says Ross Brownson, the Steven H. and Susan U. Lipstein Distinguished Professor at the Brown School and medical school.

And did they ever collide with COVID-19. Simply writing about the response feels like traipsing across a minefield because how people view what happened depends largely on their politics.

While Brownson is interested in what politicians got wrong, he has also looked at what public health experts could have done differently. Even before COVID-19, there were fault lines in the public health field that the pandemic cracked wide open.

“For decades now, but especially since the recession in 2008–09, we’ve been dramatically underinvesting in public health,” says Brownson, who co-authored the article “Reimagining Public Health in the Aftermath of a Pandemic” for the *American Journal of Public Health* in late 2020. Most health-care dollars go to treatment, rather than to public health and prevention. Between 2008 and 2017, local health departments in the United States jettisoned 50,000 jobs, Brown says.

Another issue was political, particularly the lack of a national plan for action. “Early in the pandemic, the White House said, ‘We’re going to war with this virus,’” Brownson says. “Imagine if we were going to war, but instead of having a national response, we’re going to let each city in the United States and the 3,000 local health departments decide how they want to fight this war themselves.”

Graham Colditz, deputy director of WashU’s Institute of Public Health and a co-author of the article, says it was a “cacophony of messages and counter-messages.” As a result, “people don’t trust any of it,” says Colditz, who is also the Niess-Gain Professor of Surgery and division chief of public health sciences in

the School of Medicine. This fueled the “infodemic,” the spread of misinformation about the pandemic on social media.

Public health officials also struggled to assess the impact of the virus, especially early on in the pandemic when it was difficult to get tested. Contact tracing, a main method for controlling the spread of the virus in South Korea, for example, was never truly possible for already overburdened local health departments.

In addition to revealing all the fault lines in public health, the pandemic also brought American inequities into sharp focus.

“We have multiple pandemics going on,” Brownson says. “COVID-19 is one, climate change is another, racial inequity is still another.” Racial inequity has been particularly striking during COVID-19 not only due to protests over the police killing of George Floyd and others, but also due to statistics like Blacks dying at nearly three times the rate of whites from COVID-19.

“There’s been a lot of talk about people wanting to return to normal. We ought to be thinking about not returning to normal but finding a new, more just normal,” Brownson says. “The old normal wasn’t so great for a lot of segments of society.”

## THE FUTURE OF PUBLIC HEALTH

According to Brownson and Colditz, before the COVID-19 pandemic, public health was entering “version 3.0,” with a focus on the social determinants of health. When studying why people are dying or getting sick, public health experts ask certain questions to determine interventions: Did the person who died of lung disease smoke? Did this person die of heart disease because she didn’t eat a healthy diet? If the answers are yes, then resulting public health intervention questions might be: How can we get people to stop smoking? How can we create the environments to allow people to eat healthier?

“But those [questions] don’t get to the underlying social determinants of health,” Brownson says. “Maybe someone doesn’t eat a healthy diet because they live in a food desert or they can’t afford to buy healthy food. Maybe they smoke because they’re being bombarded by messages about smoking and not getting preventive messages.”

Expanding the view of what impacts health outcomes forces public health officials to consider how things like environmental, social and economic factors are connected to health risks. In order to study these systems, it is imperative for public health to garner



more funding. Reprogramming even a small percentage of the health-care dollars that now go toward treatment to prevention could have a huge impact.

“Public health, when it’s working at its best, is invisible, because we’re incrementally preventing disease and improving quality of life,” Brownson says. But it saves millions of lives. For instance, safe drinking water and clean air prevent millions of Americans from getting sick and dying every year. But a physician removing a tumor is more visibly saving a life.

In addition to funding, Brownson advocates for a new generation of policy and practice leaders who have different skill sets.

“A big area involves communication skills,” Brownson says. Public health officials could learn a lot about getting out their message from marketers, advertisers and businesses. But they also need to learn how to combat disinformation online.

Colditz agrees. “We can do a much better job of connecting with different sectors of our society, different levels of health literacy and scientific understanding, so that everyone can get the benefit of what we know. All these excess deaths from COVID-19 aren’t because we didn’t know what to do.”

In the *American Journal of Public Health* article, Brownson also says public health leaders need to better plan how to study and intervene with social determinants of health. This might require increased use of big data and closer connection to sectors such as education, housing and employment.

“How do we go forward with more urgency and more equity as we chart the future? I think that’s the bottom line for me,” Brownson says.

■ ROSALIND EARLY



# Highlands Hunt for CLIMATE ANSWERS



Two scientists from Washington University are reconstructing past climate and cultural shifts in the Peruvian Andes. Today, such high-altitude parts of the tropics are warming faster than the rest of the globe. What **Bronwen Konecky** and **Sarah Baitzel** discover could help predict how the people and animals in this delicate ecosystem might be affected in the future.

With tents pitched at a base camp at 16,000 feet in elevation, researchers wait out an unseasonal snowstorm at the edge of Lake Sibinacocha. The lake is surrounded by glaciated peaks that reach to almost 21,000 feet in elevation.



**I**T SEEMS IMPOSSIBLE THAT THIS IS THE TROPICS. At 16,000 feet, high above the tree line in the central Andes Mountains, there is snow on the ground. The icy edge of a glacier is wedged between mountains nearby. But there is so much sun here, for so many hours of the day, that the largest high-alpine lake in the Andes never fully freezes.

For much of Peru, like other tropical regions of the world, the difference between summer and winter is a matter of precipitation. There is a rainy season and a dry season. This was supposed to be the dry season.

And yet, holed up in her all-weather tent on day four of a planned 14-day field expedition, Washington University climate scientist Bronwen Konecky peered out at another squall of thundersnow.

No matter. After what it took to get this research team to this field site from Cusco, Konecky was going for it. Today might be the day she finally gets her lake sediment core.

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Konecky, assistant professor of Earth and planetary sciences in Arts & Sciences, works in tropical regions around the world, gathering evidence of climate change in the geologic

past. Using data from rain samples and the muck of dirt, leaves and other organic matter decomposing at the bottom of lakes, Konecky is piecing together a story about the Earth's climate history – and what it could tell us about our planet's future.

Her research journey has carried her from St. Louis to Uganda to Indonesia and beyond – but one of the most significant stops is Lake Sibilacocha, in southeastern Peru.

The lake is at the heart of the Cordillera Vilcanota range. It's part of the Andes Mountains, which run 4,350 miles along the western side of South America – separating a narrow, arid coastal area from the verdant Amazon basin. In fact, the glacier melt that feeds Lake Sibilacocha swirls downhill as a principal water source for the mighty Amazon River.

Glacier runoff is a major source of water for people in the Andes. Water from glaciers fills lakes and rivers, and it also powers hydroelectric dams that keep the lights on. When that water goes away, the future becomes less certain for these high-altitude residents.

Before it feeds the Amazon River, the water from Lake Sibilacocha runs through the Sacred Valley of the Incas – an important agricultural center, as well as a popular cultural destination for some of the 1.5 million tourists who come to





**About 70% of the world's tropical glaciers are located in the highlands of Peru. But they are rapidly disappearing.**

At far left: Washington University climate scientist Bronwen Konecky (right) and collaborator Preston Sowell scout sediment coring locations on Lake Sibiñacocha using a boat that the research team transported from Cusco. Map inset: In the Peruvian Andes, Lake Sibiñacocha is a hard day's travel from Cusco, and the final miles must be covered on foot with horses helping carry supplies and equipment.

the Cusco area to visit Machu Picchu each year, according to 2018 figures.

About 70% of the world's tropical glaciers, already a rarity, are located in the highlands of Peru. But they are rapidly disappearing. Changes in Peru's glacier area have been the focus of several research studies; one such study, in the journal *The Cryosphere* (published Sept. 30, 2019), reported a drastic reduction of almost 30% in the area covered by glaciers between 2000 and 2016.

"Lots of questions still remain about how Andean temperature, snow and rain respond to big changes in the Earth's climate system," Konecky says. "We don't have a lot of data from the Andes. Actually, we don't have a lot of data from South America, in general. And the farther uphill you move in the mountains, the less and less data we have."

The nearby Quelccaya ice cap was the largest in the tropics — until recently.

"It is melting, and melting fast," Konecky says.

The word "glacier" brings to mind Antarctica, but glaciers are actually found on every continent except Australia. Glaciers are sensitive indicators of changing climate. In the tropics, glaciers typically exist only where mean annual temperatures are close to freezing and where winter precipitation produces significant

amounts of snow. If snow accumulates without melting over years, it eventually morphs into glacier ice.

The Peruvian Andes are a dynamic environment of fluctuating glaciers, snowpack, lake levels and ecosystems. Moisture balance on the altiplano — the high plateau of South America — is ultimately driven by water that comes from the tropical oceans via the Amazon basin. Recognizing the global importance of this interconnected system, scientists have been monitoring glaciers in the region, notably the Quelccaya ice cap, for decades. In 1973, a scientific expedition brought back a long column of ice drilled out from its center. At the time, it was the only ice core that had been successfully harvested outside the polar circle.

The results from analyzing Quelccaya ice cores are widely used to reconstruct past climate. But information from ice cores is best ground-truthed against other complementary sources. That's where Konecky comes in.

"Ice cores can stand on their own," she says. "But every proxy system has its weaknesses. The best way to leverage the strengths of ice cores, while making up for some of their drawbacks, is to add another proxy system, which is what we're doing with the lake sediments."



Above: Washington University anthropologist Sarah Baitzel (left), pictured with archaeologist Arturo Rivera Infante (center), has conducted research in Peru for more than 15 years. Working at high altitude presents many physical challenges for the research team, including persistent cold temperatures and low oxygen conditions.

Sediment — that muck at the bottom of the lake — contains valuable information about climatic and environmental conditions around the watershed when they were deposited. These natural climate archives allow scientists like Konecky to examine climate variability and climate change over the span of decades to hundreds of thousands of years.

“High-quality, instrumental climate records date back only about 150 years,” Konecky says. “Paleoclimate archives help us understand what caused natural climate variability and climate change before that, and how those processes relate to what we’re seeing today. We’re using organic molecules preserved in lake sediments to reconstruct ancient environments and to understand why they changed.”

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The Cordillera Vilcanota and the tropical Andes are warming faster than the global average. Warming at extreme altitudes higher than 12,000 feet is expected to amplify with the disappearance of many glaciers by the mid-21st century.

But while scientists believe that human activities have caused much of this warming, they don’t know for sure what comes next.

Model projections of the future of the tropics are highly dependent on variables that are still being teased out, such as the relative role of natural climate variability versus external forcing (i.e., human-caused changes) on regional temperature, precipitation and evaporation.

To help make these connections, Konecky reached out to another scientist at the university, Sarah Baitzel, assistant professor of anthropology in Arts & Sciences. Together they submitted a proposal for seed funding from Washington University’s International Center for Energy, Environment and Sustainability. Their project is focused on reconstructing past climate and cultural shifts in the Peruvian Andes. The effort is also funded in part by the National Geographic Society.

Recent archaeological findings suggest that humans have been using the land around Lake Sibilinacocha from 8,000 to 5,000 years ago through the Inca and early colonial periods about 500 years ago — despite dramatic fluctuations in local climate and lake levels. These changes and their impacts on pre-Hispanic Andean cultures are poorly understood.

“This site, this lake, potentially holds vital information about past climate changes,” Konecky says. “This is something that we can use to help understand what might happen in the

future, but also what could have happened in the past and how that could have shaped the way that people were living in the Andes.”

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At Washington University, Baitzel teaches courses like “The Incas and Their Ancestors: Archaeology of the Ancient Andes” and “Human Osteology,” an upper-division course in which students learn to identify and analyze human skeletal remains. She also teaches introductory archaeology.

“From an archaeological perspective, highlands are absolutely fascinating environments,” Baitzel says.

“There’s a couple of spots around the world — the Andes, the Himalayas and the Ethiopian Highlands — that people have looked at to see how humans have biologically adapted to living in high-altitude environments.

“But it’s not just a biological adaptation, which, of course, took place a long time ago in the case of the Andean people, at least,” Baitzel says, “It’s the cultural adaptations that intrigue me. There’s a highly specialized way of life that has developed around this type of environment.”

Baitzel has conducted research in Peru for more than 15 years. Today, most of her field work is in Sama, a coastal valley in southern Peru, where she explores social identity formation and interaction among agropastoralists who lived on the geographic margins of expansive Andean civilizations, including the Tiwanaku and Inca.

It was this interest that helped bring Baitzel up the mountain to Lake Sibinacocha. Her husband, Arturo Rivera Infante, a Peruvian native and also an archaeologist, had done previous work in the Cordillera Vilcanota and at the Lake Sibinacocha watershed in particular. The scientists are now collaborating with another Peruvian archaeologist, Martin Polo y la Borda, on work at Lake Sibinacocha.

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**“From an archaeological perspective, highlands are absolutely fascinating environments.”**

— Sarah Baitzel

In 2011, another group of researchers, led by environmental scientist and National Geographic explorer Preston Sowell, discovered archaeological remains under several meters of water on the floor of Lake Sibinacocha. The remains included a rock wall arranged in a zigzag, serpentine pattern, which is thought by some to be sacred architecture. Other artifacts submerged near the wall include intact pots, broken pieces of ceramic materials and arrowheads.



### **Sarah Baitzel** (left)

**Studied:** Anthropology

**Research interests:** Mortuary archaeology, the Andes, agropastoralism, social complexity and collapse

**Research locations:** Sama, Peru; Lake Sibinacocha, Peru

**Selected courses taught at WashU:**  
ANTH 190B: Introduction to Archaeology  
ANTH 3095: The Incas and Their Ancestors: Archaeology of the Ancient Andes  
ANTH 3096: Sama-Peru Archaeological Field School

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### **Bronwen Konecky** (right)

**Studied:** Paleoclimatology

**At WashU:** Explores long-term changes in tropical climate and ecosystems from the geologic past to today. Member of the executive committee for the Washington University Climate Change Program, a university-wide initiative to expand scientific research, education and public understanding of climate change

**Recent honors:** 2019 Packard Fellow, Nanne Weber Early Career Award from the American Geophysical Union

**Research locations:** Tropical regions worldwide, including Indonesia, Uganda and Peru





Bottom left: Researchers on the boat spent days collecting sediment cores at different depths in locations around the lake. Remaining images: In this part of the Andes, llamas and alpacas provide humans with everything, including food, wool and fuel. When unseasonal snow covers the pastures, herders cannot feed their llamas, and some die.



Above: Bronwen Konecky (right) shows sediment collected from the bottom of Lake Sibinacocha. The muck of dirt, leaves and other organic matter contains valuable information about climatic and environmental conditions around the watershed at the time the matter was deposited.

The wall was originally built on dry land and became submerged at a later date. Konecky and Baitzel are still trying to determine exactly when and why that happened. Researchers have also found artifacts on the shoreline, including some that Baitzel believes might be mortuary monuments dating back to Inca or pre-Inca times.

“One thing that draws me to the area is the pastoralism — this very intimate relationship between humans and their domesticated animals — and the complete reliance of one species on the other,” Baitzel says.

“In the case of the Andes, it’s the domesticated camelids — llamas and alpacas — that provide humans with everything from food to wool and fuel,” she says. “Everything that people subsist on here in terms of both food and non-food resources comes from these animals.”

In marginal environments — geographic places where it is already difficult to eke out an existence, like at high-altitude Lake Sibinacocha — climate change has an amplified effect on the way people live, Baitzel says.

“The climate is becoming more extreme,” she says. “In this environment, it means that the freezing episodes are becoming more extreme and more erratic. There used to be very clear seasons. They used to have it almost set to the date when freezing would start to set in at night, and when it would end.

“None of that works anymore,” she says. “Their entire ritual tradition of setting time throughout the year has been upended.”

When unseasonal snow covers the pastures, herders cannot feed their llamas. Some of the animals die. Freezing episodes have also become more extreme. And when rain or snow starts setting in at times when it’s not supposed to, locals can’t cultivate and preserve important food crops for winter in a way they’re used to.

“Over the last thousands of years, local herders have developed a way of living here,” Baitzel says. “And that way — with the unpredictability of climate change — is no longer sustainable for them.”

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Although the environment at Lake Sibinacocha is changing rapidly, there is a stunning abundance of life in the watershed. Scientists have recorded about 70 species of birds in the region, many of which are setting altitude records for their species just by being there. The world’s highest-altitude frog populations are found there, and lizards skitter across the rocks next to the snow. Gangly vicuñas — wild cousins of llamas — teeter on skinny legs along the mountainside ledges. Elusive but still present are the mountain cats — pumas, pampas

**“From the deeper part of the lake, we hope to be able to reconstruct changes in the lake and in the climate and environment over time. From shallower, near-shore parts, we want to potentially reconstruct human presence in the region — particularly with cores taken right next to the archaeological sites.”**

— Bronwen Konecky

cats and the extremely rare Andean mountain cat, including one spotted on the Konecky-Baitzel expedition.

It is important to note that this is not a pristine, untraveled wilderness. Lake Sibinacocha and its river valley have been visited by humans — perhaps as a pilgrimage destination, certainly as a place of pasture — long before Europeans or even the Incas took control of the Andean region.

Some of the corrals built hundreds of years ago are still being used for tending llamas by the small group of local families that today live nearby.

“I think our eyes are drawn to the corrals because they are a feature that Western people understand as human-made,” Baitzel says. But the reality could be much more complex. She suspects that the whole landscape has been purposefully modified, mainly to create canals that re-route snowmelt into small “lagunas” and wetlands to support additional food sources for humans and the animals they value.

Lake Sibinacocha is deep and dark — about 10 miles long and 1.5 miles across. Collecting sediment cores from the bottom of the lake was Konecky’s primary goal during her first visit. But it was easier said than done, starting with the process of getting the team and a boat with a heavy motor up to the site, more than 3,000 feet above and a day’s hard travel from Cusco. The final miles of the trek must be covered on foot with help from horses to carry supplies and equipment.

Once at 16,000 feet, after waiting out an unseasonal snowstorm, the scientists called on assistance from a scuba diving team to help them harvest the cores from the shallower reaches of the lake — another extraordinary event, as diving is almost never done at extreme altitudes.

“From the deeper part of the lake, we hope to be able to reconstruct changes in the lake and in the climate and environment over time,” Konecky says. “From shallower, near-shore parts, we want to potentially reconstruct human presence in the region — particularly with cores taken right next to the archaeological sites.”

For the most part, Konecky considers her recent expeditions successful. She was able to map the bottom of the lake and determine its maximum depth (almost 300 feet). From slices of the sediment cores that she painstakingly separated and labeled in the freezing conditions on the lakeshore, Konecky and partners at Queen’s University in Ontario, Canada, are sifting through and dating the materials that they recovered. Her results will help illuminate how climatic and environmental change served as a backdrop to cultural changes. The contrasts Konecky observes between information from her samples and from the Quelccaya ice cores will help constrain the timing and magnitude of local droughts and precipitation or snowfall relative to broad regional monsoon history and tropical temperature patterns.

Baitzel continues to work with partners in the government agency that oversees archaeological activities in Peru. The samples she collected and registered from Lake Sibinacocha are in safe storage in Lima, waiting to be analyzed after current pandemic conditions abate.

Baitzel is working on a manuscript that includes her initial observations at Lake Sibinacocha, and she is also eager to return to the area to conduct additional field work — targeting other high-altitude sites to the north that connected the remote Sibinacocha valley with more frequently traveled roads between the Inca capital of Cusco and the Amazonian lowlands.

Konecky is also interested in expanding her inquiry to include comparative data from sediment cores that she would like to harvest from other high-altitude lakes in the Andes. But Lake Sibinacocha and its neighboring lakes remain central to her research.

“I’m drawn to this site for a number of reasons, partly for pure climate reconstruction reasons,” Konecky says. “I think it’s an amazing place to be able to learn some fundamental stuff about how the climate system works.

“It’s also a rare opportunity to look at those interactions between people and their environment over such time scales.”



For a short film by Thomas Malkowicz on the Konecky-Baitzel Peru expedition, visit [magazine.wustl.edu](http://magazine.wustl.edu).

# Watershed Moments

The effects of climate change cannot be handled piecemeal, argues Derek Hoeflerlin. Managing 21st-century waterways will require coordination on a continental scale — and a foundational understanding of how water shapes our environment.

■ BY LIAM OTTEN



FROM HEADWATERS NEAR SALEM, MISSOURI, the Meramec River snakes 218 free-flowing miles, through 14 counties and scores of towns, skirting St. Louis before emptying into the mighty Mississippi.

Derek Hoeflerlin grew up outside St. Louis, on a wooded hill close to the Meramec. As he commuted to school along Interstate 44, he'd cross the river and its sprawling floodplain twice or more each day.

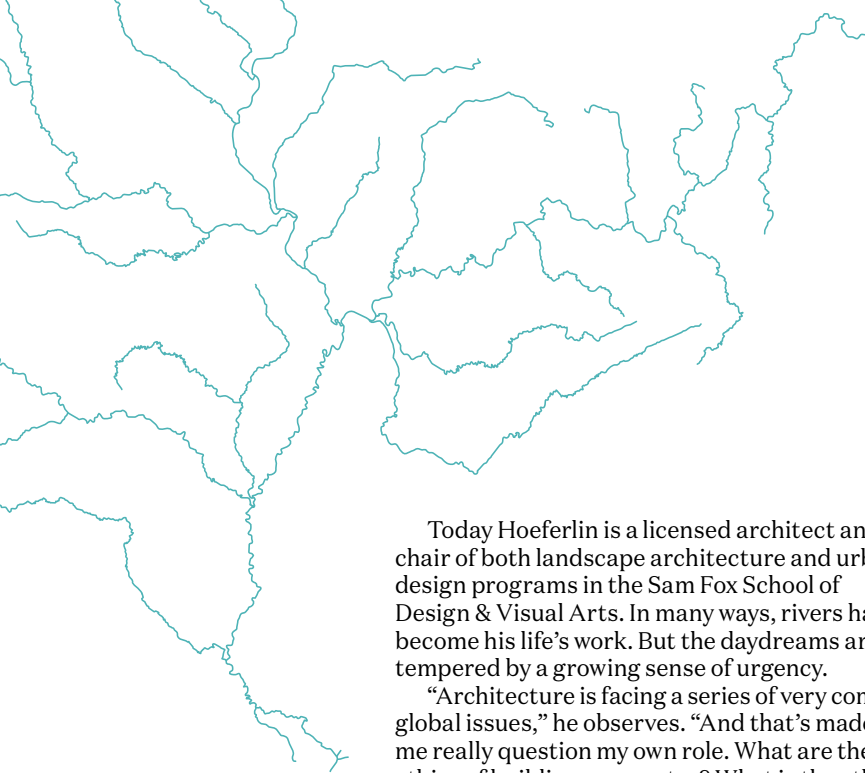
"It always mesmerized me," Hoeflerlin recalls. "Something about its meandering made me daydream. Rivers don't give a damn about north or south, east or west — or interstates for that matter. Water flows where water wants to flow."





Derek Hoeflerin, chair of Landscape Architecture & Urban Design in the Sam Fox School of Design & Visual Arts, leads students on a canoe trip along the Mississippi River, near the Chain of Rocks Bridge north of downtown St. Louis. The outing was part of Hoeflerin's fall 2020 studio "Field Work 2.0," which combined virtual and on-the-ground methods of documenting how various communities intersect with surrounding territories, watersheds and infrastructure.

Photo: Danny Reise



**“TOO OFTEN, ARCHITECTS ARE RESPONDING TO EMERGENCIES. IT’S TRIAGE WORK. BUT WE NEED TO BE MORE PROACTIVE. WE NEED TO THINK MORE HOLISTICALLY ACROSS SCALES AND SYSTEMS.”**

— DEREK HOEFERLIN

Today Hoeflerlin is a licensed architect and chair of both landscape architecture and urban design programs in the Sam Fox School of Design & Visual Arts. In many ways, rivers have become his life’s work. But the daydreams are tempered by a growing sense of urgency.

“Architecture is facing a series of very complex global issues,” he observes. “And that’s made me really question my own role. What are the ethics of building near water? What is the ethical response to something like Hurricane Katrina? To the impact of climate change in general?”

“Too often, architects are responding to emergencies,” he adds. “It’s triage work. But we need to be more proactive. We need to think more holistically across scales and systems.”

#### **THE LAWLESS STREAM**

In North America, no system is larger or more complex than the Mississippi River basin. Measuring more than 1,245,000 square miles, the basin encompasses 31 states and portions of two Canadian provinces. At its center flows the Mississippi itself — the “lawless stream,” in Mark Twain’s famous phrase, that can be neither curbed nor confined.

As a college student, Hoeflerlin followed the Mississippi south to New Orleans, earning bachelor’s and master’s degrees in architecture from Tulane University in 1997. He then spent six years in practice with the New Orleans firm Waggonner & Ball.

“New Orleans is a great place to spend your twenties,” Hoeflerlin says fondly. “The city was good to me. Some of my closest friends and most talented collaborators still live and do amazing work there.

“But looking back, other than taking the occasional swamp tour or watching freighters pass by the levees, I never thought much about the city’s relationship with water.”

That changed on Aug. 29, 2005. Hoeflerlin had just returned to St. Louis, after earning a post-professional master’s degree from Yale, and joined the Sam Fox School’s College of Architecture and Graduate School of Architecture & Urban Design.

His first faculty meeting took place the morning after Katrina made landfall. Amidst the introductions, levees began to fail in New Orleans. The dread was unbearable. “I didn’t know if my friends were alive or dead,” he says.

#### **CHANGING COURSE**

As recovery from Katrina began, Hoeflerlin consulted on water-management projects with Waggonner & Ball. He also joined H3 Studio, Inc., the St. Louis-based practice led by Sam Fox School Professor John Hoal. In 2006, H3 Studio became one of five national firms charged with overseeing the Unified New Orleans Plan.

It was a massive effort. Funded by the Rockefeller Foundation, the Clinton-Bush Katrina Fund and the Greater New Orleans Foundation, the plan aimed to develop a comprehensive, citywide rebuilding framework. Hoal, Hoeflerlin and numerous Sam Fox School alumni and students spent months documenting conditions, listening to residents, evaluating public priorities and assessing future risks.

Other collaborative water-related planning projects quickly followed, including “Gutter to Gulf” (2008), with Elise Shelley from the University of Toronto and former WashU colleague Jane Wolff; “Rising Tides” (2009), with Ian Caine from the University of Texas; and “Dutch Dialogues” (2010), led by Waggonner & Ball. Hoeflerlin also won a 2010 Sam Fox School Creative Activity Research Grant to support field research in the Mekong River delta.

In 2013, Hoal and Hoeflerlin joined forces with the Royal Netherlands Embassy in Washington, D.C., for the climate change conference “MISI-ZIIBI: Living with the Great Rivers.” In 2014, led by Hoal, they launched STUDIO MISI-ZIIBI, a yearslong planning initiative that, among other ideas, advocated moving the mouth of the Mississippi, or “head of passes,” 40 miles upriver.

It was (and remains) a radical and contentious proposal. But Hoeflerlin points out that the lower Mississippi would have jumped banks and joined the Atchafalaya decades ago if not for the Old River Control Structure, a vast system of locks and dams north of Baton Rouge. Relocating the river’s mouth — from Pilottown to West Pointe à la Hache — would acknowledge the truth of rising oceans while rendering the remaining channel faster, steeper and more resistant to storms.

“The delta today is already an engineered landscape,” Hoeflerlin says. “It’s an amazing system, but it’s a 20th-century system. It doesn’t account for climate change, population shift and other variables. And if it fails, the results will be catastrophic.”



Photos: Courtesy Derek Hoeflerlin

### A WAKE-UP CALL

Through it all, Hoeflerlin came to three major realizations.

First, though climate change conversations often center on cities like Miami, New York and, of course, New Orleans, the roots of coastal erosion and wetlands loss can start hundreds, if not thousands, of miles upstream.

“Deltas want to grow,” Hoeflerlin explains. But their basic building block is rich river sediment. And over the last century, an over-reliance on dams and levees has cut the amount of sediment reaching the coasts by half or more. “If you radically alter the flow of a river, it will not perform like it did before. Today, the deltas are starving.”

Which leads to the second realization: Climate changes are, by definition, changes to vast systems. Managing their effects will require extraordinary coordination. It can’t be done piecemeal.

Third, and perhaps most important, Hoeflerlin realized water is not the enemy. “We need water,” he says. “Life and society depend on water. Around the world, delta regions are often the lifeblood of their nations’ economies.”

But too often, we’ve tried to keep water out, rather than to fully understand its place within larger landscapes. As a result, many of our worst water-related disasters — from floods and contaminations to sinking lands and disappearing habitats — are the direct, if unintended, consequences of human activity.

“We have to learn to live with water,” Hoeflerlin says, because one way or another, “water always wins.”

**“THE DELTA TODAY IS ALREADY AN ENGINEERED LANDSCAPE. IT’S AN AMAZING SYSTEM, BUT IT’S A 20TH-CENTURY SYSTEM. IT DOESN’T ACCOUNT FOR CLIMATE CHANGE. ... AND IF IT FAILS, THE RESULTS WILL BE CATASTROPHIC.”**

— DEREK HOEFERLIN

Above: After Hurricane Katrina hit New Orleans, Derek Hoeflerlin collaborated with John Hoal, another professor from the Sam Fox School of Design & Visual Arts, along with students and alumni, to work on the Unified New Orleans Plan. Joining forces with the Royal Netherlands Embassy, the group advocated for moving the mouth of the Mississippi 40 miles upriver. Considered by some to be a radical plan, Hoeflerlin posits it would render the channel more resistant to storms. And Hoeflerlin points out that the lower Mississippi would have jumped its banks decades ago anyway without the Old River Control Structure.

HOEFERLIN'S TAKEAWAYS FROM STUDYING CLIMATE CHANGE:

Conversations center on cities like Miami, New York and New Orleans, but the roots of coastal erosion and wetlands loss can start hundreds, if not thousands, of miles upstream.

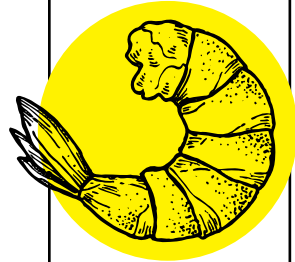
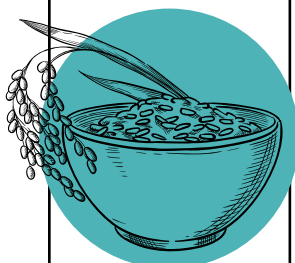
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WASHINGTON MAGAZINE 33



**DELTA FARMERS ARE SWITCHING FROM RICE TO SHRIMP DUE TO CLIMATE CHANGE.**



**RISING SEAS CONSTRAIN FARMERS**

At approximately 300,000 square miles, the Mekong River basin is one-quarter the size of the Mississippi basin but contains a roughly equivalent population, around 60 million people. It weaves through six countries and serves as a primary trade route from the Tibetan plateau to the South China Sea.

A generation ago, rice farmers in the Mekong delta’s “nine dragons” region – so named for its nine ocean outlets – could reliably grow three annual harvests, an expectation codified into Vietnam’s “three-rice” agricultural policy. Today, coastal erosion, sand mining, rising sea levels and salt water intrusion are limiting many farmers to a single harvest each year.

“The old systems, the existing frameworks, don’t work anymore,” Hoeflerlin says. “But farmers are still beholden to the old policy. So how do you take what had been a water-rich, fresh-water flat and accept the salt? How do you change to a different type of agriculture?”

For many delta farmers, the answer has been to switch from rice to shrimp. “It’s a good example of adaptation,” Hoeflerlin says. “But then you have to look at the methods they’re using, and many farmers are raising shrimp in very intensive ways. So we still need to figure out more polyculture approaches, like rotating shrimp with mussels or clams.

“Climate change is not necessarily going to end the world,” Hoeflerlin adds. “But it will force us to adapt and do things differently. And for that, you must understand the reality of what’s happening on the ground.”

**‘THE NEED FOR WATERSHED ARCHITECTURE’**

In his influential 1995 essay “Bigness or the Problem of Large,” Rem Koolhaas argued that as new technologies increase the scale of architectural projects, architects will necessarily

“surrender” to other disciplines. The roles of engineering, manufacturing, construction and politics, Koolhaas foresaw, will be “as critical as the architect’s.”

For Hoeflerlin, then a student at Tulane, Koolhaas’ manifesto arrived like a thunderclap. And as New Orleans prepared to mark Katrina’s 15th anniversary in August 2020, Hoeflerlin realized Koolhaas’ essay didn’t go far enough.

“I think we have an obligation to the *really* big scale, to the global scale, to the continental river basin scale,” Hoeflerlin says. “Disciplines shouldn’t worry so much about their own space because there is a bigger space – a literal geographic space – that we all need to share.”

In his upcoming book, *Way Beyond Bigness: The Need for Watershed Architecture* (Applied Research + Design, November 2021), Hoeflerlin argues that architects, academics, planners, industry professionals and the general public must fundamentally rethink their relationships with water.

“Maybe that sounds like hubris; maybe it’s an impossible problem,” Hoeflerlin says. “But it’s important that these conversations begin to happen, and that people begin to find their own places within them. My goal is simply to provide a framework.”

The book’s core is a series of maps, charts, photographs, speculative proposals and other materials relating to the Mississippi, Mekong and Rhine basins. The three basins reflect the last decade of Hoeflerlin’s work, but they also reflect three different hydrological scales in three different states of management and development.

“The Mississippi today represents stagnating development,” Hoeflerlin explains. Though the river boasts a rich history of infrastructural innovation, it suffers from deferred maintenance and accelerating patterns of severe weather.



Photos & map: Courtesy Derek Hoeflerlin

What's more, communities along its banks often lack the financial resources and political capital to address contemporary ecological challenges.

In contrast, the Mekong “represents accelerating development,” as China and other nations race to construct concrete mega-dams for hydropower, irrigation and, ostensibly, flood control.

“Unfortunately, these are just 21st-century versions of 20th-century ideas,” Hoeflerlin says, with little thought given to impact downstream. “They’ll further reduce sediment flows and generally wreak environmental havoc in the Mekong delta.”

#### NO ONE SOLUTION FITS ALL

Yet Hoeflerlin retains a kind of core optimism about even the most daunting design challenges. For a positive example of what he calls “adaptive development,” Hoeflerlin points to the Rhine basin, particularly as it reaches the Netherlands and the North Sea.

“The Dutch have centuries of experience when it comes to living with water,” Hoeflerlin says. Indeed, more than half the nation’s housing is located in flood-prone areas. But in the age of climate change, the Dutch have realized that building ever-higher dikes is no longer sufficient.

And so, in 2005, the Dutch government launched Room for the River, a massive, \$2.85 billion effort to upgrade water infrastructure around the country. For example, in the 2,000-year-old city of Nijmegen, Dutch architects and engineers added a bypass channel to the Waal River, the Rhine’s main distributary branch. This both reduced the risk of flooding in Nijmegen’s historic center and created a new river park on the Waal’s northern bank.

“It’s not that you can’t develop in a floodplain,” Hoeflerlin says. “In a way, that’s almost inevitable.” But, he quickly emphasizes, such

development must be undertaken responsibly, with an emphasis on environmental ethics and stewardship.

“It’s not about just letting everything go back to nature; it’s about finding ways to lace these different contexts, interest groups and ecologies together.”

Still, Hoeflerlin warns that the Rhine basin is one-quarter the size of the Mekong basin and 1/17 that of the Mississippi. “The scales are vastly different,” he says. “Addressing issues along the Mississippi and the Mekong won’t be easy, and the solutions may not be the same, but they are achievable through innovative design.”

Back on the Meramec, new levees and big-box construction are further constraining the river of Hoeflerlin’s youth. Storms the Meramec could once have absorbed now push it to flood stage and beyond. Nevertheless, Hoeflerlin finds a hopeful counter-trend in the adjacent growth of nearby conservation areas such as Castlewood Park, Lone Elk Park and Washington University’s Tyson Research Center — which, though not located in the Meramec floodplain, are part of its larger watershed.

“These places are all within striking distance of the city of St. Louis,” he points out. “I think they offer important clues for the future of coordinated institutional stewardship.

“Optimism is not idealism,” Hoeflerlin continues. “It’s actually rather pragmatic. I truly believe that studying deltas, their urbanisms and their much larger river basin contexts will help us to define the hydro-regions of the 21st and 22nd centuries.

“But we must get the fundamentals right,” Hoeflerlin concludes. “And that starts with a basic, foundational understanding of how water shapes our environment.”

Above: For more than a decade, Derek Hoeflerlin has studied (from left) the Mekong, Mississippi and Rhine river basins, with a particular focus on multi-scaled, water-based infrastructural transformation. The three basins — detailed in Hoeflerlin’s upcoming book *Way Beyond Bigness: The Need for Watershed Architecture* — reflect three different hydrological scales in three different states of management and development.



# Finding *Our Way*

The university develops a new “curriculum” to help members of our community cope during the pandemic.

■ JEANNETTE COOPERMAN



**HOW TO CALM DIFFICULT EMOTIONS.** Stay motivated. Fight Zoom fatigue. Stay safe. Breathe away panic. Teach — and learn — remotely. Be there for a friend who is quarantining. Balance home and work-from-home. Manage the tech. Take yoga online. Continue with professional development. Combat loneliness. Manage uncertainty. Remain tolerant. Stay mindful. Stay purposeful.

There was a lot to learn last spring, and in response, Washington University swiftly developed new tools, a “parallel curriculum.” Sometimes practical, sometimes existential, it offered resources for students, faculty, staff, anyone who needed help coping with the pandemic and the ensuing changes.

Sometimes the answer was to acquire more knowledge. When Krista Millich, a biological anthropologist, developed an online course titled “The Pandemic: Science and Society,” more than 1,200 students registered — the highest enrollment of any class ever taught at WashU.

At other times, the point was to feel. In April, the Center for the Humanities launched a poetry project, LIFE/LINES, offering daily prompts to hundreds of people on and off campus. Posted online, the 1,200 heartfelt poems stitched an impromptu community.

In student affairs, Rob Wild, interim vice chancellor, urged his team to get creative. “Last fall, we gave students the choice to be here or to study remotely, and we were upfront that it would not be a normal semester,” he notes. Despite

their private worries, staff found countless ways to make student life in a pandemic both engaging and safe. The rec center opened by appointment. There were numerous virtual programs, such as the career center offering live chats with students to help them explore possibilities. Thanksgiving meant care packages for the students staying on campus and stations where they could send postcards home to their families.

For students whose home life might not be ideal for learning, Wild knew it was calmer to be on campus. Others were “just happy to be here,” he noticed. “The late-night conversations in the residence halls, the big activities, aren’t



happening, yet students are still seeking opportunities to make friends and be part of the community. It's been inspiring, actually."

For the extroverted, now much-more-isolated student affairs staff, Wild co-hosted Zoom town halls with no agenda except to discuss the questions people submitted anonymously in advance. Between 80 and 100 employees — those missing the burst of energy they used to get from the big monthly student affairs meeting — attended every week. Care packages of hot cocoa and popcorn were sent home, so at least they could stay cozy and know they were remembered. And the Division of Student Affairs wasn't alone; other departments across the university whose employees continued to work from home provided similar feel-good exchanges to keep colleagues connected, and upbeat.

Some of the biggest challenges were related to quarantine, for students who had been exposed to COVID, and isolation, for students who tested positive. It's tough to keep a young adult alone in a small room, not even walking outside, for 14 days. Some students complained, a few loudly. But staff bent over backward for them, trying to vary their meals, stay in daily contact.

"Over Thanksgiving weekend, staff came to campus to hand out hot chocolate and a cookbook of students' favorite recipes," Wild says. When it turned cold and the heating hadn't yet kicked on, Cheri LeBlanc, MD, executive director of the Habib Health and Wellness Center, brought in her own space heater for a young woman who was chilly.

"In some ways, we were worried more about students' mental health than their physical health," LeBlanc says, "because for this age group, generally, COVID was not going to cause the things we were all scared about."

Nearly all the students rallied during quarantine and isolation, she says, and willingly followed the protocols. Other universities had trouble with students flouting the rules, "but we did not have that at all."

If students in quarantine or isolation needed to talk anything through, there was a 24/7 phone line, plus online groups and activities. LeBlanc worked closely with a few students who needed to go home to quarantine. "Their anxiety didn't stem from fear of the disease necessarily," she says, "but from the isolation, and the thought of not being able to leave a small space." Still, most students weathered the constraints well — even though two weeks feels like forever when you have lived only 18 years, and solitude feels like torture.

"I've been incredibly impressed," LeBlanc says. "They are doing the right things, wearing their masks even outdoors. It makes us all the more



eager to do whatever we can to support them." Messages went out on the Habib Health and Wellness Center's Instagram page, offering simple ways to stay grounded, calm, mindful. Other coping messages focused on staying connected, keeping a schedule, staying productive and dealing with uncertainty (you control what you can control, including your sleep, exercise and the amount of news streaming at you).

Often people in the university community needed ways to find meaning in the chaos, to energize themselves with new purpose when their normal routine had ground to a halt. Or they needed basic public health information, practical ways to avoid contagion, tips on working or studying from home. Sometimes people just needed to connect, distract themselves for a while, set new limits, pace themselves, volunteer, go for a run, laugh with a friend or sleep.

Human Resources worked to adapt well-being resources to help employees and their families find the support they needed in a changing and uncertain environment. "The well-being of people is always our focus in HR, and during the pandemic, we really came together to provide real-time support for every aspect of employees' lives," says Legail Chandler, vice chancellor for human resources.

In partnership with Bradley Evanoff, MD, MPH, director of the John T. Milliken Department of Medicine Healthy Work Center, HR's employee wellness program helped carry out a survey to gauge well-being throughout the pandemic. The results have helped identify and address the evolving and important needs of the WashU community. Support was rooted in well-being for the whole person, including physical and mental

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—CHERI LEBLANC, MD



health, family care, flexible and remote work, and professional learning. Services wrapped around every possible need: COVID-19 testing, telehealth and virtual visits, prescription delivery, financial education sessions, special time off, 24/7 work-life support, mindfulness sessions, health coaching, family care resources, professional learning, and a managers' hub to help people lead their teams through new challenges.

"The pandemic highlighted the important need to continue to build a culture of care for our entire community — from health-care workers on the front lines to staff adapting to delivering our missions remotely," says Amanda Pope, director of employee engagement and HR communications. "With each initiative, our team and university leadership stepped up for the greater good."

Human Resources collaborated with the Department of Psychiatry, as well as the School of Medicine, Student Affairs, Brown School and other leaders to ensure access to mental and emotional wellness resources and services.

WashU already had a wellness consultant, Meg Krejci, who teaches the community about mindfulness and stress reduction. This year, she found herself teaching six or seven classes a day. Everybody was stressed, and they knew it, and there was no shame in it. She created special sessions just for physicians, just for residents or postdocs, just for parents. Worry, fatigue, emotional eating, insomnia — "people weren't even aware how their bodies were responding," she says, "because they were in warrior mode, thinking their way through the crisis. And then they'd get swept away by uncertainty and fear and grief."

Krejci showed people not how to shut their minds off, but how to slow their thoughts, put some space between them: "In that space, the body will restore itself." Once people paid attention, triggers to panic or angst lost some of their power, and it became possible to choose how to respond.

It wasn't easy. "You are unraveling habitual thinking patterns and behavioral responses," Krejci says, in an environment so geared to service that people forget to care for themselves. She felt like she was putting her arms around the university, teaching remote sessions such as "The Power of Hope in Uncertain Times," "Cultivating Peace" and "Resiliency and Well-Being."

"Some folks were at home not knowing what to do. Some were furloughed. Some were working around the clock. Some were trying to work with children underfoot. And then there was the stress around the difficult issues our country was facing related to racial inequity and the election; it was unrelenting," she says. In response, she developed new sessions: "Uncovering Implicit Biases" and "Staying in Difficult Conversations" — without your body tensing.

"When we become stressed, we are swept away, disconnected. We lose ourselves. And mindfulness brings us back," Krejci promised her students, some of whom were the university's top physicians or administrators.

Jessi Gold, MD, MS, assistant professor and director of wellness, engagement and outreach in the Department of Psychiatry at the School of Medicine, focused her efforts on front-line health-care workers, who were seeing far more death than ever before. "With COVID," she says, "people crash faster, they stay in the ICU longer, and they die more often."

Gold and her colleagues volunteered to staff a mental health hotline, partnering with people across the university — in Human Resources, religious and spiritual life, social work — who were concerned about faculty and staff wellness. Administrators ripped away barriers and expanded services. The Employee Assistance Program after-hours hotline was opened to BJC HealthCare and WashU employees.

In-the-moment coping skills were taught in enough variety that anyone could find a comfortable fit. "Mindfulness, weighted blankets — you have to try things until you find out what works for you," Gold explains. "And you can't assume what has worked in the past will work in a pandemic. The structure of life right now is very different."

She visited other departments to talk about mental health. Free drop-in groups were set up to focus on reducing anxiety, a key need since a study found that 18% of medical trainees at Barnes-Jewish Hospital were living with significant anxiety. The psychiatry department hired two therapists dedicated to faculty and staff, and expedited appointments for them. Services have been done almost exclusively by telehealth, which has been a preferred method for many faculty due to the ease of opening up a computer to hold an appointment.





So much was new and terrifying, including the threat of contagion and the fear of running out of PPE supplies, beds and ventilators, Gold points out. “In the U.S., we often think, ‘Do we need all this?’ as opposed to, ‘We have only one of these. Whom do we give it to?’ Most of us didn’t train in a system of scarcity. So you have a lot of anticipatory anxiety about what’s coming and whether you’ll have enough.”

Last spring, when those worries began, they were mixed with hope: “With people staying home and social distancing, there was more of a feeling that the rates would go down and we would get hold of this thing.” When rates surged again in the fall, Gold says, “there was more hopelessness.” Vaccine approvals brightened the horizon, “but we are realistic about rolling that out over a big population over several months when people’s behavior hasn’t changed. It’s been hard to be in that culture.”

It’s also hard to admit how hard it is. “We do a lot of hiding in medicine,” Gold says. “You’re supposed to take care of other people, and your feelings aren’t supposed to interfere. So you’re pretty stoic — and you don’t have a problem until you have a big problem.” What helped most, she found, was old-fashioned listening. “A lot of the problems in the world right now cannot be drugged out of you. I’ve been doing a lot more supportive therapy than I usually do.”

More will be needed, she warns. Once the adrenaline can subside, “the mental health system is going to be dramatically overrun.” It’s the post-storm effect: “You get out and

assess the damage, and then you assess your internal damage, because you can finally do that.” Symptoms might take two to three years to show up. Meanwhile, people with pre-existing conditions that had been stable and well-managed for years saw them fly out of control.

At the very beginning, Gold and her colleagues saw “a lot of anxiety.” Over time, she saw more depression. “People were OK at the beginning, but the longer this has gone on, the more it has effected mood. It’s so prolonged and indefinite.”

Grief has yet to be fully addressed, she points out. People have lost loved ones and been unable to mourn them in the usual ways. Health-care workers have watched people die and had to press on, caring for the next patient and the next. The entire nation has watched the death count soar, the numbers so abstract that we grew numb to them, with many accepting the toll as inevitable.

“A lot of things people have experienced — especially people who aren’t like me and haven’t gone to therapy every week to talk about it — will need to be understood,” Gold says. “Just to be able to say, ‘I was a health-care worker during 2020, and it was very hard for these reasons...’ We need to be a little more vulnerable, a little more open.” A little less stoic.

“If anything good can come from a miserable pandemic, it’s that people realize that health-care workers are human and feelings are okay,” Gold continues. “And the emotional side is just as important as the physical exhaustion, and we have to figure out how to manage that.”

Mindful of their ongoing stress, WashU colleagues used the toolkits the university provided to send their thanks, hope and concern to those on the front lines. Turned out it was easier to go through a crisis feeling connected and concerned than to sit alone in a room doomscrolling. From this realization, a new idea called The Gratitude Project took shape, a video series highlighting faculty, staff and students working for the greater good.

“One of the most effective ways to take care of ourselves is to take care of other people,” notes Tim Bono, a lecturer in psychological and brain sciences, assistant dean in student affairs and the driving force behind The Gratitude Project. He urged students to run errands for elderly neighbors, provide meals for hungry families, share their talents online, or find ways to thank those who were doing all these things.

We know about post-traumatic stress, but there is newer research on post-traumatic growth, Bono notes. Both individuals and communities can grow stronger in times of adversity. He sees the marked increase in warmth, humanity and personal concern across the university: “Managers have been very



ALL THE RITUALS WILL RETURN ... THE CAMPUS WILL AGAIN BE CRISS-CROSSED WITH LAUGHING, WAVING HUMANS. ... IN THE IMMEDIATE FUTURE ... COPING WILL MEAN REDOUBLED CAUTION.

accommodating, acknowledging the toll this is taking not just on people’s professional or student lives but on their personal lives. At the start of meetings, people are really interested: “Tell me how things are going, how you are taking care of yourself.”

Priorities have sometimes needed to shift, Bono adds, a recalibration that might be a relief to those who felt pressured by WashU’s relentless push for excellence. “It’s not just accolades and awards and a long c.v. but the way we are taking care of each other and taking care of our community that matters — our relationships, our ability to contribute to something bigger than ourselves.”

Still, Bono concurs that anxiety has plagued most everyone, whether they were already vulnerable to it or not.

“I certainly had my share of anxious times,” Bono says. “Part of what has made this pandemic so challenging is that it feels like so much is spinning out of control, and that’s the hallmark characteristic of anxiety, the sense that the future is difficult and challenging and out of your control. It becomes important to redirect attention to things that *are* in our control.”

To keep students motivated, he urged them to find things that would give them a sense of accomplishment and gratification, a sense that they were effective and creative and could accomplish goals. Even small accomplishments, early in the day, would provide a burst of energy and well-being, making it possible to tackle larger challenges as the day went on.

Bono warned his students about social media, “which is specifically designed to keep you coming back.” One more scroll, and who knows? Instead of more doom, you might find a cat playing the piano. The algorithms work the way slot machines

work in Las Vegas. “People don’t get addicted to vending machines,” he points out. “It’s the uncertainty, not knowing what will happen when you feed money in” — or scroll or click.

Plenty of students heard his advice; his classes had near-perfect attendance in the fall. Again and again, he watched students find creative ways to make the most of any opportunity, even in a pandemic. “I’m not surprised,” he says, “and it was wonderful to see that spirit emerge even in really dark, trying times.”

Everyone was adjusting, but Bono sorely missed the casual encounters, spontaneous and unscheduled, when he’d bump into someone on campus and have a conversation or stop to listen to a group of students playing music. The upside of such deprivations, he says, is a concept called “mental subtraction”: You become even more grateful for something when it’s taken away.

All the rituals will return, he reminded himself and his students. Graham Chapel will again have standing-room-only audiences. The campus will again be crisscrossed with laughing, waving humans who can throw their arms around a friend’s shoulder or lean close to confide a secret. In the immediate future, though, coping will mean redoubled caution, as life begins to normalize but is not yet entirely safe. Context often dictates behavior and emotion, Bono says, and it will be all too easy to slip into old ways of behaving when things begin to feel familiar again.

Caution will have to be maintained, and the experiences people have endured will have to be talked through, made meaningful and stored as a source of strength for the future.

After coping with COVID, a lot of once-daunting challenges are going to look like a piece of cake.



# Next

*...and the dew cracks the earth, in five acts of lamentation...between the cuts...beneath the leaves...below the soil...* —Ebony G. Patterson

Installation view, Contemporary Art Museum St. Louis, Sept. 11, 2020–Feb. 21, 2021. Photo: Dusty Kessler.



WORLD OF OUR WASHU ALUMNI

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A full house

Alumna **Ebony G. Patterson**, MFA '06, unveiled two new works at Contemporary Art Museum St. Louis (CAM) in fall 2020. The immersive installations were monumental and multilayered paper collages. This image is from "...and the dew cracks the earth, in five acts of lamentation... between the cuts...beneath the leaves...below the soil..." Read more about Patterson at [source.wustl.edu/2020/11/beauty-and-lamentations/](https://source.wustl.edu/2020/11/beauty-and-lamentations/). Concurrently at CAM, in the main gallery, was the Great Rivers Biennial Arts Award Program exhibit featuring three artists selected by a panel of jurors. The artists each received \$20,000 and a major exhibition as part of the prize. This time, all three winners were connected to WashU: **Kahlil Robert Irving**, MFA '17; **Tim Portlock**, professor and chair of undergraduate art in the Sam Fox School of Design & Visual Arts; and **Rachel Youn**, BFA '17.

# Changing how we see the brain

By studying our brain's connectome, behavioral neuroscientist Damien Fair is drawing a new map of autism.

His phone rang all day. Same unknown number. It had to be a telemarketer. Engrossed in an NIH workshop about the obstacles of research, **Damien Fair, PhD '08**, ignored the call. At the end of the day, he answered to say, in his polite Minnesota-bred way, "Please take me off your list!"

A weighted pause. "Well, you've just been named a 2020 MacArthur Fellow." Reeling, Fair tried to absorb the fact that he would receive \$675,000 to spend on his work in developmental neurology, no strings attached.

An easygoing guy, as much a team player in science as he was on the basketball team at Augustana University, he answers the question "Why did they choose you?" calmly, with no coy dissembling. No one person can answer the complex questions he tackles, he points out. More than any single research finding, the committee may have appreciated the way his team's work is shifting the direction of research into brain development and organization.

Fair has been using fMRI imaging to explore the connectome, a map of the way an individual brain is organized. Connectomes are as unique as fingerprints; comparing them reveals the wild amount of variation among individuals who share a diagnosis. Take a roomful of kids on the autism spectrum: They are all there for different reasons, and there are significant differences in the ways their brains are organized. Researchers have recognized this messiness for years — it's called "the heterogeneity problem" — but Fair's imaging work has made it easier to see subtypes and back away from lumpy labels.

As he reminds congressional committees, being able to parse the variance and think in terms of symptoms that cut across several disorders (impulsivity, for example) will improve treatment and even prevention — so should influence education and policy. Fair's analogy for brain development is sculpture, not home-building: You are not hauling in new neurons to build a brain, but sculpting and refining neurons that were present at birth. "Most of the making of the brain occurs before you are even born." What the mother experiences during pregnancy — "stress, diet, inflammatory responses, the environment — can have a powerful influence

over genetic predispositions, laying groundwork for disorders that surface many years later."

Fair started his career as a physician assistant in Yale's neurology department, focusing on stroke. What lit his imagination on fire was "the idea that you could peer inside the brain without even touching it." He came to WashU, began doctoral research on stroke in infancy, then agreed to drop his own work long enough to go down the hall and persuade **Marcus Raichle, MD**, the Alan A. & Edith L. Wolff Distinguished Professor in Medicine, and his neuroimaging lab to share their groundbreaking code. Fair then figured out how to measure functional connectivity and apply it to his group's data.

He still remembers the day an experiment's results came through and his fellow student, **Nico Dosenbach, MD/PhD '08**, now associate professor of neurology, and their mentors came over to his workstation, peered at the screen and started high-fiving, saying, "I knew it!"

They found that three parts of a core brain system appeared to be talking to each other, even in a resting state. The result confirmed suspicions that these regions were a part of an interconnected task control system. So what did that mean about how the brain was organized? If you look at the brain the way you would see Earth from space, Fair says, you see that its over 80 billion neurons are grouped in continents — 15 or 20 large, correlated brain systems that communicate internally and with one another. This system they identified was one of those continents.

When we try to pinpoint a single place or system responsible for a behavioral issue, Fair explains, we are often zooming in too tight. "We are likely blurring, averaging or missing lots of things," he says — especially the complex dance of multiple influences within each system.

Fair continues to push for multidisciplinary approaches and team science. As for the MacArthur money, he's been scheming with his wife, head of global women's development at the University of Minnesota, about ways to share neurological advances with developing countries.

We're all in this together.

■ JEANNETTE COOPERMAN



Damien Fair is pictured in front of "Humanaissance," by George Sherwood, at the University of Minnesota.

Photo: Mark Brown

**WHO**  
Damien Fair, PhD '08

**TITLE**  
Professor, Institute of Child Development, and professor of pediatrics at the University of Minnesota Medical School; the Redleaf Endowed Director of UM's new Masonic Institute for the Developing Brain

**SHEEPSKIN**  
Doctorate in neuroscience, School of Medicine

**FIRST COUP**  
Received the Presidential Early Career Award for Scientists and Engineers

**EVEN BETTER**  
Named a 2020 MacArthur Fellow

**PARTNER IN LIFE**  
Rahel Nardos, MD, a urogynecologist on the faculty at the University of Minnesota Medical School

**"PARTNER IN CRIME"**  
Nico Dosenbach, MD/PhD '08, associate professor of neurology, Washington University School of Medicine

**THEIR COMPANY**  
NOUS Imaging Inc.



@DrDamienFair



Photo: Julie Denesha

## Building a network

In the mid-1990s, Lise Shipley helped bring the internet to the masses.

If you've ever used Wi-Fi at a Starbucks, Hilton or McDonald's, then you have **Lise Shipley, EMBA '93**, in part, to thank. Shipley started working for Southwestern Bell — now AT&T — in 1982 and spent 31 years with the company, taking on many roles, including bringing internet service and Wi-Fi to the masses.

It all started in 1996, not long after Shipley finished an EMBA at WashU. She was tapped to run a startup company for Southwestern Bell that would offer the internet services we know today. At the time, the only option was phone line dial-up. Like at all startups, everyone wore lots of hats to get this business launched and running. Shipley was responsible for creating new internet network products, marketing, setting prices and billing, and all other aspects of creating a new service. Her startup had to be separate from Southwestern Bell because the internet was an unregulated business and couldn't be mixed with the company's regulated telecommunications work.

"It was really an all-hands-on-deck situation, just like any new company," Shipley says. Her experience at

### WHO

Lise Shipley, EMBA '93

### STUDIED

Business management

### LOCATION

Outside Kansas City, Mo.

### CURRENTLY

An angel investor who learns about companies whose products could change the world, like a storm sensor that can help detect bacteria in water during a flood

### FUN FACT

Shipley started out as a programmer at Southwestern Bell.



@icreate22

WashU, where she was the first EMBA student to attend summer school at the London School of Economics, helped. "My EMBA was a good overview that helped me with the basic skills of organizational management, accounting, marketing, statistics."

Shipley successfully launched the startup and connected millions of people and businesses to the internet over 10 years, before moving on to Wi-Fi. For that, she developed a business model that would provide managed Wi-Fi services for businesses so they could offer it to their customers. Her network grew to more than 32,000 locations.

Shipley left Southwestern Bell in 2013, but she still works in business as part of Next Wave Ventures, an angel investing group of 90 women who focus on breakthroughs that could improve society. "It's a great way to stay engaged," Shipley says.

Another way she stays engaged is through her scholarship, which she started in 2005 for undergraduates in Olin Business School. Shipley makes a point of mentoring her recipients and meeting their families. Her career, role as mentor and work as an angel investor have all been focused on impacting the future and helping others.

"The internet network that we originally started in 1996 still exists today," Shipley says. "It is amazing to have been part of the history, but also to have built something that will continue to be a force in the future."

■ ROSALIND EARLY





Photo: Claire Bangser

# Hacking the gates

Marie Bigham wants to radically reimagine college admissions.

## WHO

Marie Bigham, AB '95

## STUDIED

Political science

## LOCATION

New Orleans

## WEBSITE

acceptgroup.org

## ACCOLADES

ACCEPT has gotten the attention of Facebook as one of its most active groups.



@ACCEPTgroup

In the small hours of July 8, 2016, **Marie Bigham, AB '95**, a college counselor at an independent school in New Orleans, created a Facebook group: Admissions People Sick of This Sh\*t. Bigham wanted to discuss how to put equity and racial justice at the center of the college admissions process.

Since 2014, she'd been protesting against police brutality and for racial justice, but she wanted to do more. She added a few dozen friends to her group and wrote a post titled "Why college admissions professionals should fight hate and inequity." She hoped that maybe 40 or 50 people would eventually join the group.

Fast forward to 2021, and the group, now called ACCEPT (Admissions Community Cultivating Equity & Peace Today), has nearly 6,800 members. The group also has meetups all over the country and in November 2019 hosted Hack the Gates: The Convening, where researchers, practitioners, policy makers and student advocates across the country discussed systemic barriers to college access for low-income students and students of color. Several of the moderators and researchers were from WashU, and WashU admissions officers attended. Bigham had been a WashU admissions officer herself from 1997–2004 and planned Celebration Weekend, a recruiting weekend for admitted multicultural students.

"I had always approached the work in Admissions through the lens of

diversity and inclusion but not equity and justice," Bigham says. ACCEPT has changed that.

ACCEPT's discussions have inspired individual change: An ACCEPT member and head of admissions for CalTech convinced the university not to require standardized tests for two years. (These test scores are largely correlated to family income.) And as a group, they advocate for change: For example, they encouraged colleges to delay their accept date in 2020 from May 1 to June 1 due to COVID-19.

"That one month was so critical for families," says **Steve Frappier, AB '00, MA '06**, whom Bigham named as co-founder of ACCEPT along with Brandi Smith. Bigham and Frappier met while they were both working in WashU Admissions.

In 2018, the National Association for College Admissions Counseling gave ACCEPT its Excellence in Education Award, which recognizes those who "use their prominence to advance equity and access in education." Michelle Obama is a previous recipient of this award.

In summer 2019, Bigham left her job as an admissions counselor to run ACCEPT full time. Her carefully laid plans shifted due to COVID-19, but she knows she's on the right path. "One of the things I've learned throughout this is that if you have the microphone, it's your job to use it," she says.

■ ROSALIND EARLY



with St. Louis-based supermarket chain Schnucks, which operates more than 100 stores. The relationship is already a game changer, says Beckmann, Foodshed.io's CEO, allowing consumers throughout St. Louis access to fresh produce at affordable prices.

"It starts with having demand," says Beckmann of Foodshed.io's business plan. "The fact that Schnucks is committing to buy this produce before it's planted takes a lot of burden off the farmers. It's rare to get a commitment like that, and we hope it becomes the trend."

Foodshed.io also works with St. Louis-area restaurants and WashU's food service. Due to how its grown and distributed, the food is fresher, has more nutrients and tastes better.

The idea for Foodshed.io originated in 2011, when Sullivan and her husband, Tom Hallaran, began a project to gain temporary access to vacant lots in Brooklyn, New York, in order to grow local produce and open community gardens. Sullivan had moved with her husband to New York to attend Columbia, while Beckmann was in and out of New York working in his other career as an award-winning journalist.

"Dan and I met at WashU in 1998," Sullivan says. "Tom worked in St. Louis as a software developer at WashU's Human Genome Center." The three friends recognized a gap that prevented small farms like theirs from reaching bigger markets. Later, they applied that expertise toward the Midwest's diverse farming system, co-founding Foodshed.io in 2016. "As a result of the time we spent in St. Louis, we three share a commitment to it," Sullivan says.

While Foodshed.io operates locally, the team is thinking globally. They are working with local growers to regeneratively repair and ultimately sustain the region's rich topsoil, a yearslong effort to ensure the land's potential. In this way, they hope to add another win to their expanding business concept: promoting a sustainable farming model that benefits our planet, one region at a time.

■ RYAN RHEA

## Fresher food for all

Clare Sullivan and Dan Beckmann's visionary startup, Foodshed.io, is designed to work for everyone.

### WHO

Daniel Beckmann, AB '01

### STUDIED

Political science

### MORE ABOUT DAN

He serves as a guest lecturer at the Harvard Kennedy School and is a consultant on digital media to the U.S. House of Representatives.

### WHO

Clare Sullivan, AB '02

### STUDIED

Political science

### MORE ABOUT CLARE

She helped farmers in sub-Saharan Africa and Latin America while working at Columbia University's Earth Institute. She is currently pursuing a PhD in geography at the University of Wisconsin-Madison.

Through St. Louis-based startup Foodshed.io, **Daniel Beckmann, AB '01**, and **Clare Sullivan, AB '02**, are reimagining our local food supply chain and creating a win-win-win for small family farmers, grocers and consumers. "We're increasing the supply of nutritious food in urban supermarkets and developing new markets for local farmers," says Sullivan, who leads the company's supply chain management and ensures that its technology works for all users.

After furnishing an app that connects local farmers with grocers, Foodshed.io handles the complicated logistics behind deceptively simple transactions — planning yield with local farms to meet grocer demand; designing a distribution network that delivers the food still ripe and fresh from the vine; and supplying the vision to sustain that contact between farm, grocer and consumer on a regional scale.

A proof of concept is in Foodshed.io's recent three-year, \$15 million contract

# Leana Wen: When science and politics vie

It has been a busy pandemic for **Leana Wen, MD '07**. Congress asked her to testify about racial disparities with COVID-19 and how to overcome them. National media outlets requested her virtually every day to help explain COVID-19 and how to avoid contagion. Oh, and at the height of the surge in April 2020, she had a baby.

Wen found her public health focus in med school at WashU — by learning the limitations of medicine. One boy showed up in the emergency department again and again, asthma stealing air from his lungs. He and his mother were staying in a moldy rowhouse with people who chain-smoked. Realizing that health hinged on factors outside hospitals, Wen went to Oxford University as a Rhodes Scholar and studied health policy.

Also an emergency physician, Wen is currently a visiting professor of health policy and management at the George Washington University's Milken Institute School of Public Health. She wrote a book titled *When Doctors Don't Listen*, and she is a contributing columnist for *The Washington Post* and a medical analyst for CNN. As Baltimore's health commissioner through two mayors, she learned firsthand the many ways public health and politics intersect — but nothing prepared her for a pandemic in which political officials and scientists flat out contradicted each other.

In fall 2020, Wen shared a few thoughts:

► **With conflicting messages** between our elected officials and public health experts, people don't know who to believe. Those of us who are educating our patients and the community are put in the position of fact-checking — and people still don't know who to trust.

► **I think about my patients** who have lost loved ones. My patients who have died. My patients who are trying so hard to do the right thing and the sacrifices they are making that may be in vain.

► **To reduce racial disparities?** Target testing to minority communities. Track demographics to make sure resources are fairly allocated. Hire contract tracers who represent the communities they serve. Provide free facilities for isolation and quarantine. Increase health insurance coverage. Strengthen worker protections. Certain locales are doing this important work, but we really need coordination from our federal government.

► **I never would have imagined** us as a country knowing what needed to be done but choosing not to do it. The previous strategy seemed to be one of surrender. We are the most technologically advanced country in the world, and to see that we're leading the world in infections and deaths is a travesty.

► **I'm not naïve enough** to think that politics and public health can exist in isolation from one another. As health commissioner for Baltimore, I reported to the mayor; I know decisions made on the executive level have to take many factors into account. It's understandable that public health and politics are intertwined. But it is a major problem when public health somehow becomes labeled the enemy of the economy. When scientific decisions around vaccine approval get tied to election deadlines. When something as basic as mask wearing ends up a partisan symbol. When decisions are based on political calculations rather than scientific integrity.

■ JEANNETTE COOPERMAN

**WHO**

Leana Wen, MD '07

**FOCUS**

Emergency medicine and public health

**ACADEMIC CRED**

Distinguished fellow at the George Washington University's Fitzhugh Mullan Institute for Health Workforce Equity and previous Rhodes Scholar

**STREET CRED**

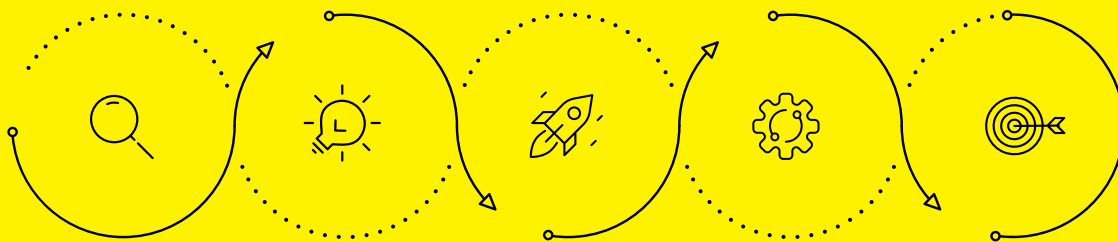
One of *TIME*'s 100 Most Influential People in 2019

**SOCIAL ACTION**

As Baltimore health commissioner, issued a blanket prescription for naloxone, saving the lives of more than 3,000 people who had overdosed on opioids



Courtesy photo



# WashU career centers adapt to reach alumni and students



For more information about WashU's Hire-a-Bear Program or to post an opportunity, visit [talent.wustl.edu/hire-a-bear](https://talent.wustl.edu/hire-a-bear).

Alumni and students find professional development resources and community amidst uncertainty.

How do you kick-start your professional life when the world suddenly turns upside down?

That question was on the minds of quite a few Washington University students, especially members of the Class of 2020, as the coronavirus began to grip the United States in March 2020. The spring semester typically brings a flurry of career-related activity, with students working to secure summer internships and soon-to-be alumni hoping to land their first post-graduate positions. But with companies instituting hiring freezes and implementing furloughs because of COVID-19, the “last one hired, first one fired” axiom now played out in real time as students grappled with dwindling internship opportunities, rescinded job offers and delayed start dates.

The Washington University Career Center has long been a lifeline for students seeking professional development resources, from individual mentoring to the popular Road Show series. Although in-person advising and events were no longer possible, the Career Center redoubled its efforts to help students navigate a newly unsteady economy. From March to July 2020, Career Center advisers increased outreach, including one-on-one virtual appointments and email advising, by 80% over the previous year. The Career Center also revamped its website to include new tools and encouraged students to maintain momentum by seeking out “micro-internships” or job-shadow programs, and by polishing resumes and LinkedIn profiles. As the pandemic persisted into the fall, the center continued to increase virtual programming by taking its career fairs online, partnering with peer institutions for a multischool networking event and hosting a weekly webinar for alumni from the Class of 2020.

The Career Center also tapped into one of WashU's greatest assets — its loyal alumni — by ramping up

promotion of the Hire-a-Bear Program. The program is a collaboration among the Washington University Alumni Association, the Parent and Family Engagement department, and the main Career Center and its counterparts in the Brown School, School of Law and Olin Business School. Together, they strive to connect students and recent graduates with paid internships and full-time positions submitted by alumni, parents and friends of the university. A winning proposition for everyone involved, the program gives those recruited a chance to gain professional experience while serving as university ambassadors to potential employers.

Not all alumni, however, were in a position to support students and recent graduates. When Olin Business School's Weston Career Center reached out to Olin grads at the start of the pandemic, counselors found many at a professional crossroads and in need of guidance. Some alumni were searching for work after job losses, and others were pausing to re-evaluate their career goals.

To address these concerns, the Weston Career Center launched a monthly Power Lunch and Learn series. For each virtual session, the center invites speakers on topics ranging from career trends to salary negotiation and executive recruitment. Open to all Olin alumni, as well as students in the EMBA and PMBA programs, the series kicked off in September 2020 and will run through May 2021.

The center also found other ways to increase engagement, rolling out a seven-session virtual Transition Bootcamp to assist EMBA and PMBA students and alumni with career transitions. And because the career group coaching seminars for EMBA students are now held virtually, alumni from the program also are able to join the monthly sessions.

These efforts and many more happening across the university's four career centers demonstrate innovation and flexibility in the face of incredible change. More important, they underscore that both students and alumni will always find a home, and a helping hand, in the WashU community.

■ EMMA DENT, AB '09

## TRANSITIONING FROM THE CLASSROOM TO THE REAL WORLD

The best way to learn is through experience, and that principle has guided the Alumni Association's Alumni Career Externship (ACE) program since it started in 2009. As part of the program, Washington University alumni mentor students interested in learning more about their chosen fields.

Over several days of spring break, externs shadow their alumni hosts and gain invaluable insights into the day-to-day operations of a wide range of industries. Though the ACE program is now on hold due to the pandemic, three WashU alumni and longtime participants offer wisdom to students and recent graduates looking to explore career paths and establish professional relationships.



Courtesy photos

From left: Jon Feltheimer, AB '72; Lisa Sharkey, AB '80; Matt Seiden, AB '78

### Jon Feltheimer, AB '72

Chief executive officer at Lionsgate

I have three pieces of advice for my externs. First, be passionate about what you believe in, whether it's a film, a television series or a good idea. Second, be resilient. I encourage my externs — and everyone else at our studio — to be innovative and to take risks, and to not be afraid of failure. And finally, I advise them to look for the win-win solution to every problem or negotiation. People on both sides of the table should come away feeling that they have gained something of value.

### Lisa Sharkey, AB '80

Senior vice president and director of creative development at HarperCollins Publishers

Be in a constant state of curiosity. No matter what you think you are interested in, be open to varied possibilities. Also, you already have life skills, whether from working in a restaurant or holding a leadership position in your student group, that can be applied to the workplace. Make a list of them. And I believe the No. 1 skill is communication. I always advise students to write and send proper thank you notes. Do not be afraid to reach out. The only students who've become my interns have been the ones who've stayed in touch with me.

### Matt Seiden, AB '78

President and chief executive officer at Seiden Advertising

The more engaged a student is, the more our employees really want to invest time and energy into their externship. Self-motivation and a real interest in learning about communications — even if the student is not sure what they ultimately want to pursue — are key. The students who ask good questions and who are not only able to articulate their interests but also connect them to the work happening at Seiden tend to have much more fulfilling experiences.

## INTRODUCING WASHU CNX

One of the great benefits of a Washington University degree is knowing it comes with a not-so-secret lifetime bonus: a global network of fellow alumni eager to offer support. Launched in February, the university's new virtual networking platform, WashU CNX (pronounced "connects"), taps into this tremendous human capital. Short for **community, network** and **exchange**, WashU CNX aims to foster all three by creating a digital space where current students and alumni can seek professional advice and mentorship, find employment opportunities and make new connections. The platform also is open to parents who wish to add their voices and expertise to the mix. Participating in the online community is a simple but powerful way for alumni to help students succeed and for students to build their professional profiles.

**WashU·CNX**  
COMMUNITY · NETWORK · EXCHANGE



To sign up or learn more about WashU CNX, visit [cnx.wustl.edu](http://cnx.wustl.edu).

Next

# Class Notes

“

When I arrived from south Texas and experienced my first snowfall, my suitemate took me out to make angels in the snow – I'd never heard of such a thing. Also related to cold weather was discovering the tunnels under the oldest building that would keep me from going outside to get from building to building. Coming up is Earth Day, which is more pressing now than then. I recall the very first one [on campus] ... if only governments and industry had paid attention then.”

CHERYL WHATLEY, AB '71, MA '75

Photo of 1970s campus snow scene:  
Washington University Archives

# What's New?

Let us know about recent honors, promotions, appointments, travels, marriages and births, so we can keep your classmates informed of important changes in your lives.



## SEND NEWS:

Class Notes, *Washington Magazine*  
Washington University in St. Louis  
Campus Box 1070  
One Brookings Dr.  
St. Louis, MO 63130-4899



## EMAIL:

wustlmagclassnotes@wustl.edu

Entries may take up to three issues after submission to appear in the magazine; they are published in the order in which they are received.

## ALUMNI CODES

AR	Architecture
BU	Business
DE	Dentistry
EMBA	Executive MBA
EN	Engineering
FA	Art
GA	Graduate Architecture
GB	Graduate Business
GD	Graduate Dentistry
GF	Graduate Art
GL	Graduate Law
GM	Graduate Medicine
GN	Graduate Nursing
GR	Graduate Arts & Sciences
HA	Health Care Administration
HS	House Staff (Residency)
LA	Arts & Sciences
LW	Law
MD	Medicine
MT	Manual Training
NU	Nursing
OT	Occupational Therapy
PMBA	Professional MBA
PT	Physical Therapy
SI	Sever Institute
SU	Sever Institute Undergraduate
SW	Social Work
TI	Technology & Information Management
UC	University College

## 1945

**John P. Adams**, MD45, had a professorship, the John P. Adams Professor in Orthopaedic Surgery, named in his honor by the George Washington University School of Medicine and Health Sciences Department of Orthopaedic Surgery. Tapped as department chair in 1953, Adams watched in 2020 as the inaugural holder of the professorship was named. The professorship started as the John P. Adams Endowed Fund in Orthopaedic Surgery, thanks to a gift from Katharine Graham, former publisher of *The Washington Post*. A patient and friend of Adams, she made the gift in honor of his retirement in 1987.

## 1951

**Charlotte Obst Barbaresi**, FA51, celebrated her 90th birthday with family and friends in Greenwich, Conn., in March 2020. Still active as a nonagenarian, she keeps up with news, friends and family through the internet and email, cuts the grass and trims the hedges around her home, and remains an avid fan of WashU and all things STL.

## 1956

**Robert Adler**, DE56, who is retired, encourages any and all classmates out there to “give him a holler.”

## 1959

**Stephen Hoyt**, EN59, retired after 25 years at Ameren.

**Gary Waldman**, LA59, retired from teaching physics after 30 years at St. Louis Community College. He maintains a website, “The Liberal Hour” ([garywald.net](http://garywald.net)), which he describes as “the project of a retired physics professor — using statistics and quantitative data to puncture conservative myths.”

## 1961

**Jack Sanders**, BU61, was inducted into the Arizona Veterans Hall of Fame for his volunteer activities after retirement from active military service. Sanders has worked with Habitat for Humanity Tucson for 26 years, serving on the board of directors, chairing the business affairs committee and acting as a purchasing agent — all while helping construct more than 400 homes. He has also worked at a Tucson hospital for 16 years, driving patients, staff and visitors throughout the hospital.

## 1962

**Judy (Schaefer) Thompson**, FA62, GF81, is a practicing artist and has a studio in her home.

## 1963

**Don Oliver**, DE63, GD67, writes that the 2020 protest movement and white awareness began for him as an undergraduate in 1957 when a young Martin Luther King Jr. gave a stirring address to an overflow crowd at Graham Chapel. Oliver says he is very grateful to Washington University, Dr. King and the sponsors for making this event and so many other opportunities possible for him — including meeting his future wife, **Sandy (Wright) Oliver**, LA61.

## 1964

**Eldridge Hardie**, FA64, released a book, *The Sporting Art of Eldridge Hardie: Paintings of Upland Hunting, Angling, and Waterfowling* (Stackpole Books, 2019). Featuring 150 paintings, and with a foreword by Paul Schullery and an introduction by Tom Davis, the book celebrates Hardie’s half-century as one of the country’s best-known sporting artists.

**Dory (Diamant) Machtinger**, LA64, GR66, was awarded the Leo Michuda IPO Award for Lifetime Service by the Illinois Philharmonic Orchestra for her many years of commitment, guidance, support and advocacy. A volunteer promoter of the Chicago South Side orchestra since 1980, she writes that she is very proud of the status the orchestra has achieved.

## 1965

**Jerome Freedman**, GR65, is an author, health-care advocate and bladder cancer survivor since 1997. He teaches about mindfulness in healing at the Pine Street Clinic in San Anselmo, Calif., and writes a blog, “Meditation Practices.” The author of *Mindfulness Breaks: Your Path to Awakening* (MICAH, 2018), Freedman was also a contributor to *I Am With You: Love Letters to Cancer Patients* (Bay Tree Publishing, 2015).

**Joshua Grossman**, MD65, is a volunteer teacher for mid-level providers on cardiac arrhythmia recognition and for his community on his personal challenges and mistakes with Type 2 diabetes. He has been married for more than 50 years to **Mickey Grossman**, OT64, a licensed practicing occupational therapist.

**Susan (Kennedy) Moran**, LA65, retired as a high school guidance counselor.

## 1966

**Eric Flamholtz**, GB66, co-authored *The Crisis Leadership Playbook* (Vandeplass Publishing, 2020). The book provides practical guidance for leaders facing crises, such as the COVID-19 pandemic, based upon research it examined from both successful and unsuccessful companies in crisis, including American Express, Chrysler, Disney, Eastman Kodak, International Harvester and Sears.

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## 1967

**Karen Adderton**, GR67, is a licensed marriage and family therapist practicing in west St. Louis County. She works with adults and adolescents in the areas of trauma, life transitions and personal growth.

**Anna Katherine (“Kay”) Behrensmeyer**, LA67, is a senior research geologist and curator of vertebrate paleontology at the Smithsonian Institution. She is known for her pioneering research in taphonomy, the branch of paleontology that deals with the processes of fossilization. Much of her career has involved paleontological and geological field research on the ecological context of human evolution in the later Cenozoic era of East Africa.

**Perci Chester**, FA67, had her “Now Is the Time/Time After Time and Drawings of Protest” show on display at the Traffic Zone Gallery in Minneapolis. The installation featured clock boxes, tree limbs and stone with anthropomorphic forms whose heads are vintage clock boxes, marking “time as no time – endless time – and the present time.”

**Pepper Schwartz**, LA67, GR69, is involved in several startups, including Pulse and Keeper. She recently finished video and audio relationship casts, 20 short videos on intimacy and sexuality, and 10 brief audio files on maintaining relationships for [GetPaired.com](http://GetPaired.com).

**Michael S. Sherry**, LA67, wrote *The Punitive Turn in American Life: How the United States Learned to Fight Crime Like a War* (UNC Press, 2020). The book explores the political and cultural history of the ways in which punishment and surveillance have moved to the center of American life and become imbued with militarized language and policies. In 2020, Sherry retired as the Richard W. Leopold Professor of History at Northwestern University, having spent 44 years on the Northwestern history faculty.

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## 1968

**Martha (Freer) Ratigan**, BU68, retired from computer work and is pursuing art.

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## 1970

**John Sheridan**, LA70, had his work included in a recent three-month exhibition at the Hunderdon Art Museum, Clinton, N.J. “From the Ground Up: Peters Valley School of Craft” was the first major exhibition to trace the 50-year history of this New Jersey craft school.

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## 1971

**Joseph Madison**, LA71, LW19, was a recipient of the Freedom Summer of ‘64 Award from Miami University. Created in 2017, the award honors people who strive to advance civil rights and social justice in America. Madison is also the host of a daily program on SiriusXM’s Urban View (channel 126).

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## 1972

**Raymond Dalton**, LA72, a clinical psychologist, retired from the U.S. Department of Veterans Affairs after nearly 40 years of service.

**Jeffrey G. Fihn**, BU72, joined Tyson Law Firm, P.C., in Greenwood, Ind., as of counsel. His focus is on commercial and business transactions and litigation, real property legal problems, insurance law matters, and contracts and torts.

**Sharon (Sutker) McGowan**, LA72, was inducted into the Milwaukee Press Club Hall of Fame, Nov. 1, 2019. The founding editor of the Milwaukee Neighborhood News Service, which launched in 2011, McGowan left the organization in January 2019 and joined the Institute for Nonprofit News, in Los Angeles.

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## 1973

**Lawrence J. Altman**, EN73, co-authored *From Bullying to Sexual Violence: Protecting Your Children While at School* (Stratton Press, 2020). The book helps parents stand up for their kids and demand that the school’s administration do what is required of the school. Altman also published articles in *Inner Circle Executive* magazine on racial discrimination in discipline in public schools and in *Inquiry & Analysis*, the newsletter of the Council of School Attorneys, on conferences held by the National Center for School Mental Health.

**Albert Ip**, EN73, was appointed an honorary adviser of the School of Humanities and Social Science and was named as an industrial advisory committee member of the School of Engineering at The Hong Kong University of Science and Technology. He was also appointed adjunct professor of the School of Hotel and Tourism at The Chinese University of Hong Kong and independent non-executive director and audit committee chairman of Hutchison Telecommunications, Hong Kong.

**Kenneth D. Wald**, GR73, GR76, won the Celebrate 350 Award for the best book in American Jewish Studies with *The Foundations of American Jewish Liberalism* (Cambridge University Press, 2019).

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## 1974

**Dennis C. Dickerson**, GR74, GR78, authored *The African Methodist Episcopal Church: A History* (Cambridge University Press, 2020). He is the Reverend James M. Lawson Chair in History and professor of history at Vanderbilt University.

**Wayne C. Koff**, LA74, is president and CEO of the Human Vaccines Project, a nonprofit consortium working to decode the human immune system to accelerate development of vaccines and therapies for major global diseases. Koff was recently honored by *Foreign Policy* in its 10th anniversary special edition of *Global Thinkers* – along with

Barack Obama, Angela Merkel, Bill and Melinda Gates, and others – as one of the 100 thinkers and doers who had a profound impact on the planet.

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## 1975

**George J. Kimmerle**, AR75, earned a doctoral degree in urban planning and public policy from Rutgers University in May 2020. He founded his New York City and New Jersey architectural, urban design and planning practice in 1990. A former faculty member of New York University’s Schack Institute of Real Estate, Kimmerle is a visiting lecturer at Rutgers’ Edward J. Bloustein School.

**Robert Lowes**, LA75, a longtime journalist, published his first collection of poetry, *An Honest Hunger: Poems* (Wipf and Stock Publishers, 2020), which reviewers called “a joyful dance with everyday life” and “a book of great heart.” In the book’s acknowledgment, Lowes credits the late Donald Finkel, a poet and professor of English literature at WashU, with expanding his vision of what a poem could be.

**Charles Medalie**, GR75, is retired and living in Moreno Valley, Calif., holding his breath until COVID-19 goes away.

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## 1976

**Henry Macfarland**, HA76, is executive director of Harvesters Reaching The Nations, in Plano, Texas. The 20-year-old, nondenominational ministry operates two orphanages, two primary schools, a vocational training center and a hospital in South Sudan, as well as a primary school at the Rhino Camp Refugee Settlement near Arua, Uganda. Previously, Macfarland had a 30-year career in hospital administration. [www.hrtn.org](http://www.hrtn.org)

**Allan Trautman**, LA76, was the lead animatronic puppeteer for the title character in “Earth to Ned,” a show on the Disney+ streaming service that follows Ned, a blue-skinned alien, and his lieutenant Cornelius, who were sent to scout Earth for an eventual invasion.

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## 1977

**Nancy (Lieberman) Abeles**, FA77, propelled first by necessity and then fascination and activism, got involved in local and regional transportation planning and policy. She is currently chair of the committee for road and transit infrastructure projects necessitated by the consolidation of Walter Reed and the National Naval Medical Center. She is also the chair of the citizens advisory committee for the Washington, D.C., Council of Government’s Transportation Planning Board.

**Jordan Goldrich**, SW77, GR77, wrote *Workplace Warrior: People Skills for the No-Bullshit Executive* (Greenleaf Book Group Press, 2019). In the book, Goldrich challenges readers to become better leaders by measuring themselves against the greatest





In fall 1978, I started the PhD program in the Brown School, as did Terri D. Combs. The professor for our first class did not show up, perhaps because we were the only two students in the class. So, Terri and I went for coffee, and as they say, the rest is history. We were married June 14, 1980, and last June, we celebrated 40 years of marriage. We've had wonderful lives together and fantastic academic careers. In spring 2019, we retired as emeritus faculty from the University of Tennessee College of Social Work. Thanks, WashU!"

**JOHN G. ORME**, MSW '81, PhD '83  
**TERRI COMBS-ORME**, PhD '82



Photo: Washington University Archives

warriors on the planet: the Navy SEALs and the Green Berets, who desire to succeed, are committed to taking charge and focus on accomplishing the mission.

## 1978

**John Barnes**, LA78, GR81, is a data-science analyst at 20/20 Tax Resolution in Broomfield, Colo., after working many months as an extremely old data-science intern.

**Joseph Stahl**, GB78, is a co-author of *Faces of Union Soldiers at Antietam* (History Press, 2019). The book examines the routes of some of the units on the field through the individual stories of 36 soldiers who fought in one of the bloodiest days in American history.

## 1979

**Thomas Countryman**, LA79, retired from the U.S. Foreign Service in 2017 after a 35-year career. He currently is a volunteer chairman of the board of directors of the Arms Control Association.

**Shel Silver**, LW79, is semi-retired and relocated to Boynton Beach, Fla.

**William Sitzer**, GL79, retired from law practice. A volunteer docent at the Saint Louis Art Museum since 2014, he became the director of the National Docent Symposium Council in 2019.

## 1980

**David Compton**, LA80, is director of toxicology at PCT Therapeutics (USA). He has represented his company on the European Federation of Pharmaceutical Industries and Associations gene therapy working group the past two years. Compton was a founding member and is on the board of the Cross-Company Abuse Liability Council,

which works with the FDA on issues in the industry on assessment of abuse potential for new medical entities.

**Steven Nadler**, LA80, is the William H. Hay II Professor of Philosophy and Evjue-Bascom Professor in Humanities at the University of Wisconsin-Madison, where he has taught since 1988. A Pulitzer-Prize finalist for his book *Rembrandt's Jews* (University of Chicago Press, 2003), Nadler was elected to the American Academy of Arts and Sciences in 2020.

**Laura (Greene) Wiegand**, LA80, is a retired general internist. She has two children and three grandchildren.

## 1981

**Rita Fullem**, SI81, is a sales associate at Patuxent Nursery in Odenton, Md.

## 1982

**Nathan Byers**, EN82, who has led Seattle engineering consulting firm Sider + Byers as the managing partner, is transitioning to retirement, working part time to smooth the ownership transition. He is looking forward to having more time to spend with his lovely wife, Page, and on his avocations.

**Elizabeth Lewis**, GA82, is professor of architecture at Florida A&M University.

**John Rovison**, LA82, EN82, after a 38-year career filled with papers, awards and patents, retired as vice president of research and development for PeroxyChem LLC during its transition to Evonik, GmbH. He plans to reinvigorate his wine-making activities and other aspects of life. Rovison received a Lifetime Achievement Award from Marquis Who's Who in 2018.

**Joy (Nelkin) Wieder**, FA82, an educator, illustrator, designer and freelance writer,

had her debut picture book, *The Passover Mouse*, published (Doubleday Books for Young Readers; illustrated edition, 2020). The book was awarded the 2018 Jewish Stories Award by the Society of Children's Book Writers and Illustrators/PJ Library and was chosen as a PJ Library selection in 2020. Wieder's historical novel, *The Secret Tunnel*, was selected for the PJ Our Way program for PJ Library. [www.jnwieder.com](http://www.jnwieder.com)

## 1983

**Jeanette Meyer**, LA83, of RE/MAX Alliance in Fort Collins, Colo., again earned Quality Service Certified Platinum, the highest level of service achievement in the real estate industry. The award recognizes Meyer's consistent scores of 100% client service satisfaction in 2019 as measured by Leading Research Corporation.

## 1984

**Doug Brandt**, LA84, GR86, is a manuscript editing coordinator at the *Journal of the American Medical Association* (JAMA) in Chicago. He is also a composer and writer, having written the music, lyrics and books for two full-length musicals. Brandt is currently writing his first opera, which tells the story of a 19th-century French intersex child who was raised as a girl but forced as an adult to live as a man.

**Kevin Johnson**, BU84, received the 2019 Fay Vincent Most Valuable Partner Award from the Society for American Baseball Research for researching and compiling playing statistics for baseball's Negro Leagues, which had not previously existed. Johnson is the co-founder of [Seamheads.com](http://Seamheads.com).

**Andrea Sant**, GM84, was featured in "Collaborative Convergence: Influenza Innovators," the Sabin Vaccine Institute's latest video highlighting efforts to accelerate the development of a universal influenza

vaccine. In the video, Sant speaks about her research and the value of novel collaborations across the science and technology landscapes to drive innovation.

**Adam Weintraub**, LA84, returned to the California Department of Health Care Services as assistant deputy director of communications after a temporary assignment as deputy director for public affairs at the California Department of Social Services. He is currently helping to streamline communications about the COVID-19 response to providers and the nearly 13 million beneficiaries of California's Medicaid program.

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## 1985

**Heather E. Gantzer**, MD85, was named chair of the Board of Regents of the American College of Physicians, the national organization of internists. The board is the main policy-making body of the college. Gantzer has an internal medicine primary care clinic practice and also practices hospital medicine as a nocturnist at Methodist Hospital in St. Louis Park, Minn.

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## 1986

**Alexander ("Alex") S. Douglas II**, LA86, a partner with ShuffieldLowman, was selected as a 2020 Florida Super Lawyer and as a 2020 Legal Elite attorney by *Florida Trend* magazine. Douglas practices in the area of fiduciary litigation.

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## 1987

**Gary Ford**, BU87, whose career in the financial industry spans more than 30 years, advises Principal Financial Group's St. Louis clients on financial investments and life and health insurance. Ford's focus over the course of his career has been as an equity analyst following financial institutions.

**Jacquelyn (Johnson) Minter**, EN87, was appointed director of Fort Bend County (Texas) Health & Human Services. As director, she provides leadership, management and support for the county's HHS departments, divisions and health and well-being programs and initiatives. Minter, who holds MD, MPH and MBA degrees, started work with the county as a preventive medicine physician in the tuberculosis program in 2017.

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## 1988

**Dana (Trotter) Buckley**, LA88, retired as a captain from Monarch Fire Protection District in Chesterfield, Mo., in March 2020. She and her husband, Gary, returned to her native Oregon and live in a home on the coast designed by her father. Buckley continues to contribute to her community as a teaching assistant for the local school district.

**Sterling Miller**, LW88, recently penned his fourth book, his second book for the American Bar Association: *Ten (More) Things*

*You Need to Know as In-House Counsel* (ABA Publishing, 2019). He is also the author of *The Evolution of Professional Football* (Mill City Press, 2015) and a slow-cooker cookbook. Miller is an attorney living in the Dallas-Fort Worth area.

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## 1989

**Brenda B. Asare**, GB89, was named to Crain's list of 2019 Notable Minorities in Accounting, Consulting & Law. She is president and CEO of The Alford Group, a national consulting firm that partners with nonprofits and corporations to help them advance their missions and do more good in the world. Asare has helped clients raise more than \$2 billion to fund their efforts.

**Dennis Dwyer**, TI89, retired in 2017 after 44 years in the information technology field. He retired from the U.S. Navy in 2003 as a master chief petty officer with 30 years of service.

**Fred Frommer**, LA89, released an updated book, *You Gotta Have Heart: Washington Baseball from Walter Johnson to the 2019 World Series Champion Nationals* (Lyons Press, 2020), with new chapters and a foreword by "Meet the Press" moderator Chuck Todd. The book features interviews with players such as Ryan Zimmerman and famous fans including Maury Povich and Lewis Black. Frommer appeared on Todd's podcast in July. He is head of sports PR at the Dewey Square Group, and is an environmental communications consultant.

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## 1990

**Karen Markel**, BU90, started as dean of the College of Business at the University of Colorado, Colorado Springs, last June.

**Theresa (Riley) Shaw**, GR90, self-published *Mademoiselle Duchesne: Mere Duchesne RSCJ* (2018). The book highlights the life of Rose Philippine Duchesne, who arrived in St. Charles, Mo., in 1818 and soon moved to Florissant, Mo. She established religious communities and eventually opened 12 schools before her death. Today, there are more than 130 Academy of the Sacred Heart schools around the world. Duchesne was canonized as a saint by the Roman Catholic Church in 1988.

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## 1991

**Mischa Buford Epps**, LA91, was named the executive director of The Missouri Bar by its Board of Governors. Previously, Epps was a partner at Shook, Hardy & Bacon LLP in Kansas City, Mo., where she practiced for more than 20 years.

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## 1992

**Fiona Gallahue**, LA92, MD97, was named a Parker J. Palmer Courage to Teach awardee by the Accreditation Council for Graduate Medical Education. The award honors

program directors who find innovative ways to teach residents and to provide quality health care while remaining connected to the initial impulse to care for others in this environment. Gallahue is program director and associate professor for emergency medicine at the University of Washington.

**Paul Luzecky**, AR92, GA94, is a vice president at FGM Architects. As principal and design director of FGM in the St. Louis office, he has 25 years of experience with an emphasis on municipal and educational projects.

**Sandra Van Trease**, EMBA92, a group president with BJC HealthCare, retired in July 2020 after 16 years with the hospital system. To improve access to care, she helped build and grow the BJC Collaborative from four health systems in Missouri and Illinois to seven systems. Previously, she was president and CEO of UniCare.

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## 1993

**Marcy (Levey) Tivol**, FA93, co-founded Solving Fun, LLC. The company engages children in learning through activities, games and puzzles that encourage creative problem-solving and perseverance. [www.solvingfun.com](http://www.solvingfun.com)

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## 1994

**Bill Weeks**, EN94, EN94, joined Argent Capital Management as a quantitative research analyst, designing next-generation machine-learning algorithms for equity analysis. Previously at American Century Investments, Weeks has more than 13 years of experience in the investment industry in quantitative investment modeling.

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## 1995

**Adam Elegant**, LA95, joined Baker Street Advisors, a boutique investment and wealth advisory firm in San Francisco. Founded in 2004 by Goldman Sachs alumni, the firm manages \$9.5 billion for some 300 families. Previously, Elegant worked 19 years with Goldman Sachs and KKR. He lives in Kentfield, Calif., with his wife and three children.

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## 1996

**D. Mara Lowenstein**, LW96, married Martin Schmaltz, a professor of theoretical particle physics at Boston University, on March 20, 2020, at their home in Jamaica Plain, Mass. Lowenstein has a law practice in New York City, and in her spare time, she makes cotton masks to protect neighbors and friends in the United States and in Italy from COVID-19.

**Sean Reilly**, EN96, moved to Augusta, Ga., and is a critical care medicine physician at Dwight D. Eisenhower Army Medical Center. Reilly has been in the military for 16 years and was recently stationed in Germany for nine months. His son attends college at TU Kaiserslautern in Germany, and his daughter attends high school in Westtown, Pa.

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## 1997

**Catherine Bowes**, LA97, is a program director of offshore wind energy at the National Wildlife Federation. She pursues clean energy options that work for both oceans and communities. Bowes was instrumental in helping bring the first commercial offshore wind farm in the United States to Block Island, R.I., in 2016.

**Leona Ketterl**, GA97, and her husband moved from Los Angeles to Sacramento, where she is a senior architect with Rainforth Grau Architects, an exclusive designer of schools. Ketterl also is actively involved in the American Institute of Architects statewide committee on the environment. The couple shares their solar-powered home with their two cats, Shaggy and Scooby.

**Joshua Mandell**, AR97, is a vice president at FGM Architects. As principal he specializes in municipal and law enforcement facility assessment. He is currently leading the design of a new regional PSAP/911 facility with Emergency Operations Center and 311 Citizens' Service Bureau for the city of St. Louis.

**Peter Vogel**, LA97, is a co-founder and the CEO of Leafwire, an online platform connecting investors to cannabis companies looking to raise funding. The company, which has gained a reputation as the LinkedIn of the cannabis industry, has grown quickly to become the largest professional network in cannabis, with 30,000 members representing more than 10,000 companies.

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## 1998

**Benjamin Edlavitch**, LA98, recently founded Edlavitch Law PLLC in Minneapolis, specializing in intellectual property strategy and electrical engineering patents. Before entering private practice, he was the sole in-house counsel for an enterprise software company. Edlavitch has more than 22 years of experience serving clients from startups to Fortune 500 companies.

**Michael Finley**, GM98, in April 2020 received the Philip B. Hofmann Research Award for 2019, the second-highest award for research conducted within Janssen Pharmaceuticals Research and Development, at a virtual (Zoom) ceremony.

**Joseph Straus**, PMBA98, is president of Imagine Bio, Ltd, in Beit Shemesh, Israel. The company advises global health-care leaders and emerging startups on strategy, partnerships and investments by leveraging Israel's health-tech ecosystem.

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## 1999

**Stephen D. Feldman**, BU99, whose expertise is in complex litigation, antitrust and appeals, recently joined Robinson Bradshaw as a shareholder, based in the firm's Raleigh, N.C., offices. He is vice chair of both the North Carolina Bar Association Appellate Practice Section and the North Carolina Business Court Rules Committee.

**Adam Schwartz**, GR99, who has taught high school in Baltimore for 22 years, is an award-winning author. His collection of stories, *The Rest of the World*, won the Washington Writers Publishing House 2020 prize for fiction, and other works have won prizes sponsored by *Poets & Writers*, *Philadelphia Stories* and *Baltimore City Paper*. His fiction has appeared in numerous literary journals, and his nonfiction in the *Sewanee Review*, *Baltimore Sun*, *New York Daily News* and other publications.

**Adam Stoltz**, LA99, returned to HOK as director of global consulting, based in the firm's New York studio. Stoltz, who for 15 years has addressed the issues involving people, organizational performance and the built environment, was the regional consulting leader for HOK's New York studio from 2013-15.

**Chad West**, BU99, was honored with the Public Servant of the Year Award by the Oak Cliff Chamber of Commerce, Dallas, in addition to the Dallas Association of Young Lawyers Foundation Award of Excellence in honor of his philanthropic and community contributions. West has conducted school-supply drives and is a co-founder of the Dash for the Beads 5K/10K race, which supports health, wellness and nutrition programming at local schools.

**Katsuyuki Yamashita**, GB99, was appointed dean of the Graduate School of Business Administration and Economics at Otemon Gakuin University, a private university at Ibaraki, Osaka, Japan, in April 2020.

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## 2000

**John Hollman**, GR00, is a professor of physical therapy and director of the program in physical therapy at the Mayo Clinic College of Medicine and Science in Rochester, Minn. He also was appointed assistant dean of student and faculty affairs in the Mayo Clinic School of Health Sciences in 2020.

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## 2001

**Karen Budell**, LA01, joined SurveyMonkey as vice president of brand marketing. She works at the survey software company's San Mateo, Calif., headquarters and lives in the Santa Cruz Mountains with her husband, Joel. Previously, she worked four years at Google.

**Kacey Cordes**, LA01, vice president at U.S. Bancorp Community Development Corporation, was named chair of Urban Land Institute (ULI) St. Louis District Council. She was also named to chair the national ULI Public-Private Partnership Council. Cordes' goals are to tap thoughtful leadership, prioritizing partnerships and social justice to drive equitable development throughout St. Louis.

**Liz (Connolly) Zimmerly**, EN01, relocated with her family to the Chicago area and now works with ComEd managing new-construction energy-efficiency programs. Previously, she worked eight years with the nation's greenest utility, Seattle City Light.

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## 2003

**Aaron Chait**, LA03, with his wife, Meghan, and their two daughters, welcomed a son and brother, Clark. The family lives in Chicago, where Chait is a lawyer with the U.S. Department of Education's Office for Civil Rights as well as an adjunct law professor.

**Jesse Cook**, LA03, co-founded Watsi in 2011 to raise money via crowdfunding for patients' health-care costs, focusing on low-cost, high-impact treatments. Cook left the nonprofit in 2014, but the organization has grown to fund health-care costs for over 20,000 patients in 25 countries. Another WashU grad, **Mackinnon (Webster) Engen**, LA04, currently serves as Watsi's executive director.

**Chad Kaffer**, LW03, was named a partner at Taylor English Duma LLP. Working in the firm's corporate and business department, Kaffer focuses on business, real estate and commercial law.

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## 2004

**Kristen Ehrenberger**, LA04, completed a residency in internal medicine and pediatrics at the University of Pittsburgh Medical Center and joined the University of Pittsburgh School of Medicine faculty as an assistant professor of internal medicine. Ehrenberger teaches patient care and medical history.

**Jonathan Gass**, BU04, sold Nomad Financial, a New York City financial services firm that he founded in 2013 to serve high-growth venture-capital and private-equity-backed companies.

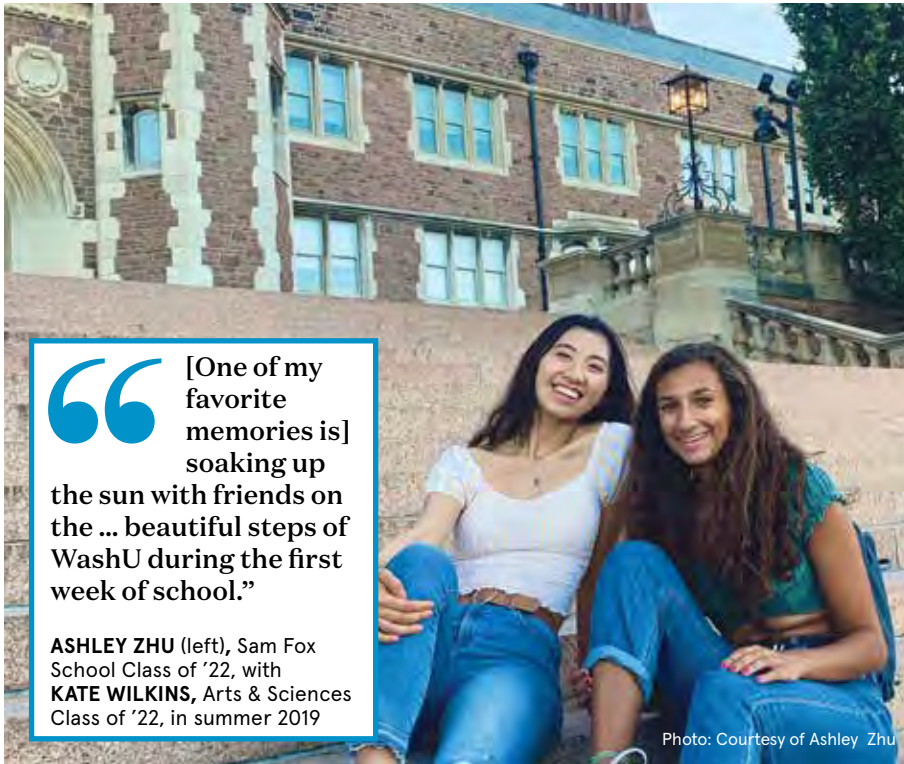
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## 2005

**Will Dorton**, LA05, joined Dickinson Wright PLLC as of counsel. His practice involves counseling companies on complex corporate transactions, including leveraged finance and general mergers and acquisitions. Previously, Dorton was corporate and securities counsel at Tempur Sealy International.

**Joseph Frank**, GR05, GR09, was promoted to senior manager-reporting and compliance, in the Washington University Human Resources Department. He is also an adjunct lecturer teaching human resources strategy in Olin Business School and an adjunct faculty member at the University of Missouri-St. Louis, Webster University and Fontbonne University.

**Kathryn Zuckerman**, LA05, is executive director at CBS News, overseeing the planning and strategy of special programming. She is responsible for coordination between CBS divisions and the CBS News operation with respect to CBS entertainment, sports, sales, marketing, affiliate relations and air control, as well as internally for CBS News special events.



“ [One of my favorite memories is] soaking up the sun with friends on the ... beautiful steps of WashU during the first week of school.”

**ASHLEY ZHU** (left), Sam Fox School Class of '22, with **KATE WILKINS**, Arts & Sciences Class of '22, in summer 2019

Photo: Courtesy of Ashley Zhu

2008

**Melissa Reinckens**, LW08, was promoted to partner at DLA Piper, based in the firm's San Diego office. She advises clients on intellectual property litigation matters involving false advertising, trademarks, trade dress, copyrights and patents.

**Ivo Rozendaal**, GA08, was recently appointed to lead the SmithGroup's newest workplace studio, operating out of its Madison and Milwaukee offices. In this role, Rozendaal collaborates with experts across the firm's nationally recognized workplace practice to create high-performing office spaces that improve productivity and enhance employees' physical and emotional health and well-being.

**Erin Valentine**, EMBA08, was promoted to vice president of business development at McCarthy Building Companies in 2020. She is a member of the leadership team that guides strategic business operations across the company's 28-state central region. Valentine was recognized as a 40 Under 40 business leader by the *St. Louis Business Journal* and as a Top Young Professional by *Engineering News-Record Midwest*.

2009

**Paul Anderson**, LA09, is associate general counsel, intellectual property, and commercial counsel at Forbes, Inc.

**Alicia Bellezza-Watts**, SW09, is the Atlanta chair of WashU Engage. The initiative, co-led by the Gephardt Institute and the Washington University Alumni Association, encourages alumni to engage in civic and community engagement opportunities in the cities where they live and work.

**Vir Singh**, LA09, completed a residency in emergency medicine in the University of Central Florida Ocala Emergency Medicine Residency Program. He then began his career in Brownsville, Texas, where he is working in emergency department administration and operations.

2010

**Dennis Cho**, GL10, LW12, is the executive director of Sorin Corporation, a global trading company in the base metal and chemical industry headquartered in Seoul, South Korea.

**Brian Coleman**, PMBA10, was promoted to principal at Baum Capital Partners, in Kansas City, Mo. Coleman works with business owners and managers, service providers, intermediaries and capital providers to originate, evaluate, execute and manage investments.

**Mark Haynes**, GB10, is the manager of employee relations at Amazon. An attorney, he consults with business leaders on labor and employment policy across Amazon's global operations. Previously, he worked at Boeing.

2006

**Maggie (Konich) Flock**, LA06, GR08, and her husband, Frank, welcomed their first child, Susanna Beatrice, in October 2019.

**Patrick Hill**, PMBA06, was named senior vice president and chief financial officer of Allsup, a nationwide provider of disability representation and return-to-work services.

**Catherine Kelly**, LA06, is an assistant professor of justice and rule of law at the Africa Center for Strategic Studies, a center in the U.S. Department of Defense located on the National Defense University campus. She became a first-time author with the recent publication of *Party Proliferation and Political Contestation in Africa: Senegal in Comparative Perspective* (Palgrave Macmillan, 2020). Kelly was accepted into the Council on Foreign Relations as a term member.

**Sukanya Pyne**, PT06, is the founder and president of ReJenga, a nonprofit organization that helps improve the rehabilitation of disabled people in the developing world by promoting sustainable rehab clinics in rural villages. She recently traveled to Panskura and Kolkata, India, where she will help create a rehab setting.

**Justin Wilke**, EN06, SI07, with his wife, Holly, and their three children, Logan, Claire and Lauren, welcomed another child, Alice, to the world, March 19, 2020. Alice's birth was an extra-special present for Holly, who has the same birthday as Alice.

2007

**Lauren Herring**, EMBA07, published *Take Control of Your Job Search! 10 Emotions You Must Master to Land the Job* (Simply Good Press, 2020). The owner of IMPACT Group, a global career development company, Herring is donating \$100,000 in career coaching to help improve the social justice narrative in the United States.

**Chihmao Hsieh**, GB07, is a research professor at SUNY Korea — a partnership between Stony Brook University, SUNY-The State University of New York and the South Korean government — and founding director of its Center for Global Entrepreneurship. For 2020-21, he is serving as a guest columnist for *Maeil Business Newspaper*, Korea's most widely circulated financial daily. In 2019, Hsieh gave talks at the United Nations Secretariat and at the Asian Development Bank in Manila.

**John S.K. ("Keoni") Kauwe III**, GM07, who at age 40 was promoted to president of Brigham Young University-Hawaii, is the youngest president in the university's history and one of the youngest college or university presidents in the Church Education System. Previously, Kauwe was dean of graduate studies at Brigham Young University in Provo, Utah.

**Joe Shumow**, LW07, commented on a range of commercial real estate matters as a guest on the radio show "Development Matters," which airs from Madison, Wis. Shumow is a tax credit attorney with Reinhart Boerner Van Deuren s.c.

**Mark Hikin**, GB10, LW10, is an associate with Sklar Kirsh, a corporate, real estate, entertainment, litigation and bankruptcy law firm with offices in Los Angeles and Pasadena, Calif.

**Balazs Martonffy**, LA10, received the 2020 John McCain Dissertation Award at the 2020 Munich Security Conference. The award recognizes exceptional academic achievements in the field of political science, with an emphasis on the transatlantic relationship. Martonffy, who is a fellow at the International Center for Security and Leadership and an assistant professor at the National University of Public Service, won the award for his doctoral thesis analyzing why alliances find it more difficult to cooperate in peacetime: "Analysis Paralysis: Threat Perception and Incohesion in NATO, 1960–1980."

**Ashlee (Minton) Vieregger**, LW10, was named to the *Des Moines Business Record's* 40 Under 40 list in 2020. She is vice president, managing wealth advisor at Bankers Trust Company in Des Moines, Iowa.

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## 2011

**Victoria Boren**, OT11, hung up her scrubs in skilled nursing and home health care to take a full-time position as an academic fieldwork coordinator at Eastern Virginia Career College. She sometimes teaches labs, concepts in aging, concepts in mental health and a professional seminar at the school.

**Rachel Cohn**, AR11, launched her own business, Virtual Party Planning, inspired by the rise in virtual events and the increase in at-home time. The company designs and plans virtual parties, from developing the concept and theme to creating the party agenda and fun, engaging activities. [virtualpartyplanning.com](http://virtualpartyplanning.com)

**Elsa Hart**, LW11, penned her fourth mystery novel, *The Cabinets of Barnaby Mayne* (Minotaur Books, 2020), which introduces Cecily Kay, an 18th-century plant enthusiast whose fascination with botany leads her into a world of collectors, apothecaries, artists and charlatans.

**Kara Powder**, GM11, an assistant professor of biological sciences at Clemson University, received a \$1.17 million National Science Foundation CAREER Award grant to investigate gene regulatory elements that determine craniofacial development and evolution. The CAREER Award is the most prestigious NSF award for faculty members early in their careers as researchers and educators. The awards have an educational component, and Powder's long-term goal is to increase diversity in STEM fields.

**Arif Soto**, GR11, is a corporate and securities associate at Carmel, Milazzo & DiChiara, LLP. He represents companies in corporate and securities matters.

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## 2012

**Moustapha Gassama**, LW12, was appointed assistant county attorney with the litigation practice group in Harris County, Texas. As such, he is part of the Community Protection Team, a program that uses civil law to rid neighborhoods of enterprises that foster crime. Gassama previously was an assistant city attorney with the city of Houston.

**Charles Jenkins III**, GR12, in 2018 achieved his longtime dream of moving to Europe, where he works for consulting firm Booz Allen Hamilton.

**Gabriel Magraner**, LA12, earned a master's degree focusing on politics and culture in Brazil and the Caribbean from New York University's Center for Latin American and Caribbean Studies.

**Bridgette Zou**, LA12, FA12, shares with great pride of authorship that her debut children's book, *Norman and the Nom Nom Factory* (Astra Publishing House, Starberry Books Single Titles, 2018), was featured on Julie Andrews' podcast, "Julie's Library." Andrews was joined by Lee Overtree and Peter McNerney from the "Story Pirates" podcast to voice characters to help bring the book to life. Zou both wrote and illustrated the book.

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## 2013

**Jason Dorn**, EN13, is a captain in the U.S. Air Force, flying C-17s at Charleston (S.C.) Air Force Base.

**Claire Downs**, LA13, is back home in Baltimore, working as an animal operations specialist at the Maryland Zoo. Downs oversaw the replacement of all lighting in animal buildings with LED bulbs, improving energy efficiency and saving the zoo thousands of dollars per year.

**Jay E. Evans**, LA13, is a tax associate in the New York City office of Debevoise & Plimpton.

**Sam Franklin**, LA13, was named 2020 Seattle District Young Entrepreneur of the Year by the U.S. Small Business Administration. Franklin founded Greenvelope.com, a paperless stationery company, out of his dorm room at WashU. The company — offering custom-animated digital wedding invitations, birthday and holiday cards, and invitations — grew from a one-person startup to employ a full-time staff of 14 and now serves 5,000 business clients in 35 countries.

**Jessica Goldberg**, LA13, and **Louis Ernst**, EN13, who met during the second day of orientation at WashU, moved their wedding date from 2020 to August 2021 due to the COVID-19 pandemic. After graduating from WashU, both went on to earn a master's degree from the University of Chicago Booth School of Business. Goldberg is a product marketing manager at Microsoft, and Ernst is a corporate strategy manager at Life Fitness.

**Brooke Husic**, LA13, and Sid Sivakumar, a graduate research assistant at WashU, had a crossword puzzle published in *The New York Times* on Saturday, Aug. 8, 2020.

**Kyungbong Jung**, GB13, is a senior manager at Woori Bank's Dubai branch, where he works in the trade finance and syndication loan area.

**Stella Kamm**, LA13, LW16, and Kyle Christopher Mallinak were married July 25, 2020. Both are practicing attorneys in Nashville, Tenn.

**Paul Tychsen**, UC13, PMBA21, was promoted to vice president at Butcher Joseph & Co., a St. Louis-based investment banking firm. Tychsen plays an active role in the firm's transaction management and executions efforts, advising middle-market companies on mergers and acquisitions and capital raising, as well as handling strategic advisory assignments.

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## 2014

**Rachel (Smidt) Bridges**, SW14, and Michael Bridges were married in a small ceremony in Overland Park, Kan., in January 2020. The couple lives in Arlington, Va.

**Reginald Nkansah**, LA14, is in residency in integrated vascular surgery at the University of Washington.

**Yanzhe Zhu**, EN14, is a postdoctoral scholar at the California Institute of Technology.

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## 2015

**Callan Howton**, SW15, leads the new Peer Recovery Center of Excellence, housed at the University of Missouri-Kansas City School of Nursing and Health Studies. As the principal investigator on a new grant by the U.S. Department of Health and Human Services' Substance Abuse and Mental Health Services Administration, Howton and colleagues will work in partnership with the University of Texas, the University of Wisconsin-Madison and the National Council for Behavioral Health to enhance peer recovery support services through expanding access to training and technical assistance services to peers, organizations and communities across the country.

**Blake Marggraff**, LA15, is CEO of CareSignal (formerly Epharmix), a St. Louis firm that offers risk-based interventions using automated phone calls or text messages to manage patients' health conditions while collecting disease-specific data. CareSignal's partners include Mercy, BJC HealthCare and SLUCare Physician Group.

**Willie Pudvah**, BU15, was promoted from universal banker to credit analyst at Gateway Bank, where he has worked since 2018.

**Benjamin Sass**, EN15, and **Aliza (Jaffe) Sass**, LA15, welcomed a son, Leo Uriel Sass, June 9, 2020. Proud family members include grandparents **Ezra Jaffe**, LA89, and **Marla**

(Zissman) Jaffe, OT89; uncle **Jeremy Rose**, LA12, and aunt **Paula (Sass) Rose**, LA12; and aunt **Monica Sass**, LA19.

**Xinyuan Zhang**, LA15, is a resident physician in urology at the University of Washington.

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## 2016

**Orchideh Abar**, LA16, is a resident physician in obstetrics and gynecology at Abington-Jefferson Health in Abington, Pa.

**Shyam Kiran Akula**, LA16, was selected to receive a Paul & Daisy Soros Fellowship for New Americans. The \$90,000 graduate school fellowship is awarded to outstanding immigrants and children of immigrants in the United States. After graduating from WashU, Akula joined the Harvard-MIT MD/PhD program to train as a physician and scientist. He is currently conducting his PhD research on rare genetic diseases of cortical malformation to understand how specific genes influence normal human brain development.

**Nicole McAmis**, EN16, a fourth-year medical student at Frank H. Netter MD School of Medicine at Quinnipiac University graduating in May 2021, joined with the university's women's basketball team to help raise awareness of Rett syndrome during the Bobcats' game against Fairfield University. Rett syndrome, which McAmis researched while at WashU, is a rare, noninherited genetic postnatal neurological disorder that occurs primarily in girls. Recently, she also wrote articles on human trafficking in emergency medicine magazines *Common Sense* and *EM Resident*.

**Jordan Mendoza**, LA16, is a senior community engagement associate at NowPow, a health-care technology company in Chicago.

**Maxwell Wang**, EN16, was a 2020 recipient of a Hertz Fellowship. The fellowship is awarded annually to graduate students in science and technology with the greatest potential to create transformative solutions to the world's most urgent challenges. A doctoral student in neuroscience and machine learning at Carnegie Mellon University, Wang is conducting research aimed at understanding how brain networks change during neuro-interventions.

**Janay (Sanders) Woodruff**, UC16, curated, produced and performed in an all-Black showcase at an empty State Theatre in Portland, Maine, to celebrate Juneteenth and raise funds for local organizations that empower the Black community. During the show, she released "Feared," an uplifting pop/rock song about conquering fears. The performance raised more than \$10,000 for Indigo Arts Alliance ([indigoartsalliance.me](http://indigoartsalliance.me)) and Black Owned Maine ([blackownedmaine.com](http://blackownedmaine.com)), which promote and support the state's Black artists and Black-owned businesses and nonprofits.

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## 2017

**Tony Nuber**, GB17, completed a research fellowship at the RAND Arroyo Center in Santa Monica, Calif., and now leads an integration team at the U.S. Army Pacific headquarters.

**James Petersen**, SW17, is a clinical social worker at the U.S. Department of Veterans Affairs in Colorado Springs, Colo.

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## 2018

**David Silver**, GL18, founded Medical Industries of the Americas, locating it in an old manufacturing plant that he revived in Eufaula, Ala. The company — which produces health, safety, medical, and personal protective equipment and supplies — brought 300 jobs to the city, intent on offering workers up to \$16 an hour. In addition to helping out his community through business, Silver enjoys mentoring as well as helping feed the homeless.

**Clare Zhang**, BU18, started a master's program in management at the London Business School in September 2020.

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## 2019

**Natalie Griffin**, MD19, completed a general surgery residency at Duke University Hospital and is in an internal medicine residency at the University of Pittsburgh Medical Center.

**Libby Jubas**, LA19, is a graduate student at Case Western Reserve University in Cleveland, working to earn a master's degree in anesthesia.

**Isaac Kauffer**, LA19, joined Left of Center as director of voter education and data, channeling his energy into politics and looking forward to using his developing skills in other capacities and beyond the 2020 election.

**Monica Sass**, LA19, is pursuing a law degree and a master's of social work at New York University, with expectations of graduating in 2023.

**Tiffany Yao**, FA19, and her mother, **Michelle Wu**, EMBA12, won the 2019 USA International Mrs. Asia and Miss Asia Pageant Grand Finale in New York City. At the pageant, Yao also won the Global First Runner-up title, as well as the Most Elegant and Charming Award; and Wu also won the Global Grand Champion title, as well as the Most Intelligent Award.

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## 2020

**Zachary Steinberg**, EN20, is part of a six-month Capital One Developer Academy that trains software engineers. After completion, he will join a two-year rotational technology development program at Capital One.

**Brenda Torteya**, EN20, is an operations analyst at Goldman Sachs.

## Next IN MEMORIAM

**Jerome Brasch**, BS '44, MS '47, emeritus trustee of Washington University, died Nov. 17, 2020. He was 95.

Brasch was appointed a Shepley Trustee on the university's Board of Trustees in 1995 and became an emeritus trustee in 2000. In addition, Brasch, who earned a bachelor's degree in chemical engineering in 1944 and a master's in 1947, also served on the Alumni Board of Governors.

Professionally, Brasch was the founder and president of Brasch Manufacturing Company, Inc., which builds electric space-heating equipment for industrial, commercial and institutional applications.

**Garrett Duncan**, associate professor of education and of African and African American studies, both in Arts & Sciences, died Dec. 8, 2020, at Barnes-Jewish Hospital. He was 59.

Duncan studied the education of Black students in urban and suburban schools. He published extensively on Black youth, identity, language and ethics. He also headed up the "Schooling as a Moral Enterprise" project that explored issues of race, culture, education and society.

"His research, his teaching and his community outreach were all immensely important for the development of AFAS," says Gerald Early, the Merle Kling Professor of Modern Letters and chair of African and African American studies. "He made us known and respected in circles that increased our stature. His 'Black Adolescence' course by itself was an enormous addition to our curriculum."

Duncan was also a longtime interviewer for the John B. Ervin Scholars Program and a mentor to the Mellon Mays Undergraduate Fellowship Program.

**Luis Glaser**, PhD '56, former head of the then-Department of Biological Chemistry in the School of Medicine, died Dec. 23, 2020, in Miami, after a long illness. He was 88.

While earning a PhD in biochemistry, Glaser studied in the laboratory of Nobel laureates Carl and Gerty Cori. He became a faculty member in 1956 and eventually became the chair of the biological chemistry department, precursor to the Department of Biochemistry and Molecular Biophysics. He held that position from 1975-86.

Glaser went on to be director of the Division of Biology & Biomedical Sciences in 1980. He retired from WashU in 1986 but remained an adjunct professor at the School of Medicine through 1989. He served as executive vice president and provost at the University of Miami from 1986 to 2005.

**Gene Hoefel**, BFA '56, professor emeritus at the Sam Fox School of Design & Visual Arts, died peacefully in his sleep at an assisted living facility on Dec. 28, 2020. He was 86.

After earning a bachelor's degree at the School of Art, Hoefel spent 15 years in Chicago working in the advertising industry. He contributed to award-winning national ad campaigns, such as Nestea Plunge, at leading firms, such as Leo Burnett and DDB-Needham.

In 1974, Hoefel returned to the university as assistant professor of graphic arts communication. He co-taught the long-running course "Snap Up" with Bob Gulovsen, adjunct professor at Olin Business School. The course paired senior design students and MBA students with real-world clients to create advertisements.

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**Nancy Kistler**, JD '86, deputy city counselor for the city of St. Louis, died May 20, 2020. She was 59.

Kistler joined the Missouri Bar in 1986 after graduating from the School of Law. She worked for the city of St. Louis for 30 years and also served on the judicial commission for the 22nd Circuit from 1997 to 2003.

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**Walter H. Lewis**, professor emeritus of biology in Arts & Sciences, died peacefully at his home in St. Louis on Nov. 17, 2020. He was 90.

Lewis and his wife, Memory Elvin-Lewis, professor emerita of biology at WashU, worked on projects around the world including studying the indigenous peoples of Peru. Their book, *Medical Botany: Plants Affecting Man's Health*, is considered a definitive work on traditional pharmacopeias.

In 2013, Lewis, a renowned expert on wild roses of North America, was named a "Great Rosarian of the World" by the American Rose Society. Lewis was also awarded the Martin de la Cruz Silver Medal from the Mexican Academy of Traditional Medicine in 2000, the E.K. Janaki Ammal Gold Medal from the Indian Ethnobotanical Society in 2004, and was named, along with his wife, a Distinguished Economic Botanist by the Society for Economic Botany in 2006.

Lewis taught popular botany courses at WashU from 1964 until he retired in 2000. He also held a joint appointment as senior botanist at Missouri Botanical Garden.

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**Roger Phillips**, professor emeritus of earth and planetary sciences in Arts & Sciences, died Nov. 19, 2020, after suffering from complications of Parkinson's disease. He was 80.

A planetary geophysicist, Phillips studied the geophysical structure and evolution of the moon, Mars, Venus and Mercury. He was the team leader for the Apollo Lunar Sounding Experiment, which flew on Apollo 17 and produced the first radar imaging of the lunar subsurface. He also co-led the Shallow Radar experiment on the Mars Reconnaissance Orbiter.

Phillips worked at Washington University from 1992 until 2007, when he became a professor emeritus. During his tenure, he served as a professor and as director of the McDonnell Center for the Space Sciences from 1999 to 2007.

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**Karen Seibert**, executive director of the pharmacology center at the School of Medicine, died Nov. 9, 2020, at her home in Chesterfield, Mo., after a battle with cancer. She was 61.

Seibert has been described as a "true force of nature," which is demonstrated in her career at WashU. She served as the founding executive director of the Center for Clinical Pharmacology, a formal collaboration between Washington University and the newly named University of Health Sciences and Pharmacy. She was also a professor of anesthesiology, of pathology and immunology, and of genetics at the School of Medicine. Plus, she was associate director of shared resources for Siteman Cancer Center, in conjunction with Washington University and BJC HealthCare.

In addition, Seibert had leadership roles in research collaborations between Washington University and Pfizer Inc., a biopharmaceutical company, as well as between the university and Mallinckrodt Pharmaceuticals.

Michael Avidan, MBBCh, the Dr. Seymour and Rose T. Brown Professor of Anesthesiology and head of the Department of Anesthesiology, says that Seibert was "brilliant with a deeply inquisitive mind, a wonderful sense of humor, and a remarkable ability to bring people together and form partnerships."

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**John G. Stallings Jr.**, MBA '93, a leader in banking and finance, died Nov. 2, 2020, after a three-year battle with bile duct cancer. He was 53.

Stallings began his 30-year career in finance in 1988 after graduating from Vanderbilt University. He worked in the management associate program at National Commerce Financial (NCF) in Memphis, Tenn. After earning an MBA from Washington University in 1993, he was selected to lead an expansion of NCF in North Carolina. Between 1996 and 2010, Stallings served as regional president of NBC Bank, head of retail banking for NCF/CCB, and president and CEO of the Central Carolina Region of SunTrust after SunTrust acquired NCF.

Stallings' career continued in Richmond, Va., where he served as division president and CEO of SunTrust. In 2017, he became bank president for Union Bank & Trust, also in Richmond.

In addition to his career, Stallings was a volunteer in his community, serving on many boards including the boards of Virginia Foundation for Independent Colleges, Virginia Bankers Association and the Science Museum of Virginia Foundation.

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**Sherri Stichling**, payroll and accounts specialist at the Brown School, died of pancreatic cancer Sept. 30, 2020. She was 60.

Stichling started working at the university in spring of 1980 and was recognized for her 40 years of service before she passed.

"Sherri will be deeply missed by our community, and we are so grateful for all of her contributions during her years of service," says Mary McKay, the Neidorff Family and Centene Corporation Dean of the Brown School.

The following death notices were submitted from April 1, 2020–Nov. 30, 2020. Please contact Development Services at [rmccloud@wustl.edu](mailto:rmccloud@wustl.edu) to report the death of an alumnus or alumna. And please submit full obituaries for consideration to [earlyr@wustl.edu](mailto:earlyr@wustl.edu).

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## 1930-1939

**Virginia (Eppler) Smith**, LA39; May '20

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## 1940-1949

**Sarah (Alexander) Higginbotham**, LA40; May '20

**Elenore Schewe**, AR41; June '20

**Mildred (Yanow) Wallach**, BU41, SW43; Oct. '20

**Dave L. Cornfeld**, LA42, LW43; April '20

**Robert W. Eldredge**, LA43; April '20

**Jerome F. Brasch**, EN44, SI47; Nov. '20

**Beverly (Werner) Abrams**, LA45; May '20

**Joseph S. Bierman**, LA45, MD50; May '20

**Anita (Stanza) Graves**, LA45; May '20

**Rhoda (Alter) Hurwitz**, BU45; May '20

**Margaret (Echols) Ladenberger**, LA45; July '20

**Ann (Perrine) Bauer**, FA46; Oct. '20

**Katharine (Mueller) Kilpatric**, NU46; Sept. '20

**Mary Ellen (Bowman) Simpson**, NU46, NU49; July '20

**Stanley M. Wald**, MD46, HS53; June '20

**Edwin C. Wind**, BU46, GB47; July '20

**Janis (Gordon) Adams**, LA47; May '20

**Elwyn L. Cady Jr.**, LA47, March '20

**Therese F. Dawson**, LA47; April '20

**Marcella (Pepper) Doyne**, LA47; Aug. '20

**Sidney H. Guller**, BU47; Oct. '20

**Fred P. Handler**, MD47; April '20

**Richard T. Henmi**, AR47; July '20

**William D. Hermann**, BU47, GR62, GR67; Oct. '20

**H. Newton Pollock**, BU47; Sept. '20

**Reid Ross**, LA47; June '20

**Bob Ward**, EN47; Oct. '20

**Shirley (Balk) Berman**, BU48; June '20

**Janet (Ames) Borman**, FA48; Sept. '20

**Harry L. Glassman**, DE48; July '20

**Jerold H. Gold**, BU48; June '20

**Harold A. Kennedy**, LW48; July '20

**Shirley (Fulbright) Kirby**, LA48; June '20

**Janet (Jackson) Kruh**, LA48, GR49; April '20

**Joseph L. Oppenheimer**, LA48; Nov. '20

**Helen (Bennett) Paust**, NU48; May '20

**Daniel P. Pierson**, EN48; July '20

**Myron H. Reinhart**, EN48; Sept. '20

**Mary (Henderson) Schleiffarth**, LA48; April '20

**Melba (Foutes) Shapiro**, SW48; April '20

**James J. Skiles**, EN48; Oct. '20

**Allen T. Slagle**, GR48; Aug. '20

**Shirley (Binowitz) Soule**, SW48; May '20

**Warren H. Speiser**, DE48, GD62; Oct. '20

**Jesse W. Spiceland**, GB48; June '20

**Walter H. Weber**, EN48; Aug. '20

**Patricia (Roth) Bry**, UC49; Sept. '20

**James T. Duncan**, MD49; Aug. '20

**Charlotte (Horwitz) Friedman**, UC49; May '20

**Terry (Lazar) Hieken**, BU49; Aug. '20

**John L. Hill**, EN49; Nov. '20

**Kenneth W. Jones**, BU49; Oct. '20

**Marion (Herman) Kienker**, OT49; Oct. '20

**Stanley L. London**, MD49; June '20

John L. Mozley, EN49; July '20  
Peter A. Puleo, EN49; Nov. '20  
Seva K. Twin, LA49; June '20  
Albert O. Wilkat, EN49; May '20  
Robert M. Williams, EN49; May '20  
Stanley L. Zerman, BU49; July '20

## 1950-1959

Otis H. Bowden, BU50, GB53; May '20  
Zoe (Winkler) Braner, NU50; Aug. '20  
Ash Gerecht, LA50; Nov. '20  
Jean (Child) Haldiman, LA50; June '20  
Gerhard P. Hentschke, EN50; July '20  
Charlotte (Westberg) Malotky, NU50;  
April '20  
Walter L. Meyer, MD50; Oct. '20  
Joanne (Stansfield) Parrott, NU50; July '20  
Bernard H. Poelker, EN50; June '20  
Billy E. Rikard, BU50, Dec. '20  
George Rosenthal, EN50; May '20  
Frances (Hrbacek) Sanner, NU50; Sept. '20  
Jerome D. Schneider, BU50; June '20  
Thomas W. Starkey, BU50; Oct. '20  
Lucille (Kennard) Syers, NU50; July '20  
Lois H. Vahle, NU50; Sept. '20  
Anna (Trost) Williams, LA50; July '20  
James E. Bitter, LA51; May '20  
Patricia (Hellerud) Drew, LA51; May '20  
Hans H. Frey, LA51; Oct. '20  
Frederick L. Heger, BU51; April '20  
Leo Hesselberg, LA51; Nov. '20  
Fredrick W. Koenig, LA51; April '20  
Elizabeth (Fischer) Krachenberg, FA51; May '20  
Herman L. Litwack, UC51, SW53; Aug. '20  
Phyllis (Ellinwood) Marshall, LA51, SW69;  
Nov. '20  
Gerald Polinsky, LA51, GR54; April '20  
Lester Sherman, BU51; May '20  
Janet (Lamm) Von Behren, LA51; Aug. '20  
Robert E. Wieland, LW51; April '20  
Perry Zevin, LA51; April '20  
Diane (Stevenson) Zinke, BU51; May '20  
Milton J. Bischof, AR52; Nov. '20  
Marilyn (Williams) Danforth, NU52; April '20  
Bertram V. Dannheisser, DE52; Sept. '20  
Ralph A. Fournier, AR52; Sept. '20  
Melvin Greene, EN52; July '20  
Dorwin E. Hawthorne, DE52; June '20  
Mary (Morris) Hicks, LA52; Nov. '20  
Louis Kilo, BU52; Aug. '20  
Norman G. Litz, LA52; Sept. '20  
Eftichia (Hassopoulou) Macris, LA52;  
July '20  
Ruth (Gadbois) Matarazzo, GR52, GR55;  
Nov. '20  
Bill P. Mohr, FA52; July '20  
Marvin A. Muchnick, BU52; July '20  
Richard J. Reisel, BU52; July '20  
Betty (Kim) Rudolph, BU52; July '20  
William I. Allen, DE53, GD57; Aug. '20  
James R. Arnhart, HA53; Sept. '20  
Robert G. Avis, LA53; July '20  
Donald W. Bean, LA53; June '20  
Edward G. Beimfohr, LA53, LW56; July '20  
Leslie A. Black, AR53; Aug. '20  
Leo A. Guenzburger, BU53; July '20  
Robert L. Lyng, LW53; Nov. '20  
Jacqueline (Howard) Northrup, NU53; Oct. '20  
Edwin M. Olschansky, LA53, BU53; April '20  
Edward L. Potter, EN53; Nov. '20  
Stanford G. Ross, LA53; Aug. '20  
Katherine (Moon) Sargeant, LA53; Sept. '20  
Joel L. Siner, MD53; May '20  
Esther (Albrecht) Turner, NU53; Oct. '20  
Lynn D. Unterbrink, SW53, SW59; April '20

Eugenia (O'Brien) Becker, LA54; Sept. '20  
Joan (Conway) Crancer, LA54; July '20  
Raymond A. Everitt, DE54; Nov. '20  
Catherine (Berry) Feucht, FA54; June '20  
Reva (Weinberg) Funk, LA54; May '20  
Gerald M. Hoxworth, MD54; July '20  
Louis T. Miller, LA54, GR54; June '20  
Judith (Grand) Rubenstein, SW54; April '20  
Paul B. Schipke, FA54; Sept. '20  
Lorna (Kohn) Voss, UC54; June '20  
Thomas W. Williams, MD54; June '20  
Glenn E. Benckendorf, LW55; Aug. '20  
Jerry Brown, BU55; July '20  
Ellen (Bock) Heitz, BU55; June '20  
Melvin A. Hock, EN55; June '20  
Edward Lewin, HS, MD55; April '20  
Raymond W. McCann, BU55; July '20  
John F. Meystrik, BU55; July '20  
Anna M. Peterson, SW55; Sept. '20  
Robert S. Pisarkiewicz, EN55; Nov. '20  
Richard S. Rosenthal, LA55; Aug. '20  
Carol (Metcalf) Spann, LA55; Oct. '20  
Donald H. Tilson, MD55; June '20  
Floyd C. Warmann, BU55; April '20  
James F. Wittmer, LA55, MD57; June '20  
Ronald L. Bradshaw, LA56; April '20  
William L. Brydon, MD56; June '20  
Mary (Ainsworth) Cvengros, GR56; June '20  
William D. Dannenmaier, GR56, GR63;  
Oct. '20  
Robert M. Filler, MD56; July '20  
Nancy (Dahlkamp) Fries, LA56; May '20  
Sally (Speken) Gass, LA56; July '20  
Barbara (Zepf) Grow, LA56; April '20  
Gordon A. Grundmann, EN56; May '20  
Gene R. Hoefel, FA56, Dec. '20  
Dorothy (Shaw) Hubeli, LA56; July '20  
Vivian (Banta) Kattentidt, AR56; Oct. '20  
Alice (Freeman) Kerr, NU56; Nov. '20  
Richard P. Kleffman, LA56, GB59; May '20  
Robert F. Malison, LA56, MD59; Aug. '20  
Robert L. Meyer, BU56, LW57; Nov. '20  
Erwin H. Mild, BU56; Nov. '20  
Norma (Hauschild) Padgett, NU56; Oct. '20  
Gordon D. Pfeifer, EN56; May '20  
Mary A. Rabin, LA56; Oct. '20  
Joan (Rosen) Sessel, LA56; Nov. '20  
Edwin J. Diamond, BU57; July '20  
Richard A. Fogelman, BU57; June '20  
Robert D. Miller, EN57; June '20  
Alexander V. Monto, MD57; Aug. '20  
Dorothy (Vickroy) Nelson, LA57; April '20  
Marilyn (Ogden) Schneider, NU57; July '20  
Ronald F. Yociss, EN57; April '20  
Robert E. Althoff, BU58; Aug. '20  
Bill G. Davis, UC58; Sept. '20  
Stephen A. Hirschmugl, UC58; Aug. '20  
Norton S. Kronemer, LA58, HS65; Sept. '20  
Charles B. Kruse, UC58; April '20  
James M. Macnish, LA58, LW64; April '20  
George W. Petri, EN58; Oct. '20  
Robert W. Radina, LA58; July '20  
Robert J. Robertson, DE58; May '20  
B. Kent Addison, FA59; April '20  
Russell H. Beerman, EN59; Nov. '20  
Arnold M. Goldman, MD59; Nov. '20  
Suzanne (Collins) Hampton, LA59; April '20  
Keith B. Johnson, GB59, GB63; Aug. '20  
David Kelce, BU59; May '20  
Arnold Kreitman, BU59; Nov. '20  
Ronald V. Lindsay, EN59; Sept. '20  
John V. Moellenhoff, EN59; Aug. '20  
Carl G. Riepl, EN59; May '20  
Norman G. Siefert, EN59; Aug. '20  
Melvin A. Solomon, AR59; April '20  
R. Richard Straub, LW59; Nov. '20  
Frederick M. Switzer, LW59, GL74; Oct. '20

James R. Thompson, LA59; Aug. '20  
Thomas V. White, EN59; May '20

## 1960-1969

Robert E. Beitel, BU60, GB61, UC70; Aug. '20  
Richard D. Glassey, EN60; July '20  
David M. Kuhn, BU60; June '20  
Esther Lyss-Greenstein, UC60; Aug. '20  
Gordon R. Miller, MD60; Oct. '20  
Fuad M. Safwat, GR60, GR62; Sept. '20  
Eugene J. Sayfie, MD60; May '20  
Richard C. Bailey, EN61; July '20  
Lavaughn A. Boldt, HA61; April '20  
Ralph H. Deusinger, EN61; Oct. '20  
David W. Dye, LA61; Aug. '20  
James M. Garrison, GR61; Oct. '20  
Allene (Berger) Harding, LA61; May '20  
Philip L. Kapnick, LA61, GR71; April '20  
Burt B. Lasko, SI61; Sept. '20  
Arthur Loomstein, BU61, LW64; July '20  
John D. Morgan, MD61; April '20  
Daniel J. O'Keefe, EN61; Nov. '20  
Jerry L. Redfern, LW61; June '20  
Edwin E. Stark, UC61; July '20  
Joseph C. Stevens, MD61; Oct. '20  
Eugene A. Stampf, UC61; July '20  
Christopher M. Weil, LW61; Aug. '20  
John S. Weyforth, LA61; Oct. '20  
Robert L. Williams, GR61; Aug. '20  
Evan L. Allred, DE62; July '20  
R. Ernest Anderson, GR62; June '20  
Henry Beguelin, EN62, Dec. '20  
Alan L. Bisno, MD62; Aug. '20  
Donald J. Denby, EN62, GB68; April '20  
Sally J. Dobrunz, LA62; Sept. '20  
Oliver D. Dressel, GB62; June '20  
James R. Goggin, MD62; April '20  
Curtis C. Harlin, SI62; Sept. '20  
Robert E. Hasselfeld, EN62; Nov. '20  
Donna Hearne, LA62; June '20  
Richard H. Jacobsen, MD62; April '20  
Richard J. Kovach, EN62, SI67; June '20  
Darwin L. Kraft, UC62; Sept. '20  
Terry A. Mackey, LA62; Sept. '20  
Richard V. Mainini, UC62; Oct. '20  
Gary W. Mockler, UC62; April '20  
Gregory R. Myers, EN62; May '20  
Marcia (Brown) O'Connell, GR62; Nov. '20  
Elizabeth (Spirit) Quinn, UC62; Nov. '20  
John E. Rittmann, MD62; Nov. '20  
Jackie R. Schneider, UC62; April '20  
John A. Schulte, AR62; May '20  
Gerald L. Adlon, UC63; July '20  
Walter C. Brauer, EN63; Aug. '20  
Earl W. Eddins, HA63; July '20  
George R. Fritz, LA63, GR67; May '20  
Richard C. Fulford, HA63; Nov. '20  
Alan L. Goldman, MD63; April '20  
Richard M. Goldstein, EN63, GR66, SI70;  
July '20  
Janet (Reynolds) Kohring, UC63; Sept. '20  
Donald L. Leesor, TI63; Oct. '20  
James E. Loomis, UC63; Oct. '20  
Richard W. Pike, SW63; June '20  
Myrne R. Riley, EN63, SI66, SI68; Aug. '20  
Jane (Lueking) Schneider, LA63; April '20  
Stephen A. Welsh, GB63; May '20  
Fred J. Applegate, UC64; Nov. '20  
Bernard Bloom, EN64; May '20  
Richard S. Epstein, MD64; May '20  
L. Vinson Freeman, UC64; April '20  
John M. Jordan, GR64, GR66; April '20  
Thomas H. Lake, LW64; Sept. '20  
Edward Levinson, EN64; June '20  
Andrew E. Lindberg, EN64, SI67; May '20



Donald O. Merz, UC64; Oct. '20  
Shelley B. Weinstein, BU64; July '20  
Robert S. Bernstein, LA65; Nov. '20  
Patricia J. Casserly, UC65; April '20  
James W. Cabbage, UC65, UC78, UC81;  
Nov. '20  
Nina (Orthwein) Durham, LA65; July '20  
William E. Manz, TI65, TI79; Oct. '20  
Chaille (Bartley) Roberson, LA65, GR73;  
Sept. '20  
Wilbert J. Robinson, GR65; Sept. '20  
James R. Stevens, GB65; April '20  
Irving C. Tang, SI65, Dec. '20  
Don E. Williams, DE65; April '20  
John C. Bettag, TI66; Sept. '20  
William W. Hausman, LA66, GB67; Nov. '20  
Patricia (Johnson) Krippner, NU66; Sept. '20  
David E. Mutchler, GR66, GR70; Sept. '20  
Norman D. Nelson, MD66; May '20  
Marsha (George) Richeson, LA66; Aug. '20  
Elaine (Belenson) Shore, UC66; April '20  
Timothy D. Shultz, GR66; Sept. '20  
Max Zebelman, UC66, GR68; April '20  
Virginia (Cooley) Allen, UC67, SW69; Nov. '20  
Nicole (Nystrom) Baker Pyle, FA67; June '20  
Lawrence M. Brennan, UC67; Aug. '20  
Dennis R. Brophy, LA67, GR68; Sept. '20  
Mary (Park) Cox, GR67; May '20  
Kerry L. English, LA67; April '20  
Patrick M. Gardner, UC67; Nov. '20  
Robert A. Grothe, UC67; Sept. '20  
Judith (Coburn) Harris, GR67, GR70;  
June '20  
Leonard W. Lutz, EN67; Oct. '20  
Robert C. Malone, LA67; Sept. '20  
James B. Munce, DE67; July '20  
Ruth (Beckmann) Murray, GN67; June '20  
Ingrid (Petersen) Reuter, SW67; May '20  
Doris (Goodman) Schumacher, GR67;  
Oct. '20  
Frank R. Yurkoski, SI67; April '20  
Ronald G. Bolhofner, TI68, UC79; Sept. '20  
David L. Danner, DE68; July '20  
Frank L. Dittmeier, UC68; Aug. '20  
William E. Evers, UC68; Sept. '20  
Robert L. Ferdinand, GD68; Sept. '20  
James M. Fillpot, HA68; April '20  
James J. Hager, EN68, SI71; May '20  
Lorenz Kaiser, UC68; July '20  
William J. Muich, UC68; July '20  
John W. Poullain, UC68; Aug. '20  
Paul F. Probst, TI68; Sept. '20  
Sally Schur, LA68; July '20  
Carol (Coppersmith) Shapiro, LA68;  
Sept. '20  
John T. Shaughnessy, GR68; July '20  
William M. Theisen, SW68, SW72; Nov. '20  
Jill (Mirus) Bader, UC69; July '20  
Howard B. Feinstein, LA69; April '20  
Gerard J. Olsen, UC69; Aug. '20  
John J. Sheridan, MD69, HS74; April '20  
Virgil E. Stubblefield, GR69, GR76; April '20

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## 1970-1979

Milton B. Bossch, UC70; June '20  
Rivalie (Sideman) Cohn, UC70; Oct. '20  
George M. Duggan, SI70; Aug. '20  
Lawrence A. Dyck, GR70; Aug. '20  
W. Blair Garff, GB70; April '20  
Robert F. Matusek, TI70, TI72; Sept. '20  
Orville F. Nolle, UC70; Aug. '20  
Michael L. O'Brien, DE70; April '20  
Thomas F. Schuessler, EN70; June '20  
R. Richard Wieland, GB70; April '20  
Asad S. Khailany, SI71, SI72; April '20

Gary K. Lowmaster, HA71; Nov. '20  
Gregory J. Marecek, LA71; Sept. '20  
Edward P. Rose, MD71; Sept. '20  
Richard L. Waddington, UC71; Sept. '20  
Dennis L. Wittman, LW71; Aug. '20  
Constance (Kreitz) Brodhead, UC72, GR75;  
Nov. '20  
David K. Bruce, LA72; May '20  
Phyllis J. Dobin, LA72; Sept. '20  
Ronald J. Faszold, TI72; April '20  
James T. Hillner, UC72; Aug. '20  
Paul J. Huber, TI72, UC75; Aug. '20  
Ronald A. Lowy, GR72; April '20  
Herby O. Pearson, TI72, TI74, UC76; Nov. '20  
William C. Burke Sr., HA73; Nov. '20  
John D. Hirsch, MD73; July '20  
Janet Krupnik, GR73; Aug. '20  
Frederick R. Olwig, UC73; June '20  
Thomas L. Schlesinger, LA73, GB75; Aug. '20  
Francis G. Grelle, GB74; Sept. '20  
Curtis A. Heckman, AR74; April '20  
James S. Kaigler, HA74; Nov. '20  
Richard B. Lewis, UC74; July '20  
William R. Odell, GA74; Aug. '20  
Brian C. Richardson, GR74; Sept. '20  
Alan H. Broadbent, DE75; April '20  
Dunbar P. Gibson, UC75, Feb. '20  
David J. Hoag, UC75; May '20  
Paul N. Kotakis, LA75; Nov. '20  
Andrea (Lite) Myles, FA75; Aug. '20  
Deborah (Kantor) Nagler, LA75; April '20  
Judith (Glenn) Samson, GR75; Oct. '20  
Anice L. Wells, UC75; April '20  
Roy A. Goto, LW76; April '20  
William A. Stack, UC76; April '20  
Wayne W. Stoltz, UC76; May '20  
Kenneth F. Limberg, UC77; Sept. '20  
Jesse Ochoa, EN77; Nov. '20  
Martin C. Sloan, LA77; June '20  
Jack R. Strosnider, UC77; Aug. '20  
Donald T. Balthrop, EN78; July '20  
James F. Mabry, GR78; May '20  
Robert E. Silverman, GM78, MD78; June '20  
Arthur W. Stumpf, GR78; July '20  
Ronald S. Arakawa, DE79; April '20  
Catherine Glim, HA79; Nov. '20  
Charles H. Lockyear, SW79; April '20  
Jose M. Mora, TI79; June '20  
Vernon G. Reiniger, UC79; July '20  
Cheryl (Wroth) Stein, SW79; Sept. '20

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## 1980-1989

Louis C. Brock, GR80; Sept. '20  
Sue S. Freeman, GR80; Oct. '20  
Jeanette Ganousis, GB81; May '20  
Kevin M. Hicks, GR80; April '20  
Douglas M. Monroe, LW81; Sept. '20  
Patricia A. Moore, GR81; July '20  
Lloyd O. Senter, TI81; Oct. '20  
Thomas J. DeGroot, LW82; Aug. '20  
Patricia M. Dunn, SW83; Nov. '20  
Charley Fuchs, BU83, GB84; July '20  
Virginia Haigler, SW83; Nov. '20  
Patricia (Lamore) Otto, UC84; July '20  
James B. Stenkamp, AR84, GA86; June '20  
Maude (Beavers) Barker, GR85; May '20  
Jerry J. Bosse, GR85; May '20  
Michael S. Cetina, LW85; Nov. '20  
Gladys G. White, UC85; July '20  
James Dimos, LW86; Aug. '20  
Nancy R. Kistler, LW86; May '20  
Michael A. Veseth, DE86; Nov. '20  
Debra E. Freed, LA87; June '20  
Sally (Osterweis) Kopman, UC87, GR95;  
April '20

William E. Martin, EN87; July '20  
Christopher J. Phillips, MD87; July '20  
Zachary Matthew T. Edmonds, BU88;  
June '20  
Mary E. Movshin, PMBA88; Oct. '20  
Joy (Urbom) Taylor, LW88; Sept. '20  
Kenneth G. Dodds, TI89, SI91; Oct. '20  
James L. Fuchs, PT89; June '20  
Sambath Keo, DE89; Sept. '20

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## 1990-1999

Riyad E. Moe, EN91; Aug. '20  
Robert W. Kurzu, EMBA92; Sept. '20  
Anthony M. Zelazny, MD92, HS96; June '20  
William J. Graves, GR93; April '20  
Mark Nunge, MD93; Nov. '20  
Khalid Sherdil, EN93, EN93; May '20  
John G. Stallings, GB93; Nov. '20  
William D. Kelp, UC94; April '20  
Laura M. Reeb, EMBA94; Sept. '20  
Winfred R. Richardson, UC94; April '20  
Michael D. Pally, LW95; April '20  
John M. Dailey, EMBA97; July '20  
Jennifer L. Edwards, SW98, UC09, UC09;  
May '20  
Martha E. Simpson, EN98; Aug. '20  
Alicia (Dibenedetto) Di Benedetto  
Neubauer, AR99; April '20

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## 2000-2009

Kathleen Fry, SW00; April '20  
Christopher J. Gutierrez, GR00, GR05;  
Aug. '20  
Michael Standing Soldier, SW00; Sept. '20  
Katherine A. Bradfield, GR01; April '20  
Finley Kipp, LA01; April '20  
Paul A. Deatherage, LA05; Aug. '20  
Janice M. Houf, UC06; May '20

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## 2010-2019

Sheila J. Rivera, SW10; April '20  
Rohit K. Ray, EN11, EN11; July '20  
Timothy Tsang, LA14; Sept. '20  
Jonah N. Liebman, LA16; April '20  
Rajan P. Laddu, LA17, LA17; Nov. '20  
Nicholas Weiskittel, LW17; Oct. '20  
Dianna Derigo, OT18, OT19; June '20  
Kenneth Geisler, LW18; May '20  
Momoko Oyama, LA18, LA18, MD22; June '20  
Elizabeth Wolfson, GR19, UC19, GR19, UC23;  
Nov. '20

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## 2020-2029

Natalie A. Sorenson, EN23, EN23; May '20



...STRANGE NEW  
...HIDDEN FROM  
...BY A CONCEALING  
...OF GIANT TREES.

IT'S TRULY A  
JUNGLE... BUT  
LIKE NOTHING EVER  
SPAWNED BY  
NATURE! IT'S A  
MAN-MADE JUNGLE!

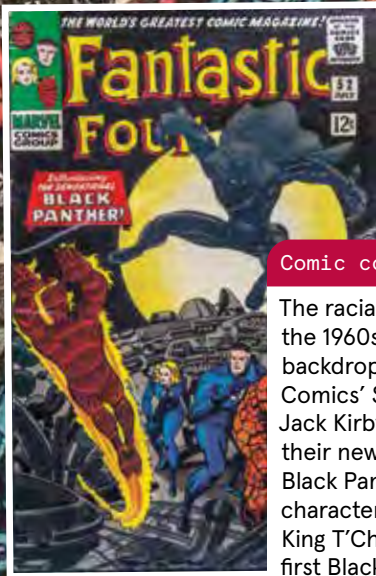
INDEED, YOU ARE  
CORRECT! THE ENTIRE  
TOPOGRAPHY AND FLORA  
ARE ELECTRONICALLY-CONTROLLED  
ARE VERY BRANCHES ABOUT US ARE  
COMPOSED OF DELICATELY-  
CONSTRUCTED WIRES...

WHILE THE  
FLOWERS WHICH  
ABOUND HERE ARE  
HIGHLY COMPLEX  
BUTTONS AND DIALS!  
EVEN THE BOULDERS  
CAN BE HEARD TO  
HUM WITH THE  
STEADY PULSE  
OF COMPUTER  
DYNAMOS!

THEN, NO SOONER DOES THE AMAZING SHIP COME TO A VIBRATIONLESS HALT, THAN...  
OUR GUIDE!! HE'S GONE!  
HE VANISHED BEHIND A  
NETWORK OF TUBES AND  
COILS!

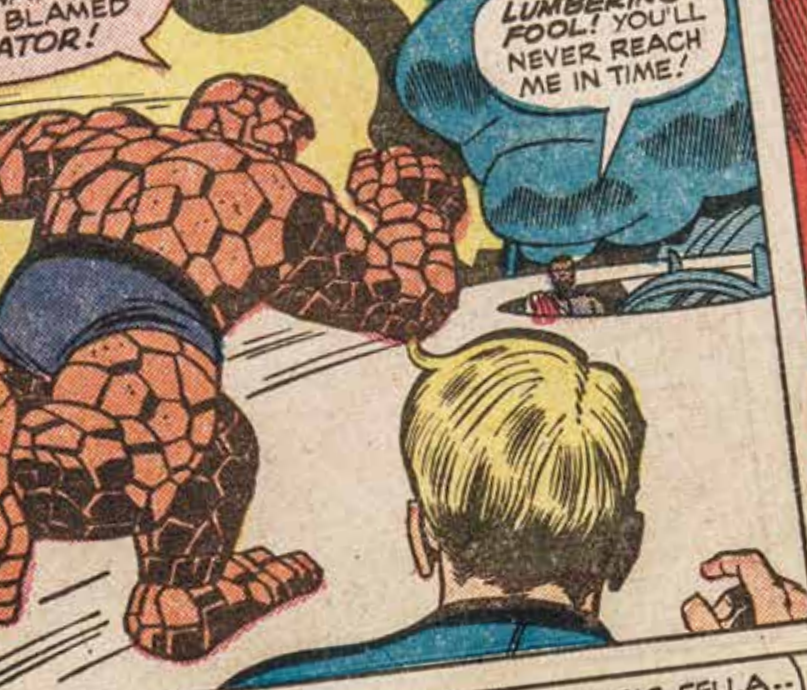
STAY TOGETHER... ALL OF YOU! WHOEVER  
CREATED THIS ELECTRONIC NIGHTMARE HAS  
KEPT IT A SECRET FOR SOME DEADLY  
REASON!

PHOOEY! IT'LL TAKE  
MORE'N A MESS'N  
CHROME-PLATED N  
'N BOLTS TO SCAR  
ME!



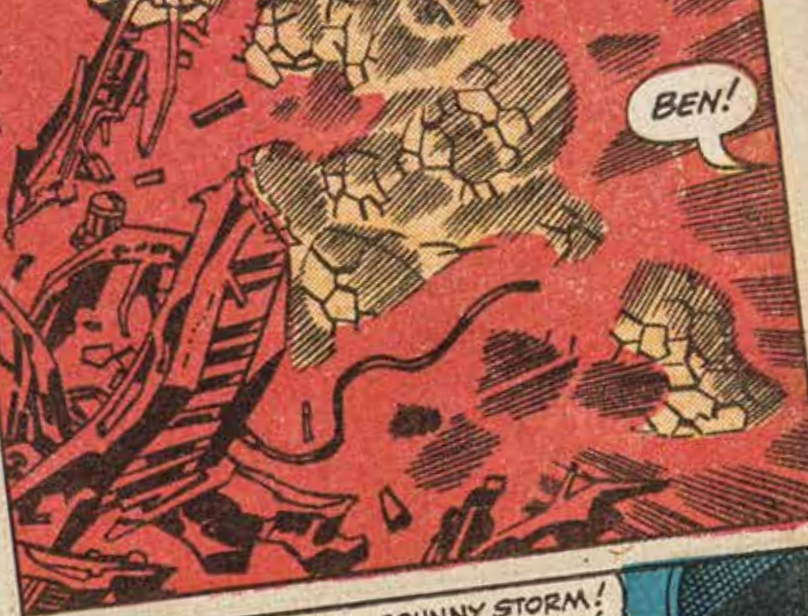
Comic consciousness

The racial injustices of the 1960s provided the backdrop that Marvel Comics' Stan Lee and Jack Kirby used to create their new character, Black Panther. The character's alter ego, King T'Challa, was the first Black superhero to debut in U.S. comic books. WashU's Douglas B. Dowd Modern Graphic History Library offers researchers multiple editions of *Black Panther*, including the first issue, as part of the library's robust comic book collection that spans more than 90 years.



BLAMED  
ATOR!

LUMBER  
FOOL! YOU'LL  
NEVER REACH  
ME IN TIME!



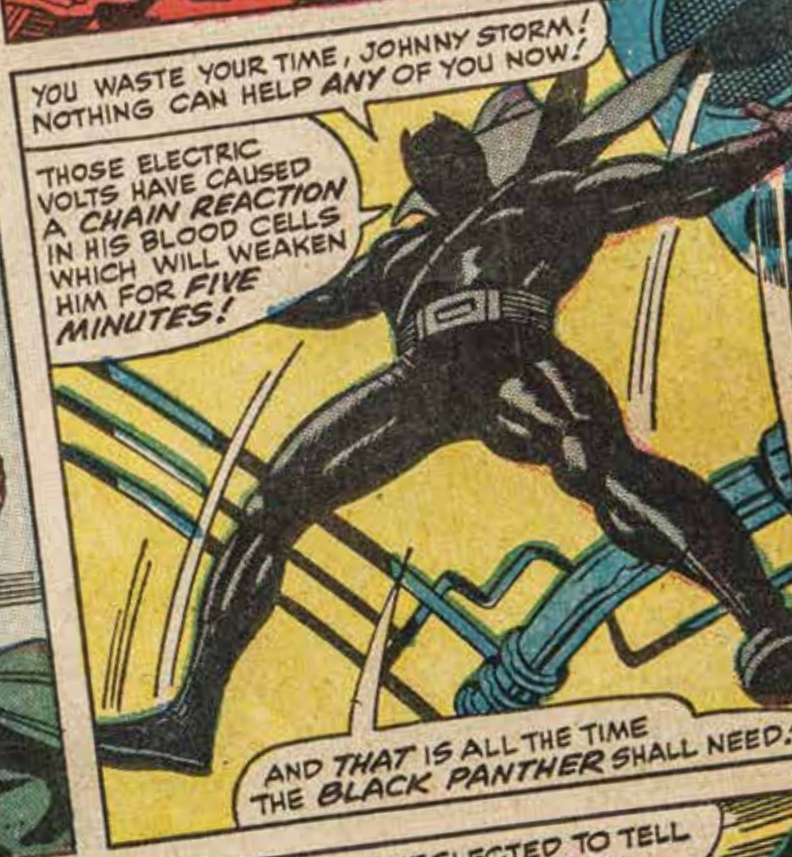
BEN!



IT WUZ A TRAP!... SOME  
KINDA ELECTRIC SHOCK...  
WAITIN' FER WHOEVER  
TOUCHED THAT METAL!

EASY, BIG FELLA...  
EASY! LEAN ON  
ME, BEN... I'LL  
HELP YOU!

BUT... WHAT'D IT DO  
TO ME ?? I... I'M AS  
WEAK AS A BLAMED  
YANCY STREETER...!



YOU WASTE YOUR TIME, JOHNNY STORM!  
NOTHING CAN HELP ANY OF YOU NOW!

THOSE ELECTRIC  
VOLTS HAVE CAUSED  
A CHAIN REACTION  
IN HIS BLOOD CELLS  
WHICH WILL WEAKEN  
HIM FOR FIVE  
MINUTES!

AND THAT IS ALL THE TIME  
THE BLACK PANTHER SHALL NEED.



'TWAS I WHO INVITED YOU FOR THE HUNT!

BUT, I NEGLECTED TO TELL  
YOU ONE THING...

IT IS YOU  
WHO SHALL BE  
HUNTED!

## Imagining

Love' is finding  
the familiar dear.  
/ 'In love' is to be  
taken by surprise.

— **Mona Van Duyn**  
(1921-2004), U.S. Poet  
Laureate, 1992

To celebrate National  
Poetry Month, we're  
offering poems, stories  
and video readings  
from WashU poets;  
visit [source.wustl.  
edu/2021/4/washu-  
poetry/](https://source.wustl.edu/2021/4/washu-poetry/).

