

COVID Survivors Get New Lungs p. 13 ... Northwestern's Miracle Maker p. 26 ... Teaching All of America's Past p. 40 ... Robot Quarterback Hits the Field p. 46 ... A New Podcast Standard p. 64

"I'm a person of faith, and the Bible gives me a glimpse into what is beyond my science." p. 9

Northwestern

WINTER 2021



KATHRYN HAHN

Gets Messy

Screen star finds creative freedom in complexity.
p. 34

Skyline Swim
Chemistry professor William Dichtel planned to swim the English Channel in June 2020, but the pandemic interrupted those plans. Instead, he completed the Chicago Skyline Swim, which runs the length of the city in Lake Michigan. Finishing the overnight swim in a record 12 hours, 27 minutes and 50 seconds, he swam 26.2 miles from Juneway Beach in Rogers Park to Calumet Beach in Calumet Park. Dichtel, the Robert L. Letsinger Professor of Chemistry, is co-founder of Cyclopure, a company that uses innovative technologies to remove micropollutants from water.



PHOTO: SHANE COLLINS

Firefly Procession

With in-person theater shut down due to the pandemic, members of the Northwestern arts community brought safe, outdoor performances to Chicago-area communities last summer and fall. The Art of Spontaneous Spectacle, organized in part by associate professor of theater Jessica Thebus '91 MA, '97 PhD, produced socially distanced participatory processions along Chicago's lakefront with props, life-size puppets and music. A crowd of roughly 75 people of all ages participated in the "Firefly Procession" at Loyola Beach on Chicago's North Side in September.



PHOTO: JUSTIN BARBIN '11

Contents



34

Free to Play

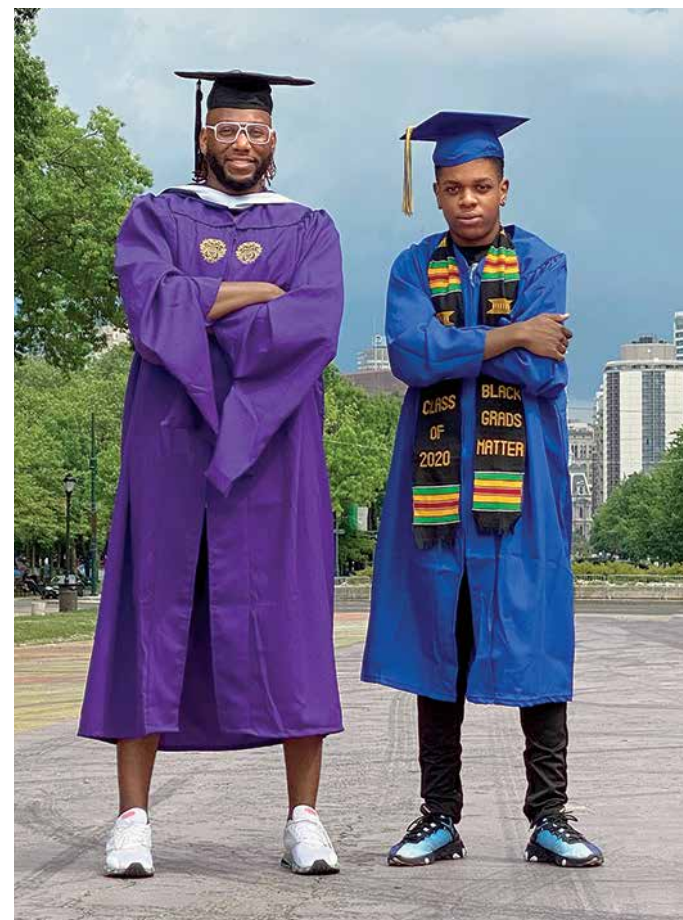
After a number of parts in “big-swing comedies,” Kathryn Hahn ’95 moved to more substantial roles that cemented her place as a sought-after star. It’s clear now that she’s in love with her work: the deep dives into character, the exploration and messiness each role brings, the dedication to her fellow actors — and the creative magic that results.

By Clare Milliken

13

Hope After COVID

Northwestern Medicine surgeons perform double-lung transplants, giving new life to seven COVID-19 survivors.



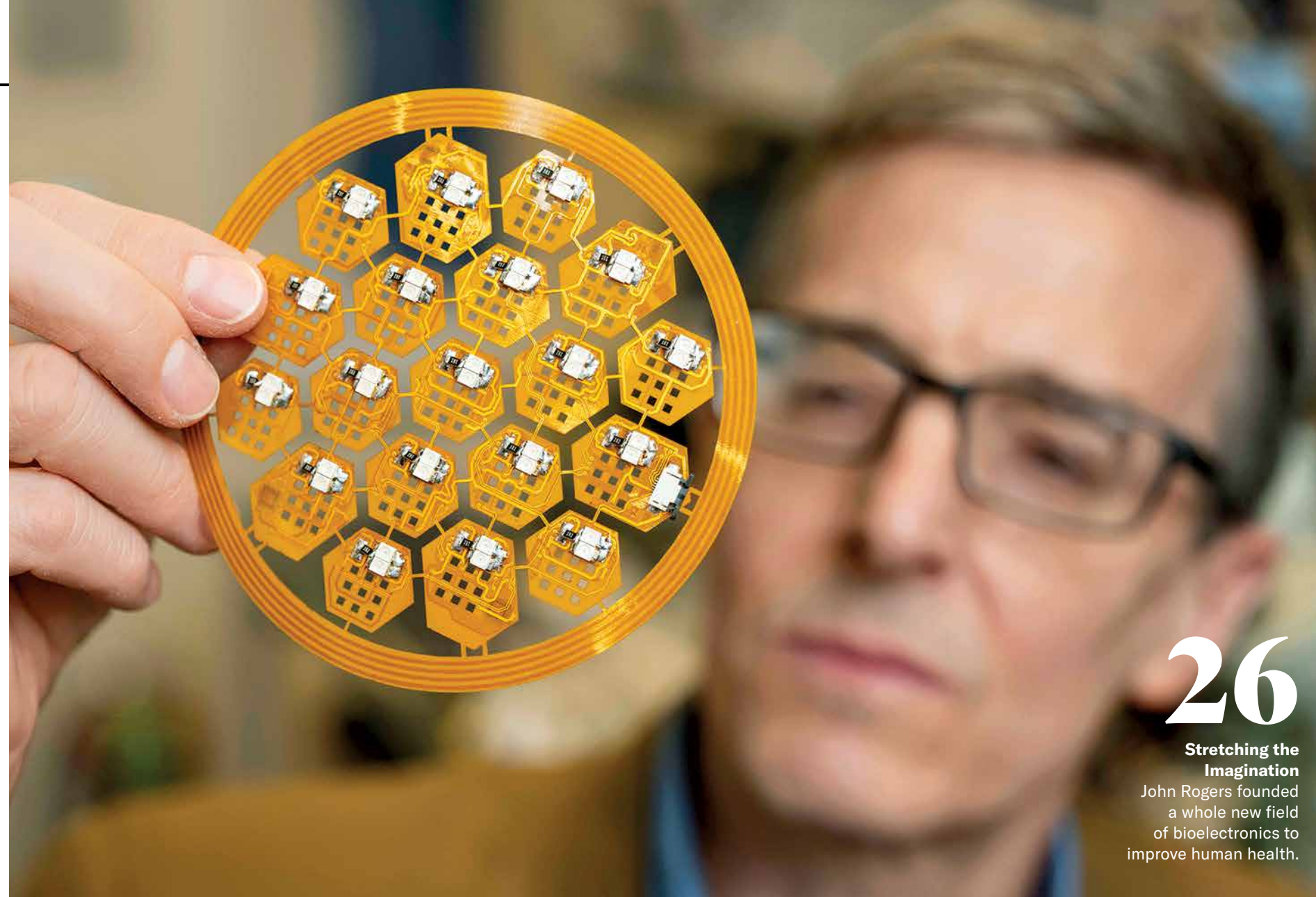
40

← “We have a responsibility to situate all of our work in a historical context so we can realize that history isn’t this thing of the past, but it’s something that we experience now.”

—Evanston Township High School history teacher Corey Winchester ’10, ’20 MA, left, with his brother, Jason Deas, who graduated from high school in 2020

HAHN: BRIAN HIGBEE; WINCHESTER: ANYA WINCHESTER

Cover: Photograph by Michael Friberg



26

Stretching the Imagination

John Rogers founded a whole new field of bioelectronics to improve human health.



47

Star Baker

Alex Willis ’17 MS earned fourth place on *The Great American Baking Show*.

ROGERS: JIM PRISCHING



18

Big Cities Still Matter

Innovation depends on the rate of human interaction. Kellogg professor Hyejin Youn identifies a key population threshold that allows large metro areas to become innovation hubs.

WINTER 2021

Vol. 23 Issue 2

FRONT

1 Moment

6 Talk Back

VOICES

9 Gerald Gabrielse

Balancing science and faith in uncertain times

11 Olivia Pura

Bioscientist finds silver linings in a pandemic graduation

NEWS

16 Student Life

The show must go on for theater groups

21 Innovation

COVID-era bus design wins international competition

“WE WILL” UPDATE

22 Social Justice

Donor gifts advance diversity, equity and inclusion

ALUMNI

46 Five Questions

Sports tech innovators create a smart quarterback

50 Class Notes

67 In Memoriam

72 The Other Cover

John Rogers tests his latest technology — on himself



A NEW CHAPTER FOR NORTHWESTERN MAGAZINE

Hello and Happy New Year! Have those words ever sounded so sweet?

Welcome to 2021. It's time for a fresh start!

I want to take this opportunity to introduce myself. My name is Sean Hargadon, and I am the new editor in chief of *Northwestern Magazine*.

Though I am new to the position, I am certainly not new to the magazine or the University. Since 2003 I have been part of the team that has brought you *Northwestern* as a print publication and, increasingly, via our digital magazine and email newsletter.

At its heart, an alumni magazine should continue your relationship with the university, while also educating, entertaining and building community. Our team strives to bring you outstanding content in a sophisticated design, addressing key national and global topics across all disciplines. Our goal is to create a magazine *anyone* would enjoy reading.

My vision is to welcome new voices into the

magazine and to add diverse perspectives from across the University community while continuing to tell stories that endear and enlighten.

In short, we want to bring you the best stories about the University and its people. And we want to bring those stories to you in the format that works best for you. In addition to producing three print issues per year, we will continue to make our digital magazine a place to see and hear more from the people who make Northwestern great.

And while we're talking about people who make Northwestern great, I would like to recognize former executive editor Stephanie Russell for her three decades of outstanding service to the University and her leadership of, first, *Northwestern Perspective* and, for the last 20 years, *Northwestern Magazine*.

Stephanie loved sharing stories about the University and its people and bringing humanity to this institution. It's been an honor to work with her, and we wish her all the best in retirement.

In closing, I hope that you and your loved ones are safe and healthy. I look forward to connecting with you via email at letters@northwestern.edu, across social media @NorthwesternU and, yes, via good, old-fashioned letters mailed to 1603 Orrington Ave., Suite 200, Evanston IL 60201.

I hope that you enjoy this issue of *Northwestern Magazine*.

Sincerely,
Sean Hargadon

Talk Back

DOCTOR BECOMES PATIENT

Ryan, from what I remember, you always had a positive outlook in our college days. So while I am thankful you are still alive and with us, I'm not completely surprised you were one of the fortunate ones to beat COVID-19. All the best to you in your adventures ahead. Cheers! [In response to the profile of Ryan Padgett, "Doctor Becomes Patient," "The Stories of Our Lives," fall 2020.]

*Jim Miller '93
Wilmington, Del.*

Ryan Padgett was a star student in my neurobiology and behavior class. I moved the final exam so he could attend an NFL tryout, but he did not reciprocate with Rose Bowl tickets. So I waited in line at 6 a.m. in Evanston's cold December, got tickets for myself and my son and followed Ryan and the team to Pasadena, where we saw a great game!

Ryan, glad you recovered.
*J.P. Rosenfeld
Professor of psychology
Glencoe, Ill.*

IT'S TIME TO ABOLISH SCHOOLS

Thank you for publishing kihana miraya ross' opinion piece "It's Time to Abolish Schools" [Voices, fall 2020] — and thank you to kihana for writing it! I've witnessed firsthand that our education system does not work for Black students the same

way it works for me, and now I work at a higher education institution where anti-Blackness prevails throughout campus. It's frightening to think that we're clinging to white supremacist structures.
*Caitlin Klask '13 MS
Seattle*

Several ideas in kihana miraya ross' faculty opinion strike me as highly problematic. She charges that "students may learn that brutally enslaved Africans (enslaved in the first place by other Africans, it should be mentioned) were 'workers' who came to the U.S. in the context of immigration." Maybe some moron said or wrote that, but such nonsense is certainly not in significant works on slavery published since Kenneth Stamp's *Peculiar Institution* (1956). I majored in history at Northwestern and never heard such an idea there.

Her idea of anti-Blackness, I take it, relates to anti-Semitism. There are certainly parallels between the two. But Professor ross must know that Nazi anti-Semitism meant the destruction of the Jews. A handful of lunatics, no more, proposes that end for the American Black population. Meanwhile, Northwestern and every other major university and many other groups and organizations are now deeply engaged in anti-anti-Blackness. Anti-Blackness does exist in this country; yet Ross teaches at Northwestern; four other, apparently Black, professors

are featured on page 10 ["Profs Discuss Racial Justice," Voices, fall 2020]; and Attica Locke gets a glowing article ["The Write Path," fall 2020]. So it is possible for talented Black people to get excellent jobs and speak openly about American life. If anti-Blackness is still a policy anywhere, it is under strong attack.

Ross' suggestion to abolish schools may be only a provocative idea, but she presents no alternative. She has every right to be enraged about discrimination and the murder of Black people. However, as hard as it may be for African Americans, we all need to speak calmly, refer to major studies of slavery and injustice, and recognize current remedial efforts as we work to fix our society.
*Robert W. Thurston '71
Oxford, Ohio*

INVENTION: AN IMPROVED SWAB

The creation of a new nasal swab ["An Improved Swab," Innovation, fall 2020] is great news. I recently had to take a COVID-19 test and was astounded at how far back the swab had to go. So unpleasant.



Glad to see that Northwestern is at the forefront of innovation in the midst of the global pandemic.
*Josh Zulli
Santa Clara, Calif.*



A NORTHWESTERN LEGEND

As duly noted in the title "A Legend Retires" [Close-up, fall 2020], Shep Shanley is indeed a legend who has made an enormous impact on the minds and lives of thousands of Northwestern students. To congratulate Shep and recognize his extraordinary 50 years at Northwestern, 70 Northwestern and Willard Residential College alumni worked in secret to organize a surprise tribute in the form of video messages, photographs and written messages that express what their time at Willard and Northwestern means to them. This inspired 36 video testimonials (featuring individuals and groups), hundreds of photographs and a huge volume of written messages, all filled with joyous reflection and an outpouring of respect, gratitude and appreciation.

The alumni testimonials are highly consistent on many points: Shep knew us from our applications and interviews, before we

ever moved on campus. He greeted us when we arrived and welcomed us as adults, free to declare ourselves on our own terms. At Willard, he maintained a custom of inviting groups of newly arrived freshmen to his home for Sunday brunch, an experience many alumni recall vividly to this day. Shep would often join us for lunch in the Willard cafeteria and regularly led the French-speaking table. He was the undisputed guest of honor and guiding presence at all our events and parties — entirely with, but not of, the flock.

At Willard, Shep created and curated a culture of respect, consideration and curiosity. Supporting an agenda that centered around a joyous embrace of life, he led by example with graciousness, warmth and wisdom. Through Willard, he provided a context that informed us of who we had become as adults and showed a wonderful example of what adulthood could be. And to a very large number of us, Shep has become a lifelong friend.

There will come a time — soon, we all hope — when students will again be allowed to fully join one another in the thriving river that is university life. Those tasked with relighting the fires in the temples of society and leading the social reopening would do well to consider Shep's contributions to Northwestern and Willard Residential College and the remarkable community that stands united as his legacy.
*Kenneth J. Schaeffe '90
New York City*

Editor's note: More than 70 alumni co-signed this letter.

"Shep Shanley is indeed a legend who has made an enormous impact on the minds and lives of thousands of Northwestern students."

— Kenneth J. Schaeffe

I must be Shep's mistake.

Or maybe he was on vacation the day my application was reviewed. Whatever, Northwestern admitted me. And it has been a privilege to know Shep and a singular pleasure to have enjoyed his wonderful personality over the subsequent decades. An added bonus, I also got to know his delightful father, Lyn. The apple, as my mother often said, doesn't fall far from the tree. And Shep and his father have been and had been metaphorical trees on the Northwestern campus for generations: welcoming, graceful and stately.

Holy God, I'll bet I wrote something really awful and totally sappy like that on my application essay! And they still let me in! Like I said, I must be Shep's mistake. I'm happy that he made one.
*Kevin Leonard '77, '82 MA
University archivist
Evanston*

It brings tears to my eyes to think that Shep is retiring. As an Alumni Admission Council member for more than 25 years and a director for most of that time, I know the AAC would not have been

Northwestern Magazine

VICE PRESIDENT, OFFICE OF GLOBAL MARKETING AND COMMUNICATIONS

Jeri Ward '01 MEM, MBA

ASSISTANT VICE PRESIDENT, CHIEF CREATIVE OFFICER

Andy Madorsky '86 MS

EDITOR IN CHIEF

Sean Hargadon

ART DIRECTOR

Christina Senese

ASSISTANT ALUMNI

NEWS EDITOR

Lena Elmeligy '18

DIRECTOR OF CREATIVE PRODUCTION

Martin Wilson '10 MS

PUBLICATIONS DIRECTOR

Anne Egger

EDITORIAL CONTRIBUTORS

Mohamed Abdelfattah, Lindsay Beller, Deborah Cassell '00 MS, Nancy Liskar, Roseann Mark, Clare Milliken, Jeff Strayer

DESIGN CONTRIBUTORS

Sarina Benoit, Heather Cosgrove, Henry McGill, Mark Meyer

EDITORIAL INTERNS

Lainey Dow '23, Sophia Lo '22, Jacob Munoz '21, Fred Tippet '22, Emma Yarger '23

EDITORIAL ADVISORY BOARD

Krishnan Anantharaman '91, chair; David Beard '81; Emily Chow '12; Alex Freund '17, '20 JD; Alex Garcia '89; Adrienne Samuels Gibbs '99; Ryan Haggerty '07, '16 MS; Jerry Lai '04; Robert Leighton '82; Mike McGee '10; Cate Plys '84; Gita Pullapilly '00 MS; Christina Rosales '11; Joshua Rosenblat '17; William Weinbaum '82, '83 MS; Steph Yiu '08; Cat Zakrzewski '15

© 2021 Northwestern University. Northwestern Magazine is published in fall, winter and spring. All Rights Reserved. Produced by the Office of Global Marketing and Communications, 1603 Orrington Ave., Suite 200, Evanston, IL 60201. Telephone: 847-491-5000 Website: alummag.nu

Views expressed in Northwestern Magazine do not necessarily reflect the opinions of the editors or the University.

ADDRESS CHANGES

Mail to: Alumni News Editor Northwestern Magazine 1603 Orrington Ave., Suite 200 Evanston, IL 60201

Email: address-change@northwestern.edu

Web: magazine.northwestern.edu/change-your-address

the same without Shep. He was and will always be family to all of his AAC directors. I know I am a better person for having had him as a mentor.

Shep, I wish you a wonderful retirement and thank you for making Northwestern such a warm and special place. Michelle Frankenstein Hoffman '83 Leawood, Kan.

I worked with Shep at Northwestern for a relatively brief time. I did not smoke, but he always invited me outside while he got his nicotine fix. I always said yes.

We had many lovely, thoughtful, endearing conversations, and I learned so much.

That first May, this Southern girl was standing there, freezing in her coat in the wind. The poor daffodils were barely up and looked as though they wanted to dive back under the bits of snow still scattered on the ground. I looked at Shep and said, “This is a poor excuse for May.” Shep looked at me with his memorable, wry look and said, “Well, no one moves to Paris for the weather.” Now that I live in the Northwest, I use that line all the time. And smile thinking of Shep. Every time.

Dear friend, stay well and enjoy your next adventure. Kimberly Crouch Portland, Ore.

GRATITUDE FOR FINANCIAL SUPPORT

For personal reasons, I appreciated the short article in the fall 2020 issue on a special fund set aside to help meet emergency financial needs [“Showing Support,” “We Will” Update]. It noted that since 2017, Student



Emergency and Essential Needs funds have provided such resources.

I don’t think it had a special name at the time, but in the late 1970s Northwestern also maintained such a fund. As I remember it, I applied for and received an immediate \$25 “loan” to help make it through the weekend at a time when I was literally broke. More broadly, thanks to financial assistance from Northwestern, I graduated from Medill in 1979, embarking on a 32-year foreign service career that included service as U.S. ambassador to Mongolia. Jonathan Addleton '79 Macon, Ga.

LOCAL NEWS INITIATIVE

The Local News Initiative [“Fighting for Local News — and Democracy,” fall 2020]

has done some great work, but I think many of these ideas assume an outsized view of the tech capability on the staffs of local news sites.

We’ve been successful at Mission Local in publishing first-rate content. But if I knew what I know now, I would never have started a local site without a strong tech person on board as an equal partner. All of the experimenting around engagement really requires that — even much of the innovative storytelling needs some tech expertise. My first piece of advice to anyone interested in starting a local site would be: Don’t do it without a full-time tech person.

Lydia Chavez San Francisco

Read more letters from our readers on our website at magazine.northwestern.edu/talk-back.

DOUG CHAYKA

SHANE COLLINS

Voices

FACULTY OPINION

Science and Faith in Strange Times

By Gerald Gabrielse

A great mystery of modern physics is that the fundamental mathematical description of physical reality (the Standard Model of particle physics) accurately predicts the results of all laboratory measurements and yet is unable to explain basic features of our universe — for example, how a universe made of matter survived annihilation after the Big Bang.

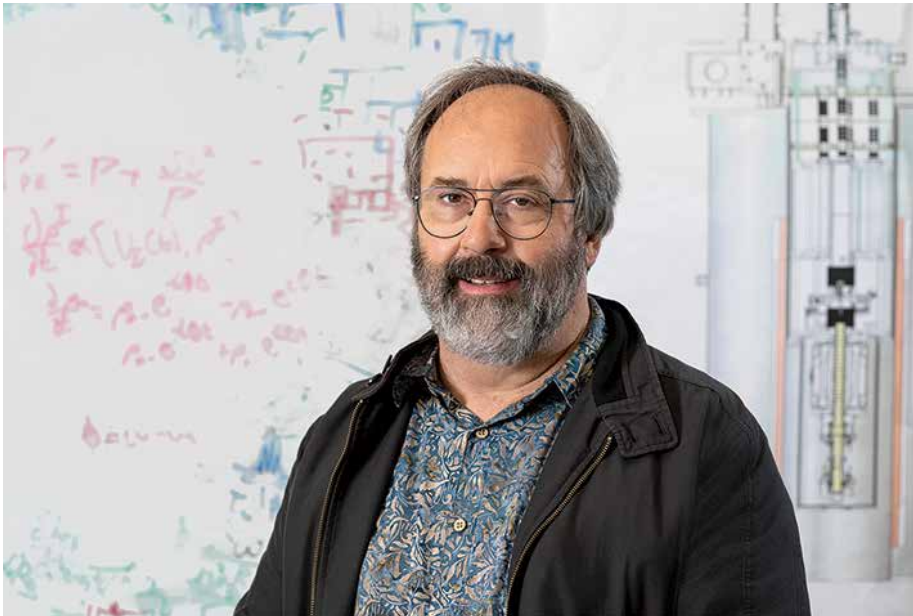
It has been my privilege to work with 50 Harvard and Northwestern doctoral students investigating this mystery. We measure an electron’s magnetism — by

suspending a single electron for months using batteries and magnets — to test the most stringent prediction of the Standard Model. We also use lasers to produce molecules within which we probe for lumpiness in the electron charge that would indicate new physics beyond the standard description.

I’m a person of faith, and the Bible gives me a glimpse into what is beyond my science, introducing me to a God who is intensely proud of the reality he wills into being. I believe that there is delight in heaven as my students and I peel back the layers of God’s “onion.” This motivates me and frees me to do curiosity-driven science well before I perceive how the insights to be gained will profit a modern society.

My God — a God worth having — is far beyond description using the language of human experience and the methods of science. There can be no contradiction between what science reveals about the physical reality that such a God sustains, and the peek beyond that reality that God provides in the Bible.

Physicists and Christians seem like natural allies to me. Awed by the vast and intricate universe, both celebrate a reality



↑ Gerald Gabrielse

that is infinitely larger than we are and acknowledge our small place as temporary caretakers of planet Earth. Verification of what is true is intrinsic to the scientific process. My Christian faith also requires truthfulness. I must honestly acknowledge my place in God’s universe, that I am unable to live up to God’s standards, that I need forgiveness, and that I must accept the redemption offered by Jesus Christ.

A troubling feature of our strange times is that oft-repeated false statements are increasingly accepted as alternatives to reality-based findings. False statements about the COVID-19 threat, the number of deaths, the efficacy of face masks, the need and role for testing, bogus therapies, and the timeline for creating and injecting safe vaccines continue to result in much needless death. False claims that our greenhouse gases are not substantial contributions to climate change keep us from preserving the fragile atmosphere and minimizing weather extremes of the planet in our temporary care. The clear correlation between gun availability and homicides, both of which are enormously higher in the U.S. than in other developed countries, is denied. Reality-based truth is ignored as new “rights” to infect or to carry battlefield weapons are promoted.

I feel special pain that evangelical Christians quoted by the news media often espouse “alternative facts.” Identifying with this group is now hard for me. How can those who proclaim the value of life be in denial about COVID-19 deaths or campaign for open access to assault weapons? How can those who realize that we live on God’s Earth deny what the greenhouse gases we could limit are doing to the atmosphere provided for our protection? Is it right or effective to obtain short-term political power to enforce moral standards if the cost is empowering those who egregiously deceive and violate these standards?

To this scientist and person of faith, it seems urgent to reverse the acceptance of “alternative facts” that propagate so rapidly in our strange times. Scientists, people of faith and Northwestern alumni need to speak up. Silence is complicity.

Gerald Gabrielse, a member of the National Academy of Sciences and the American Academy of Arts and Sciences, is a Board of Trustees Professor in Physics and director of Northwestern’s Center for Fundamental Physics.

SOUND OFF

Understanding Incivility

What has led to the current divisiveness within the United States, and how has that impacted civility and the ability to compromise?

Jamie Druckman '93, Payson S. Wild Professor of Political Science and associate director of the Institute for Policy Research



"Starting in the 1970s and '80s and increasingly into the 21st century, we've seen an ideological sorting. We've also seen demographic sorting, so racial minorities, lower-income individuals and less religious people have sorted into

the Democratic Party, whereas more religious people, rural people and wealthier people have sorted into the Republican Party. On top of that, we've seen the return of partisan media accentuating these partisan differences and creating distinct information worlds. So people are generating these perceptions of the other side — actually in a fairly inaccurate fashion — as being so different from themselves because what they're seeing is not the modal member of the other side but rather the extreme, so the other side looks totally incomprehensible."



Mikala Stokes, third-year doctoral student in history

"I think the current age of incivility is a reflection of the country's persistent inability to acknowledge the legacy of white supremacy and

systemic racism. It's like telling a friend that they've hurt you, only to be dismissed and told to get over it. From that relational perspective, it would be really hard to be civil if two parties can't come together and acknowledge the basic record of hurt and pain. That's what's happening among Americans."



Laurel Harbridge-Yong, associate professor of political science and a faculty fellow at the Institute for Policy Research

"Even from members of Congress we see that if you're not on my team, you're anti-American. The same is true among the public. A person's political party has become increasingly aligned with their other social identities. This helps make party allegiance an increasingly salient social identity, leading to in-group favoritism and the desire to maintain psychological distance from the out-group. This focus on partisanship as a social identity makes it easy to demonize the other side and live in a bubble among people who think like you do."

Tabitha Bonilla, assistant professor of human development and social policy and of political science and a faculty fellow at the Institute for Policy Research

"As presidential candidates take positions with more explicit promises, voters react much more strongly to those policy positions. I can't say that the promises themselves are what's causing the incivility, but I do think promises reinforce it. Voter responses to candidates who promise are polarized. My research demonstrates that elected officials are making more promises than they used to, meaning their policy positions are more committed. There is a lack of room for these candidates to compromise because they're trying to mobilize voter bases."



SOCIAL FEEDS

The Northwestern community remembered the life of Supreme Court Justice Ruth Bader Ginsburg '98 H, who died Sept. 18. Ginsburg delivered the Northwestern Commencement address in June 1998 and visited Northwestern Pritzker School of Law in 2009.



"Rest in power RBG. Thank you for everything you have done and for being a true inspiration to us all."

@shreyarajappa @

"RBG was the Commencement speaker at my PhD graduation from @NorthwesternU. I was fortunate to get to shake hands with her onstage. I still remember her wonderful speech about feminism."

@AmeetRKini @

"RIP #notoriousrbg. You've taught me so much, most importantly, how to use my voice to fight for others, even when I am afraid of being silenced or viewed as too emotional for being a woman."

@erin.elizabeth25 @

DRUCKMAN: PATRICIA REESE; HARBRIDGE-YONG: JIM ZIV; BONILLA: STEVE DREY; GINSBURG: STEVE ANZALDI '10 MS

By Olivia Pura '20

Miss Illinois USA 2020 and a first-year doctoral student at the University of Chicago



MY NORTHWESTERN DIRECTION

Silver Linings from a Pandemic Graduation

No lecture, seminar or Norris Mini Course could have prepared me for the upheaval of graduating in the Class of 2020. In a matter of weeks, my future — a meticulously and beautifully arranged house of cards — was blown apart. I'm a planner who loves organization and consistency, so this change was incredibly disheartening at first. Over time, however, I've begun to appreciate the chaos as I learn to play the new hand I've been dealt.

One silver lining: I've found space for creativity. After months of brainstorming, trading emails and watching YouTube tutorials, my classmate Drew Zbihley '20 and I launched our podcast, *Science in Society*, in August. It features interviews with experts who break down the science in everyday life —

from the effects of caffeine on the body to the relationship between sleep and chronic disease — in a way that's understandable, practical and fun. I'm never at a loss for words. And now to have a purpose for those words — and have fun while I'm at it — is so rewarding.

I've also found time for reflection. I'm focusing on the present and looking forward to the future. This fall, I began a biochemistry and molecular biophysics doctoral program at the University of Chicago, and my ultimate goal is to become a professor. As a first-generation Polish American and first-generation college student, I have immense gratitude for receiving an education that may one day allow me to provide education for others.

My love for research has its roots at Northwestern. The NU

Bioscientist Program provided a perfect outlet for my curiosity. The program prepares a select group of first-year undergraduates — primarily first-generation, low-income and underrepresented students — for research and grant writing through mentor-mentee matching and seminar courses.

My first research project entailed swabbing sinks and toilets in hospitals and analyzing any *Pseudomonas aeruginosa* bacteria that were present. These are the bacteria responsible for many hospital-borne infections. Believe it or not, I fell in love — with the research process! The swabbing part? Not so much.

Junior year I began more advanced research with Professor Tom Meade. My project investigated cobalt complexes as inhibitors of cellular pathways. In particular, I looked at pathways that cause basal cell carcinoma (skin cancer) and medulloblastoma (brain cancer).

I credit Professor Meade with shaping much of my academic journey; his enthusiasm for his work and dedication to his students inspired me to pursue a career in academia. Earning my PhD will be one more milestone on my journey.

I reached another type of milestone on Nov. 9, when I placed in the top 10 at Miss USA. I've dreamed of competing in the pageant since I was a young girl.

I'm often asked how anyone can balance the vastly different spheres of pageantry and academics. Rather than try to balance them, I find the overlap between them. Pageantry gives women an incredible platform to advocate for causes. Mine is gender equality in STEM fields. As Miss Illinois USA, I've worked with the Illinois House of Representatives, Girl Scouts and other organizations to make "my" mission "ours."

So, while my house of cards may have been left a mess, the pandemic afforded me much-needed time to re-evaluate the deck. Now I'm ready to rebuild the house even stronger — with microphone, lab coat and pageant sash in hand.

"I credit Professor Meade with shaping much of my academic journey; his enthusiasm for his work and dedication to his students inspired me to pursue a career in academia."

WHAT INSPIRES ME

The Dance of History

A former journalist digs deep into her Latin American roots to understand the past and reframe the present.

Lina Britto, associate professor of history

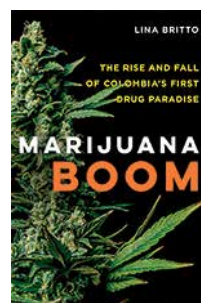
"I worked as a journalist for many years in my 20s, because I wanted to tell stories about the social life around me. When I migrated to the U.S., I continued doing print and online journalism in Spanish. I had just lived through the rise of the 'pink tide' in Bolivia and was writing stories about what was happening in Latin America, where social movements were producing deep and radical structural changes. I realized that journalism was not enough for the kind of stories that I wanted to write.

"Obviously, my own country, Colombia, is a huge source of inspiration. I grew up in

Medellín during the rise and consolidation of the Medellín cartel. That is always in the back of my mind, prompting me to ask questions and to understand that very complex society that I witnessed as a child.

"I'm always in a dialectical conversation between past and present, seeing how the past is reflected in the present, but also how the present reframes and rewrites the past. That dance between past and present is a source of fascination, curiosity and inspiration for me."

Lina Britto teaches courses that examine Latin American and Caribbean history with a focus on the drug trade and the war on drugs, the impact of music on



↑ Lina Britto

nation building, and Cold War terror. Her latest book, *Marijuana Boom: The Rise and Fall of Colombia's First Drug Paradise* (2020), explores how and why the country became one of the world's premier sources of illegal drugs.

IN THE NEWS

History in the Making

From racial justice to the effects of the coronavirus, Northwestern faculty members shared their opinions on the issues of the moment.

"The decision by a Kentucky grand jury not to charge any of the officers in the death of 26-year-old Breonna Taylor has left many Black women, including myself, traumatized. We are worried about our own safety and well-being. We are outraged we live in a society where we can be robbed of our

lives with no consequences." **Inger Burnett-Zeigler**, associate professor of psychology, in the *Chicago Tribune*

"Encephalopathy, which is characterized by altered mental function ranging from mild confusion to coma, is the most severe neurologic manifestation of COVID-19." **Igor Koralnik**, professor of neurology, in *USA Today*

"We were making slow and steady progress until [the pandemic]. It's likely we will have wiped out a lot of the progress that we've made over the last decade in childhood obesity."

Diane Whitmore Schanzenbach, left, director of the Institute for Policy Research and

the Margaret Walker Alexander Professor of Human Development and Social Policy, in *USA Today*

"We dodged a meltdown of our systems in this election because the pandemic created an early sense of urgency and motivated enormous efforts to make the election a success, despite profound challenges. But unless we think affirmatively about what we need to do next time, we're unlikely to be so lucky again."

Michael Kang, the William G. and Virginia K. Karnes Research Professor at Northwestern Pritzker School of Law, in *NBC News*

RALPH ALSWANG PHOTOGRAPHY

→ Diane Whitmore Schanzenbach

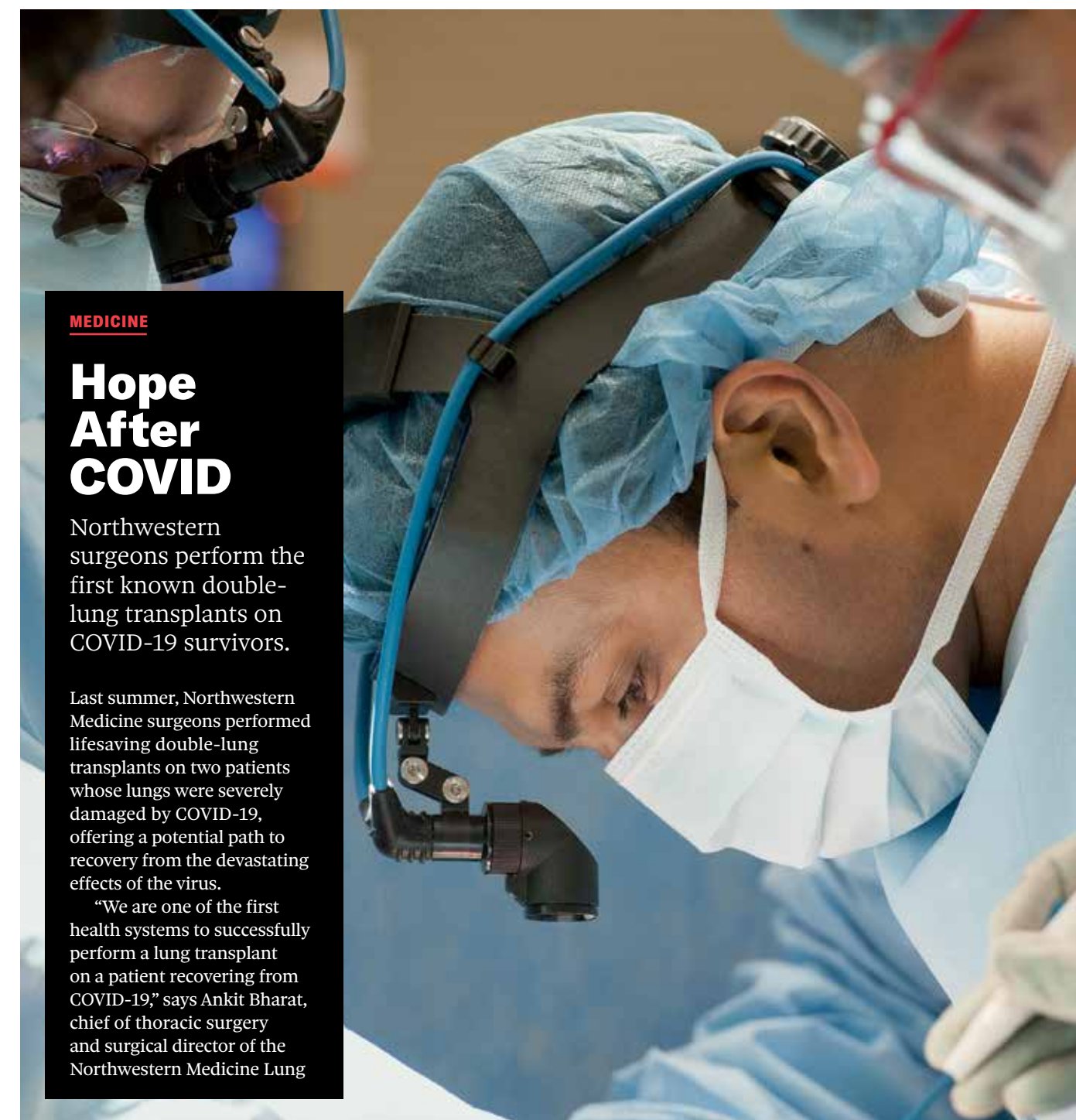


News



Theater groups adjust to virtual stage p 16

Designing a bus for the COVID era p 21



MEDICINE

Hope After COVID

Northwestern surgeons perform the first known double-lung transplants on COVID-19 survivors.

Last summer, Northwestern Medicine surgeons performed lifesaving double-lung transplants on two patients whose lungs were severely damaged by COVID-19, offering a potential path to recovery from the devastating effects of the virus.

"We are one of the first health systems to successfully perform a lung transplant on a patient recovering from COVID-19," says Ankit Bharat, chief of thoracic surgery and surgical director of the Northwestern Medicine Lung

LAURA BROWN © 2020, NORTHWESTERN MEDICINE



Ankit Bharat

Transplant Program and associate professor of surgery and medicine at the Feinberg School of Medicine. “We want other transplant centers to know that while the transplant procedure in these patients is quite technically challenging, it can be done safely, and it offers the terminally ill COVID-19 patients another option for survival.”

The first patient, 28-year-old Mayra Ramirez, spent six weeks in the COVID ICU on a ventilator and extracorporeal membrane oxygenation (ECMO), a life support machine that does the work of the heart

“His lung damage was among the worst I’ve ever seen.”

— Samuel Kim

and lungs. While her body cleared the virus, her lungs were damaged beyond repair.

“For many days, she was the sickest person in the COVID ICU — and possibly the entire hospital,” explains Beth Malsin ’19 GME, a pulmonary and critical care specialist at Northwestern Memorial Hospital and an instructor of medicine at Feinberg. “There were so many times our team had to react quickly to help her oxygenation and support her other organs to make sure they were healthy enough to support a transplant if and when the opportunity came. One of the most exciting times was when the first coronavirus test came back negative and we had the first sign she may have cleared the virus to become eligible for a lifesaving transplant.”

The lung transplant team listed Ramirez for the transplant, and 48 hours

later, she became the first known COVID-19 patient in the United States to receive a double-lung transplant.

The second patient, Brian Kuhns, an Illinois man in his 60s, spent 100 days on ECMO. He received the majority of his treatment at another health system before being transferred to Northwestern.

“Prior to his arrival at Northwestern Memorial, the patient developed an invasive infection that required a major chest surgery. This was going to make the double-lung transplant substantially more difficult,” says Northwestern Medicine thoracic surgeon and Feinberg associate professor of surgery and medicine Samuel Kim, who assisted in the double-lung transplant alongside Bharat. “His lung damage was among the worst I’ve ever seen. When we opened the chest cavity there was a lot of evidence of infection; everything we touched or dissected started bleeding, and one misstep could have led to catastrophic consequences.”

Typically, a double-lung transplant takes six to seven hours, but this surgery took about 10 hours due to lung necrosis and severe inflammation.

Bharat’s team is optimistic that both patients will make a full recovery. The surgeons are now offering guidance to other transplant centers. By mid-November, Northwestern surgeons had performed double-lung transplants on seven COVID-19 survivors.



FOCUS ON CHILDREN’S RIGHTS

Argentina

Last fall Weinberg College of Arts and Sciences sophomore Kelly Bates interned with Fundación por Nuestros Niños through the virtual Global Engagement Studies Institute. The Salta, Argentina-based program advocates for children’s rights, with a focus on violence prevention, health and education. Bates, whose family is from Argentina, appreciates the opportunity to immerse herself in Argentine culture while making a positive impact in a “country that gave so much to me and my family.”

BHARAT: TERESA CRAWFORD PHOTO; ARGENTINA: JEFFREY DAVIS/GETTY IMAGES; GHANA: DRAZEN/GETTY IMAGES

GLOBAL REACH

Staying Safe, Wildcats Make a Difference Worldwide



REPORTING FROM BAGHDAD

Iraq

Amina Ismail ’05 MS was named Reuters’ Reporter of the Year in March 2020, along with Angus Berwick, a correspondent in Venezuela. She won the award for her reporting on Egyptian president Abdel Fattah Al-Sisi’s authoritarian rule. Ismail joined Reuters in 2016 and is currently a senior correspondent based in Baghdad, where her coverage centers on human rights and politics. Prior to joining Reuters, Ismail worked at the New York Times as a reporter.

MAKE A MASK

Pakistan

In April, Northwestern University in Qatar junior Adan Ali helped launch the student-led Mask Banao campaign, which shares information about making masks at home and promotes mask usage and awareness. Ali and his colleagues also work with factories to produce and distribute cloth masks to Pakistani communities, including people living in poverty. The multinational team has seen Pakistani attitudes toward masks grow more positive.



SUSTAINABLE ART

Vietnam

Through the virtual Global Engagement Studies Institute, sophomore journalism major Quan Pham has worked with Vun Art, a Hanoi-based social enterprise that trains people with disabilities to make sustainable clothing and accessories, featuring traditional Vietnamese motifs and recycled materials. Pham has worked on projects to expand Vun Art’s market into the U.S. and develop a tour of Vun Art’s facilities. Pham, a Hanoi native, plans to work in Asia in the future.



HALTING HUMAN TRAFFICKING

Ghana

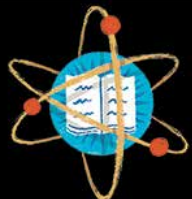
Sophomore Bengi Rwabuhemba is passionate about advocacy for children’s and women’s rights. Through the virtual Global Engagement Studies Institute, Rwabuhemba is working with the Center for Initiatives Against Human Trafficking in Tamale, Ghana. The organization aims to empower women and children while educating the public about child labor and child marriages.

The Ticker

● Northwestern research funding reached **\$886 million** for fiscal year 2020. This marks an 11% increase over last year’s total.



● The Department of Energy’s Fermi National Accelerator Laboratory in Chicago’s western suburbs will lead one of five national centers aimed at advancements in **quantum information science**, and Northwestern is a major player in the initiative. Seventeen Northwestern faculty members are affiliated with the new center.



● Northwestern has again been ranked among the nation’s top 10 universities. **The University ranked No. 9** in U.S. News & World Report’s “2021 Best Colleges” report. Northwestern also ranked in the top 20 in each of the five graduate education categories. It is one of only four top-10 U.S. universities to achieve that feat.



● Northwestern researchers have been awarded **12 Rapid Response Research (RAPID) grants** by the National Science Foundation — more than any other top-10 university. The grants will be used to further COVID-19 pandemic research efforts and projects, which include a wearable symptom sensor and a self-sanitizing face mask.





Bienen School of Music faculty members Hans Thomalla and Alan Pierson worked on the September premiere of the opera *Dark Spring*. Composed by Thomalla and conducted by Pierson, the production in Mannheim, Germany, featured socially distanced performers and smaller audiences.

ARTS & ENTERTAINMENT

The Show Must Go On

When student performance groups returned to campus in the fall, social distancing and crowd safety guidelines forced them to adjust their art to a new, virtual reality. For example, Refresh Dance Crew, which performs to hip-hop and pop songs, had its

members record themselves performing dance moves at home, then compiled the videos to create coordinated online performances. Lovers & Madmen, a Northwestern Student Theatre Coalition organization centered around classical performances, put on its

production of *The Trojan Women* using StreamYard, a live streaming service. “One of the hardest parts about switching to a virtual format is that you don’t have the audience with you,” says sophomore Arella Flur, the show’s producer. “StreamYard allows comments to feed into the actors’ streams, so they can all see the audience giving them love during the show.” Flur’s 25-person team rehearsed remotely, and

designers sent actors costumes and props. While the actors had to adjust to singing by themselves, being their own crew and managing microphones and lighting, their efforts were a success. “There’s this whole mentality right now that theater is dying,” says Flur. “But theater has always been a form that has adapted. We’re still doing what theater has always done by telling stories and building communities.”



PHOTOGRAPHY

Northwestern’s Block Museum of Art acquired 41 silver gelatin and platinum prints by American artist Edward Steichen from collectors Richard and Jackie Hollander. Expanding the Block’s holdings of vintage Steichen prints, the gift is the third to the museum from the Hollander family, who donated 49 Steichen prints in 2013 and 44 in 2017. The latest donation includes portraits of historical figures such as Carl Sandburg, Amelia Earhart (shown at left) and Thomas Mann; examples of Steichen’s commercial advertising images; fashion studies for *Vogue* and *Vanity Fair*; and early photographic experiments. Steichen (1879–1973) is regarded as one of the greatest photographers of the 20th century.

ESTATE OF EDWARD STEICHEN / ARTISTS RIGHTS SOCIETY (ARS) NEW YORK. EDWARD STEICHEN, AMELIA EARHART, VANITY FAIR, 1931. GELATIN SILVER PRINT, MARY AND LEIGH BLOCK MUSEUM OF ART

'CAT TALES

Bringing Stories to Life

For three decades, the student-run Griffin’s Tale theater group has performed original plays, raps, songs and poetry written by students in 20 Chicago-area elementary schools.

Due to the pandemic, Griffin’s Tale canceled its performances — and 30th anniversary celebration plans — last spring. But now the group is ready to go virtual. Junior Kandace Mack, one of the directors, envisions “*Sesame Street* meets *SNL*.” The group will adapt stories written by children into skits and create a video that schools can stream. Griffin’s Tale had been interested in expanding its program and now can involve more schools in Chicago and beyond.

Virtual or not, Mack says, the mission remains the same. “The focus is on highlighting creativity.”



DARK SPRING: HANS JÖRG MICHEL; CAMPUS: SHANE COLLINS



Students line up for COVID-19 testing at the Jacobs Center on the Evanston campus.

STUDENT LIFE

Welcome to the Class of 2024

Incoming students hail from 60 countries around the world.

This past September, more than 1,900 first-year students began their journeys as members of Northwestern’s Class of 2024, together with more than 190 transfer students. On the final day of a fully remote Wildcat Welcome, the class was cheered by President Morton Schapiro, who delivered his traditional convocation in an entirely online format. By any standard, these new

students bring extraordinary qualities, talents and accolades to Northwestern. They come from 60 countries and speak more than 60 languages. Thirteen percent are the first in their families to go to college. More than 20% of incoming students received federal Pell Grants. And nearly 95% ranked among the top 10% in their high school class. “This class contributes a remarkable range of

perspectives to our community,” says Liz Kinsley ’15 PhD, director of undergraduate admission. “But as diverse as they are, they also bring a shared spirit of collaboration and compassion that drives their ideas and actions. They approach the world around them with equal parts critical thought and deep optimism, and I’m excited to see where they go and what they do together.”

Discovery

SOCIAL SCIENCE

Big Cities Still Matter

Kellogg professor identifies key population threshold that allows large metro areas to become innovation hubs.

If you're currently living in a big city, please stick around.

The alluring trend of moving to a more affordable locale to work remotely as COVID-19 upends our lives will likely not hold up in the long run. And that's because places like Chicago, Los Angeles, New York and other large metropolitan areas have the traits that make them hubs for a strong, innovative economy.

Hyejin Youn, assistant professor of management and organizations at the Kellogg School of Management, and her collaborators analyzed industrial employment and population changes in 350 U.S. cities between 1998 and 2013. The survey included more than 100 million workers.

She observed a transition from economies based on manual labor to more

innovative, cognitive labor economies when the population reaches a certain sweet spot — around 1.2 million people. Along with population size, she found those cities are also capable of attracting and retaining certain industries that tend to grow much faster than the rate of population growth. Some of these “superlinear industries” include the arts, entertainment, professional services, science and information technology.

“What we observed is not a blip in history,” Youn says. “These two factors [population size and the ability to attract cognitive industries] go hand in hand and depend on one another.”

According to Youn, human interactions are known to drive the creation of ideas. In other words, innovation depends on the rate of human interaction, which is

pushed forward by increases in population size.

Youn thinks the largest cities will likely survive after COVID-19 despite fleeting trends of workers flocking away from major urban centers. But she warns that innovation may take a hit.

Since innovation, in many ways, is driven by strong communication, serendipitous interactions and people being largely together in the same physical space for quick decision-making, Youn warns that new ideas and breakthroughs

might slow down as we continue to work from home.

“Remote work is efficient only if communication processes are well established and most tasks are well defined with little room for ambiguity,” says Youn. “If you're presenting a new idea to your company, you will need multiple ways of communicating it, and it will probably not be understood the first time. This is very hard to do online compared with face-to-face interactions.”

Cities account for 90% of the U.S. economic output

90%

Cities' share of U.S. economic output

86%

Cities' share of the U.S. population

1.2M

The population threshold that signals a city's potential to develop a more innovative economy

and are home to 86% of the population, according to recent data from the Bureau of Economic Analysis and the Census Bureau.

Youn's study may have implications for policymakers, especially mayors who are trying to transform their cities' economies. For example, cities losing more people than they gain must look at population size as a strategic priority, according to Youn. “They wouldn't be losing only economically but also squandering a lot of possible innovative power.”

Areas in the United States that have typically relied on manufacturing but now face challenges due to outsourcing and globalization may consider a policy of “upskilling,” where they make their workforce employable in more advanced industries.

“The caveat here is this transformation may be more dependent on national rather than city policy,” Youn said. “The federal government needs to think about the industrial composition of the country as a whole.”



Illustration by Dante Terzigni

WELLNESS

Make Time for Mental Health

Amid a global pandemic and socially distanced holidays, winter will be even more challenging this year, say Northwestern Medicine psychiatrists. Aderonke Pederson, Feinberg School of Medicine instructor of psychiatry and behavioral sciences, and Inger Burnett-Zeigler, associate professor of psychiatry and behavioral sciences, offer tips to protect your mental health this winter.

1 Get outside and stay active. Even if it's cold, take advantage of the sunlight, Burnett-Zeigler says. Find ways to be active and connect with others.

2 Enlist your social circle. “Ask your family and friends to form accountability groups, where you have a clear sense of how you will check in on each other,” says Pederson. A buddy system could be helpful as well.

3 Be patient with yourself and others. “Everyone is under a great deal of stress,” Pederson says, adding that changes in sleep, appetite, anxiety and energy levels are expected.

4 Take time to recharge. “Identify what feeds you emotionally,” Pederson says. “Make a list of activities you enjoy and add them to your routine.”

The largest cities will likely survive after COVID-19 despite trends of workers flocking away from major urban centers. But innovation may take a hit.

ENTREPRENEURSHIP

DNA Testing at Home

Student-run Acorn Genetics creates a genetic analysis tool that maintains a user’s privacy.

Ana Cornell wanted to learn about her genetic background but shied away from trying a commercially available DNA test kit because of privacy concerns. She couldn’t find a test that could be taken and analyzed at home. So the McCormick School of Engineering junior set out to build one.

DNA testing services allow more people to learn about their genealogy, genetic makeup and associated health risks, and other information. However, privacy concerns loom large, as genetic testing companies often make money by sharing their user’s genetic information with third parties.

To address this issue, Cornell led the creation of GenomeLock, a DNA testing kit that turns a simple cheek swab into usable, private

genetic data without the user’s DNA ever leaving the home.

Here’s how it works: First, users take a cheek swab, which they run through the kit’s DNA extractor and then place in GenomeLock’s polymerase chain reaction machine — a thermal cycler that uses enzymes to amplify the segment of DNA being analyzed.

The sample is then inserted into a handheld genetic sequencer, which analyzes the data and produces results.

Users can order enzymes from Cornell’s startup, GenomeLock-maker Acorn Genetics. They can use those enzymes to test for certain diseases, such as Alzheimer’s.

After the DNA sequencer finishes, the analytics can be viewed on a computer. Users learn about any abnormalities found, if they are at risk



Acorn Genetics team members, from left, Jakub Wolsza, Ana Cornell and Mark Ogarek.

for a certain disease and recommendations for action moving forward.

“We’re finding out that people have genetic predispositions to certain diseases,” Cornell says, “but if they adjust their lifestyle in a certain way, they can cause epigenetic changes that could strongly decrease the chance of getting that disease.”

GenomeLock is the first product from Acorn Genetics, which was formed in the Principles of Entrepreneurship course taught by industrial engineering and management

sciences professor Michael Marasco. The company currently consists of four core members: Cornell, sophomores Jakub Wolsza and Mark Ogarek and junior Kate Conner.

Acorn Genetics serves as an early steppingstone to Cornell’s goal of making health care more accessible and transparent. For her work, she earned a Propel Program grant, awarded to female entrepreneurs at The Garage, Northwestern’s student entrepreneurship incubator. She was also was named to Chicago Inno’s “25 Under 25.”

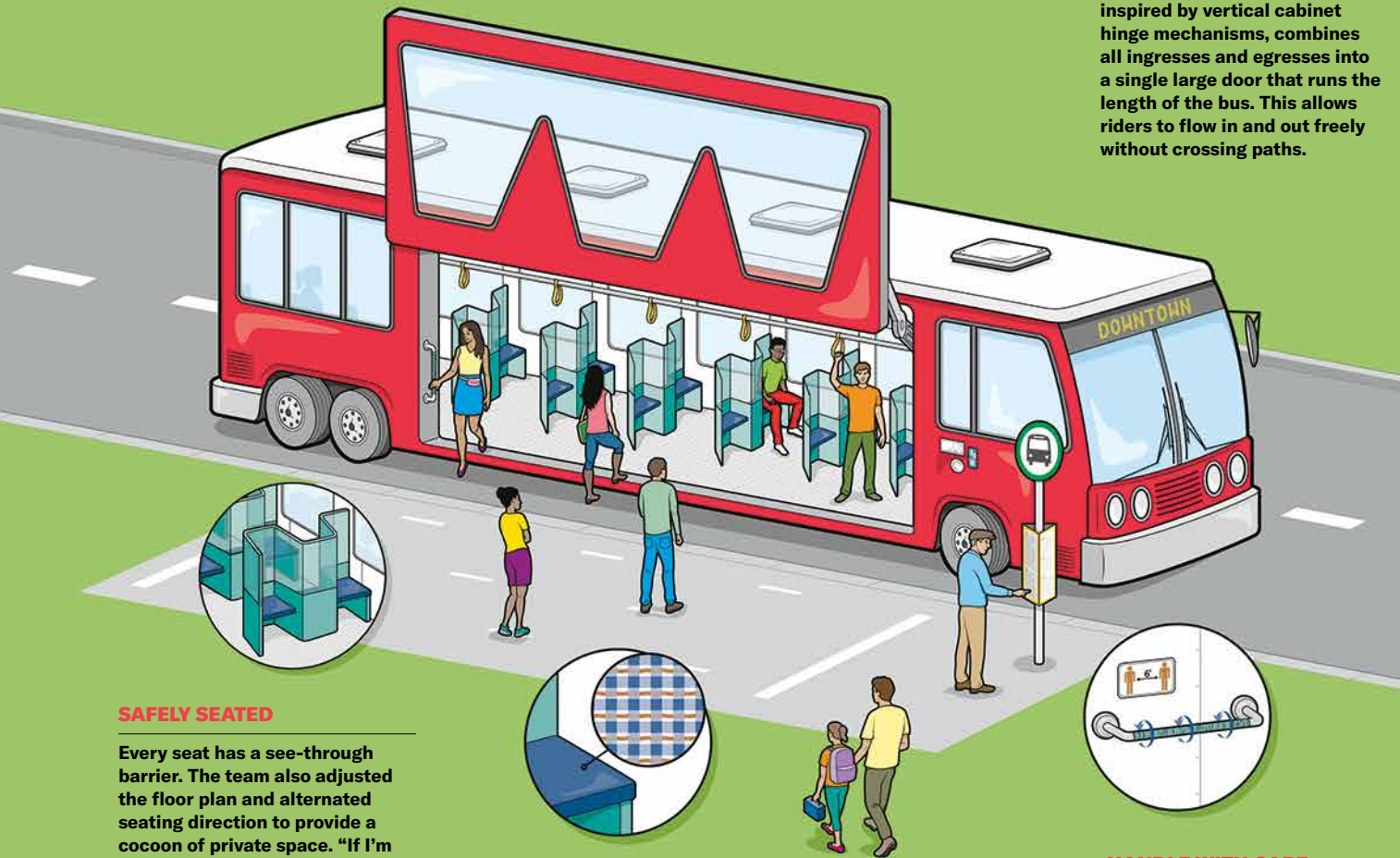
LEADERSHIP



X-Factor, The Garage’s revolutionary new student program developed in partnership with psychology professor Jennifer Tackett, helps Northwestern student founders enhance their capacity for transformational leadership. Students get personalized feedback on their leadership strengths and weaknesses and learn strategies to promote leadership growth through clinically proven assessments and check-in meetings.

OPEN AND SHUT

The bus door opens upward, altering the way passengers hop on and off the bus. The design, inspired by vertical cabinet hinge mechanisms, combines all ingresses and egresses into a single large door that runs the length of the bus. This allows riders to flow in and out freely without crossing paths.



SAFELY SEATED

Every seat has a see-through barrier. The team also adjusted the floor plan and alternated seating direction to provide a cocoon of private space. “If I’m facing forward, the person next to me would be facing the other way,” Ryan Teo says. “We would be next to each other, so we’re all close, but we would not be in contact with each other.”

FABRIC UPGRADES

The seats are covered in an affordable, copper-infused fabric that is known to reduce pathogens.

HANDLE WITH CARE

Much like the automatic plastic toilet seat covers at O’Hare International Airport, the bus handles have a stainless steel tube covered by a disposable plastic wrap. Each time the bus stops, the handle will make a slow, 360-degree rotation, allowing the entire surface of the tube to be sterilized by a 254-nanometer UV light strip.

INVENTION

Futurebus

A new public transportation design concept aims to once again give passengers the confidence to ride the bus. The Futurebus, designed for the COVID-19 era by an international team that includes Northwestern senior Ryan Teo, reduces contact between passengers and uses antimicrobial fabric and self-sanitizing handles. “We got our inspiration from the dandelion flower,” says Teo, an international student from Singapore

who studies product design, engineering and anthropology as part of the McCormick Integrated Engineering Studies program. “The dandelion opens its petals widely, allowing its seeds to be dispersed freely. We wanted to give passengers that same freedom of movement to minimize contact.” The design won the top prize in the FourC Challenge, a 24-hour international competition sponsored by the Shanghai Jiao Tong University School of Design.



SOCIAL JUSTICE

Donor Gifts Advance Diversity, Equity and Inclusion

Initiatives seek to diversify the Northwestern community, propel research and education, and enrich the student experience.

The national conversation surrounding diversity, equity and inclusion is ongoing. Northwestern has responded by committing to advancing racial and social justice and making the University a more equitable and inclusive place for all — and generous donors are bolstering these efforts.

The renovation of the Black House — a space dedicated to serving Black students within the Northwestern community as a result of the 1968 Bursar’s Office Takeover — is being

led by Multicultural Student Affairs and Campus Inclusion and Community, which strive to make Northwestern a place where students are safe and feel a sense of belonging. Structural, technological and aesthetic improvements include dedicated areas for large gatherings, quiet spaces for studying and updated offices on the upper floors. Construction began in summer 2019 and is expected to be completed this spring.

While the University funded the renovation, donor gifts

will enhance and care for the space. The Black House has received support from Alma Cates ’78 and Michael Sutton ’75, alumni who felt its impact firsthand. The couple also made a gift toward programming related to the Black student experience.

“The support and counsel I received from the Black House administration inspired me to work hard and strengthened my resolve to complete my degree under sometimes very trying circumstances,”

says Sutton, who graduated from the McCormick School of Engineering. “The camaraderie and meetings at the Black House with other Black students provided meaningful social interaction and intellectual stimulation.” One of those students was Cates, who worked at the Black House while earning her degree from the School of Communication.

Another area of Campus Inclusion and Community, Social Justice Education, creates co-curricular opportunities that foster self-exploration, facilitate conversations and support actions that create social change. A gift from University Trustee Paula Pretlow ’77, ’78 MBA is supporting social justice initiatives that advance equity at Northwestern.

The Peer Inclusion Educators program helps foster an inclusive learning

← Campus Inclusion and Community programs like Summer Academic Workshop help students of all backgrounds to thrive.

environment by addressing issues surrounding personal awareness of social identities, power, privilege, oppression and social justice. The program hosts workshops for residential communities, athletic teams, student organizations and others. Pretlow’s gift helped increase student engagement through the training of 20 facilitators, who ran 40 workshops in 2019–20.

Pretlow also supported the third annual Justice and Allyship Retreat, during which students met in small groups to discuss the types of oppression individuals of different identities face, what they envision for a socially just world and other topics. One attendee described the retreat as giving them a “newfound energy and sense of action and urgency toward spreading compassion and understanding.”

“My personal priorities and vision for impact at Northwestern are firmly centered in diversity, equity and inclusion,” Pretlow says. “My investment in Social Justice Education was a perfect match. The program continues to grow — now serving more than 3,400 students per year — and has become a national model.”

Financial aid for students is a priority at Northwestern. It is further supported by alumni and friends, whose generosity makes it possible for students with financial need to attend the University and helps ensure that the undergraduate community more accurately reflects the world at large.

University Trustee Adam Karr ’93 and Tonia Karr have made gifts to endow three

scholarships that also support diversity, equity and inclusion at Northwestern.

The Karr Scholars Program provides endowed support for undergraduates who have an interest in teaching in schools located in marginalized communities.

The Karr Achievement Scholarship provides endowed support for undergraduate students, with a preference for those who have demonstrated leadership in the Black community.

The Karrs also were lead donors toward a Promise Scholarship, which provides endowed support for undergraduates — with a preference for those who have shown a commitment to the Black community.

“Speaking from experience, knowledge of and access to resources can be a critical

barrier for young, deserving students of color, which is why we created these opportunities,” Adam Karr says.

An anonymous gift to Northwestern Engineering supports diversity, equity and inclusion in its computer science department. The gift has enabled the school to partner with Chicago community organizations and the University’s Center

“My personal priorities and vision for impact at Northwestern are firmly centered in diversity, equity and inclusion.”

— Paula Pretlow

for Excellence in Computer Science Education to recruit a diverse group of high school students for a two-week summer program emphasizing the creative and career possibilities of computer science. It also funds a laptop loaner program for students in the department who may not have the resources to replace their machine if it breaks down. The program has purchased two new computers that allow for the custom installation of software and non-standard operating systems these students require — and inspired students and faculty to donate four used laptops for refurbishment.

↓ Architectural rendering of the back of the Black House, which is currently under reconstruction





← Jeanne Sparrow '91, '15 MS addresses students at the 2019 Weinberg College Career Summit.

of the Weinberg College Board of Visitors.

“Particularly now, organizations are looking for individuals with balanced backgrounds and the ability to adapt — and that’s what the arts and sciences curriculum provides,” he says.

The Waldron Connections Program typically offers a variety of opportunities each quarter, including panel discussions and industry-specific conversations, professional skill-development workshops and on-site career treks to Chicago and Evanston businesses.

In September more than 200 students heard from 45 alumni in diverse industries and roles at the program’s annual Weinberg College Career Summit, which went virtual in 2020. Students attended panels on subjects ranging from big data and entrepreneurship to media and health care, and connected with alumni in small-group breakouts.

“What’s really great about the Waldron Connections Program is that it has different programming for wherever you are on your career journey,” says Madelyn Moy ’22, a Weinberg College junior majoring in biology, anthropology and integrated science. “Whether you’re still deciding on a major or know what industry you want to work in but not exactly what job, there is something for everyone.”

Since the program got its start as a pilot, it has experienced tremendous growth — from 87 student participants during the 2013–14 academic year to 708 student participants in 2019–20.

CAREERS

Connecting Students with Alumni Professionals

The Waldron Connections Program supports Weinberg College students as they embark on their career journeys.

Career exploration is an essential part of defining a student’s path forward after graduation, and Northwestern alumni are uniquely positioned to provide insight and guidance. That is why alumnus Austin J. Waldron ’78 partnered with the Weinberg College of Arts and Sciences to create and endow the Austin J. Waldron Student-Alumni Connections Program, which connects undergraduates with alumni in various fields and across different stages of their careers.

The Waldron Connections Program helps students explore career possibilities, hone their networking abilities and learn how to communicate the value of

their arts and sciences degrees. Moreover, the opportunity to engage with already-established alumni helps students envision their own professional futures, alleviating concerns about life after graduation.

“So many students get wrapped up in choosing a

“The Waldron Connections Program has different programming for wherever you are on your career journey.”

— Madelyn Moy ’22

major, laying out a life plan and thinking it can’t change,” Waldron says. “My journey, and that of many other alumni, is proof that pivoting to a new path can lead to much more satisfaction.”

A lifelong Chicagoan, Waldron is a veteran health care operations executive who spent his 37-year career at Health Care Service Corp., an independent licensee of the Blue Cross and Blue Shield Association. Prior to retiring in 2016, he oversaw claims and account service for 15 million members as senior vice president and chief customer service officer. Waldron earned a bachelor’s degree in psychology from Northwestern and is a member

HEALTH

Philanthropy Fuels the Fight against COVID-19

As of early November, Northwestern had received more than \$4.1 million in gifts and commitments for pandemic-related initiatives.

Coming together to solve the most critical problems is a defining Northwestern characteristic. Since the COVID-19 pandemic began in spring 2020, the University’s philanthropic community has responded by funding high-impact research as well as providing resources to help students learn remotely and return to campus. Donor support has been crucial to the continuation of Northwestern’s research and teaching missions.

Feinberg School of Medicine alumnus and University

Trustee Andrew “Drew” Senyei ’79 MD and his wife, Noni, made a substantial gift to help launch Northwestern’s Screening for Coronavirus Antibodies in Neighborhoods (SCAN) study, which identifies individuals in Chicago who have been infected with COVID-19 and provides them with at-home antibody tests — a simple finger-prick generates a single drop of blood that is dried on a special filter paper and mailed to a lab for analysis.

In total, the study will evaluate 5,000 participants,

testing their blood samples when they enroll and again six months later to determine if the antibodies offer any immunity.

The study began in summer 2020. Early results, made available last fall, suggest infection rates were higher than previously thought. Nearly one in five participants tested positive for antibodies. If COVID-19 antibodies are found to provide some level of defense, this information will be essential to assuaging the virus.

“Given the urgency of the pandemic, philanthropic grants offer the fastest way to empower our researchers so we can develop strategies and policies to mitigate the impact of this health crisis,” Drew Senyei says.

Benefactors also have made in-kind gifts of personal protective equipment (PPE) to help reduce the transmission of COVID-19 at Northwestern. Andrea and Anthony Melchiorre ’89 donated the contents for 15,000 PPE kits for students returning to campus this academic year. Each kit contains five reusable cloth masks, two bottles of hand sanitizer, one packet of disinfectant wipes and a digital thermometer. The couple also donated 11,000 KN95 masks for use by research personnel and students and others in need of this type of PPE.

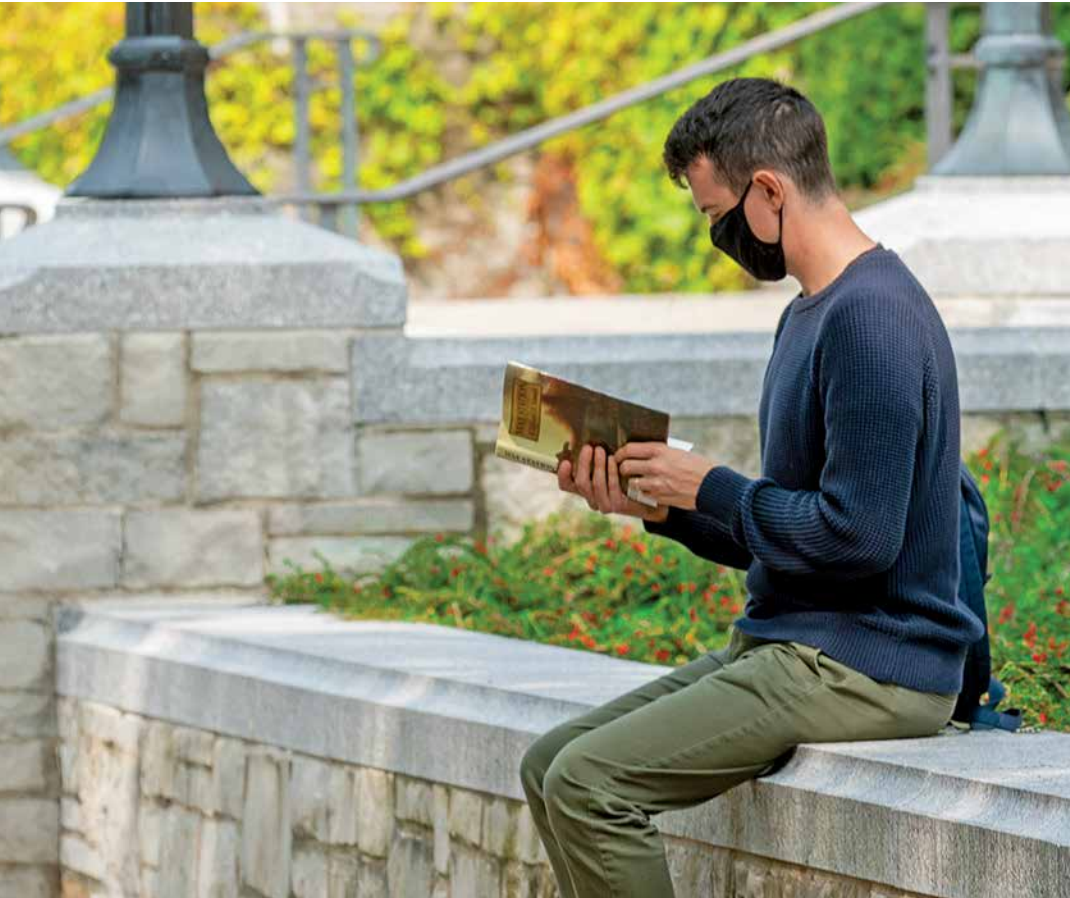
“For us, this gift is a way to help safeguard the health of those who are on campus,” Andrea Melchiorre says.

Driven by the same goal, Upside Health donated 60,000 three-ply medical face masks — 50,000 for use in Norris University Center and 10,000 for Chicago Field Studies, a Weinberg College of Arts and Sciences program that pairs an internship with academic coursework.

“This pandemic requires everyone to take initiative and do their part,” says Jonathan Hanitio ’20, who facilitated the gift along with fellow Upside Health volunteers Ryan Teo ’21 and Stella Lin ’21.

Donors also have supported the technology needs — laptops, Wi-Fi hotspots and internet — of students who started the academic year in a remote learning environment.

← Northwestern community members must wear masks in all public and shared environments on campus.



STRETCHING THE iMAGINATION

Pioneering professor **John Rogers** founded a new field of bioelectronics to improve human health, making devices that bend, twist, stretch, or melt away.

BY AMANDA MORRIS

John A. Rogers has invented a mind-boggling number of electronic devices. Do you want to measure your sweat's chemistry to check hydration? There's a device for that.

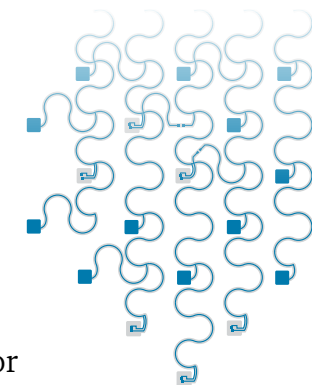
Monitor exposure to harmful levels of ultraviolet radiation from the sun with a sensor smaller than an M&M? There's a device for that.

Jump-start your heart with an ultrathin, stretchable "sock" that acts as a pacemaker? There's a device for that.

Or map your brain's electrical signals with a sensor that softly laminates onto the organ's wrinkled, folded surface and then harmlessly dissolves, making a second surgery to remove the sensor unnecessary? There's a device for that, too.

How about "artificial skin" that creates the sensation of touch in virtual reality environments? Or an implant that senses when the user has ingested a fatal level of opioids, delivers a lifesaving antidote and calls emergency responders?

Yes. Believe it or not, Rogers has developed bioelectronics for all these applications and more.



← John Rogers developed the fundamental geometry that is the foundation of his stretchable electronic devices. By making the electrical components wavy, Rogers ensures that his devices can withstand stretch and strain, enabling otherwise rigid electronics to move and flex with the human body.

Watch an interview with John Rogers at alummag.nu/john-rogers.

W

hen talking to Rogers, it's clear that research is not just an exercise of the mind. It's a highly competitive, full-contact sport. It's an arena where boundaries are pushed to extreme limits and electronics become impossibly thin, flexible, stretchy and smart — blurring the distinction between body and device.

"I'm not competitive against other people, necessarily, but competitive with myself," says Rogers, who directs Northwestern's Querrey Simpson Institute for Bioelectronics. "In my lab, we want to go as high as we can go in terms of rigor and impact. We want to do more and get to the endpoint faster."

With more than 750 published journal papers, more than 100 patents and more than 130,000 citations, Rogers is playing his best game. He is the Michael Jordan of technology — unstoppable, unflinching and agile enough to pivot his research when a medical need unexpectedly arises.

"John is truly motivated by his desire to help people," says longtime collaborator Yonggang Huang, the Jan and Marcia Achenbach Professor of Mechanical Engineering at Northwestern. "The faster he can move from idea to invention, the faster he can get his devices onto the patients who need them. John's vision is to create a new field that benefits society."



DISCOVERING RESEARCH Rogers, who is the Louis A. Simpson and Kimberly Querrey Professor of Materials Science and Engineering, Biomedical Engineering and Neurological Surgery, doesn't just lead the field of stretchable bioelectronics — he founded it. But with his mild demeanor and subtle Texas lilt, Rogers is so unassuming that people might not expect such extraordinary achievements. He is a highly decorated researcher, with a MacArthur "genius grant" to his name. He also is just one of approximately two dozen people in history to be elected to all three national academies: The National Academies of Sciences, Engineering and Medicine.

"You might expect someone with as many awards and honors to have a big ego. But he is a humble, pleasant,

caring colleague," says collaborator Amy Paller '83 GME, the Walter J. Hamlin Professor of Dermatology.

Rogers caught the research bug while an undergraduate at the University of Texas at Austin. He grew up outside Houston, where his mother wrote science-inspired poetry and his father was a physicist. A double-major in physics and chemistry, Rogers pursued an undergraduate research position in the laboratory of Professor Richard "Dick" Lagow, who was famous for "extreme chemistry," or research into highly reactive compounds, with a focus on the most reactive element of them all, fluorine.

"He was energized not only by the research but also by the competitive landscape of academic science," Rogers says of Lagow. "I thought that being an academic meant that you sat in an ivory tower and thought big, profound thoughts. I didn't fully appreciate that it was also so competitive. Dick enjoyed competing against other labs, trying to do something better or something different. I found that whole environment exciting."

From there, Rogers pursued a doctorate at the Massachusetts Institute of Technology, where he met Lisa Dhar, who he married in 1996. (She is now director of New Business Ventures for Engineering at Northwestern.) Then Rogers became a Harvard Junior Fellow, studying with materials science great and renowned chemist George Whitesides '20 H. Rogers quickly built a reputation for himself. Fellow postdoc Joanna Aizenberg remembers review meetings in which group members presented their research results.

"Nobody wanted to present after John," says Aizenberg, who is now a materials science professor at Harvard. "We constantly fought about it. His presentations were awe-inspiring. It was embarrassing to follow that. It was obvious, even back then, that he would do great things."

After their postdoctoral fellowships ended at Harvard, Rogers and Aizenberg reconnected at the storied Bell Labs, where they shared an office. By this time, Rogers — who grew up playing with Legos and Erector Sets — had realized that he enjoyed building things and designing gadgets, so he expanded his research focus from chemistry and physics to various aspects of engineering. At Bell Labs, he worked on the backplane circuits for electronic paper displays, which became the basis for e-readers such as the Kindle, and on advanced fiber-optic devices for data communications, which became cornerstones for the fastest networks at that time.

Aizenberg describes Rogers as someone who loved his work so thoroughly that he spent days and nights in his

"The faster he can move from idea to invention, the faster he can get his devices onto the patients who need them. John's vision is to create a new field that benefits society." — Yonggang Huang

JIM PRISCHING



Inspiring the Next Generation

During his five years at Bell Labs, John Rogers relished working at the interface between science and engineering, in a highly collaborative mode with an eye toward broader impact. Now that he runs his own lab, he aspires to emulate that model. Rogers has one of the biggest labs on campus in terms of the number of students, consisting of approximately 100 postdocs, graduate students and undergraduates — equally split between men and women.

"We give students freedom to choose their own projects and develop a sense of ownership," Rogers says. "Then they bring their own creativity and come up with new ideas, and they work on interdisciplinary research, interacting with experts in multiple fields of study — the Bell Labs way. That's an important part of the education process."

Rogers' lab model is clearly working. Throughout his career, all but two graduate student mentees have pursued careers in science or engineering. And 117 have become faculty members at universities around the world, including Princeton, Cornell, Duke, Stanford, MIT — and Northwestern.

"He's trained some wonderful progeny who carry his work forward in many different ways," says University of Pennsylvania researcher Brian Litt. "There's a piece of John in all these people, and they will go on to inspire the next generation." — A.M.



↑ Top, Rogers works with students in his lab in the Technological Institute. Above, Rogers and postdoctoral researcher Roy Cho examine a component of the "virtual skin" device, which incorporates a sense of touch into virtual and augmented reality systems. Rogers believes it's important to allow students in his lab to select their own research projects. "When students enjoy what they do, they are more productive," he says.

office, listening to heavy metal on his headphones and fueling himself with iced tea. “I don’t think he ever slept,” says Aizenberg. “It was clear that he truly enjoyed his work and being in the office. And for me, it was like being next to greatness. He’s absolutely unmatched.”

BENDING MATERIAL TO MEET NEEDS After the dot-com bubble collapsed, taking Bell Labs with it, Rogers came home to academia, joining the University of Illinois at Urbana-Champaign and the Beckman Institute for Advanced Science & Technology in 2003. In 2005 a single thread of silicon changed the direction of his research — and his life.

Rogers sought to develop a hybrid material that could transform brittle, rigid silicon into a flexible and stretchy rubber band. The U.S. military funded Rogers’ lab to create large-format electronic wireless communication systems that could be unfurled in a battlefield situation and then rolled up and tossed into a backpack for urgent, easy transport.

“Prior to that, our work focused on plastic-based materials as the basis for such types of flexible electronic systems,” Rogers says. “That approach can work pretty well for simple devices like displays, but the performance tends to fall short for more demanding applications.”

Rogers knew that thinner materials, by nature, become increasingly flexible. It’s like the thickness of a sheet of paper versus that of a two-by-four. Both are the same material — wood fiber — but their geometries dictate their mechanics. Rogers’ team was exploring silicon ribbons, each just one-thousandth the thickness of a strand of hair. After a serendipitous accident, a postdoc noticed that under certain conditions these silicon ribbons spontaneously adopted rippled or wavy shapes when bonded to a rubber substrate in the right way.

“We immediately realized that if silicon was in that configuration, we could stretch it back and forth like an accordion,” Rogers says. “We could twist it, bend it, crumple it up. It was almost indestructible.”

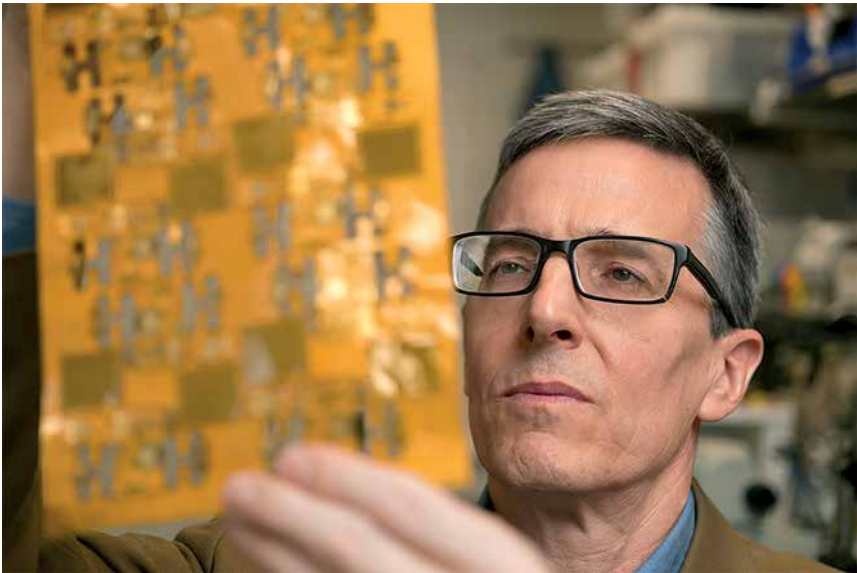
Rogers leveraged the discovery to build the first-ever stretchable transistor as a key building block for integrated circuits. When the research was published in the journal *Science* in 2006, the paper hit *MIT Technology Review*’s top-10 list of best discoveries that year and was downloaded tens of thousands of times.

“John was the first person to change the geometry of electronics,” says Northwestern colleague Yonggang Huang, who has published more than 300 papers over 15 years with Rogers. “He made the silicon wavy, and he coiled the wires like a spring. He’s very clever.”

THE EYE-OPENING BRAIN Like many researchers around the globe, Brian Litt, a professor of neurology and bioengineering at the University of Pennsylvania, took note of Rogers’ discovery.

Litt has devoted his life to better understanding the brain in order to treat epilepsy patients. To further this work, he envisioned implantable devices to map epileptic networks. He saw the potential for Rogers’ electronics to perhaps achieve the impossible — to monitor select, localized areas of the brain without causing damage. Litt and his team approached Rogers after a presentation.

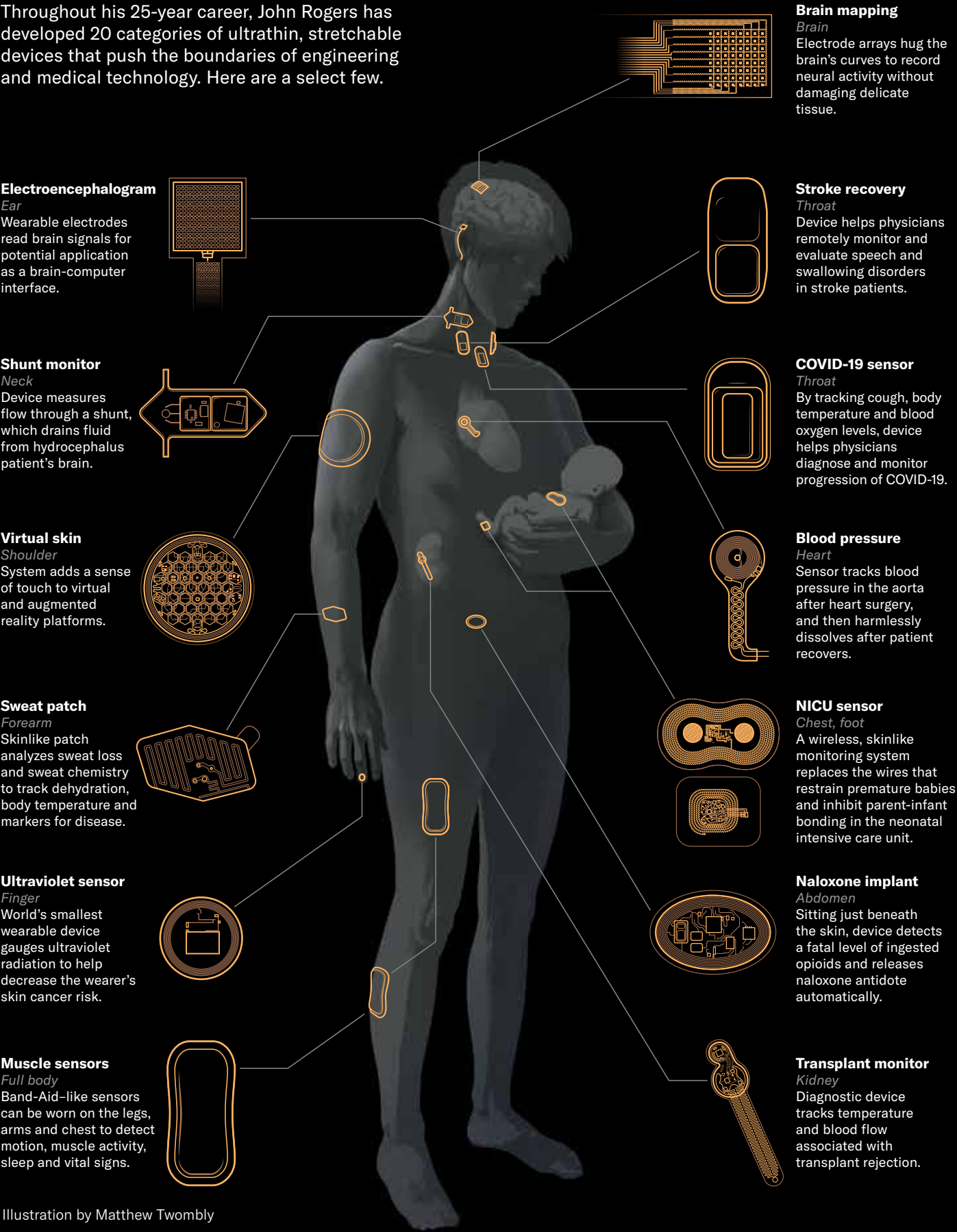
“They asked if I ever thought about putting my flexible electronic systems onto the brain to monitor electrical activity or stimulate it for treatment,” Rogers says. “That was an eye-opener for me. It represented a new direction, much different than our work on displays and communication systems. A bio-interface sounded really interesting, with clear potential for tremendous societal value in human health.”



↑ The copper circuit board that underlays John Rogers’ COVID-19 monitoring device is flexible and sheetlike.

HEAD TO TOE

Throughout his 25-year career, John Rogers has developed 20 categories of ultrathin, stretchable devices that push the boundaries of engineering and medical technology. Here are a select few.



Brain mapping
Brain
Electrode arrays hug the brain’s curves to record neural activity without damaging delicate tissue.

Stroke recovery
Throat
Device helps physicians remotely monitor and evaluate speech and swallowing disorders in stroke patients.

COVID-19 sensor
Throat
By tracking cough, body temperature and blood oxygen levels, device helps physicians diagnose and monitor progression of COVID-19.

Blood pressure
Heart
Sensor tracks blood pressure in the aorta after heart surgery, and then harmlessly dissolves after patient recovers.

NICU sensor
Chest, foot
A wireless, skinlike monitoring system replaces the wires that restrain premature babies and inhibit parent-infant bonding in the neonatal intensive care unit.

Naloxone implant
Abdomen
Sitting just beneath the skin, device detects a fatal level of ingested opioids and releases naloxone antidote automatically.

Transplant monitor
Kidney
Diagnostic device tracks temperature and blood flow associated with transplant rejection.

Electroencephalogram
Ear
Wearable electrodes read brain signals for potential application as a brain-computer interface.

Shunt monitor
Neck
Device measures flow through a shunt, which drains fluid from hydrocephalus patient’s brain.

Virtual skin
Shoulder
System adds a sense of touch to virtual and augmented reality platforms.

Sweat patch
Forearm
Skinlike patch analyzes sweat loss and sweat chemistry to track dehydration, body temperature and markers for disease.

Ultraviolet sensor
Finger
World’s smallest wearable device gauges ultraviolet radiation to help decrease the wearer’s skin cancer risk.

Muscle sensors
Full body
Band-Aid-like sensors can be worn on the legs, arms and chest to detect motion, muscle activity, sleep and vital signs.

JIM PRISCHING



← John Rogers' sensors monitor a newborn's vital signs. One of the sensors wraps around a baby's foot, while the other is placed on the chest. The wireless, battery-free sensors are thin and gentle on a baby's delicate skin. The elimination of wires promotes bonding between newborns and their parents.



The challenge of engineering a device for the brain, however, is enormous and daunting. The human brain is a jiggly maze of wrinkled peaks, shallow grooves and deep fissures. With the consistency of gelatin, it can be depressed by the most delicate touch. Finding new tools to map and stimulate the brain could unlock the potential to restore lost brain function or cure debilitating disease. But failure carries the risk of hemorrhage or even permanent damage to the organ that houses intellect, creativity, emotions and memories.

"This presented a whole new set of challenges from a fundamental materials-science standpoint," Rogers says. "To integrate an electronic device onto a very complex topographical surface like the brain, and to do so in a manner that doesn't damage the fragile tissues or the technology, you have to build devices that can contort in very complex ways to follow the irregular geometry — in materials that both are biocompatible and enable high-performance operation."



THE SKIN IS IN Rogers joined Litt and his team to develop wireless, skinlike, biocompatible monitors for the brain that could last many decades without degrading — or that would, after a set number of days, harmlessly dissolve. After this initial project, Rogers was hooked on designing devices for other organ systems of the body. Next, his team tackled the heart, developing devices that softly adhere to the surface to monitor activity or even jump-start it like a pacemaker.

"John recognized that medical devices were the right direction for the group," says Tony Banks, who has worked in Rogers' labs at both the University of Illinois and Northwestern. "It very quickly became apparent that our group's research on medical devices could help someone's life. That became a huge driving motivation not only for John but for everyone in our group."

After innovating for the heart and brain, Rogers decided to tackle the body's biggest organ: the skin. "We didn't

need animal models to test the devices or collaborators to perform surgeries," Rogers says. "With skin, we could build devices in our own lab and test them on ourselves."

Before the Fitbit or smart watches, Rogers' team invented the first wearable device to monitor health in 2007. Called epidermal electronics, the platform showcased a wireless, tattoo-like device that easily adhered to the skin to measure simple vital signs, such as cardiac activity and body temperature. The research marked a conceptual breakthrough and presented a road map for developing thin, high-performance electronic systems integrated with the body.

"John always has a keen sense of what will happen next in science — before it starts to happen," says Banks, one of Rogers' closest friends. "He has the ability to predict the next big thing."



UNPREDICTABLE APPLICATIONS Oftentimes, Rogers develops new devices without knowing what future problems the technology might solve. His team developed a sensor to measure blood flow, for example, and then learned it could be used for hydrocephalus patients. Much like the serendipitous interaction with Litt some years before, this opportunity developed from a discussion with Matthew Potts, assistant professor of neurological surgery at the Feinberg School of Medicine, and Amit Ayer '19 MBA, a recent neurosurgery resident at Feinberg, following a Rogers neurosurgery seminar.

Hydrocephalus, a potentially life-threatening condition in which excess fluid builds up in the brain, affects nearly 1 million Americans. Treatment includes surgically

implanting a brain shunt, a straw-like catheter that drains fluid from the brain. Shunts have a nearly 100% failure rate over 10 years, and a malfunctioning shunt can cause headaches, fatigue and even death, if left untreated.

Rogers repurposed his blood-flow sensor to instead gauge the flow of fluid through a shunt. The Band-Aid-like sensor could revolutionize the way patients manage hydrocephalus and potentially save the U.S. health care system millions of dollars. Beth Meyer, whose son Willie was diagnosed with hydrocephalus as an infant, is keenly aware of how life-changing the device might be. Over the past 28 years, Willie has undergone more than 190 surgeries to diagnose or repair a malfunctioning shunt.

"Shunts work fine for a lot of people, but when they don't, you're in big trouble," says Beth, who lives in Arlington Heights, Ill. "Dr. Rogers' device is a game changer. It's painless, it's noninvasive, and you can quickly determine whether the shunt is working properly or not. It could potentially save lives and money — and anxiety."

Similarly, Rogers re-engineered his epidermal electronics to monitor premature babies, following a discussion with Amy Paller after a presentation at the annual meeting of the Society of Investigative Dermatology. His team's resulting wireless device — designed with preemies' fragile skin in mind — carries the promise of removing the tangle of wires that restrict movement and prevent parent-baby bonding. A father himself, Rogers profoundly understood the project's potential impact.

After launching the devices in Chicago-area hospitals, the wireless monitoring systems for premature babies have been deployed to families in 26 countries, including resource-poor settings in Zambia, Kenya and Ghana. Now the devices exceed the capabilities of existing, wired monitoring technologies to provide information beyond traditional vital signs, including a baby's crying, movement, body orientation and heart sounds. With support from the Bill & Melinda Gates Foundation and Save the Children, Rogers' team will complete a program of testing the sensors on 15,000 pregnant women and 500 babies by the middle of 2021.



PANDEMIC PIVOT In March 2020 the accelerating momentum of Rogers' research slammed into the same wall that hit the rest of the world. The coronavirus pandemic shut down Northwestern, and the University's research operation ground to a halt.

As the Technological Institute's hallways grew quiet, Rogers continued to visit his office and lab every day. Then his collaborators from the Shirley Ryan AbilityLab called, wondering if it might be possible to re-engineer a Band-Aid-sized device that he developed to track swallowing and speech sounds in recovering stroke patients to instead monitor cough, shortness of breath and vital signs in COVID-19 patients and front-line health care workers.

Two weeks after the phone call, Rogers' team had already produced a working device. A month later, they launched a pilot program to test the device on health care workers and patients at Shirley Ryan AbilityLab and Northwestern Memorial Hospital. Rogers applied for

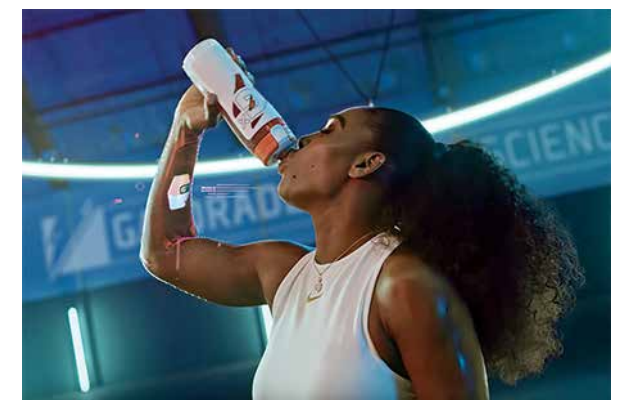
essential status (exemption from the Illinois' stay-at-home order), and his team manufactured each device in the lab.

"John didn't miss one day of work," says Banks. "Before students and postdocs returned, John and I were in the lab making COVID sensors. We personally went down to the hospital to put them on patients and work with the doctors."

This is no surprise to Shuai "Steve" Xu, medical director of the Querrey Simpson Institute for Bioelectronics.

"I don't think John gets enough credit for his empathy," says Xu '18 GME. "Beyond his technical brilliance, he puts himself in others' shoes to genuinely understand their problems. And then he will do anything in his power to solve those problems."

Amanda Morris '14 MA is senior editor of science and engineering in Northwestern's Office of Global Marketing and Communications.



Celebrity Sensors

It's one thing to see your device on a patient in a laboratory. It's another thing entirely to see it on Serena Williams.

Gatorade is one of the many companies that has licensed inventions from Rogers' laboratory. The sports-drink giant is currently commercializing a skinlike, wearable device that measures electrolyte levels in sweat in tiny fluidic channels. Gatorade teased the product, which will be widely available in 2021, in a string of television commercials that began airing in 2019, showing world-class athletes such as Williams and NBA stars Jayson Tatum and Paul George wearing the device while training.

"It's super cool, obviously," Rogers says. "Some of the athletes are publicly sharing their thoughts about the importance of quantitative approaches to hydration management enabled by our device. That's more exciting than seeing the commercials."

More than 70 of Rogers' patents have been licensed through both large companies — such as L'Oreal and E Ink — and lean startups, some of which he co-founded. — A.M.

Free To Play

Kathryn Hahn finds roles that challenge and excite her, rediscovering the relentless curiosity she first fostered at Northwestern. BY CLARE MILLIKEN

Photograph by Jesse Dittmar/Redux

WINTER 2021 **NORTHWESTERN**

For Kathryn Hahn, *Afternoon Delight* was a game changer.

In the 2013 film, Hahn '95 played Rachel, a wife and mother who looks to enliven her marriage by arranging a visit to a strip club with her husband. Rachel forms a bond with one of the dancers, whom she invites to become her young son's live-in nanny. The film, which exposes painful, even cringe-worthy realities of modern marriage, was described by reviewers as groundbreaking and "meticulously acted." Hahn's performance was "disarmingly frank," one review noted.

Filmed in just 21 days, the indie hit was intensive and immersive for the cast. A single scene could take all day to shoot, as the actors improvised and fed off of one another's performances. Rehearsals, run-throughs and power naps took place in what Hahn calls a "creative womb," a rented Southern California bungalow where images and quotes from John Cassavetes — the pioneering independent filmmaker who brought an improvisational, actor-first aesthetic to American cinema — covered the walls.

Hahn drove her own car in the film, and she'd find energy bar wrappers and crushed water bottles in the minivan's crevices after filming wrapped — reminders of her "work family."

"I would be driving home so *juiced* that I just could not wait to get back to work the next day, because I was riding those feelings of discovery," Hahn says of making *Afternoon Delight*. "It was that feeling that I'd been looking for since college, the same feeling of play that I had when I was at Northwestern."

After Hahn's supporting roles in a series of mid-2000s comedies, *Afternoon Delight* signaled a shift in her career, leading to edgier, more sensual, more substantial roles and cementing Hahn's place as an awards circuit mainstay and a sought-after star working across genres and mediums.

Her IMDb page reads like a review of the past two decades of pop culture: *Spider-Man: Into the Spider-Verse*. *Free Agents*. *Bad Moms*. *Transparent*. *Parks and Recreation*. Hahn's most recent work includes roles in the HBO shows *Mrs. Fletcher* and *I Know This Much Is True*, as well as parts in the Disney+ miniseries *WandaVision* and two Apple TV+ shows: *The Shrink Next Door*, an upcoming series based on a podcast of the same name, and the animated *Central Park*.

While under California's stay-at-home order in response to the COVID-19 pandemic, Hahn recorded voice-over for Paige Hunter, her *Central Park* character, from inside a closet in her house. "I'm so technically not savvy, but the crew was very patient with me and walked me through every step," Hahn says of her work-from-home setup.

Hahn is regarded by her former professors and professional colleagues alike as a dedicated artist and a captivating performer. And it's clear that she's deeply in love with her work, not the trappings of



↑ From top, Kathryn Hahn's credits include *Bad Moms* with, from left, Mila Kunis and Kristen Bell; *Mrs. Fletcher*; *Private Life* with Paul Giamatti; and *I Know This Much Is True* with Mark Ruffalo

celebrity but the craft of acting: the deep dives into character, the exploration and messiness each role brings, the dedication to her fellow actors — and the creative magic that results.

From Stage to Screen

The summer after graduation in 1995, Hahn and her boyfriend, radio/TV/film major Ethan Sandler '95, rented a U-Haul truck and drove east to New York City, eager to immerse themselves in the big-city theater scene.

Their first apartment was a tiny walk-up studio that had only one sink. "You would open the door and hit the shower," Hahn says. "I was always saying to Ethan, 'Dude, when you shave, *please* rinse the hair before I do the dishes.'"

Hahn and Sandler waited in long lines to audition for "off-off-off-off-off-off-off-off-Broadway shows." They ate "like crap" and slept on a futon. Hahn worked as a receptionist at a salon, and the staff once gave her a hairbrush for Christmas. "I was not a ringing endorsement for a hair salon," she recalls with a chuckle, drawing a circle around her unruly brown hair.

"It was the best time," Hahn says, her eyes sparkling with happy memories. "I *loved* it. Everything about it. It was pretty heinous, but we were so young that we just didn't know."

Hahn's first big break came in 2001, when she was cast as a grief counselor in the crime drama series *Crossing Jordan*, which aired for six seasons on NBC. The transition from New York to Los Angeles and from theater to television was not an easy one.

"I did come out to Los Angeles a little bit kicking and screaming," she recalls. "I was so incredibly grateful for the opportunity, but I definitely was still mourning [losing] New York City and the theater opportunities. It took me a while to find the same ownership over my work."

Hahn began getting smaller parts in movies — including the "big-swing comedies" *How to Lose a Guy in 10 Days* (2003) and *Anchorman: The Legend of Ron Burgundy* (2004). She also had roles in the drama *The Last Mimzy* (2007) and the rom-com *How Do You Know* (2010), among others.

Despite notable successes, "I never could figure out the rules of that space," Hahn says of working on camera. "I just couldn't find the total freedom. On the stage, once that curtain goes up, it belongs to you and your fellow actors, and it's all just about breathing together and the relationship with the audience. And I just never could find that on camera."

Contrary to what some might expect, herself included, Hahn says that becoming a mother opened the door to the creative freedom she craved.

"Once I had kids, I just ... I just got a huge case of — pardon my French — the 'f--- its,'" Hahn says.

"I felt less like I wanted to please everybody and more like I didn't want to waste any time anymore," she continues, relaxing. "I wanted to get back to those feelings I had when I was in college in a dark little studio theater with the people I love and just digging those trenches. I just happened at that moment to meet these incredible creators who were looking for that same feeling."

Coming Home in Hollywood

One of those creators was writer-director Joey Soloway, who cast Hahn in *Afternoon Delight* and with whom Hahn has continued to collaborate. Hahn played Rabbi Raquel in the Soloway-created Amazon Studios series *Transparent* (2014–19), a role for which Hahn received an Emmy nomination.

Hahn also starred as Chris Kraus in

← Hahn and Sandler at the 69th Primetime Emmy Awards



Woman Without Apology

It's not always the case that women actors get more roles, or become more famous, as they age. For Kathryn Hahn, who's been able to work across genres and alongside people who inspire her, two things are at play:

"In my experience, the combination of being a mom and being older has stripped down the idea of performance toward the world," she says. "I don't feel like I need to be something different for everybody. Exerting that performative energy out to the world does not feel as necessary, so I can save all that energy for my particular job. And I think for me, in my little life, it's benefited my work."

Her experience of being a mother and being older has also guided Hahn through her most critically acclaimed roles as women with complex desires who live full lives — and apologize for none of it.

"This [over-40] chapter in a woman's life has been cloaked in this kind of invisibility shield of shame. Once she passes this threshold, she's put on a shelf or something," Hahn says. "That's what I always thought when I was in my 20s and looking at what becomes of a woman in middle age. Now as I'm going through it, there's so much more mystery to it. It's so complicated in a fabulous way. And I'm surrounded by amazing collaborators who want to dig deep into that mystery and show how fabulously messy, sexy, contradictory, human and funny it all is. I'm just so turned on by the ripping off of that cloak."

The freedom that comes from realizing you can be yourself and accepting that you won't please everyone is not exclusive to women in entertainment, Hahn says.

"I can see it in other women my age who don't have my job, that embrace of saying, 'Oh, I don't have to give myself away all the time,'" she says. "You just can say no. You don't have to mince words. You don't have to apologize all the time. That's been a really beautiful surprise about this chapter in my life — and a huge relief." — C.M.



Amazon’s *I Love Dick* (2016–17), a short-lived series created by Soloway and Sarah Gubbins ’97, ’08 MFA and based on a book of the same name. Hahn plays a woman who becomes infatuated with Dick (played by Kevin Bacon), the head of her writer husband’s residency program in Marfa, Texas.

“That role was difficult because of the mind space. It was a very hungry, tense experience, because [Chris] was always unsatisfied,” Hahn says.

But as for the show’s creators, cast and crew, she says, “What an amazing group of humans!” The feeling is mutual for Gubbins, who hadn’t met Hahn before *I Love Dick* and now says she’d “do anything” with Hahn.

“Kathryn never shies away from the messiness [of a role],” Gubbins says. “She locks in emotionally to a character and then puts it through this Kathryn Hahn funnel. She’s able to take a very static scene and just ignite it with so much energy and purpose.”

While Hahn says she and *I Love Dick*’s creators “definitely have unfinished business,” she hasn’t exactly been hard up for new roles — and critically acclaimed ones at that. She starred as

Carla in the comedy *Bad Moms* (2016), a smash hit that was followed by *A Bad Moms Christmas* the next year. In 2018 she co-starred alongside Paul Giamatti in *Private Life*, whose New York Film Festival premiere Hahn counts as one of her proudest moments. “It all felt so legit,” she remembers of the event at New York City’s Lincoln Center for the Performing Arts.

Yet Hahn is still eager to return to theater when the time is right. (Her last stage show was *Boeing-Boeing* on Broadway in 2008.) Gubbins thinks Hahn would be great as the strong-willed and sharp-tongued Masha in Chekhov’s *Three Sisters*. “That would be amazing,” Hahn says with a grin that quickly becomes a sly smirk. “It says a lot about my personality.”

Eager to Act

Growing up in the 1970s and ’80s in Cleveland Heights, Ohio, Hahn always knew she wanted to be an actor. “There was no other choice,” she says. “I didn’t have stars in my eyes. I just had no other option in my mind.” As a child, Hahn performed in local theater productions at the Cleveland Play House. That experience led to her first television

↑ From left, Sarah Gubbins, Bobbi Salvör Menuez, Griffin Dunne, Roberta Colindrez, Kevin Bacon, Joey Soloway, Kathryn Hahn and Lily Mojekwu of *I Love Dick* at the 2017 Sundance Film Festival

role — on *Hickory Hideout*, a children’s program featuring puppet animals living in a treehouse — but she had her sights firmly set on theater. When it came time for Hahn to apply to college, Northwestern was a perfect fit.

“I knew that I wanted a liberal arts education,” she says. “It was important to me as an actor to have that foundation.”

Hahn quickly found her Northwestern family, which included Sandler, now her husband, and Jeb Brody ’95, a lifelong friend who is president of production at Amblin Partners, the film and television production company headed by Steven Spielberg. Brody and Hahn now live down the street from each other in Southern California. Even when they were students, Brody knew Hahn had something special.

“There was something about Kathryn’s presence as a performer that was recognizable right away,” says

Brody. “She had the kind of performer’s magnetism that you couldn’t miss. You wanted to find out more about her characters — to explore, investigate and understand them.”

Hahn, who worked in the campus prop shop and as a manager at downtown Evanston’s Unicorn Cafe (which closed in September after 29 years), also met Sandler during her first year on campus. Hahn and Sandler began dating in their sophomore year, and they eloped on their 10-year anniversary. They now have two children, Leonard, 14, and Mae, 11.

“It was like you took two of the most creative and talented minds at Northwestern at the time, put them together and shook them around every day,” Brody says of Hahn and Sandler’s relationship. “It was astonishing to be near.”

Hahn and Sandler performed together in several plays at Northwestern from 1991 to 1995, including David Mamet’s two-hander *The Woods*.

Hahn also performed on campus in Christopher Hampton’s *Les Liaisons Dangereuses*, Maria Irene Fornés’ *Fefu and Her Friends*, Chekhov’s *Uncle Vanya* and Shakespeare’s *Hamlet*.

Ann Woodworth ’75, ’79 MA, an associate professor of theater in the School of Communication who

co-directed the *Hamlet* production with senior lecturer Dawn Mora, says Hahn was a dream collaborator.

“Kathryn was willing to try anything, to explore and experiment,” says Woodworth of Hahn’s turn as Ophelia. “We turned the play that Hamlet requests into a musical, and Kathryn was willing to go along with all of it. I’ve shown clips of that show since, when I’m trying to get classes to expand their imaginations of what we might do with a production.”

“What I remember most about Kathryn at Northwestern was her radiance,” recalls professor emeritus Frank Galati ’65, ’67 MA/MS, ’71 PhD, who taught Hahn in several performance studies classes. “Kathryn is unpretentious and self-deprecating. She’s beautiful, charming and hilariously funny. She’s comfortable in her body and never posing. She doesn’t display character; she *inhabits* character.”

When reflecting back on her Northwestern experience, Hahn is nothing short of ebullient. “It was such a rich, rich experience,” Hahn says, her enthusiasm at a rolling boil. “I think about that space — the theater building — as holding so much vibrating, creative energy and people just wanting

When Kathryn Hahn’s daughter, Mae, was 6 years old, Hahn wrote an article for Lena Dunham’s email newsletter. (Hahn also appeared on the HBO series *Girls*, in which Dunham starred.) The article, “What I Learned from My 6-Year-Old Daughter About Being a Woman,” would eventually lead to a 2018 children’s book called *My Wish for You*.

Illustrated by Brigitte Barrager and written by Hahn, the book encourages young girls to be silly, get messy and follow their hearts:

“Wherever you go, I hope you will always remember the you that you are right now. The you that knows to...

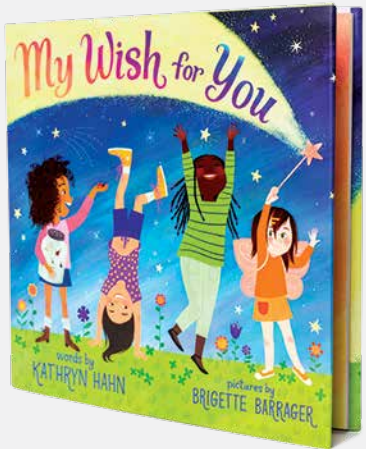
Sing all the time.

Nap whenever.

Be afraid. Be fearless. Have BIG, BIG feelings.

My wish is that you remember to dream, my sweet. You are all you need to make your wishes come true. Because you are the only you.”

Although the book was inspired by Hahn’s daughter, its message is universal. “It’s for everybody,” Hahn says. — C.M.



3 Things You Didn’t Know About Kathryn Hahn

- She saved Kevin Bacon from a potentially deadly scorpion on the set of *I Love Dick*.
- She has two rescue dogs, and her family fostered three kittens during the pandemic.
- She’s involved with groups that are promoting fair elections and expanding access to education and reproductive health care.

to *make*. And I still hold on to that feeling — of rehearsing at 2 in the morning, not wanting to coast and just wanting to dig into the heart of it. That’s what I definitely have taken away from it — the relentless curiosity.”

In 2018 Hahn took the stage at Northwestern’s *A Starry Night*, a celebratory performance that brought together some of the University’s most famous alumni in entertainment. The event capped off CommFest, a weekend reunion hosted by the School of Communication. Backstage, Hahn talked to students, fellow stars and others, including Galati, who was thrilled to tell her how much he loved her performance in *Transparent*.

The afternoon before the show, Hahn and Sandler returned to their old campus haunts.

“Walking through the theater building with my hubby, I had a lump in my throat the whole time,” Hahn recalls. “I miss those days so much. I will never take that experience for granted. I know how lucky I was to spend four years at Northwestern.”

Clare Milliken is senior writer and producer in the Office of Global Marketing and Communications.

JAY L. CLENDENIN/LOS ANGELES TIMES/CONTOUR BY GETTY IMAGES

THE RECKONING IS HERE

**Educators, legislators
and families are
reigniting a decades-old
debate about teaching
the full context of
American history.**

BY ADRIENNE SAMUELS GIBBS

Perhaps you read about a junior high school's overnight nature camp in Wisconsin that included an Underground Railroad simulation where, according to one student, the Black students had to pretend they were runaway slaves while the white students acted as slave catchers or helpful abolitionists.

Or maybe you read about the Chicago elementary school that celebrated Black History Month with an assignment for kindergartners to draw and write about African animals.

And then there is the geography textbook used in Texas high schools until 2015 that described enslaved Africans as “immigrants” to the United States.

Examples like these are just part of the problem. Educators agree that most schools are ill-prepared to teach difficult aspects of American history. Studies by the National Museum of African American History and Culture and the Southern Poverty Law Center (SPLC) reveal that the nation's teachers are largely uncomfortable teaching Black history and find their textbooks inadequate. As a result, only 8% of high school seniors surveyed by the SPLC could identify slavery as the central cause of the Civil War.

As America grapples with a history of injustice and in light of the recent attention given to the Black Lives Matter movement, a historical and educational reckoning is occurring that has been decades in the making. Northwestern alumni and faculty are part of a growing chorus of teachers, students and lawmakers reminding us that Black history — and the histories of other marginalized communities — are as American as apple pie and should be accurately and contextually taught to all.

“It's important for children, from the very earliest ages in the school system, to be taught real American history — not a fantasized or sanitized version,” says Aldon Morris, Northwestern's Leon Forrest Professor of Sociology and African American Studies and the recently elected president of the American Sociological Association.

Corey Winchester '10, '20 MA teaches U.S. history at Evanston Township High School. And though he's not required to incorporate every aspect of America's diverse and sometimes difficult history into his lesson plans, he does it anyway.

This gives some students pride, he says, while prompting others to state their discomfort. In fact, a few years back, a white student called Winchester a communist. Another student sent a humbled mea culpa for his behavior in Winchester's class. “I got a letter saying, ‘I want to apologize for my 2013 self. All those times you took me to the side to explain why you talk about race so much — it hit. It finally hit.’”

As an undergraduate at Northwestern, Winchester says his eyes were opened to the full breadth and depth of Black history when he took classes taught by, among others, the late Richard Iton (Race, Ethnicity and the American Constitution), Lane Fenrich '92 PhD (U.S. History) and D'Weston Haywood '08 MA, '13 PhD (Black Manhood in the 20th Century). Those classes added historical context and sparked a shift in Winchester's perspective.

“Racism,” he explains, “is like states of matter, in that it has lots of forms — solid, liquid and gas — and I had understood racism as one thing prior to college. It was the ice. I could see it. I knew it was there.

“The deeper investigation I had in college made me realize that racism is not just solid. It morphs into gas — something you can't see — and is a part of the things you literally need for existence, like the air you breathe. I didn't understand that until I was presented with these texts and had professors articulate it for me in ways I hadn't processed.”

And then Winchester asked himself, “Why didn't I get this context before?” That learning experience would later inform his teaching style.

In elementary, middle and high school, Winchester says, disciplines are often taught absent of context. That applies to history but also science, art and music too.

He offers an example: “I can situate history within a sociocultural context that

often goes beyond the presidential politics in which we are typically taught U.S. history,” says Winchester, who received last year's Golden Apple Award for Excellence in Teaching. “So, when I teach about Manifest Destiny as this concept rooted in white supremacy, one based on the Doctrine of Discovery, anti-Blackness and settler colonialism, I can also position gentrification as a present-day concept to explore within this context.

“Students are learning about both past and present phenomena and in many respects are able to see these manifestations of white supremacy, anti-Blackness, settler colonialism and gentrification on micro and macro levels, within and aside from their own lived experiences. From there, students develop various levels of consciousness regarding their understanding of self, as an individual and within the context of their peers, as well as an understanding of larger sociopolitical histories and how to engage with them, especially as we move toward a more just and humanizing reality.”

Teachers, he says, have to “start interrogating themselves and their own identities” in order to overcome their shortcomings and fears of teaching a more sophisticated view of history.

“We have a responsibility to really interrogate histories and situate all of our work in a historical context so we can realize that history isn't this thing of the past, but it's something that we experience now, and the implications of our actions now

are what's going to impact the future,” Winchester told the *Evanston Patch* after being named the top history teacher in Illinois for 2020 by the Gilder Lehrman Institute of American History. “Everything is connected, and I just wish that folks understood the magnitude of that.”

In remarks at the National Archives Museum last September, President Donald Trump called for the creation of the 1776 Commission to promote “patriotic education.” According to the *New York Times*, “Trump vowed to counter what he called an emerging classroom narrative that ‘America is a wicked and racist nation.’”

It's not the first time that a person in power has sought to influence or remove difficult race histories from K-12 curricula. Northwestern professor Leslie M. Harris points to Lynne Cheney's crusade to remove Black and Native American

history from consideration for curriculum standardization as one example.

In the 1990s UCLA historian Gary Nash worked to create a national history standard, partnering with teachers to weave various multiracial histories into one American narrative. When these national standards for U.S. and world history came up for a Senate vote, Cheney and others went on an all-out assault.

In “The End of History,” a 1994 op-ed in the *Wall Street Journal*, Cheney — former chair of the National Endowment for the Humanities — wrote that the proposed standards were too “politically correct.” They mentioned the Ku Klux Klan 17 times, she said, but didn't mention Gen. Robert E. Lee.

“The idea is that by including these histories we're doing damage to the nation,” says Harris, a history professor whose research focuses on U.S. slavery and pre-Civil War African American labor. “Academic historians really did an incredible job in the '60s, '70s and '80s in diversifying our understanding of history, but it's been difficult to impossible to get those histories into our K-12 curricula.”

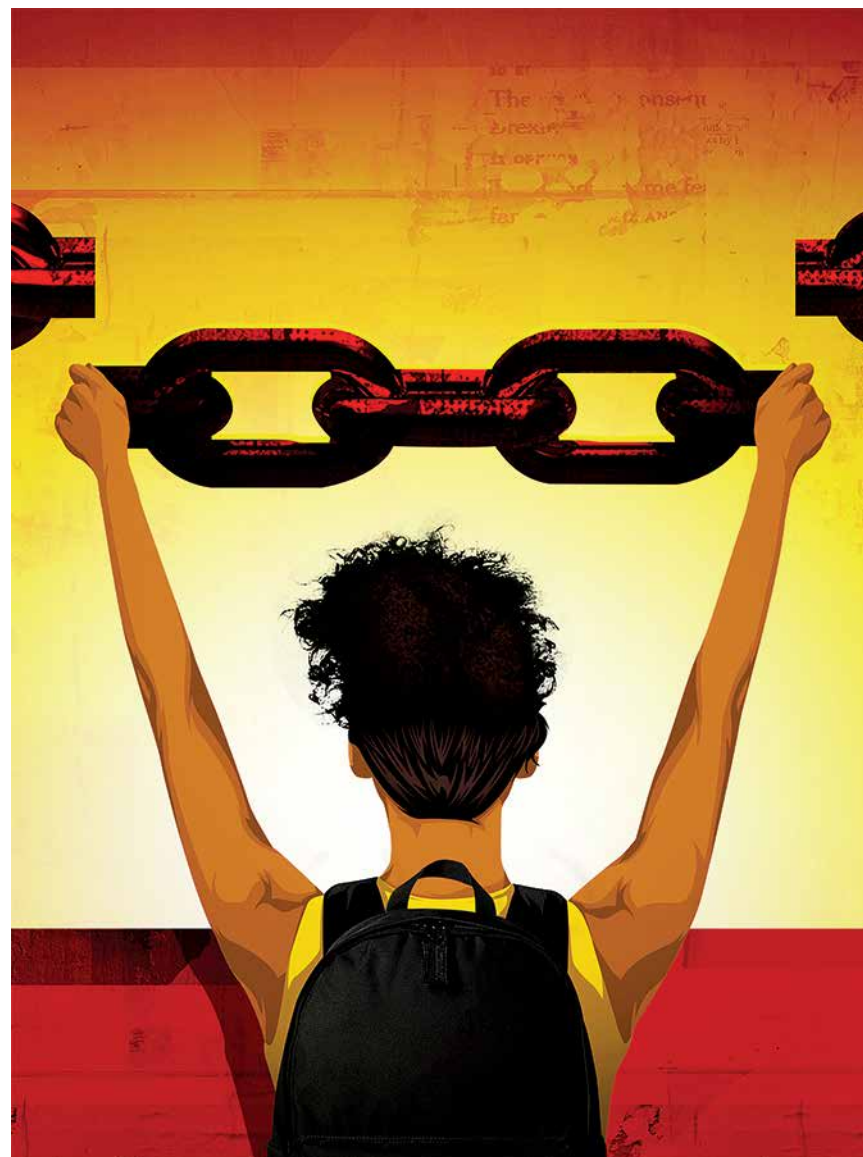
But now, says Harris, “the reckoning is here.”

“U.S. history was held hostage by the idea that the nation was created by white intellect, white energy, white labor. Yet slavery was key to economic survival. We should study that.”

Aldon Morris asks, “Who benefits when you only teach that America is exceptional in its greatness and its virtue? Why shouldn't students learn, for example, that during World War II Japanese Americans were rounded up and caged in concentration camps? This shameful treatment of a segment of Americans is, in fact, part of American history.

“I'm not saying providing a comprehensive history is going to be easy. What I am saying is that the price of ignoring the totality of American history is very high because such erasures promote profound and crippling ignorance.”

In late September, Kate Masur and history doctoral students Hope McCaffrey and Heather Meneff '15 spent part of a Saturday afternoon at Chicago's Oak Woods Cemetery. Holding signs that read, “This is a monument to white supremacy,” and bore the hashtag #wewantmorehistory, they sought to provide a more complete story of Confederate Mound, a monument to



the thousands of Confederate prisoners of war who died at the Union’s Camp Douglas on Chicago’s South Side.

The Confederate Mound protest was part of “Civil War History: A Call to Action,” an event organized by the *Journal of the Civil War Era*, which Masur co-edits.

Scheduled to coincide with the anniversary of the issuance of the preliminary Emancipation Proclamation, the group demonstration took place for two hours at about a dozen sites across the country, including Gettysburg National Military Park, with historians and community members holding signs and chatting with visitors to offer additional history not represented in markers and monuments.

“We had two goals,” says Masur, an associate professor of history at Northwestern. “One was disrupting what’s called the ‘Lost Cause’ narrative, the idea that the Confederacy was this great, noble cause and that they weren’t really fighting for slavery but rather for states’ rights. We wanted to poke holes in that and tell a fuller story. We also emphasized aspects of African American history that are invisible on the landscape.

“We want to be a resource for people in trying to move this conversation forward and set the record straight. We’re trying to add more history. Who could object to that, right?”

Masur says that to understand racial injustice, people have to know U.S. history, but this history has not adequately been taught on the K-12 level. In part, that’s due to a decadelong focus on science, technology, engineering and math — a worthy focus that has diverted some resources from history and social studies.

“There’s been a systemic de-emphasis on the teaching of history and humanities in this country for a very long time,” says Masur. “And now? We’re reaping what we sow.”

Unfortunately, it’s often not until students get to college that they get the full context of historical lessons. And “it’s not just Black students who benefit from this history,” says kihana miraya ross, assistant professor of African American studies. “Everybody benefits. Everybody needs to understand that Black folks were the only race to be ‘freed’ with zero capital — nothing, no housing, no job — nothing except being racialized in a way that made the act of existing a challenge.

Black-History Courses Gain Popularity

Recent social movements are making Black-history classes more popular than ever at Northwestern. Students want to understand the facts behind what’s happening in the streets, says Mary Pattillo, the Harold Washington Professor of Sociology and African American Studies and chair of the Department of African American Studies. In the fall quarter, several classes in the department had waiting lists.

“We definitely experienced an uptick in enrollment,” says Pattillo. “My class [Introduction to Black Social and Political Life] was capped at 30. I have 34 students and had to turn others away.”

She surveyed the class, and just under half said that one of the reasons they enrolled was because of the current conversation about anti-Black violence. “There are also a good number of seniors who said they finally have room in their schedules to take a race class and were especially interested in doing so given the current moment.”

Fall 2020 African American studies courses included:

- **Survey of African American Literature** — An introduction to critical snapshots of expressive writings by and about African Americans, from the era of U.S. slavery in the 18th century through the contemporary moment
- **Introduction to Black Social and Political Life** — A study of the social relations, political agency and economic practices of African Americans and other Black folk in the diaspora
- **The Black Diaspora and Transnationality** — An introduction to critical theories of race, gender and sexuality across the African diaspora
- **Major Authors: James Baldwin** — A study and meditation with and within Baldwin’s language

—A.S.G.

“If people better understood that history, they would be better able to historicize our experiences and connect the past to the present in a way that would meaningfully address some of the obvious racial injustices we continue to see.”

Students need to know more than political folktales, says Aldon Morris. Even elementary school students can learn age-appropriate lessons that also discuss the painful narratives of history.

If students don’t get this crucial education early on, Morris cautions, they “will grow up with a very limited view about how America works and how the world works.”

Winchester, who is pursuing a doctorate in learning sciences at Northwestern and taught the social studies practicum at the School of Education and Social Policy this past fall, suggests replacing the march-through-time approach to teaching history with a focus on understanding the implications of historical events. He also suggests that K-12 teachers move beyond textbooks and focus instead on supplemental texts that provide the context routinely taught to college students.

“What can you do at your school level?” ross asks of teachers. “How can you engage in subversive practices that will benefit all students, who need to know the truth so they grow up to be better people and have a better understanding of the world they live in?”

But teachers can’t do it alone. Parents have to push their individual schools and school boards or councils for historical accountability.

Winchester says myths — Santa Claus, the Easter Bunny, the tooth fairy — are part of American culture. But when it comes to teaching history, it’s time to come clean.

“We’ve been lying to our kids for a long time,” says Winchester. “In the U.S., this idea that we’re going to censor things until we think kids are ready — that’s a part of the problem, because eventually you have to unlearn all the things that were partial truths or full-out lies.”

Adrienne Samuels Gibbs ’99 is the editor of Momentum, a publication that documents the dismantling of anti-Black racism, and the features editor of ZORA, a magazine for women of color. She lives in Chicago.

Alumni



↑ Residents of Chapin Hall, the Humanities Residential College. Keep an eye on our social media to help identify these folks.

Creation



↑ Bhargav Maganti, left, and Igor Karlicic, founders of the sports tech company Monarc

COMPETITIVE EDGE

Five Questions with Igor Karlicic '12 and Bhargav Maganti '12

The Dallas-based sports tech innovators from Monarc created the Seeker, a smart quarterback that uses tracking technology.

1

How did you become involved in sports tech?

Karlicic: We really liked the concept of allowing a receiver to train alone. The only way you can execute that is if you take the player's data in real time, track his position and velocity using wearable technology, and then layer algorithms to predict where he's going to be. Being able to train alone while interacting with a robot

2

What sets the Seeker apart from other football-passing machines, including the popular JUGS machine?

Maganti: The patent for JUGS machines was created over 40 years ago, and there hasn't been much innovation on that front since. We asked, "How can we optimize this technology?"

The first thing we focused on was positional tracking. There have been tremendous advances in the tracking space, specifically positional tracking in soccer, over the past decade. We came into the industry at a moment when this tracking technology became more widely available and applied it to the Seeker.

3

What makes the Seeker so important to football?

Karlicic: We had a relationship with the University of Iowa to test our prototype. And with the very first concept, it was evident that we had something special. A lot of the receivers commented that they could never get the practice reps they needed. As a third-string receiver, you don't get priority. Everybody wants reps. The Seeker offers that. It became clear that the idea and the platform had immense potential.

is one thing, but having a platform that learns from you and then modifies the output — that's the paradigm we're most excited about.

4

How did you launch Monarc in the midst of a pandemic?

Karlicic: We have several universities on board right now. We had planned a road show to hit a lot of Big Ten schools. And then that came to a screeching halt with COVID-19. But the players themselves were reaching out to us. The idea of being able to train alone was extremely compelling.

Maganti: We've done several workouts with NFL players. We had [San Francisco 49ers tight end] George Kittle using the Seeker in his backyard. He posted videos on social media. In addition to exposure, the outcome of our campaign was having NFL players like T.J. Hockenson and Eric Ebron purchase Seekers for themselves. We also had Kittle, Mohamed Sanu, Hunter Henry and N'Keal Harry come on board as investors.

5

How has your work at Monarc been informed by your time at Northwestern?

Maganti: The Engineering Design and Communication courses and the capstone design course that Igor and I took together our senior year were certainly influential in terms of our interest in and passion for design. What also makes Northwestern unique is the amazing Ford Design Center. Igor and I used to go there quite often, just tinkering around and learning how to make things.

Interview by Jacob Muñoz, a senior from Ingleside, Ill.

FUMUDOH: MICHAEL LOCCISANO/GETTY IMAGES FOR MOVEMENT VOTER PROJECT



POINTED COMEDY

Ziwe Fumudoh's Instagram Live show has become must-see social media TV. In the sharply funny, confrontational and often wildly uncomfortable show, Fumudoh '14 interviews celebrity guests to explore their implicit biases and start conversations about race and racism. She is also a writer on Showtime's *Desus & Mero*. She released a musical album, *Generation Ziwe*, in 2020 and is also the voice of Kamala Harris on Showtime's *Our Cartoon President*. Fumudoh is currently writing a humorous essay collection called *The Book of Ziwe* and will star in and executive-produce a new Showtime variety series. "I just want to push the boundaries of my art at all times," she says, "and to do that successfully, I have to dabble in as many things as possible." Read more about Fumudoh, pictured above at a 2018 Movement Voter Project comedy benefit, at alummag.nu/ziwe-fumudoh.



FOOD

Taste Maker

Last spring, as millions of Americans quarantined at home, Alex Willis '17 MS used his lifelong hobby of baking to keep him busy.

Willis, who earned a master's degree in chemistry at Northwestern, pursued a career in business analytics and strategy after graduation and also rekindled his passion for food creation. This spark led to an appearance on the fifth season of *The Great American Baking Show*,

which aired on ABC last winter. Willis, who earned Star Baker honors twice — during Cake Week and Spice Week — and finished the season in fourth place, called it the time of his life.

"The best thing about being on the show," he says, "was meeting all of the people: my fellow bakers, who I text all the time, and the production crew and the celebrities."

In August, Willis hosted a live, virtual baking demonstration with the Northwestern Alumni Association and the Graduate School in celebration of National Potato Day. During the presentation he turned purple sweet potatoes into purple milk bread.

Willis, who lives in West Hollywood, Calif., says his long-term goal is to start or operate a bakery. "It's important to realize that you should be a multifaceted person and pursue your interests, even if it's just as a hobby," he says. "That doesn't make it any less important or less valuable."

Get Willis' purple milk bread recipe at alummag.nu/alex-willis.



↑ Molly Beucher, right, and her friend Georgia Maguire motorbiked across Morocco.

INTERNATIONAL ADVENTURE

Monkey Bike Mafia

Molly Beucher '08 and her friend Georgia Maguire pulled into one of the last stops of their 500-mile motorbike trip across Morocco feeling like small-town heroes. They had just traversed a mountain pass in a snowstorm, and locals were waving and shouting.

"It was a real *Rudy* moment," Beucher says. "Then some guy yelled, 'Fire! Fire!' and I looked down to see that, sure enough, my bike was probably 30 seconds from erupting in flames."

Beucher and her bike were both OK — someone rushed over to pour water on the spreading flame. The incident was emblematic of the duo's seven-day journey: exhilarating, dangerous — and helped tremendously by the kindness of strangers.

In partnership with Education for All Morocco (EFA), an organization focused on educating Moroccan girls in remote areas, Beucher and Maguire set off on their 2018 adventure through the North African country. And they did it all on "monkey bikes" — essentially, miniature motorcycles. The distance traveled each

day depended on these bikes, which broke down more often than the women had anticipated.

"We found ourselves in these small towns that aren't even on a map, asking for a mechanic, who often ended up being the cousin of the guy who just happened to see us do an accidental wheelie off our bikes," Beucher says. "We were overwhelmed by the generosity of everyone we met."

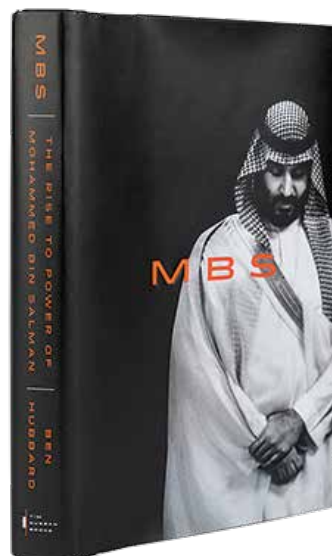
Beucher and Maguire — the so-called Monkey Bike Mafia — filmed their journey and posted excerpts on YouTube in seven installments that are equal parts comedy and travel diary. The episodes show breathtaking terrain, interactions with local residents, hilarious status updates and, of course, many monkey bike breakdowns.

"It was so transformative just to be with my friend in a foreign country and figure it all out," says Beucher, who would love to do a Monkey Bike Mafia Ride 2.0. Now, though, she's focused on a different adventure: motherhood. She gave birth to her first child, William, last September.

BIOGRAPHY

MBS by Ben Hubbard

New York Times Beirut bureau chief Ben Hubbard '99 conducted hundreds of interviews over seven years for *MBS: The Rise to Power of Mohammed bin Salman*. The book tracks the trajectory of the crown prince of Saudi Arabia, a largely mysterious figure who has rapidly asserted his control over the kingdom's oil, finances, military, and domestic and foreign policy. Hubbard, who speaks Arabic and has covered coups, civil wars, protests and more in the Middle East and North Africa, sought to provide a multifaceted picture of the prince and the kingdom itself. "It is true that [bin Salman] is a social reformer and that he is changing things in Saudi Arabia," Hubbard says. "It's also true that he's a very authoritarian character. Those things can be true at the same time, and I think you have to understand that they fit together to really get a picture of who he is and where he might take Saudi Arabia in the future."



↑ Ashley O'Shay, right, and activist Janaé Bonsu

DOCUMENTARY

Unapologetic About Racial Justice

Ashley O'Shay's documentary follows the work of two Chicago women at the fore of the Movement for Black Lives.

POLITICS ON SCREEN

Surging Forward

To capture the barrier-breaking 2018 election, first-time director Wendy Levine Sachs '93 co-directed and produced *Surge*, a feature documentary film that follows three female candidates who fought to flip their districts from red to blue in the last midterm election. "We followed a diverse group of candidates who reflected the surge that was happening in 2018 and the record numbers of women who were running for the very first time," says Sachs, a former Capitol Hill press secretary, Emmy Award-winning TV news producer, author and media strategist. *Surge* was released on Showtime and Amazon just before the presidential election. Sachs hopes the film will inspire young women to embrace the power of grassroots activism. "The film is not just about women running for office but about the women who got behind the women running for office. *Surge* shows us what representative democracy looks like and how it's up to us to make sure that 2018 was not a moment but a true movement," Sachs says.

Ashley O'Shay attended her first Black Lives Matter protest in 2012 following the killing of Trayvon Martin. After graduating with a radio/TV/film degree, O'Shay '15 decided to focus her documentarian lens on the nascent movement.

What began as a short film for her internship with Kartemquin Films turned into *Unapologetic*, a feature-length documentary that premiered in August at the BlackStar Film Festival in Philadelphia. O'Shay follows the work of two young Black women, Janaé Bonsu and Bella BAHHS, who organize for Black political, economic and social liberation. (Morgan Elise Johnson '11 is the film's producer.)

O'Shay knew she had to make the film when she witnessed the "electric atmosphere" at a Chicago Police Board accountability hearing in response to the killing of Rekia Boyd by an off-duty officer. "I was taken aback that the voices at the center of this space ... were those of young Black women who I could identify with in a lot of ways," says O'Shay, who grew up in Indianapolis and now lives in Chicago.

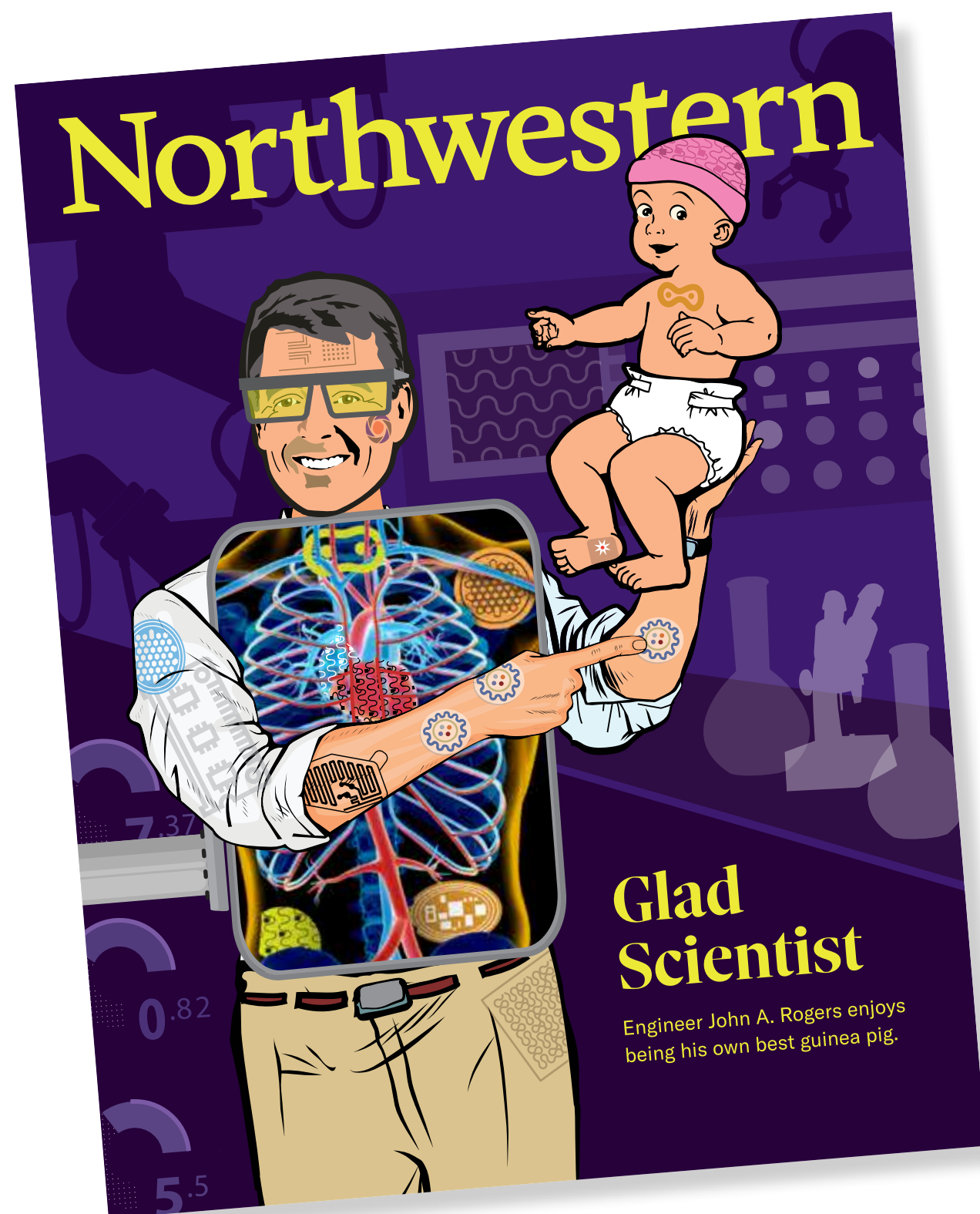
The project picked up momentum after the killing of Laquan McDonald caused the movement to gain even more attention. O'Shay says it was important to capture this moment in Chicago's history by featuring women "who reminded me of the Black women in my life. I wanted to give them the respect that they've always deserved within movements around Blackness."

O'Shay became more outspoken on issues of racial justice thanks to Northwestern. "I was always very much a rule follower and didn't want to stir the pot," she says. "But because of the strength of the Black community, Northwestern was a space where I could explore my politics and activism."

While O'Shay is also interested in pursuing commercial and branded content, documentaries flow most naturally for her.

In September she was named to *Newcity's* "Film 50 2020: Chicago's Screen Gems," telling the magazine that "being a Black woman with the talent to wield a camera is a superpower."





Watch an interview with prolific inventor John Rogers at alummag.nu/john-rogers, and to read more, see page 26.

HENRY MCGILL



Shop Purple First

Whether you need financial advice, photography, or a special gift, you can support Northwestern alumni who own small businesses around the world. Search more than 450 listings in 18 countries in the Northwestern alumni-owned small business directory.

alumni.northwestern.edu/smallbusinessdirectory

Northwestern | ALUMNI

Northwestern

NORTHWESTERN MAGAZINE
NORTHWESTERN UNIVERSITY
BOX 1603
2020 RIDGE AVENUE
EVANSTON, IL 60208-4340

NON-PROFIT ORGANIZATION
U.S. POSTAGE PAID
NORTHWESTERN UNIVERSITY



500

Miles driven on monkey bikes by Molly Beucher '08 and her friend Georgia Maguire during a seven-day journey across Morocco to raise funds for girls' education. See page 48.

