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*"Black women are the bedrock of  
their communities, and everyone  
benefits when they are well."* p. 7

# Northwestern

WINTER 2022

## The Wright Move

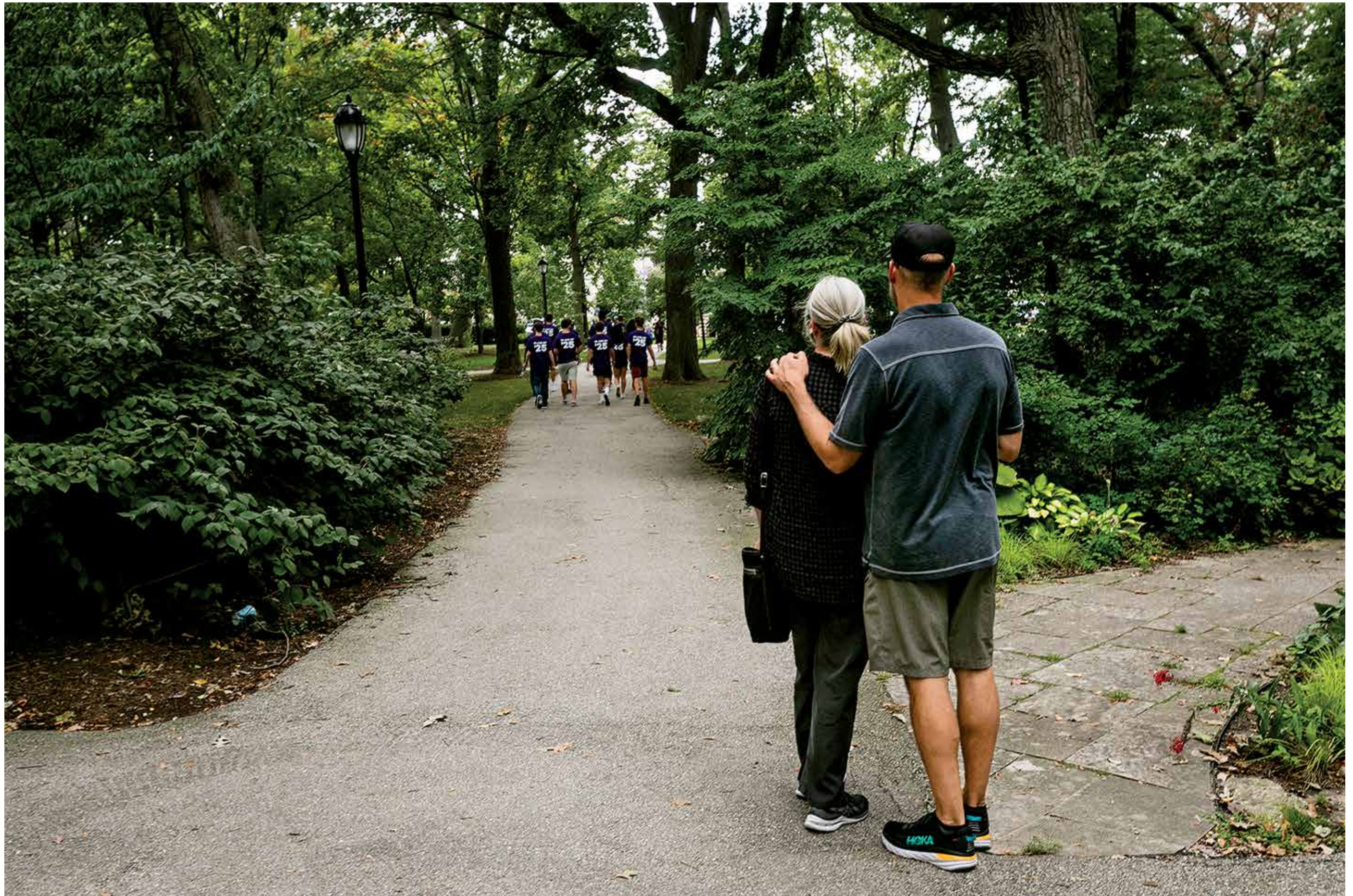
Former Wildcat Jason Wright  
goes from running back to  
running the Washington  
Football Team. p. 28





**A Fond Farewell**

Parents watch a group of new Wildcats head out on campus following the March Through the Arch ceremony during Wildcat Welcome in September. After a year of COVID-19 restrictions, Wildcat Welcome introduced the Class of 2025 to the foundational elements of Northwestern, while members of the Class of 2024, who missed out on face-to-face experiences last year, took part in a modified program known as Wildcat Welcome Back.





**Collective Craft**

Last October, for the first time in perhaps 180 years, a traditional Native American birch-bark canoe was launched into Lake Michigan from the shoreline along the Evanston campus. During the course of three weeks last fall, Mino Giizhig Wayne Valliere, artist-in-residence at Northwestern's Center for Native American and Indigenous Research, shared the Native American craft of canoe building with students. A member of the Ojibwe tribe, Valliere (bottom row, third from left) is one of only a few builders of traditional birch-bark canoes in the U.S. The canoe, launched briefly during a sunrise ceremony, will be on display at Northwestern.



PHOTO: SHANE COLLINS



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We know good sleep promotes good health (and vice versa). Now, researchers from across Northwestern's schools and disciplines are bringing together sleep science, circadian biology and technology to help us better understand the importance of a good night's rest — and get more of it.

By Clare Milliken



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### Widening the Arch

Increased financial aid has made a Northwestern education more accessible and fueled a transformation of the student population.

By Sean Hargadon



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← “We can invigorate traditional forms of theater by inviting the audience into a totally different relationship with the work. I like to say that I make boring things sexy.”

— Mara Lieberman '98 MA, right, director of *Voyeur: The Windows of Toulouse-Lautrec*

ROBINSON (FINANCIAL AID): SHANE COLLINS; ILLUSTRATION: YIFAN WU; LIEBERMAN: TRAVIS EMERY HACKETT

Cover: Jason Wright. © Scott Taetsch — USA Today Sports



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Talk Back

BATTLING GLIOBLASTOMA

Great article (“Outsmarting the Deadliest Brain Cancer,” fall 2021)! Great science writing, in plain English, without “science-y” jargon at the expense of clarity, and with thoughtful commentary on the human toll of this disease. Clare Milliken seems to have understood the topic. Kudos.

And condolences to Ned Smith’s family. What a brave man to share his experience in the face of such a devastating disease.

Heather Collins '91 MBA Evanston

**Editor’s Note:** We are honored that Ned Smith was willing to share his story with us. Unfortunately, Smith’s tumor recurred last summer, and he transitioned to hospice care in September. He died on Sept. 25, 2021. The magazine extends its deepest sympathies to his family, friends, colleagues and everyone who knew and loved him. Please see his obituary on page 75.

MISSION TO MARS

This is an impressive and informative article that addresses some of the challenges of a manned mission to Mars (“So Far Yet So Close,” fall 2021). However, it leaves unanswered the question that I have come to regard as the quintessential understanding about this project — why?

Why would we want to spend possibly as much as \$2 trillion to visit a planet that is deadly in so many ways and has nothing of value on it?

Is the answer to “why” to be found in the contracts that

would need to be created with private industry to build the hardware to sustain life in space and on Mars? There is no reason to expend resources to take people to Mars. Our destiny is on this planet, where we evolved. We should take better care of our only home. Robert Jacobsen '77 Los Angeles

Thanks for this informative article about the physical and psychological challenges of long-distance space travel. As an informal educator at a science museum where we engage guests to discuss the challenges of living on another planet, I found this article especially helpful! Chris Rademacher '96 MBA Chicago

THEATER FOR YOUNG AUDIENCES

I was excited to see your recent article “Saved by the Stage” (fall 2021) but disappointed that you did not include the incredible Northwestern alum Nina Meehan '00. In an industry where artistic leadership positions are still largely held by men, she has successfully built the award-winning Bay Area Children’s Theatre from the ground up as CEO. Nina’s theatrical work for young people has reached more than 1 million kids and adults, and the theater group has toured nationally and internationally.

She also serves as the board president for TYA/USA and is a renowned creativity expert who has shared her wealth of knowledge with Northwestern students and alums.

Kate Mitchum '00 Lexington, Ky.

IDENTIFYING CONCUSSIONS

If Rosina Samadani’s EyeBOX (“Identifying Concussions,” page 57, fall 2021) can be delivered in a small, economical, user-friendly way, and with a bare minimum of false positives and negatives, every high school, college, emergency room and ambulance should have one! Jon von Gunten Tujunga, Calif.

THE FUTURE OF MEDILL

I wish I could share Dean Charles Whitaker’s optimism (“Medill Poised to Lead a Changing Media World,” page 7, fall 2021), but my cynicism is influenced by how journalists are perceived by our fractured society.

But there is hope. One of my memorable Medill classes was Jake Scher’s newspaper history course. Professor Scher recognized the need to establish what Dean Whitaker calls “new media outlets for specific communities.” It’s how newspapers started at the dawn of the print age. It’s how we can recapture the public’s trust.

George A. Baum '55, '56 MS Naples, Fla.



Watch original video and read more stories at alummag.nu

The Divided States of COVID with Professor James Druckman '93

WATCH: Financial Aid Recipients Describe Their Journeys

Tananarive Due '87 Reveals the Black History of Horror Movies

WATCH: President-Elect Blank on Coming Home to Northwestern

Voices

MENTAL HEALTH

The Other Side of the Strong Black Woman

By Inger Burnett-Zeigler

This past summer, women’s tennis star Naomi Osaka and Olympic gymnast Simone Biles launched a movement in Black women’s mental health by choosing not to compete in order to care for their mental health.

For far too long the emotional pain of Black women has been ignored. Compared with other race and gender groups, Black women experience more stress when it comes to work, finances, family responsibilities, racism, sexism,

discrimination and trauma. The COVID-19 pandemic, combined with the civil unrest in response to highly visible police killings of Black people, piled onto that extant stress and exacerbated mental health challenges.

Black women have traditionally coped with their stress and trauma by wearing their “strong Black woman” cape, which empowers us with the resilience necessary to do what we need to do, day by day, to simply make it in the world. However, these capes veil the detrimental effects that stress and trauma can have in our lives.

Both Osaka and Biles courageously defied this strong Black woman mandate, which requires all-enduring strength, self-sacrifice and the denial of emotions such as depression and anxiety. Instead, they provided an example of how to pay attention to our feelings, prioritize our needs and set boundaries in service of mental wellness, even if it is an inconvenience to others.



↑ Inger Burnett-Zeigler

Though Osaka and Biles are premier athletes with wide-reaching platforms, in many ways they are no different from the Black women I see in my outpatient psychotherapy practice at Northwestern Medicine. I work with women who are struggling with the residue of unresolved trauma related to sexual abuse, poverty, chronic instability and exposure to violence. This trauma shows up in their daily lives as persistent fear, worry, feelings of insecurity and shame.

Many Black women I work with are additionally burdened by being “the first” or “the only” in white spaces. These women sense that they don’t belong and describe feeling the pressure to be perfect, so that they set a good example and don’t let down those who depend on and are looking up to them. They are constantly self-monitoring, making sure not to inadvertently validate a negative stereotype about Black women.

In my recent book, *Nobody Knows the Trouble I’ve Seen: The Emotional Lives of Black Women*, I show the other side of what strong Black women display to the outside world — our vulnerabilities and the common humanity embedded in our suffering. I share rarely told stories of stress and trauma that I’ve heard from friends and family and women I have worked with in therapy and clinical research, as well as my personal struggle with anxiety and depression. When held in silence, these experiences can feel burdensome and isolating. By giving voice to our pain, we liberate ourselves from the necessity of wearing a cape of superficial strength. Instead, we hold space for our pain and embrace all aspects of ourselves with compassion and grace, knowing that we are worthy and valuable human beings just as we are.

The tide is turning. COVID-19 has made flexible work arrangements more common. The discussions continue about the effects of racism and trauma on mental health. There is a new opportunity for Black women to radically realign their lives in a way that supports their mental wellness. Let’s face it: Black women are the bedrock of their families and communities, and everyone benefits when they are mentally and physically well.

Inger Burnett-Zeigler '09 PhD is an associate professor of psychiatry and behavioral sciences at the Feinberg School of Medicine.

JENNA BRAUNSTEIN PHOTOGRAPHY



SOUND OFF

# Our Beautiful Campus

What place at Northwestern brings you joy?

Michael Weidemann '74



Alice Millar Chapel! The stained-glass windows are awe-inspiring, and the organ and choir provide an amazing accompaniment during services. I was part of a group of students, faculty, alumni and townspeople who formed the Church in the Chapel, an interdenominational Christian community that worshipped and studied together and tried to live out our faith in the world. My wife and I were married in the adjoining Jeanne Vail Chapel, and our daughter was baptized there. What a wonderful place to nourish one's soul!

Gaye Miyasaki '78

Northwestern had one of the most beautiful campuses when I attended. One of my favorite spots was the Shakespeare Garden. I loved reading books in the garden, which was near my dorm, McCulloch Hall. It was a beautiful, serene place in the fall and the spring. I recently looked up the garden online and was pleased to see that it has been refurbished. It looks wonderful and is definitely still a gem!



Robert Lilienfeld '75, '76 MBA

It's an early evening on a Friday in spring. You're finished with classes for the week

and have just eaten dinner at Elder Hall. You and a few friends grab a drink, head over to the rocks and sit along the lake with your legs hanging over the edge. There's a warm, onshore breeze washing over you. The gulls above are squawking, some dogs at the nearby frat houses are barking, and your stress melts away. On a warm spring day, before the alewives washed ashore, that spot was heaven.



Jacob Munoz '21

Whether it was painting on large rocks along the shore, partying to thundering Dillo Day concerts or just gathering with friends, many of my great memories on campus took place on the Lakefill. Even on the most crowded summer days, the area has a true serenity to it. There's nothing quite as special as listening to crashing waves while viewing the Chicago skyline or watching the dark blue horizon give way to a bright orange sunrise.



Catherine Scholl '86

No place on campus is more special to me than the old Music Administration Building. Everything from the creaking floors that gave way as you walked on them, to the smell of oil carefully applied to ease the bones of the century-old wood banisters, to the cavernous rehearsal rooms that connected to others like a cave system — it all made me feel like the artist I was becoming. Often I would just close my eyes and “feel” the building through a cacophony of piano, flute, clarinet and other instruments, all performing beautiful concerts of their own. It brought me vitality and peace, and it's etched in my memory and heart forever.



SOCIAL FEEDS

As Northwestern welcomed the Class of 2025, alumni chimed in to cheer them on and reminisce about their favorite times on campus.

“Still have the winter coat I was wearing when I painted the Rock in 2000. I got paint on my sleeve and I smile every time I see it.”

Claire Adams Wang '03



“♥ My son J. Imani is in that N! I am a proud alumna and mom. Go 'Cats!”

Seretha D. Williams '92

“[My favorite class was] a graduate-level class called Excitable Cells and Synapses, team-taught by neuroscience faculty from both the Evanston and Chicago campuses. My husband and I met in this class in September 1990, and we got married in May 1994 at Millar Chapel.”

Joanne McAndrews '94 PhD



By Chad Mirkin

Director of the International Institute for Nanotechnology and the George B. Rathmann Professor of Chemistry

MY NORTHWESTERN DIRECTION

# Using Small Science to Solve Big Problems

Several fortunate twists of fate led me to Northwestern. As a high school student in rural Pennsylvania, I was interested in math and science. But while my brothers had pursued physics, medicine and geology, I wanted to chart my own course. At Dickinson College, I chose to study chemistry.

I landed at Northwestern in 1991 thanks to persistence and a bit of luck. I reached out to the chemistry department several times until, finally, professor Jim Ibers said there was an unexpected opening. He invited me in the next week, and it was the best interview I ever had. The vibe, environment and faculty were perfect for what I wanted to do: build a world-class laboratory that would push the frontiers of inorganic chemistry.

When I arrived on campus, I had the freedom to try new things. The materials science and engineering department had a scanning probe microscope, a tool used to determine the topology of surfaces at the atomic scale. I had never even seen one before, but I taught myself how to use it. Before long we had built one of the largest scanning probe operations in the world, which enabled the rapid growth of nanotechnology at Northwestern and led to the invention of techniques that have revolutionized aspects of materials discovery.

The collaborative nature of research here has made all the difference too. One case in point is the development of spherical nucleic acids (SNAs), which are nanoparticle structures modified with bits of DNA or RNA. Due to their unique size and structure,

SNAs can actively enter cells, cross biological barriers and serve as the basis for new genetic medicines.

The inspiration for SNAs came to me during a conversation with chemistry professor Joe Hupp. We'd heard a talk about trying to make colloidal crystals from nanoparticles, using small molecules to bond the particles together. In nature, colloidal crystals control the color of butterfly wings, for example. In the lab, they can be used to create a wide variety of optical devices. That got me thinking: DNA has the highest information content of any polymer, so we could use it as a programmable bond. Our research group began to repurpose the “blueprint of life” to make new materials that can be programmed for use in diagnostics, therapeutics and drug delivery, giving us new tools to study, track and treat disease, including deadly cancers.

Back in the 1990s people thought nanotechnology was a gimmick. But I saw it as a once-in-a-lifetime opportunity. East Coast schools had a head start in many disciplines due to their ages. But with an emerging field like nano, everyone was starting at the same time. Northwestern had a chance to be the best. President Henry Bienen '09 H understood that and made the financial investment we needed to launch this effort, and President Morton Schapiro doubled down. Now the International Institute for Nanotechnology (founded at Northwestern in 2001) has raised more than \$1 billion for research and educational initiatives. We've competed for — and won — some of the largest grants in science, and we have attracted some of the best students and faculty in the world to Evanston. Indeed, Northwestern has become a world leader in nanoscience and nanomedicine.

In the end, my story isn't really about twists of fate. It's about a community where ambitious work can be done. It's about a university committed to solving big problems. With those values in place, great opportunities naturally arise.

“East Coast schools had a head start in many disciplines due to their ages. But with an emerging field like nano, everyone was starting at the same time. Northwestern had a chance to be the best.”



WHAT I LOVE

Pop Culture Curator

The Ringer’s Juliet Litman dishes on pro sports, rom-coms and binge-worthy shows.

Juliet Litman ’08 always figured she’d be an English professor, not a pop culture authority. But thanks to a nudge from her adviser, former Northwestern professor Brian T. Edwards, the American studies major took a job in media and, within a few years, landed at The Ringer.

Litman is head of production and a creative force in the making of pop culture and sports content and commentary that goes well beyond fandom. She manages the more than 50 shows in the company’s vast podcast network. She hosts a few herself, including *Bachelor Party*, *Jam Session* and, occasionally, *The Rewatchables*, a roundtable of Ringer regulars who break down the movies we all watch again and again.

Some of her all-time favorites are the romantic comedies of Nora Ephron. An insomniac, Litman has fallen asleep hundreds of times to *When Harry Met Sally*, *You’ve Got Mail* or *Sleepless in Seattle* — all good “middle-of-the-night movies.”

Here are four more things Litman loves:

- *New York City’s Upper West Side, where she grew up: “It’s like a small town in a big city.”*
- *The theatrics of pro sports: “After all, my parents named me after basketball star Julius Erving.”*
- *Kobe Bryant: “When he took Brandy to his high school prom, it was a sensational collision of basketball and pop culture.”*
- *An ER binge watch on Hulu: “The show and young George Clooney still hold up. And it has that nice Chicago connection!”*



Juliet Litman in New York City

IN THE NEWS

Talking Points

Northwestern faculty discuss recent breakthroughs in research, innovation and social insights, from the world’s tiniest flying microchip to the pandemic’s effect on reproductive health.



“Over the course of billions of years, nature has designed seeds with very sophisticated aerodynamics. We borrowed those design concepts, adapted them and applied them to electronic circuit platforms.”

**John Rogers**, the Louis A. Simpson and Kimberly Querrey Professor of Materials Science and Engineering, Biomedical Engineering and Neurological Surgery, to *Smithsonian Magazine* about his microfliers (left).

“[Workers are] trying to recover some sort of protections and rights in the workplace, where they have virtually none. Once you realize the extent of the problem, it’s hard to look away.”

**Daniel J. Galvin**, associate professor of political science, to *NBCNews* regarding research that shows Latino and Black workers are much more likely to be paid below minimum wage than white workers.

“We know added stress can negatively impact our overall health and well-being, but for women and people who menstruate, stress can also disrupt normal menstrual cycle patterns and overall reproductive health.”

**Nicole Woitowich**, research assistant professor at the Feinberg School of Medicine, to *Forbes* about a Northwestern study that showed 54% of respondents had experienced changes in their menstrual cycle since the pandemic began.

“If I did not see it for myself I would not have believed it. ... It’s almost crazy in my mind.”

**Rui Yi**, the Paul E. Steiner Research Professor of Pathology and professor of pathology and dermatology at the Feinberg School of Medicine, to *The New York Times* about his surprising discovery that hair loss is caused by stem cells escaping from hair follicles.

AMANDA WESTCOTT / AK COLLECTIVE

News

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LEADERSHIP

Our Next President

Rebecca Blank, who will become Northwestern’s 17th president, is a renowned economist, researcher and public servant.

**R**ebecca M. Blank, chancellor of the University of Wisconsin–Madison, was named the 17th president of Northwestern University by the Board of Trustees last October.

Blank is an internationally renowned economist and researcher on poverty and the low-income labor market. She has also served as an economics expert in three presidential administrations. Her appointment marks a return to Northwestern, where she served on the economics department faculty from 1989 to 1999.

When she begins her appointment this summer, Blank will make history as



SHANE COLLINS



Northwestern's first woman president. She will succeed Morton O. Schapiro, who has served as president since 2009.

"Northwestern is a school that I have known and admired for years," Blank says. "Its reputation as a top-rated educational and research institution has grown each decade. It will be my mission to make sure the institution's reputation and quality continue to accelerate."

"The Presidential Search Committee met with an incredibly competitive pool of candidates and unanimously recommended Rebecca Blank to the Board for election as our 17th president," says Peter Barris '74, chair of the Presidential Search Committee and a vice chair of the Board of Trustees. "As part of our process, we heard from all segments of the University community, and I believe Chancellor Blank's deep experience and talents will support our current needs and position us for a promising future."

As UW-Madison chancellor, Blank has

advanced the institution's mission of research and innovation, emphasizing the university's role in nurturing entrepreneurship and driving economic development. She also oversees a research portfolio that brought in \$1.5 billion in sponsored research funds this past year.

Blank has championed expanded access to higher education during her time at UW-Madison, notably through Bucky's Tuition Promise, an initiative that guarantees four years of free tuition to Wisconsin resident students whose household adjusted gross income is \$60,000 or less. Under Blank's leadership, UW-Madison's student body became more diverse across multiple demographics.

"She is a distinguished scholar and visionary leader," says J. Landis Martin '68, '73 JD, chairman of Northwestern's Board of Trustees. "Her bold vision for the University's role in the world and her proven ability to lead a collaborative academic research enterprise will guide our institution

toward greater eminence and impact."

A member of the American Academy of Arts and Sciences for almost two decades, Blank was named a 2021 Distinguished Fellow of the American Economic Association in recognition of her lifetime research contributions. Her research has focused on the interactions between labor markets, individual behavior, government policy and the macroeconomy.

Blank is also a leader in Division I athletics, serving on the NCAA Board of Governors. She is chair of the Big Ten Conference Council of Presidents and Chancellors.

Blank served as acting secretary of commerce and deputy secretary of commerce under President Barack Obama '06 H. She also was a member of the Council of Economic Advisers under President Bill Clinton, a senior staff economist on the council under President George H.W. Bush, and a Robert S. Kerr Senior Fellow at the Brookings Institution.

Blank, who received a bachelor's degree in economics from the University of Minnesota and a doctorate in economics from the Massachusetts Institute of Technology, is married to Hanns Kuttner, a senior fellow at the Hudson Institute. They have one daughter, Emily, who graduated from Northwestern in 2018.

**"Northwestern is a school I have known and admired for years. ... It will be my mission to make sure the institution's reputation and quality continue to accelerate."**

— Rebecca Blank

The Ticker

● Amy Heimberger, the Jean Malnati Miller Professor of Brain Tumor Research at the Feinberg School of Medicine, was named by President Joe Biden to the **National Cancer Advisory Board**, which helps guide the director of the National Cancer Institute and the national cancer research program.



● Northwestern received a **record \$893.4 million** in annual sponsored research funds for the 2021 fiscal year. Since 2011, the University's research funding has increased by more than 74%.



● Last July, Illinois Gov. J.B. Pritzker '93 JD signed four criminal justice reform bills into law at the Northwestern Pritzker School of Law. One of the laws prohibits police from using coercive tactics against children during interrogations, a culmination of the **law school's reform efforts**.



● The Bienen School of Music launched a three-part **Black Composer Showcase** including performances and musical analyses by faculty, students and guest presenters. One of the goals of the series is to educate the community about composers of color and their major contributions to classical music.



GLOBAL

What food do you miss most from home?

International students dish about their favorites.

PASTEL DE NATA

Portugal

There is so much food that I miss from Portugal, but my ultimate favorite — the thing that I buy first at the airport cafe as soon as I land — is the *pastel de nata* (Portuguese custard tart). This is not to be mistaken for other versions that exist in some Asian countries. Pastel de nata is filled with a sugary egg paste. It is best eaten warm, with a bit of cinnamon. Everyone who travels to Portugal should try it.

Diogo Costa, McCormick School of Engineering junior



BOEREWORS

Eswatini, formerly Swaziland

I really miss *boerewors* (South African sausage). It is literally the best food on Earth. We usually have boerewors with *pap* (soft porridge made from cornmeal) and *chakalaka* (spiced vegetable relish), a killer combination. When we have our *braais* (barbecues), there are always stacks of boerewors on the grill. My dad is usually in charge of the grill during the braai. Boerewors reminds me of home and summer, just good vibes while being surrounded by family and playing great music.

Vuyiswa Mngometulu, McCormick School of Engineering junior

NYAMA CHOMA

Kenya

The food I miss the most is *nyama choma* (roasted meat in Kiswahili). It is usually goat or beef. This popular dish can be found throughout Kenya, from roadside shacks to fine-dining restaurants, and is often paired with local beer and side dishes such as *ugali* (cornmeal or cassava flour porridge) and *sukuma wiki* (collard greens and spices). Nyama choma reminds me of traveling to the countryside with my extended family over Christmas break and enjoying a meal together.

Adala Makhulo, School of Communication junior



BAOZI

China

I miss everything my grandparents cook, especially *baozi* (steamed buns filled with carrots and lamb, tofu, beans and pork, or other meats and vegetables) and *xiaolongbao* (soupy buns). I only remember us making baozi together when my extended family — grandparents, cousins, aunts and uncles — were all there. While playing with my cousins, I would run to the big table and watch my grandma teach everyone how to make them. As a little girl, I would ask the adults to teach me — but I would make something that looked nothing like a baozi. Sometimes my grandma would help me fix it. Other times, she would cook it just the way it was and then proudly proclaim it "the special one." Every time I see baozi, it reminds me of my big family.

Sherry Xue, School of Communication senior

DDUKBOKKI

South Korea

A popular street food, *ddukbokki* is made with rice cakes and *gochujang* (red pepper paste) and often has add-ins like Vienna sausages, cabbage or fish cakes. It's always a treat to huddle around a food cart with friends on a cold night and eat ddukbokki. My mom makes really good ones (recipes online are always too sweet), and I've developed my own recipe while at Northwestern!

Allison Rhee, Medill School of Journalism, Media, Integrated Marketing Communications junior



TICKER ILLUSTRATIONS: LESLIE-ANNE MOCK; MAP FOODS: GETTY IMAGES



SPORTS

# Testing His Medal

Northwestern junior and Olympic medalist Federico Burdisso leads Italy’s swimming surge.

**F**ederico Burdisso made Northwestern history when he claimed two Olympic medals in Tokyo last July.

The Italian swimmer became the first Northwestern athlete in 65 years to medal at the Olympics while enrolled at the University and the first Wildcat to medal since Matt Grevers '09 earned two golds and a silver at the 2012 Games.

Burdisso, of Pavia, Italy, placed third in the 200-meter butterfly in Tokyo. He and his teammates also took bronze in the 400-meter medley relay.

Italy had won just 20 swimming medals in its Olympic history before Tokyo. “We’re going in the right direction,” says Burdisso, the Italian record holder for the 200-meter butterfly. “We were probably the youngest team there, and we still got six medals.”

The 20-year-old says he’s used to being one of the youngest swimmers in the pool, and going up against the world’s greats doesn’t faze him. “Every time I do an

international competition, I wonder, ‘Why am I racing with the best swimmers?’ But when you’re in the water, you don’t really think about that anymore. You just give your best.”

Burdisso, a junior statistics major in the Weinberg College of Arts and Sciences, swam for the Wildcats in 2019–20, when he set school records in the 200-meter butterfly and 200-meter freestyle in addition to claiming 18 first-place finishes. He stayed in Italy for the 2020–21 season due to COVID-19 protocols and Olympic training. He’s hoping his Olympic performance will carry over to the Northwestern pool.

“Federico is a world-class student-athlete who has proven himself at the highest level of our sport,” says Katie Robinson, Northwestern’s director of swimming and diving. “His Olympic medals are a testament that you can find success at the top in both athletics and academics at Northwestern.”



← Federico Burdisso is the first student-athlete in 65 years to medal at the Olympics while enrolled at Northwestern.

REPARATIONS STUDY

In 2021 the city of Evanston became the first U.S. municipality to approve a plan to pay reparations to Black residents affected by discriminatory housing policies and practices. **African American studies assistant professor kihana miraya ross** has received \$250,000 from the Spencer Foundation to study and document the

effects of the reparations program on Black students’ education in real time. “In recognizing the debt owed to its Black residents and pledging actual dollars toward repairing centuries of educational inequities, Evanston is in uncharted waters,” says ross. “The world will be watching.” The project will inform ross’ second book.

BURDISO: NORTHWESTERN ATHLETICS; ‘CAT TALES: COURTESY OF UNIVERSITY ARCHIVES

‘CAT TALES

# Turn Up the Radio

Northwestern’s student-run radio station, WNUR 89.3, turns 72 this year. In spring 1950 the station began broadcasting using a 10-watt transmitter with a range of 5 to 7 miles beyond Northwestern’s campus. By 1975 WNUR had acquired a 7,200-watt transmitter, extending its reach to a wider Chicago-area audience.

In the early 1970s WNUR introduced groundbreaking programming through “Fillet of Soul” and “BlackNUss,” shows that celebrated Black culture and provided outlets for discussion. In 1972 the station hosted a discussion on race relations at Northwestern; jazz and funk music shows, such as “Love from the Sun”; and news and information programs, such as “Third World Report.” Today the station serves as a forum for underrepresented music and ideas while offering students the chance to hone their broadcasting skills.



↑ A WNUR DJ in 1969



Benjamin Mwangi

GLOBAL CONNECTIONS

# A Long-Distance Internship

Benjamin Mwangi, a Northwestern University in Qatar junior, helps promote the life-changing work of an alum’s Chicago-area nonprofit.

**W**hen Kim Weisensee Brown ’08, ’09 MS needed content creation help for her Chicago-based nonprofit, she turned to Northwestern to find an intern. To her surprise, she found the perfect fit more than 7,000 miles away: Benjamin Mwangi, a junior at Northwestern University in Qatar.

Mwangi, who is from Nairobi, Kenya, completed a remote internship last summer, developing

infographics and video for Brown’s website and social media channels. Brown’s nonprofit, Centrally Human, teaches equity and inclusion techniques to high school students nationally to help them reach their career and leadership potential.

Mwangi appreciates the opportunity to help empower teens. “I’m here on the other side of the world and hopefully I’m able to make a difference in someone else’s life,” he says.

“As an alum,” Brown says, “it’s so cool that I get

to work with this student who’s a global citizen and an incredible video producer to tell the story of how we’re helping high school students be more inclusive.”

Mwangi and Brown will likely meet in person for the first time when he travels to the U.S. as part of the Evanston Communication Exchange Program, which invites Northwestern Qatar communication students to study on the Evanston campus during the winter and spring quarters.



THE SCIENCE OF ART

The Secret to Creating a Masterpiece

Researchers discover that periods of boundary-pushing exploration followed by spans of intense focus lead to artistic and scientific breakthroughs.

Before developing his famed “drip technique,” abstract artist Jackson Pollock dabbled in drawing, printmaking and surrealist paintings of humans, animals and nature. According to a new Northwestern study, this period of exploration followed by a period of intense focus on his new drip technique set Pollock up for a “hot streak,” or a burst of high-impact works in close succession. Pollock’s hot streak lasted from 1947 to 1950, during which he created all his drippy, splattered masterpieces for which he is best known.

By using artificial intelligence to mine big data related to artists, film directors and scientists, Northwestern researchers

discovered this pattern is not uncommon and in fact results from an extraordinary formula. Hot streaks, they found, directly result from years of exploration (studying diverse styles or topics) immediately followed by years of exploitation (focusing on a narrow area to develop deep expertise).

“Although exploration is considered a risk because it might not lead anywhere, it increases the likelihood of stumbling upon a great idea,” says Dashun Wang, professor of management and organizations at the Kellogg School of Management, who led the study. “By contrast, exploitation is typically viewed as a conservative strategy. If you exploit the same type of work over and over for a long period of time,

With this new understanding about what triggers a hot streak, institutions can intentionally create environments to help their members thrive.



Van Gogh: The Immersive Experience, a virtual reality art exhibit, uses light projections to showcase Van Gogh’s artwork.

KIRSTY O’CONNOR/PA IMAGES

it might stifle creativity. But, interestingly, exploration followed by exploitation appears to show consistent associations with the onset of hot streaks,” he says.

In 2018 Wang and his colleagues published a paper in *Nature* that identified hot streaks in individual careers of artists, film directors and scientists. After establishing that hot streaks do occur on an individual basis, Wang was motivated to discover what triggers them. He found a clue while visiting the Van Gogh Museum in Amsterdam. Van Gogh experienced

an artistic breakthrough from 1888 to 1890, during which he painted his most famous works, including *The Starry Night*, *Sunflowers* and *Bedroom in Arles*. Before that, however, his work was less impressionistic and more realistic. He also tended to use somber earth tones rather than the bright colors he favored later.

“If you look at his production before 1888, it was all over the place,” says Wang, who is director of Northwestern’s Center for Science of Science and Innovation.

In the new study, Wang’s team developed computational methods using deep-learning algorithms and network science to examine large-scale datasets of 800,000 visual arts images, 79,000 films and 20,000 scientists.

Wang and his collaborators quantified a hot streak within each career based on the impact of works produced, measured by auction price, film ratings and academic paper citations. Then they correlated the timing of hot streaks with the creative trajectories of each individual. Looking at careers four years

before and after a hot streak, the researchers examined how each individual’s work changed around the beginning of a hot streak.

The team found that when exploration was not followed by exploitation, the chance for a hot streak was significantly reduced. Similarly, exploitation alone — that was not preceded by exploration — did not guarantee a hot streak. But when exploration was closely followed by exploitation, the researchers noted the probability of a hot streak consistently and significantly increased.

With this new understanding about what triggers a hot streak, institutions can intentionally create environments to help their members thrive.

“This knowledge can help individuals and organizations understand the different types of activities to engage in,” says Jillian Chown, co-author of the study and an associate professor of management and organizations at Kellogg, “and the optimal sequence to use in order to achieve the most significant impact.”

MEDICINE

To Your Health

1 If you’re concerned about a skin lesion, ask your dermatologist to check your entire body — not just that one spot. A Northwestern Medicine study found doctors are **more than twice as likely to find skin cancer when performing a full-body exam**. In a medical record review of more than 1,000 patients, more than half of the skin cancers discovered were not where the patient thought they were, according to Murad Alam ’06 MS, ’15 MBA, vice chair of dermatology at the Feinberg School of Medicine. “If the dermatologist did not check the patient’s entire body, these skin cancers would have been missed,” says Alam, who led the study. About 5 million people a year are diagnosed with skin cancer.

2 About 20% of people in the U.S. with diabetes do not know they have the disease. But if the disease can be identified early on, diet and exercise interventions can help. Sadiya Khan ’05, ’09 MD, ’12 GME, ’16 GME, an assistant professor of medicine at Feinberg, says **it’s important to screen for diabetes with a common blood test** known as a hemoglobin A1C (HbA1C) test. “Physicians are always telling people to ‘know your numbers,’ which has historically been about blood pressure and cholesterol, but it should [also] include HbA1C,” Khan says.



# Innovation

EDUCATION

## Can You Dig It?

Mechanical engineering professor Kevin Lynch partners with the Field Museum on Fossil Canyon, a dinosaur-themed educational card game for families.

After his young twins had endured months of remote learning due to the pandemic, Kevin Lynch noticed the kindergartners, Erin and Patrick, were having trouble staying interested in their educational activities.

Lynch, professor of mechanical engineering and director of Northwestern's Center for Robotics and Biosystems, and his wife, Yuko, began brainstorming ways to help their children engage with science lessons. To study outer space, for example, the family made scale models of planets and learned about gravity and orbits by swinging weights around on a string.

Next up? Dinosaurs. The family read books together on the topic, but when Lynch's

son, Patrick, began playing a paleontology video game, it sparked an idea. In June 2020, Lynch made a game prototype out of an old deck of playing cards with text about dinosaurs taped onto the cards. It was the first iteration of what would become Fossil Canyon, a card game in which players collect dinosaur fossils for their own museums.

Lynch's children were instantly hooked. "They really loved the 'digging' aspect of it," he says, referring to how players choose cards at random from a "dig site" of scattered fossil cards. It became clear the idea could grow beyond the Lynch family.

"The kids were more than just play-testers," says Lynch. "They enjoyed being part of the creative process." When the

twins felt sad having to give up a favorite fossil card during an "exchange" phase of the game, for example, the family decided to make the game "a bit friendlier," he says.

To take it to the next level, Lynch contacted Nathan Martel, a graphic designer with whom he had worked before. Martel created cards with drawings of each skeleton, realistic images of the dinosaurs, essential factoids and even a pronunciation guide. The Lynchs then struck up a partnership with the Field Museum and worked with

Akiko Shinya, the museum's chief preparator of fossil vertebrates, who serves as the project's science adviser.

After a successful Kickstarter campaign, the team brought Fossil Canyon to life, allowing families to have fun together while the children — and adults — learn something along the way.

"It's really been amazing — my kids know so much about dinosaurs and geology now," Lynch says. "Paleobiology is not my specialty, but anything that gets kids excited about science works for me."



FOSSIL CANYON: NATHAN MARTEL



NATURAL DISASTER RELIEF

With wildfires becoming ever more frequent and dangerous, Kevin Kaspar, a sophomore manufacturing and design engineering major, and his team developed **InfernoGuard**, a first-of-its-kind wildfire detection system. The device attaches to a tree and measures air quality, temperature and other environmental data to determine whether a wildfire is present. The team tested the device in Yosemite National Park in July 2021 and will test it again in a prescribed burn setting at Yosemite this winter.

INVENTION

## The Equal Opportunity Book Box

Jacob Jordan '20, '21 MS was an avid reader as a child and grew up loving books. So when he took Education and the Inheritance of Social Inequality at Northwestern, Jordan was shocked to learn that two-thirds of low-income children in the U.S. don't own any books. What's more, children's literature severely lacks diversity: "In 2018 77% of all children's books featured

either white people or animals," Jordan says. That inspired Jordan to launch the Equal Opportunity Book Box (EOBB), a monthly subscription service that delivers picture books featuring characters of color, LGBTQIA characters, and/or characters with disabilities. *The New York Times* recommended EOBB in its 2020 Holiday Gift Guide for Kids.

SHARING THE STORIES

Every month, subscribers receive a box of three picture books featuring characters from underrepresented communities. For every book sold, EOBB donates a book to a child in need through Bernie's Book Bank, which provides books to underserved children in Chicago.

SUPPORT FROM THE START

Jordan, Stephanie Shin '21 and senior Anthony Cruz launched EOBB with the help of Northwestern's student entrepreneurship hub, The Garage. "The support that they've offered has been immeasurably important," Jordan says. In 2021 EOBB won first place in the social impact and nonprofit industry track of The Garage's VentureCat startup competition.

TELLING IT HOW IT IS

"One of my favorite pieces of feedback is from a mom in Utah," Jordan says. "She was upset with the school district because they were trying to sugarcoat some topics in the curriculum. She really appreciated that our books were realistic and honest about the diversity that exists in the world but also the racism, sexism and homophobia that exist too."

THINKING OUTSIDE THE BOX

EOBB offers books for children ages 0–2 and 3–7 and is expanding to ages 8–12. "Down the road, we're hoping to publish our own books written by people with nontraditional life experiences," says Jordan, "such as incarcerated people and refugees and teenagers, to bring other perspectives into the picture-book space."

@SHELVESOFCOLOR







**WE WILL.**  
**CELEBRATE!**

**NORTHWESTERN RAISED MORE THAN \$6 BILLION THROUGH ONE OF THE MOST SUCCESSFUL CAMPAIGNS IN THE HISTORY OF HIGHER EDUCATION.**

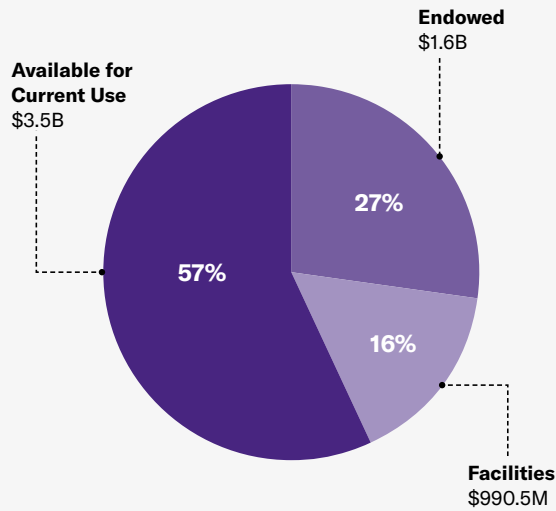
*We did it.*

Thanks to a community of alumni, parents and friends from around the world — **174,380** to be exact — **We Will. The Campaign for Northwestern** brought in an awe-inspiring **\$6.1 billion**. Donors gave a total of **626,796 gifts** of all sizes to areas across the University through the ambitious fundraising initiative, proving that every gift really does matter.





Campaign Giving



Committed to Excellence

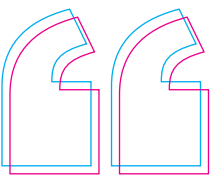
“We are extremely grateful to our community of generous and dedicated supporters who invested in Northwestern through the Campaign and helped the University achieve new heights,” says University Trustee Paula B. Pretlow ’77, ’78 MBA, “We Will” Campaign co-chair. “Our collective support will continue to propel our students, faculty and staff forward and shape the Northwestern University of tomorrow.”

The Campaign also was highlighted by a series of transformative gifts. In 2015 the University received its first gift of more than \$100 million, from Roberta Buffett Elliott ’54, followed by landmark commitments from Louis A. Simpson ’58 and Kimberly K. Querrey, the Patrick G. ’59, ’09 H and Shirley W. Ryan ’61, ’19 H Family, and the Pritzker Foundation.

Additionally, the University announced in September 2021 a \$480 million gift from the Patrick G. and Shirley W. Ryan Family — the largest in Northwestern’s history. (See “Ryan Family Caps Off Campaign with Extraordinary Gift,” page 24.)

“The ‘We Will’ Campaign has, without a doubt, elevated Northwestern’s standing among the world’s preeminent research universities,” says University Trustee T. Bondurant “Bon” French ’75, ’76 MBA, co-chair of the “We Will” Campaign. “Now is the time to continue our remarkable progress toward

PAGE 22: JUSTIN BARBIN '11; PAGE 23: ESSI RONKKO



We are extremely grateful to our community of generous and dedicated supporters who invested in Northwestern through the Campaign and helped the University achieve new heights.”

— Paula Pretlow, Campaign co-chair

excellence, which we will do by leading the charge toward a more equitable and just society, expanding opportunities for our students to learn and thrive in a rapidly changing world and accelerating breakthrough research and innovations that serve society,” he adds.

Broad Support

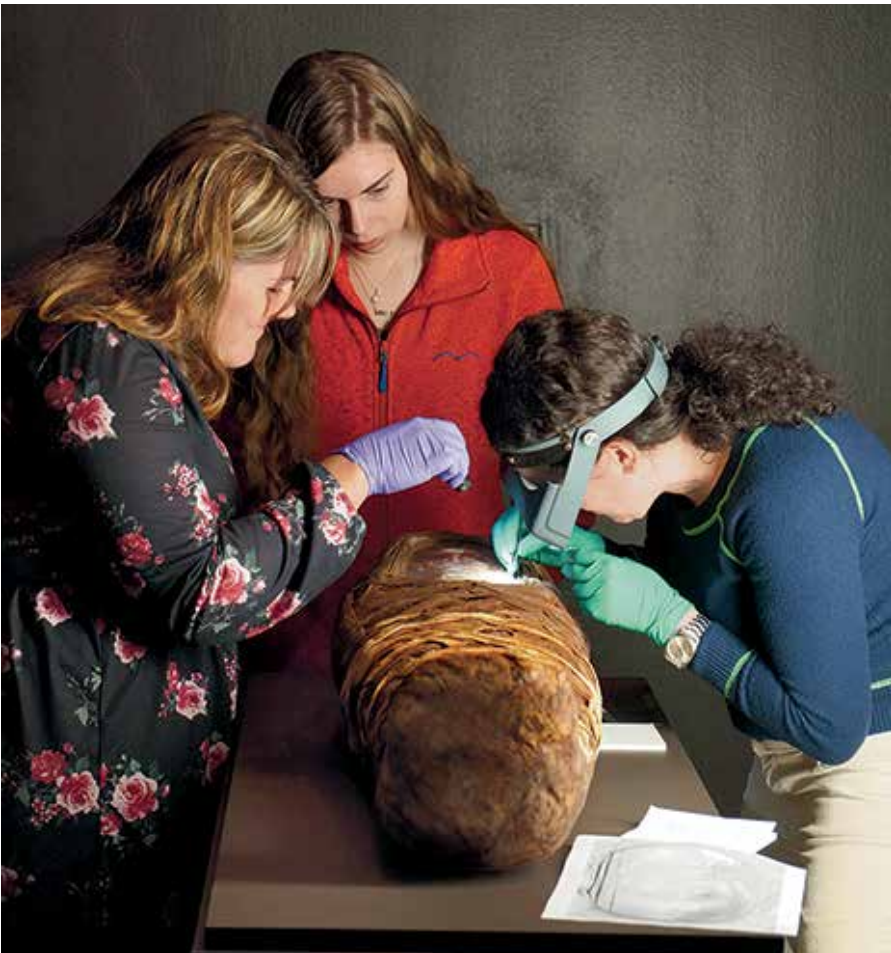
Donors from 116 countries made gifts during the Campaign. Each year, more than 10,000 alumni, parents and friends participated in the Campaign as members of the Northwestern University Leadership Circle, which recognizes donors who make cumulative annual gifts of \$1,000 or more.

Over the course of the Campaign, 76,092 donors also were members of NU Loyal, a giving society that recognizes donors who support the University year after year. Those donors included Dorothy Ruby Saxe ’46, who has given to Northwestern in each of the last 76 years — the most of any donor on record.

“As an immature, 16-year-old freshman, I learned about and grew to appreciate art, music and literature at Northwestern. It’s where I made lifelong friends and grew up,” Saxe says. “It never occurred to me that one did not support one’s alma mater, so I started and never stopped. I’m proud to see what a world-class university NU has become.”

Volunteers were critical to the University’s success, helping to raise funds and hold 62 Campaign events in 30 cities — 14 cities within the United States and 16 abroad — engaging 4,943 unique attendees.

→ Students take research samples from the mummy that was featured in The Block Museum exhibition *Paint the Eyes Softer: Mummy Portraits from Roman Egypt*.



Every Gift Matters

84%

of all Campaign gifts were contributions of \$1,000 or less

58%

of all Campaign gifts were contributions of \$100 or less

97,421

donors made their first gift to the University during the Campaign



# Ryan Family Caps Off Campaign with Extraordinary Gift

The Patrick G. '59, '09 H and Shirley W. Ryan '61, '19 H Family has given the largest single gift in University history to conclude the record-breaking “We Will” Campaign. The \$480 million gift will accelerate breakthroughs in biomedical, economics and business research and enable Northwestern to construct a best-in-class athletics venue for the University community.

“Our family has long been committed to supporting areas of strategic importance to Northwestern — from the arts, humanities and sciences to basic research and clinical care,” Pat Ryan says. “Our philanthropy also has focused on helping our undergraduate, graduate and professional school students to reach their full potential regardless of their financial circumstances.”

The new gift will support several areas of the Feinberg School of Medicine, including the creation of the Ryan Family Digital Health Fund, which will focus on digital medicine technologies to improve human health. The fund will facilitate the development of an interactive digital application to assist

parents in employing sensor programs for measuring neuromotor performance in infants as well as support the curation of a sustainable and accessible library of diverse and unique health datasets.

The gift also will create a new institute that will dramatically advance Northwestern’s distinctive scholarship in the field of neuroscience. Additionally, the Ryan Family Catalyst Fund will facilitate promising medical research by scholars who have the potential to make an important impact on human disease.

Further, the Ryans’ gift will endow the existing Institute for Global Health, to be renamed the Robert J. Havey, MD Institute for Global Health in honor of Robert J. Havey '80 MD, '83 GME, '84 GME — the institute’s deputy director and clinical professor of general internal medicine and geriatrics at Feinberg — and establish the Ryan Family Center for Global Primary Care within that institute.

“Northwestern’s world-class scientists and innovative and interdisciplinary approach to research have



tremendous potential to advance treatments and tools that can improve the lives of people in the U.S. and globally,” Shirley Ryan says.

In addition to supporting human health, the Ryans’ gift will endow a Center for Applied Microeconomics, solidifying Northwestern’s leadership position in economics while fueling research with the capacity for significant social and policy impact. The gift will benefit the Kellogg School of Management as well.

The Ryans’ gift also includes the lead gift for the redevelopment of Ryan Field to create an enhanced game-day experience for students, alumni, fans and the

surrounding community. An important goal of the project is to exceed Americans with Disabilities Act requirements and make the stadium exceptionally accessible and welcoming to all attendees. “Shirley and I believe in the power of sports to develop the whole person — mind, body and soul for all students,” Pat Ryan says.

The Ryans were already the largest benefactors in Northwestern’s history before this new gift. They have made broad and deep philanthropic investments across the University, supporting academic programs, students, research and teaching, and facilities. In addition to Ryan Field, they have made possible campus athletics landmarks such as Ryan Fieldhouse and Welsh-Ryan Arena. They also have created prominent academic facilities, including Patrick G. and Shirley W. Ryan Hall, the home of the International Institute for Nanotechnology; lab and research space within the Robert H. Lurie Medical Research Center (Chicago campus); and the Patrick G. and Shirley W. Ryan Center for the Musical Arts.

COURTESY OF THE RYAN FAMILY

## Significant Impact

Gifts raised during the “We Will” Campaign are providing vast opportunities for Northwestern students and advancing programs across the University.

A total of 37,825 donors gave \$436.3 million toward financial aid, including \$235.3 million for undergraduate scholarships, and created 534 endowed scholarships and fellowships that will support generations of students. Northwestern has significantly increased financial aid for its undergraduate students — from \$106 million in the 2010–11 academic year to \$209 million in 2020–21 — and eliminated loans for undergraduate students.

Graduate student stipends also were increased to enhance the quality of life for graduate students. The University Fellowship rate rose from \$20,928 in 2010–11 to \$33,504 in 2020–21, and the Graduate Assistantship rate rose from \$21,576 in 2010–11 to \$33,504 in 2020–21.

International student scholarships expanded during the Campaign too. Nineteen new endowed scholarships for international undergraduate students were created as part of the Buffett Matching Challenge for International Student Scholarships, a matching gift challenge supported by Roberta Buffett Elliott '54.



A total of 90 endowed professorships were created as well, helping the University to attract and retain top faculty across a wide range of disciplines — from screen- and stage-writing to biomedical engineering.

↑ Brian Hannah '20 participated in the Weinberg College of Arts and Sciences’ Posner Research Program, which was endowed during the Campaign.

## IMPACT OF RYAN FAMILY PROGRAMS

272

undergraduate students have participated in the Ryan Family Scholars Program, which has provided financial support as well as community building since 2007

212

graduate students across disciplines have benefited from the Ryan Family Fellowship in Nanotechnology since 2007

25

new endowed professorships were created during the Campaign through the Ryan Family Chair Challenge, advancing research and teaching

## Supporting Students



2,807

students received funds from the Summer Internship Grant Program

SIGP: JIM PRISCHING; COVID: JONATHAN GIBBY



\$7.1M

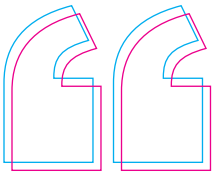
raised for COVID-19-related initiatives, such as emergency student assistance, community initiatives and research



\$96.5M

raised in support of 184 initiatives focused on diversity, equity and inclusion (DEI)

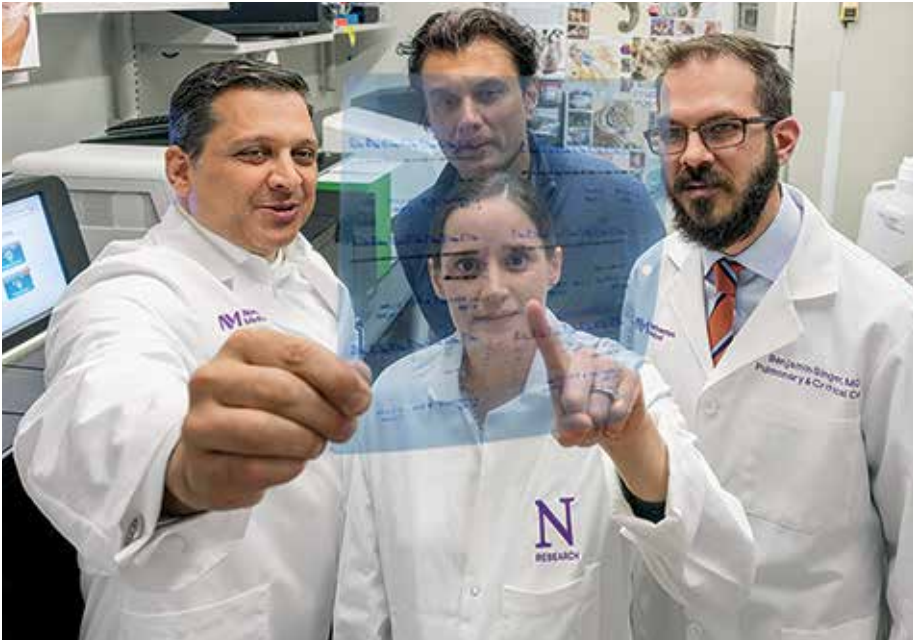




**The ‘We Will’ Campaign has, without a doubt, elevated Northwestern’s standing among the world’s preeminent research universities.”**  
— Bon French, Campaign co-chair



↑ Anne d'Aquino '20 PhD, left, a former Ryan Fellow, Presidential Fellow and National Science Foundation graduate research fellow in Northwestern's Interdisciplinary Biological Sciences graduate program



↑ Ali Shilatifard, left, director of the Simpson Querrey Institute for Epigenetics at Feinberg School of Medicine, and his team study the epigenetic mechanisms underlying the development of disease.

Throughout the “We Will” Campaign, donors supported initiatives that advanced and expanded Northwestern’s research enterprise. Newly established research institutes and centers include the Kimberly K. Querrey and Louis A. Simpson Institute for Bioelectronics and the Ronald and JoAnne Willens Center for Nano Oncology.

Relatedly, more than \$2.8 billion of funds raised were designated to Northwestern Medicine, helping to drive high-impact clinical innovation, accelerate cutting-edge scientific discovery and educate the next generation of medical leaders. The Louis A. Simpson and Kimberly K. Querrey Biomedical Research Center, which officially opened in June 2019 as the largest new building solely dedicated to biomedical research at a U.S. medical school, is facilitating

scientific discoveries that will translate to better care for patients in Chicago and worldwide.

Altogether, “We Will” Campaign funds supported the construction of 25 new facilities and 32 major renovations in Evanston and Chicago — impacting the lives of the entire Northwestern community, from undergraduate and graduate students to professors and researchers. (See “Building a Better Northwestern,” opposite page.)

The record-breaking “We Will” Campaign raised nearly four times the amount of the University’s previous campaign, “Campaign Northwestern,” which brought in \$1.55 billion.

*To learn more about the impact of the “We Will” Campaign or to make a gift, visit [giving.northwestern.edu](http://giving.northwestern.edu).*

Spotlight on Research

**17**  
University research institutes and centers established

**2,045**  
students awarded Summer Undergraduate Research Grants

**10**  
biomedical centers and institutes endowed at Northwestern Medicine

Building a Better Northwestern

The “We Will” Campaign impacted Northwestern inside and out, transforming the look and feel of the campuses themselves. Funds raised supported the construction of 25 new facilities — 22 in Evanston and three in Chicago — along with 32 major renovations — 27 in Evanston and five in Chicago. New state-of-the-art facilities include, clockwise from top left, the Patrick G. and Shirley W. Ryan Center for the Musical Arts, Walter Athletics Center, Global Hub, Louis A. Simpson and Kimberly K. Querrey Biomedical Research Center and Segal Visitors Center. Meanwhile, major renovations include the Black House, Seeley G. Mudd Building and Kresge Centennial Hall, plus a number of residence halls.

PAGE 26, D'AQUINO: MICHAEL GOSS; PAGE 27, CLOCKWISE FROM TOP: TOM ROSSITER; JAMES STEINKAMP PHOTOGRAPHY; NIC LEHOUX; STEVE HALL; PABST PHOTO





# A NEW GAME PLAN

Former Wildcat running back **Jason Wright** thought his football days were over until the Washington Football Team gave him a chance to transform the franchise as its new president.

BY ELLIOTT SMITH



It's not an exaggeration to say that Washington, D.C.'s NFL franchise has built a reputation for controversy over the past 20 years.

The team's owner since 1999, Daniel Snyder is known as one of the most litigious people in the capital region. The organization's former name, the Redskins, had drawn rebuke from Native Americans and others who pointed out the racist origins of the moniker and logo. In 2021 the NFL concluded an investigation into the franchise's workplace culture amid accusations of sexual harassment. Members of the cheerleading squad filed a lawsuit against the team for secretly producing inappropriate videos during swimsuit calendar shoots.

So when the franchise fired former team president Bruce Allen in late December 2019, many wondered who would step up to fill the role.

Some in Jason Wright's inner circle advised him to think twice about the opportunity to lead the transformation of the renamed Washington Football Team.

But Wright '04, a former NFL running back and one of the top 10 rushers in Northwestern football history, has never been one to shy away from a challenge. The position offered him a unique opportunity to reshape the culture of a franchise from the ground up. Those chances don't come around very often in the tightly controlled NFL, where change is often slow and incremental.

"I saw that this organization was at a major inflection point," Wright says. "I knew that there was a commitment to a cultural transformation. In the interview process, I understood that Dan and Tanya Snyder [co-CEOs of the Washington Football Team] were deeply committed to this. We poked and prodded at each other, but we didn't find any fractures. So we were excited to link arms and move forward."

On Aug. 17, 2020, the Washington Football Team named the 38-year-old Wright the franchise's president, making him the first Black president in NFL history. Currently the youngest president

in the league, Wright was hired after seven years at McKinsey & Company, where he was a partner in the operations practice and helped lead the company's diversity, equity and inclusion initiatives (see "Partner with a Purpose," page 32). His combination of on-the-field NFL experience and corporate boardroom chops made him an ideal candidate to guide the team's cultural and business transformation.

Responsible for leading the team's business divisions, Wright immediately began putting his stamp on the franchise, hiring a diverse group of leaders, not from the insular NFL but from outside organizations like the Obama Foundation, Jay-Z's Roc Nation and soccer powerhouse Real Madrid, to provide fresh perspectives to a franchise that had gone stale. He also retained Julie Donaldson, who was hired just weeks before Wright, as the team's senior vice president of media and content. She was the first woman to become a full-time member of an NFL radio broadcast.

And in the Washington, D.C., area, where every move made by the team is often met with either skepticism or hostility, something strange happened under Wright's watch: People actually

liked the things he and his newly installed team were doing.

In December 2020, Wright was named the "Best Hire of 2020" by *Street & Smith's Sports Business Journal*. NBA superstar Kevin Durant, a native of Maryland and passionate Washington Football Team fan, applauded Wright on Twitter. And so far, the fan base seems happy with the work of a president who has been transparent about the changes, big and small, to their favorite team.

### HIT THE GROUND RUNNING

Admittedly, Wright's hiring raised some eyebrows. After all, he'd never held any front-office position in the sport. Plus, he was a contemporary of some older players still in the league.

But Wright had begun building an excellent reputation at Northwestern, which he says pushed him to grow both personally and professionally. He came to the University as a heralded recruit from Los Angeles, who, in his own words, wasn't "the most responsible or mature kid." He credits late football coach Randy Walker as a critical figure in his development.

"He helped me evolve as an individual and grow into a man," Wright says of the former Wildcat coach (1999–2005), who

died in 2006. "The evolution that needed to happen for me to become a person of substance came through Coach Walker, who was able to see through my b.s., my California bluster, all of that. He was intentional about investing time in me. I carry so much of his character with me in the work I do today."

Wright learned, above all, to be adaptable, a hallmark trait that would lead to his success both in his Northwestern football career and in the pros. He was asked to shift positions, from running back to wide receiver, early in his Wildcat career, a move that stung at first but demonstrated his ability to think and maneuver on the fly.

"It was the first time I wasn't the best of the best at something," he recalls. "It was a blow to my ego, but it was also my ego that compelled me to say yes to the position switch. It helped me develop a more diverse skill set as a player."

"And now, with all the high-intensity topics in this role, the type of thinking I need to bring shifts from meeting to meeting, moment to moment. That mental and physical agility started at Northwestern."

During his first two seasons, Wright didn't see much action for the Wildcats. But that didn't mean he wasn't making an impact on the team.

"When Jason wasn't starting, he and I were both on the scout team," recalls former Northwestern quarterback Brett Basanez '05, '06 MA. "He was so talented. We could have our way with the starting defense — and we had a lot of good players on that defense. Plus he was one of the smartest people at the school, not just in the locker room."

Wright proved to be multitasking both on and off the field. The self-described nerd studied psychology at the Weinberg College of Arts and Sciences and considered a career as a pediatrician. He also sang the national anthem before a Big Ten Men's Basketball Tournament game at the United Center and was president of the Northwestern chapter of Alpha Phi Alpha fraternity.

Wright's coaches eventually returned him to running back before his junior season, and his mental and physical acumen drew notice from all in the

## SLOW START, BIG FINISH



two monster performances in his final two games: 251 yards against the University of Illinois and 237 yards against Bowling Green State University in the Motor City Bowl, both of which rank in the top 10 for single-game rushing records at Northwestern.

"Like a lot of athletes, it just took Jason a while to come into his own," says Brett Basanez '05, '06 MA, the quarterback during Wright's senior season. "When Jason got the chance, he made the most of it." — E.S.

Jason Wright's professional accomplishments often obscure the fact that he was an excellent football player, particularly at Northwestern, where he currently ranks seventh all-time in rushing for the Wildcats, with 2,625 yards.

Wright primarily served as a kick returner and wide receiver in his first two seasons, catching nine passes for 60 yards and carrying the ball just three times. But he earned the starting nod at running back his junior year and blossomed, breaking out with a 186-yard effort against the Naval Academy and racking up 196 yards and four touchdowns against Indiana University for a three-win Wildcats team.

Wright wrapped up his Northwestern career with a stellar senior campaign, rushing for nearly 1,400 yards, scoring a conference-leading 20 touchdowns and delivering

program, including a young assistant coach named Pat Fitzgerald '97, who was working with Wildcat linebackers.

"He was incredibly intelligent," recalls Fitzgerald, now the Dan and Susan Jones Family Head Football Coach. "It was amazing to me that he took the MCAT [Medical College Admission Test] during preseason camp one year. So he was going down the road to medical school. To see him change gears and get into the business world and now football management is incredible. But he always exuded leadership, confidence and the amazing ability to make everyone better."

Wright became captain of the football team in his senior year and twice earned first-team Academic All-American honors.

But when asked what the most important part of his collegiate

experience is, Wright says there's no contest: It was meeting Tiffany Braxton '07, a School of Education and Social Policy student whom he married in 2008. Wright also credits the student-athlete experience and the Black community at Northwestern for helping to shape his worldview.

"The Black community was especially vibrant, thoughtful and formative for me, especially my discussions with fellow Black students at the Black House," Wright says. "Just being around other brilliant Black folks is always energizing. I don't think I really understood the value of those experiences at the time. That network of folks has helped me get on my feet as a first-time chief executive."

Wright's professional success came as no shock to his friend and



↑ Jason Wright (18) with his fellow seniors and coach Randy Walker in fall 2003





↑ Jason Wright spent seven seasons in the NFL, the last two with the Arizona Cardinals.

fraternity brother Michael Blake '04. “Northwestern put Jason in a scenario where excellence in academics and sports and the professionalism of business all intertwined,” says Blake, president of Next Level Sports and Entertainment and former vice chair of the Democratic National Committee. “It perfectly prepared him for this moment. Remember, he wasn’t just some random guy. He was the star of team. I always said Jason was the coolest nerd I ever knew.”

ON TO THE NFL — AND BEYOND

After rushing for more than 2,600 yards in his Northwestern career, Wright spent seven seasons in the NFL with the San Francisco 49ers, Atlanta Falcons, Cleveland Browns and Arizona Cardinals. He was a team captain for the Cardinals and served as the team’s NFL Players Association representative. But even at the pinnacle of his profession, Wright felt something was missing. He comes from a family with a history of activism and service. His grandfather helped launch an NAACP chapter in east Texas, and his father was a Black Panther and civil rights activist. So during his NFL offseasons, Wright found ways to give back to communities he cared about. He went to seminary and helped start a charter school network in Cleveland.

While Wright was playing for the Browns, he and Braxton befriended two teenage girls who attended the after-school program where Braxton worked. When their parents were not around, the girls lived with the Wrights. Now in their 20s, Aiesha Gaston and Jamie Owens are the Wrights’ goddaughters and part of the family alongside Jason and Tiffany’s children, Johnathan and Gabrielle. For Wright, there had always been more to life than football. So in July 2011, at age 29, he retired from the NFL to attend the University of Chicago Booth School of Business. “My wife will tell you I was going through my pre-midlife crisis in graduate school,” Wright says. “But I was always focused on the platform or the fulcrum for broad societal impact. I believed that occurred through business. If we can find a way to generate capital while also doing good for the community, that’s the rising tide that raises all boats. I found that at McKinsey.” During his seven years at McKinsey & Company, Wright helped raise awareness about the U.S. racial wealth gap. He rose to partner and co-authored a report that showed the average Black family in the U.S. in 2016 had a net worth that was one-tenth the wealth of an average white family.

“The entire economy does better if the racial economic gap is closed,” Wright says. “Even taking this job with the Washington Football Team, I looked at it as an opportunity to enact that vision of equitable distribution of capital while creating social good. It just happened to lead me back to sports, fortuitously, at the right time.”

HIGH-WIRE ACT

When Wright visited the Washington Football Team training camp in Richmond, Va., in summer 2021, he couldn’t go more than 50 feet without being questioned about the team’s new name. Wright announced in July 2021 that the name wouldn’t be Warriors or any other moniker that references Native

PARTNER WITH A PURPOSE

During his seven years with the management firm McKinsey & Company, Jason Wright made an impact on several fronts. Wright was a partner in the operations practice, where his projects focused on improving efficiency and service in university administrative operations, including human resources and finance. He then helped lead McKinsey & Company’s diversity, equity and inclusion initiatives, and co-led the Black Economic Institute, which studied the ways Black Americans are disproportionately affected by automation and machine learning in the workplace. On a CNBC interview in 2020, Wright discussed the concept of tying executive bonuses to the elevation of Black talent. “McKinsey allowed me to use its platform and its powerful reach globally to create a new narrative around racial economic equity,” Wright says, “one not just about the moral imperative but the economic imperative.” — E.S.

2009 GETTY IMAGES, JONATHAN DANIEL/STAFF

EMILEE FAILS, WASHINGTON FOOTBALL TEAM

American or Indigenous iconography. The team plans to have its new identity in place early in 2022, in time for the franchise’s 90th anniversary celebration. That’s just one of two polarizing issues Wright faces in his new position. The other is deciding where the team will play in the future, with Virginia, Maryland and Washington, D.C., all jockeying for the team when its FedEx Field stadium lease ends in 2027. Wright, for his part, is looking to create a world-class entertainment venue that will uplift the surrounding community as well. “For a 39-year-old brother from LA, whose life has been focused on economic equity, especially through a racial lens, it’s very rare that someone like me gets to deploy that amount of capital,” he says. While Wright’s appointment was groundbreaking, he’s also aware of the realities that Black managers and executives in professional sports often

face. Studies have shown that they usually have shorter tenures than their white counterparts. And if they are fired, rarely do they get a second chance. Blake says Wright wouldn’t let fears of that scenario stop him from taking on this opportunity. “This is a once-in-a-generation, transformational opportunity,” Blake says. “There has never been a Black NFL president before now. When you think about how you can provide equity, how you can truly change the game, how you can create opportunities, especially for people of color and women, how do you not pursue something like this? His success is going to open up doors for so many who come after him.” Wright is well aware that all eyes are on him. But he hasn’t let that stop him from bringing his unique perspective and experience to the Washington Football Team. “I don’t want to blow this opportunity, because I don’t want people to be like,

‘We’re not going to give a brother the keys to the kingdom again.’ I definitely don’t want that,” he says. “The only pressure I put on myself is: Don’t mute yourself, don’t water yourself down. When I’m trying to solve a problem around trying to increase our season ticket base, for example, I want to bring my Blackness, I want to bring my background as an economist, I want to bring my nerdiness, I want to bring my experience as a former player. I want to bring all those aspects of who I am to the forefront. One of those aspects of my identity might have the key to solving this problem. And that’s just my set of experiences. “To me, that’s the power of assembling a diverse team — you get to better answers.” Elliott Smith '97 is a freelance writer and children’s book author. He lives in Falls Church, Va., with his wife and two children.



← Jason Wright talks with the Washington Football Team during team practice last spring.



# The Rhythm OF SLEEP

Long regarded as disparate fields, sleep research and circadian science come together at Northwestern to help us better understand how sleep can improve our health.

BY CLARE MILLIKEN

**It's so slight, you don't even feel it coming.** You might feel a bit fuzzy, weightless, buoyant. It's subtle — in the initial stages, your heart rate dips and your muscles relax. Before your brain waves become even slower, your body temperature falls. Finally, brain activity speeds back up, but your limbs are temporarily paralyzed and your eyes begin to dart behind your eyelids. Over the next several hours, this cycle will repeat at relatively regular intervals.

Until your alarm blares from your nightstand.

We may regard sleep as a period of pure rest and rejuvenation, but it's so much more. And while we often hear that we need seven to nine hours per night, there's more to that story as well.

"Sleep health is multidimensional," says Kristen Knutson, associate professor of neurology and preventive medicine at Northwestern's Feinberg School of Medicine. "It's sleep duration — are you getting enough sleep? But it's also quality. It can also be timing. You could be getting what you think is a decent quality of sleep, and you might think that you're getting enough sleep, but you don't feel rested at the beginning of the day."

The effects of insufficient or poor-quality sleep go far deeper than our energy level the next morning. As Northwestern researchers have shown, sleep is a key component of our cardiovascular, metabolic and cognitive health. In short, improving sleep can help us live longer, healthier lives.





## THE MECHANISMS OF SLUMBER

If you’ve been up since 7 a.m., you might notice that with each passing hour after dinnertime, you feel more tired and ready for sleep. By midnight, you’re likely dreaming — or hoping to be doing so soon. This natural drive to sleep is known as sleep homeostasis, and it is one of the key mechanisms controlling sleep.

“Sleep homeostasis is a fancy word for something very simple: The longer you’ve been awake, the easier it is to fall asleep,” Knutson says.

Sleep is also controlled by the circadian clock, a 24-hour pattern naturally synchronized to the cycle of daylight and darkness. You can think of the circadian clock as your internal timekeeper, which, ideally, aligns with the time of day or night — so-called external time. That grogginess you experience after pulling an all-nighter or the jet lag you feel after flying from Rome to Chicago is due in part to your circadian clock being out of sync with external time.

The central circadian clock is in the hypothalamus region of the brain. Our pattern of sleep and wakefulness — the sleep-wake cycle — is one output, or rhythm, of our circadian system. (Our pattern of hunger and fullness, the so-called feed-fast cycle, is another.)

In recent decades, researchers at Northwestern and elsewhere identified that there are also circadian clocks in the pancreas, the liver and many other tissues. Controlling specific functions like insulin secretion, DNA repair and even stress response, these peripheral clocks are like musicians in an orchestra. The central circadian clock in the brain is the conductor, giving cues to the clocks throughout the body to stay in sync as much as possible. The “conductor” clock can fall out of sync, as we experience when we fly across time zones, and so too can the peripheral “instrument” clocks.

“Circadian biology refers to the 24-hour regulation of every physiological process in our bodies, and the sleep-wake cycle is just one of them,” says Fred Turek, the Charles and Emma Morrison Professor of Neurobiology at Northwestern’s Weinberg College of Arts and Sciences. When clocks are misaligned, so-called circadian disruption can lead to negative health outcomes. At the same time, insufficient sleep and poor-quality sleep are risk factors for a whole host of ailments from hypertension to depression.

More than half the genes at the heart of the central circadian clock were identified by Northwestern’s Center for Sleep and Circadian Biology (CSCB), which Turek directs. Martha Hotz Vitaterna ’92 PhD, a neurobiology research professor at Weinberg and CSCB deputy director, discovered a mutation in a mouse that helped identify the first molecular piece of the clock in mammals: the so-called *Clock* gene.

“Twenty-five years ago, these were really two separate fields,” Vitaterna says of circadian biology and sleep science. While she acknowledges that some sleep issues may not be circadian-driven, “it almost becomes a chicken-and-egg question because, especially with humans, it’s very, very hard to mess with circadian rhythms and not mess with sleep. And conversely, it’s very hard to mess with sleep without messing with circadian rhythms.”

In the early 1990s, Turek recognized that understanding the role of circadian biology in the sleep-wake cycle could help researchers shed light on the role of the circadian system in health and medicine more broadly. He set up a rodent sleep laboratory at Northwestern, and within a few years he and his team had earned millions of dollars in research funding.

“I would argue that Northwestern University has played a major role in integrating the two fields into what is almost one field today,” says Turek.

In a 2005 study, Turek worked with Joseph Bass, the Charles F. Kettering Professor of Medicine at Feinberg, and his team to discover that when an animal’s *Clock* gene is abnormal, the animal is more likely to become obese than an animal with a normal *Clock* gene eating the same food. “That told us there was some connection between the genes controlling the sleep-wake cycle and the circadian clock and obesity,” Bass says.

They also found that disrupting circadian rhythms was connected to the development of a metabolic syndrome consisting of symptoms related to cholesterol and glucose levels and fat accumulation in the liver and abdomen.

“So is it circadian disruption or sleep loss contributing to health problems?” Turek asks. “The answer right now is both.”

## AT THE HEART OF IT

If you’re walking in the woods and come upon a bear, your body’s autonomic nervous system — your fight-or-flight response mechanism — kicks into high gear.

“This is evolutionary. I want my autonomic nervous system to respond in a way that, if this bear slashes me, I don’t bleed out. I want my heart rate to go up so that I can prepare to run,” says Mercedes Carnethon, the Mary Harris Thompson Professor of Preventive Medicine and vice chair of that department at Feinberg. “Not sleeping well is a stressful situation, and when you’re under a lot of stress, your body is preparing for a fight by raising your blood pressure, raising your heart rate, making your blood more likely to clot.”

And when blood pressure stays high as a result of prolonged stress, Carnethon explains, the lining of the blood vessels suffers abrasions, triggering an inflammatory



response that narrows the arteries and can lead to heart attacks and strokes.

“There’s a lot of experimental work that has shown that even a week of sleeping only four or five hours a night changes your autonomic nervous system,” Knutson says.

In a national four-site research project called Coronary Artery Risk Development in Young Adults (CARDIA), Knutson and Carnethon linked short sleep and poor-quality sleep to higher blood pressure and a greater increase in blood pressure over five years among non-Hispanic Black and white adults. Being a short sleeper was associated with a buildup of calcium in the coronary arteries and, in men, a thickening of some arteries. All of these, Knutson says, are risk factors for cardiovascular disease.

Carnethon acknowledges, though, that sleep and stress have a bidirectional relationship. “Nonrestful sleep is both a cause

of stress and a consequence of stress,” she says. “It’s a total feedback loop.”

So too is the connection between poor sleep and our behaviors in response to our stress *and* our sleep loss: moving less throughout the day, eating less nutritious food, increasing caffeine intake — all of which may affect our risk for disease. “Short and poor-quality sleep can influence the risk of chronic diseases directly, through changes in biological pathways and mechanisms, and indirectly, through changes in the behaviors that you use to cope with nonrestful sleep,” Carnethon says.

In 2017 Carnethon found that sleep may explain some of the racial disparities in cardiovascular and metabolic diseases between African Americans and European Americans. Carnethon and Knutson are now studying the impact of sleep



on racial disparities in blood pressure control among 2,200 young people across four cities: Birmingham, Ala.; Chicago; Minneapolis; and Oakland, Calif.

“Hypertension is the most commonly diagnosed medical condition in the country and the primary source of Black-white disparities in stroke, heart failure and chronic kidney diseases,” Carnethon says. “And we know that there are gaps in blood pressure control between Blacks and whites that aren’t explained by medication-use behaviors. We want to measure the extent to which the known differences in sleep are contributing.”

BOOSTING THE BRAIN

**We’ve all felt brain fog** after a late night or an overseas trip. That cognitive slump, Knutson says, is itself a health risk.

“We can’t discount that if you’re really sleepy, you’re more likely to have an accident,” she says, “or maybe you don’t take your medication properly.”

We may not notice these deficits, or we may think we’re outsmarting our physiology.

“There’s this phenomenon where, if you’re not getting enough sleep long-term, you start to feel used to it and you don’t necessarily feel sleep deprived,” says Vitaterna. “But if you do some sort of performance test, you are experiencing detriments from that long-term sleep debt even though you’re not feeling sleepy.”

Studies in mice have shown that even mild sleep deprivation can affect how well we cope with psychological stress. According to Turek, poor sleep may be a contributing cause of both post-traumatic stress disorder and depression.

After disrupting the sleep of mice for five days, Turek and Vitaterna exposed mice to an aggressive male mouse. (The sleep-disrupted mice were inside a safety cage within the “bully” mouse’s cage. “No violence, no bloodshed,” Vitaterna assures.) After just five days of insufficient sleep, the mice were much less able to recover from the stress of an encounter with the aggressor. “And we saw changes in their sleep patterns that are reminiscent of what happens with PTSD,” Vitaterna says.

“If you’re in a war fighter situation and you haven’t had enough sleep — if your rhythms are disrupted — and then you’re subjected to a traumatic stress event, are you more vulnerable to developing PTSD?” Turek asks. “The answer seems to be yes.”

Turek adds that some studies show sleep loss often precedes the onset of depression. “To me that means it’s a causal factor,” he says. In an article in the journal *Sleep*, Turek cited longitudinal studies that suggest that episodes of depression can manifest about five weeks after insomnia. “The hypothesis here is not only that disordered sleep can bring on an episode of depression, but also that treating the insomnia may prevent or shorten the period of depression,” Turek wrote.

“All these different parts of our body that are separated in the clinic and the hospital are not really separate — they affect each other,” Knutson says, citing high blood pressure as an example. “That affects what’s going on in the brain. And you see a lot of papers coming out saying that not sleeping

“Not sleeping well is a stressful situation, and when you’re under a lot of stress, your body is preparing for a fight.”

— Mercedes Carnethon

enough or not sleeping well is associated with dementia and Alzheimer’s disease risk because of changes in the brain.”

Among the most shocking findings: Waking up in the middle of the night, what’s known as sleep fragmentation, is associated with Alzheimer’s disease six years later, says Phyllis Zee ’87 GME, ’89 GME, the chief of sleep medicine in the department of neurology and the Benjamin and Virginia T. Boshes Professor of Neurology at Feinberg. Zee is internationally recognized for her work on the connections between sleep and circadian rhythm issues and risk for both neurological and cardiometabolic diseases.

In recognition of the link between circadian biology and sleep science, Zee founded Northwestern’s Center for Sleep and Circadian Medicine. Today, she is increasingly focused on a stage of sleep known as slow-wave sleep. This third and deepest stage of sleep is characterized by slow brain waves, decreased heart rate and lower blood pressure. Sleep, and slow-wave sleep in particular, helps to restore the brain and body.

“People with insufficient sleep and less slow-wave sleep are more likely to accumulate more beta-amyloid, which is a protein that accumulates in the brain of patients with Alzheimer’s disease,” Zee says.

Even healthy people make beta-amyloid, which increases in our brains over the course of the day, Zee explains. “It’s part of the brain’s metabolic activity,” she says. “It’s like your car running on gasoline. You’re creating exhaust, and you have to remove the exhaust. With chronic sleep loss and sleep disturbance, there is impairment of the removal of harmful proteins like beta-amyloid, which can increase risk for dementia. Your car is still running, and you don’t have the ability to get rid of the exhaust. It’s just building up.”

Zee has also found that slow-wave sleep is important for more basic functions like memory consolidation, and her lab is looking for ways to improve slow-wave sleep through exercise, diet and even certain sounds played at a specific frequency and at specific times during sleep. This acoustic stimulation with

“pink noise” has been shown to improve slow-wave sleep and boost memory in older adults.

“So sleep becomes a modifiable factor, something that could change the expression of disease later on,” Zee says.

GETTING IN SYNC

**The continued unification** of sleep and circadian science holds great promise for health and medicine, Turek says, but “we’re at the very early stages of being able to monitor circadian rhythms.”

A test called Time Signature aims to do just that. Developed by Zee and others, the test measures gene expression markers in the blood to detect whether a person’s internal circadian clock is out of sync with external time. Requiring two blood draws, the test could indicate issues with the clock controlling sleep, but it could also determine whether clocks in other tissues are misaligned.

“This is a first step toward providing ... a time-based biomarker for circadian timing — and it isn’t just for sleep,” Zee said on Feinberg’s *Breakthroughs* podcast, adding that Time Signature could help address hypertension and diabetes and even optimize medication dosing and timing.

Resynchronizing a misaligned clock is another challenge altogether, and Northwestern researchers are hard at work on that front too. Supported by the Defense Advanced Research Projects Agency, a national research team led by Jonathan Rivnay, assistant professor of biomedical engineering at Northwestern’s McCormick School of Engineering, is developing a wireless, implantable device capable of resynchronizing

a misaligned circadian clock and significantly reducing the time needed to recover from disrupted sleep. (The team also includes Turek, Vitaterna, Zee and Weinberg neurobiology research assistant professor Peng Jiang, among others.)

Integrating bioelectronics and synthetic biology, the so-called living pharmacy device could be invaluable to shift workers, military and medical personnel, and people traveling across time zones. The integration of otherwise disparate fields of research also holds great potential.

“While this program is targeting sleep, you can definitely envision that if we prove out some of these concepts, it could open up applications in a number of other areas,” says Rivnay, citing depression and pain management. “It is giving us the opportunity to target something specific right now with an eye on potentially having an even broader impact.”

For Turek, who has seen the fields of circadian biology and sleep science intertwine over decades, understanding how our circadian clock affects our health — including and beyond our sleep — will usher in the next frontier of medicine.

“People talk about precision medicine,” Turek says. “But without understanding the 24-hour rhythmicity, there will never be precision medicine.”

Clare Milliken is senior writer and producer in Northwestern’s Office of Global Marketing and Communications.

Northwestern changed the study of sleep science, and now the University is training the next generation of researchers. Watch the video at [alummag.nu/sleep](http://alummag.nu/sleep)

IMPROVING SLEEP

Blood tests and devices to detect and remedy sleep issues may be on the horizon, but there are also other ways to improve sleep — starting tonight.



**BE CONSISTENT**  
“As much as your schedule allows, try to go to bed around the same time every night,” says Kristen Knutson.



**SEIZE THE SUNSHINE**  
Getting light during the day can help you sleep deeply during the night, says Phyllis Zee. But at bedtime, make the room as dark as possible with black-out curtains, or wear an eye mask.



**GET QUIET**  
Drown out noise beyond your bedroom with earplugs or a white-noise machine. “A box fan can also work,” Knutson says.



**MOVE AROUND**  
People who exercise are more likely to sleep better, Zee says.

**DO WHAT YOU CAN** “Are you going to get your seven to eight hours of sleep if you have to work 18-hour days? Probably not,” Knutson says. “But to get the most out of the time you can sleep is an incremental step in the right direction.”





**Dwight White II's** new mural  
in the renovated Black House  
is about what you can see  
— and so much more.

INTERVIEW BY MARTIN WILSON  
PHOTOGRAPHS BY SHANE COLLINS

# BENEATH THE PAINT



“I’M ALWAYS LOOKING FOR WAYS TO UNDERSTAND things and people at a deep level and then bring it to life artistically,” says Dwight White II ’16, ’17 MS.

White, who grew up in Houston, played defensive back for the Northwestern football team before injuries forced him to leave the team prior to his senior year. In the personal introspection that followed, he turned to art and is now a professional artist and creative consultant based in Chicago and Los Angeles. His works include a 40-foot mural in Chicago’s South Loop and recent collaborations with the Chicago Bulls and Chicago Fire.

His sensitivity to history and to people made White a natural fit for a big commission: creating a large mural for the newly renovated Black House on the Evanston campus. White’s *Undivided Legacy* mural — 5 feet tall and nearly 14 feet wide — now hangs in the main first-floor space known as the Quibbler’s Club Family Room. (A replica of the original 1970s first-floor mural now hangs on the wall of the B100 Student Lounge.)

*Northwestern Magazine’s* Martin Wilson sat down with White to talk about his experiences in the Black House, his transition from football to art and his creative process.



“We’re in a transitional time, an empowering time, that’s hopefully going to be uplifting to our community.”

— Dwight White II

**You came to Northwestern as a student-athlete. How did you discover your artistic side?**

Painting was one of the things that came about as I was trying to redefine and explore myself while also battling mental health issues. Art was the thing that got me out of dark places. I actually started painting during my senior year at Northwestern, just before I graduated. I took an intro to painting course, and that’s the only painting class I’ve ever taken.

**What did the Black House mean to you during your time at Northwestern?**

The Black House was one of the places on campus where I knew I could see people like myself. I don’t know what the percentage of Black students was when I was in school, but it wasn’t likely that you’d just bump into each other on campus. So the Black House was that home away from home. It was a place where I got fed sometimes when I probably didn’t have a ton of money on my Wildcard. There were friends there. I was also on the board of FMO — that’s For Members Only [Northwestern’s Black student alliance] — so I went to the Black House twice a week for our meetings. It was a significant space for me, even more so after my football career ended.

**What kind of research did you do before beginning your work on the mural?**

It was important for me to engage our community as much as possible, even though we were in a pandemic and couldn’t be in the same room. The conversations I’ve had with students, faculty and even alumni about the Black House have been fairly consistent. The common perception is that the Black House is a home on campus. And it’s something that we aim to protect.

Some students talked about how they always feel like they’re striving to not only improve but prove themselves. I also heard from students about having confidence, feeling like they — we — belong here and can excel and exceed. I found those conversations inspiring and empowering.

**Can you describe the mural’s design?**

There are three subjects on the piece: One represents the past, one the present — looking directly out from the canvas —



↑ For inspiration, Dwight White adds symbols and words to his canvas (top image). Some of these end up hidden beneath layers of paint. But White brings other words and symbols to the surface (above), creating feelings and connections between images and ideas.

Watch a time-lapse video of the creation of Dwight White’s mural at [alummag.nu/mural](http://alummag.nu/mural)

and one the future. It’s important for me to have both male and female representation as well. I see super powerful, strong Black women leaders on campus. And I know there’s a ton of men, like myself, who also play a significant role in this space. That was the general concept.

The one thing that doesn’t necessarily come through in this piece is the celebration of ourselves as Black Northwestern students. So I literally wrote “celebration” on the canvas, along with other insights that I felt were a part of the story. Celebrating moments on campus with peers, teammates and loved ones are memories I cherish.

**How do you prepare the canvas before you work on the main design?**

I typically add a bunch of symbolism to the piece as my first step. I’ll add words that come to mind that are related to the piece. It helps me understand where I am on the canvas but also gets my creativity flowing. Sometimes that comes through in the final work, and sometimes all of it is hidden. It helps me, especially on larger

pieces, map out where I am. You spend so much time right up in front of the piece and don’t step back for hours at a time.

**What are some of the words or symbols you used as inspiration or “underpainting” in this case?**

I wrote things like “Time is now.” I wrote and put emphasis on “Black.” There are thoughts about the Black House and my experiences that you won’t see in the final version of the mural. But the thing about that process is that it lives on the canvas, behind the finished concept. And for this project, we documented the entire process, so you’ll actually be able to see the underpainting. It won’t go completely unnoticed, which typically it does in my final work.

**What do you hope people see when they experience your mural in the Black House, both today and in the future?**

When people come into the Black House, I hope they get, one, a sense of curiosity. And, two, I want people to see themselves

when they walk in. That’s important. As a Black student, you may walk around campus and not see yourself. This is one place where people come specifically to see themselves.

When people see this mural in the Black House in the future, I hope that they get a sense of time. The reason I create art is partially to document history. So I hope they get a sense of what the energy was at this time — why the subjects look the way that they do, why there’s a sense of seriousness. Because I do think we’re in a transitional time, an empowering time, that’s hopefully going to be uplifting to our community. The subjects in the mural are representative of the energy I got from our current students. In the future, our student body will continue to evolve, based on all of the work being done, and I imagine the energy on campus will also change as we continue to make progress. I love to see progress.

*Martin Wilson ’10 MS is director of creative production in Northwestern’s Office of Global Marketing and Communications.*





*“Some of us come from families  
who have done this before.  
Some of us are the first to walk through this door.  
Some of us don’t have the family that others do.  
Some of us didn’t know whether or not  
they’d make it through.”*

— NOLAN ROBINSON '21

# WIDENING THE ARCH

**Increased financial aid has made a  
Northwestern education more accessible  
and ushered in a student population that is  
more diverse by almost every measure.**

BY SEAN HARGADON



**AT** Northwestern's virtual Commencement last June, Nolan Robinson opened his student address with a poem (excerpted on page 44) that captured the essence of his Northwestern experience.

"That entire speech really is a reflection of everything that has happened to me here, with the lessons I learned about knowing that I'm enough, that I don't need to prove anything to anyone, that I belong here, that I'm worthy and that my voice is powerful," says Robinson '21.

Robinson grew up a few miles from the Evanston campus and often attended — and acted in — Northwestern theater productions as a child. The Evanston Township High School (ETHS) graduate never really considered attending the University because of its proximity to home — and its cost.

"I don't come from a rich family," he says. "And I have a twin sister who was going into college at the same time. I knew I needed to be cognizant of how much my family would be spending for my education."

Robinson was part of Evanston Scholars, an ETHS program for aspiring first-generation college students from low-income backgrounds. One day his Evanston Scholars mentor, Liane Anderson '82, spelled it out for him.

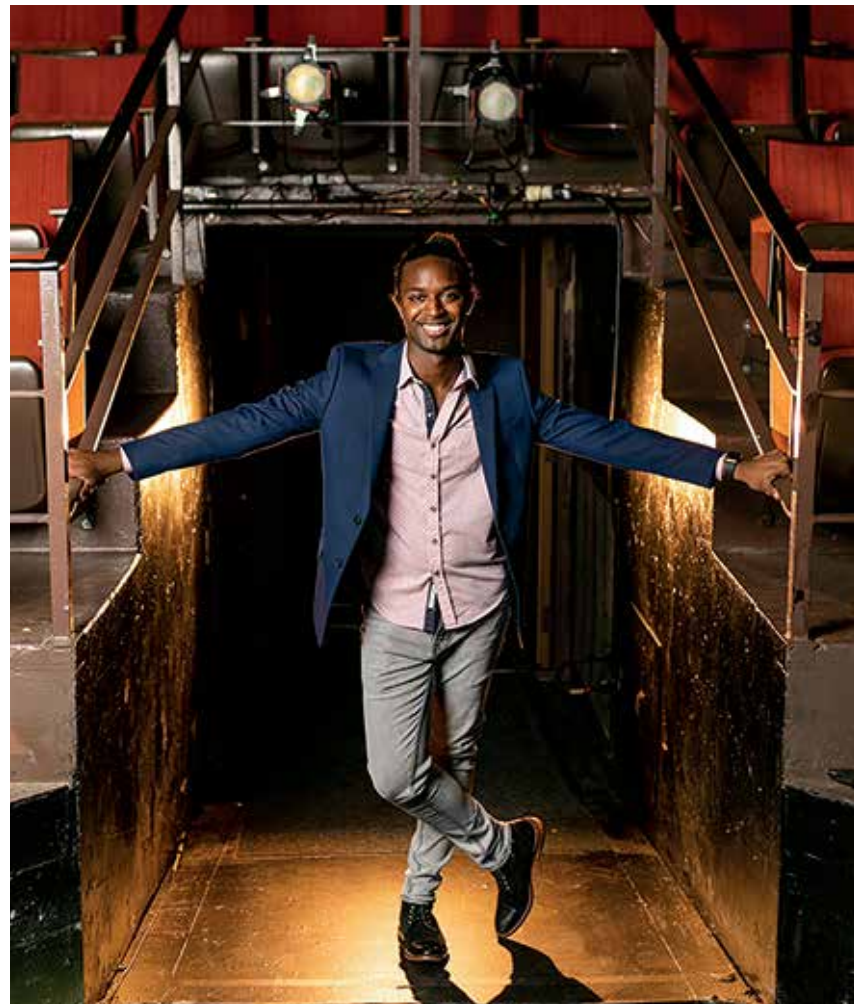
"She said, 'Go to Northwestern. It's a full-needs-met school,'" Robinson recalls. "I didn't really know what that meant. I'm like, 'OK, well, it's still pretty expensive.'"

"She says, 'Nolan, Northwestern will meet 100% of your financial need.'"

Once that sunk in, "there was no way I could say no to this," says Robinson, who graduated with zero debt, thanks to Northwestern's no-loan financial aid package. "I would not have enjoyed my time here as much if I was always worried about paying a bill or needing to pay back

**"I would not have enjoyed my time here as much if I was always worried about ... needing to pay back all those loans. My mind wouldn't have been focused on the moment, on growing as a person, as an artist, as a human being."**

— Nolan Robinson



Nolan Robinson

all those loans. My mind wouldn't have been focused on the moment, on growing as a person, as an artist, as a human being."

#### REMAKING THE STUDENT BODY

Financial need is not a factor in determining admission to Northwestern, and the University is among a small group of institutions that meets the full demonstrated need of its financial aid

applicants. More than \$200 million in aid is awarded annually to thousands of undergraduates — assistance that opens the doors to students who otherwise could not afford to attend.

Throughout his tenure, President Morton Schapiro has worked to open those doors even wider.

Most notably, Schapiro pushed to increase the number of Federal Pell Grant recipients, aiming for 20% of the incoming class by 2020. The University hit that goal in 2019 — and with every incoming class since. (Students whose total family income is \$50,000 a year or less qualify for Pell Grants.)

The University also established the Northwestern Academy, a free college access and enrichment program for underrepresented, academically motivated high school students from Chicago and Evanston, and the Good Neighbor, Great University Scholarship

SHANE COLLINS

program, which provides financial aid to students, like Robinson, from Evanston or Chicago. Students from Chicago Public Schools (CPS) now make up nearly 6% of the incoming class, up from just 3% a decade ago. Thanks to these initiatives, first-generation college students comprise more than 15% of the class of 2025.

To a large degree, financial aid initiatives have helped remake the undergraduate student body. Socioeconomically, racially and geographically, the class of 2025 is the most diverse incoming cohort in University history. "Northwestern is a different and better place because of the assistance the University is providing," says Chris Watson, dean of undergraduate enrollment and associate vice president for student outreach.

"We have a larger number of low-income students on campus [than in

**"I'm amazed by the sheer number of jobs out there and how achievable they are given the fact that I went to Northwestern and made the connections that I did."**

— Hannah Whitehouse

years past]," says Phil Asbury, director of financial aid. "And oftentimes, if you come from a less affluent background, you have a different perspective. It makes us all more empathetic toward one another. All of our students benefit from that."

#### IMPACT OF AID

"My mom knew that the No. 1 opportunity would be sending me to a good university," says Jason Weber '20,

who grew up as an only child in Creve Coeur, Mo. "But it was always a question of, how are we going to afford it?"

His mother, Cheryl, a single parent and special education teacher, sometimes worked three jobs to provide for the family. She never took vacations and seldom spent money on herself so that she and Weber could afford to live in the Ladue School District, one of the best in the St. Louis area.

Still, the prospect of paying for college was "an unbelievably big stressor," Weber says. "And seeing that stress get essentially erased by the generosity of Northwestern was unbelievably relieving."

Financial aid made a Northwestern degree possible for Weber. "A lot of hard work, perseverance and sacrifice put me in a position to go to a school like Northwestern," he says, "and Northwestern made possible all sorts of opportunities that I never imagined when I was growing up."

He certainly made the most of his opportunities. The first in his family to go to college, Weber majored in economics and political science. During his junior year he studied abroad in Paris for a quarter — a trip funded by Northwestern.

"I had never had the chance to travel internationally," says Weber, now a consultant at Strategy& in Chicago who also has a deferred enrollment at the Kellogg School of Management. "That international experience opened my mind to other cultures, other possibilities, other perspectives. It helped me become a more educated global citizen. It was one thing to learn about Brexit [while living] in Evanston, versus going to European Union institutions and talking with some high-level people about the real-life implications of that policy decision."

"That trip brought everything to life and showed me what was possible."



Hannah Whitehouse

ANDREA MORALES





Jason Weber

ENGINE OF SOCIAL MOBILITY

The price of a Northwestern education in 2020–21, including tuition, fees, housing and meals, is more than \$80,000 per year.

“Typically, students see this sticker price and think, ‘There’s no way that can be an institution for me. That’s way out of reach,’” says Jackie Marthouse ’15, former senior assistant director of admissions. “But with our need-based financial aid program, we’re able to say, ‘No, you can afford it because, based on your financial situation, you only need to pay this portion. We’ll cover the rest.’” (Marthouse became director of enrollment marketing and communication at the University of Denver in October.)

The ability to give a student access to a Northwestern education sets them on a different path. “From a social mobility perspective,” Marthouse says, “we’re seeing students who come from incredibly low-income backgrounds and graduate

from Northwestern debt-free. Then they lock themselves into careers that potentially put them in different income brackets or different socioeconomic statuses than what they came from.”

After determining the expected family contribution — a formula-derived measure of a family’s financial strength — Northwestern meets full financial need using a combination of need-based scholarships, grants and part-time work, but no federal student loans.

**“A lot of hard work, perseverance and sacrifice put me in a position to go to a school like Northwestern. And Northwestern made possible all sorts of opportunities that I never imagined.”**

— Jason Weber

SHANE COLLINS

EXPANDING AID

**61%**  
of undergraduates receive financial aid

**\$51,300**  
is the average first-year scholarship

**\$209M**  
in scholarships was awarded to undergraduate students in 2020–21

With support from Schapiro, the University implemented a policy to meet each student’s full financial need without loans, starting in 2016–17.

“That relieves the burden of borrowing,” Asbury says. “Many low-income families are averse to borrowing, and that can be a barrier to them even considering a school like Northwestern.”

The University is one of just 19 institutions in the U.S. that are need-blind (or do not consider an applicant’s financial situation) in their admissions processes, meet full demonstrated need for domestic students and offer no-loan financial aid packages.

“This policy has accelerated our efforts to recruit and enroll students with as diverse an array of backgrounds, experiences and perspectives as possible,” Watson says.

Nearly 50% of all undergraduate students receive a Northwestern University Scholarship as part of the no-loan program. Overall, more than 60% of all undergrads receive some form of financial aid. Some students still take out private loans to replace a portion of the

expected family contribution. However, since the implementation of the no-loan program, the percentage of seniors graduating from Northwestern with student loan debt has dropped by 45%.

FITTING IN

Hannah Whitehouse ’20 had Northwestern on her radar ever since eighth grade, when she discovered that the University has a strong program in music education.

“Without financial aid, Northwestern would have been totally impossible,” says Whitehouse, now a middle school orchestra instructor in her hometown of Memphis. “Tuition itself was nearly twice as much as my household was making at the time I applied.”

Her financial aid package made Northwestern cheaper than many of the in-state schools she applied to. If it had not been for Northwestern’s assistance, Whitehouse says, she would have gone to college in Tennessee, lived at home and worked several jobs to make ends meet.

“But Northwestern went above and beyond,” says Whitehouse, the first of her siblings to graduate from high school and the first in her family to go to college. “It was insane. I was basically on a full ride.”

Thanks to financial aid, “I was able to enjoy my college experience, be a real student.” Free to explore, Whitehouse traveled the world, participating in Northwestern’s Global Engagement Studies Institute after her freshman year. “I’d never left the country before, and here I was living in a rural village in Kenya for six weeks,” she says.

Then Whitehouse taught stringed instruments to children during a weeklong trip to Panama during junior year. Finally, the summer before senior year, she set out on a 10-week, six-country trip to research El Sistema, a global public music education program, on a Circumnavigators Travel-Study Grant, a program made possible by the Office of Undergraduate Research and the Chicago chapter of the Circumnavigators Club.

“I learned more about the world and what possibilities I have career-wise,” says Whitehouse, who spent summer 2021 teaching English in Israel. “I always wanted to be a music teacher, but since graduating I’m seeing ways that I can advocate for music education even on a higher level. [I’m amazed by] the

SHANE COLLINS

**“I was able to get technology assistance for Zoom learning. And it made it possible for me to do a remote internship this summer with a U.S. district judge in New York City.”**

— Daniel Rodriguez

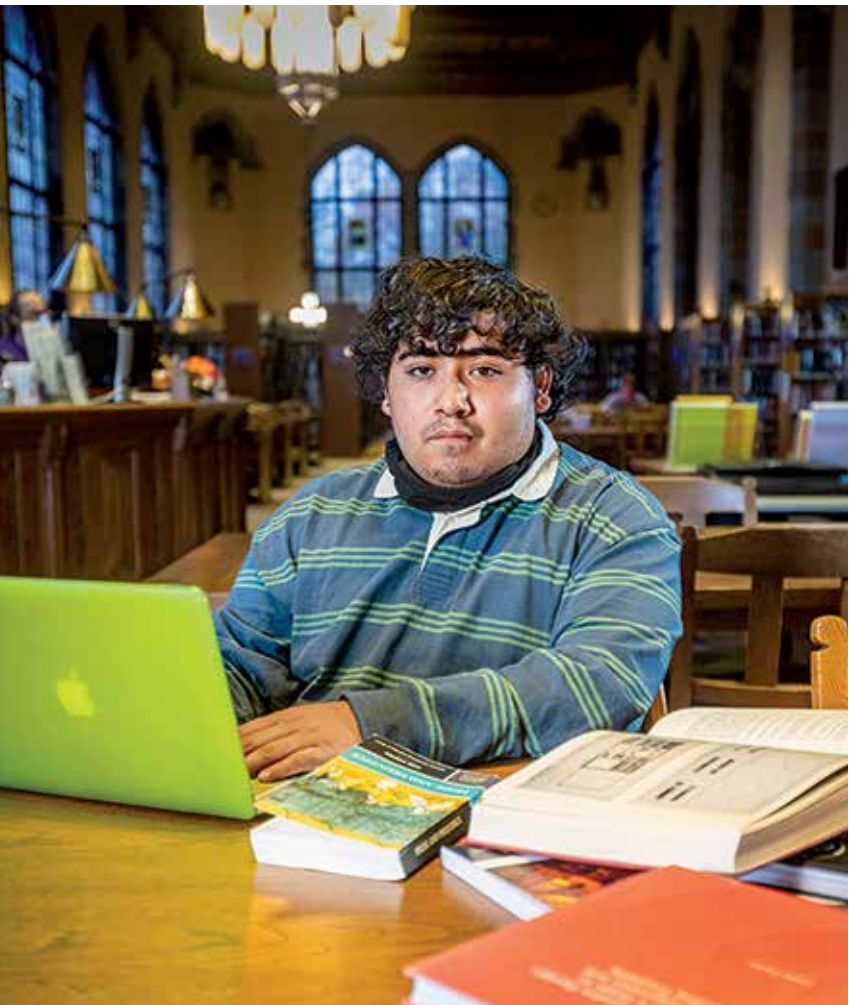
sheer number of jobs out there and how achievable they are given the fact that I went to Northwestern and made the connections that I did.”

Whitehouse acknowledges, though, that she encountered struggles as a lower-income student. “Relationally, it was still challenging at times being around people who come from money and who grew up differently,” she says. “The [financial aid] didn’t fix everything — but it freed up so much of my brain space and free time to

study hard and make good friends and participate on campus.”

EQUAL ACCESS

When reflecting on his time at Northwestern, Nolan Robinson echoes Whitehouse’s views. He says his Commencement address to fellow graduates was “100% honest” about the joys and challenges he experienced as a first-generation, lower-income Black student at Northwestern.



Daniel Rodriguez



Student Body Demographic Changes

	2009	2021
Native or Indigenous	0.0%	1.9%
Asian American	21.9%	24.4%
Black or African American	6.2%	12.0%
Hispanic or Latinx	6.7%	16.8%
White	55.5%	52.4%
International	5.6%	10.3%

Northwestern’s reporting method tracks students who identify as multiple races or ethnicities in each category, so the numbers exceed 100%. More than 20% of Northwestern’s first-year class indicated two or more races or ethnicities.

“I made the right decision choosing to go to Northwestern,” he says. “At the same time, not everything is rosy and peachy.”

Indeed, financial aid is just the beginning. Making the Northwestern experience accessible to all is a priority for the Office of Undergraduate Financial Aid and other partners in the Division of Student Affairs, including Campus Inclusion and Community (CIC) and Student Enrichment Services (SES), as well as Northwestern Career Advancement (NCA).

Assistance comes in many forms. The Knight Community Scholars Program, for example, provides four years of individual and group advising, community-building opportunities, workshops and programming for a cohort of first-generation, lower-income (FGLI) students, undocumented students, and students in the U.S. as part of the Deferred Action for Childhood Arrivals program. The Student Activities and Assistance Fund, provided by Student Organizations & Activities, allows recipients to fully participate in their student organizations’ programs. The Purple Pantry, run by SES and the Sheil Catholic Center, keeps students from going hungry.

The Summer Internship Grant Program, an NCA endeavor, offers funding that makes taking unpaid internships possible. NCA also provides funds for interview travel or assistance in acquiring professional attire. SES and NCA, in collaboration with the Northwestern Alumni Association, also host Work the Room, a career development series focused on fostering networking skills and connecting students with FGLI

alumni from various industries.

The financial aid office also provides \$1,500 in startup funding to help first-year students from lower-income backgrounds pay for travel expenses, buy new bedsheets or cover the cost of a new laptop, even before they arrive on campus. And emergency aid is available upon request to cover unexpected medical bills.

“Students need their basic needs met before they can engage in ways that are both intellectually stimulating and developmentally appropriate,” says Lesley-Ann Brown-Henderson, assistant vice president for inclusion and chief of staff in the Division of Student Affairs. “Providing a coat, making sure students have meals to eat — those things are foundational. But that’s just the foundation. It’s not where we aspire to be as a community. We want to champion a culture where all students thrive.”

Through physical spaces on campus — including the Black House, the Multicultural Center and the Gender and Sexuality Resource Center — and programmatic offerings, the student affairs team is helping students develop a sense of belonging and make the connections necessary to navigate Northwestern’s campus and community.

“We have a responsibility to our students, particularly our students of marginalized identities, to make sure that they feel seen, that they have opportunities to explore their identities and engage across lines of difference, as well as celebrate their cultures and who they are,” says Brown-Henderson. “CIC plays a really important role in ensuring that students who are Black, Indigenous and people of

color, first-generation students, lower-income students, undocumented students, and LGBTQIA students have a space that’s carved out just for them.”

Going forward, the University’s financial aid and student affairs teams continue listening to students and looking for opportunities for improvement.

“CIC was created for students and by students,” Brown-Henderson says. “And when I think back, there’s traditionally been a call and response. So the students make their voices heard, and the University, sometimes more speedily than other times, responds. We’re starting to anticipate some of our students’ needs so our response becomes not only reactive but proactive.”

In spring 2020 Northwestern and the world faced the effects of a global pandemic, a catastrophe that no one could have anticipated. In response, the financial aid office created a special COVID-19 emergency aid fund that helped about 2,000 students in less than a month, providing funding for emergency travel and technology expenses.

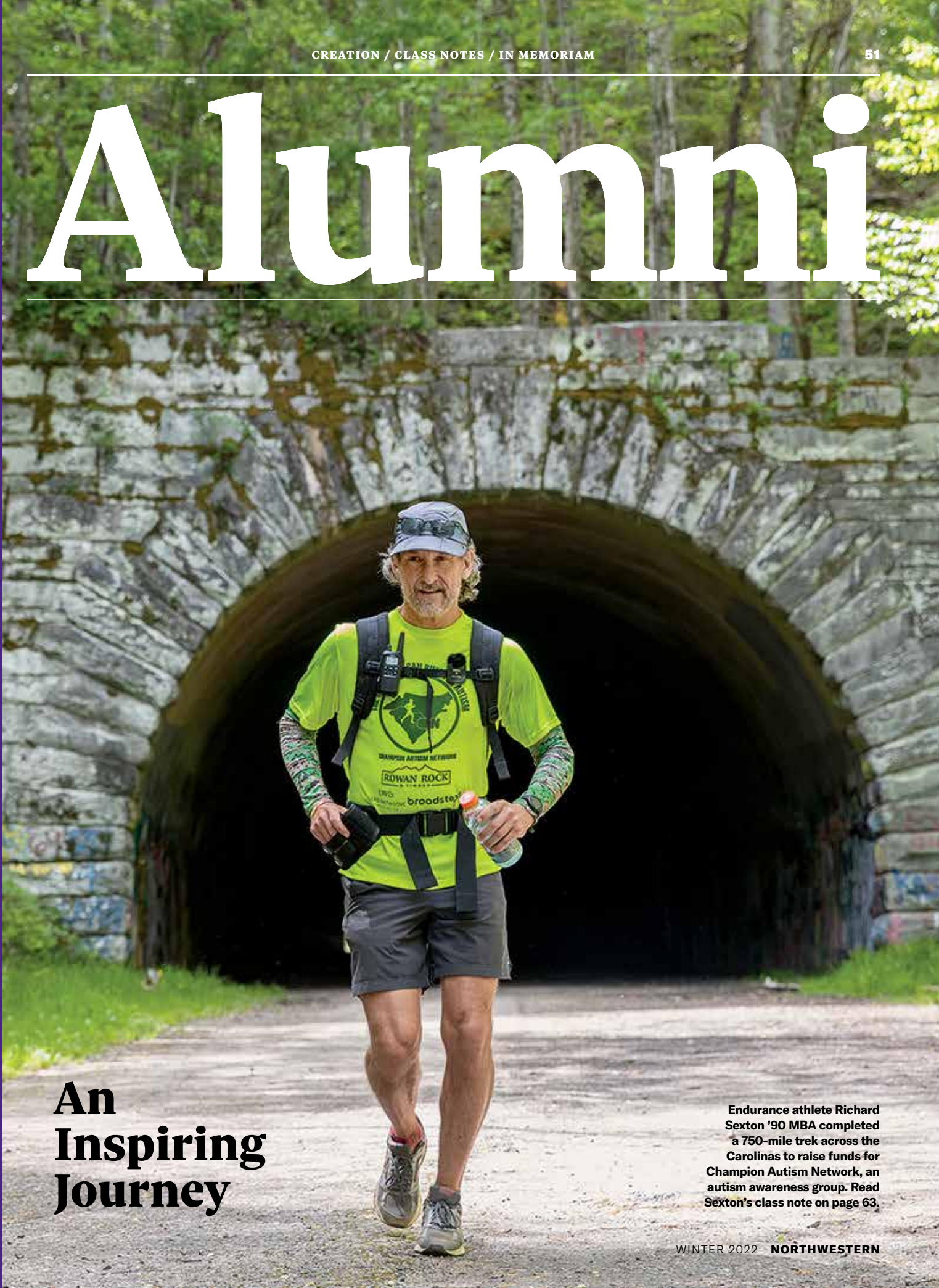
School of Education and Social Policy senior Daniel Rodriguez received funding to improve his unreliable Wi-Fi. “I had terrible internet at home and knew that my laptop was definitely not going to be able to handle Zoom classes,” says Rodriguez, who hails from Chicago’s West Ridge neighborhood. “I was able to get technology assistance for Zoom learning. And it made it possible for me to do a remote internship this summer with a U.S. district judge in New York City.”

Rodriguez, who participated in the Northwestern Academy and received a Good Neighbor, Great University Scholarship, says he has been pleased to see the changes that have resulted from a University-wide focus on doing more for lower-income students.

“I’ve seen Northwestern try to prioritize its outreach for students of marginalized backgrounds more and more every year — partly as a consequence of students on campus being frustrated with the current systems and advocating for better [ones],” he says. “There’s obviously still a lot more work to be done, but I think the University is really trying to get this right.”

Sean Hargadon is editor in chief of Northwestern Magazine.

# Alumni



## An Inspiring Journey

Endurance athlete Richard Sexton '90 MBA completed a 750-mile trek across the Carolinas to raise funds for Champion Autism Network, an autism awareness group. Read Sexton's class note on page 63.



# Creation



↑ Director Mara Lieberman, right, with *Voyeur* actors and a puppet of artist Henri de Toulouse-Lautrec

## THEATER

### Five Questions with Mara Lieberman '98 MA

A theater-maker brings 1899 Paris to the streets of New York City.

1

**What was *Voyeur: The Windows of Toulouse-Lautrec*?** *Voyeur* was my answer to the notion that live theater could not be done during the pandemic. Bated Breath Theatre Company, where I'm executive artistic director, had a show running in New York in spring 2020

called *Unmaking Toulouse-Lautrec*. It was a very down-and-dirty biography of postimpressionist French painter Henri de Toulouse-Lautrec. When the pandemic hit, we had to close. The idea came to me that perhaps theater could be done safely if the scenes were in public, outdoor spaces and a small group of masked audience members traveled through the streets of the West Village together. The show itself was basically like a dream, a memory-scape from 1899 Paris — as if someone asked Toulouse-Lautrec, "If you could pack up six memories in a suitcase and take them with you when you die, what six memories would you take?"

2

**What was it like to create a show outdoors during a pandemic?** As a director and a theater-maker, I'm hyper-obsessed with every detail, every bit of choreography, every breath. It's all like a symphony of sound and motion and words. But when we moved the performance outdoors, New York City became our scene partner. To have this highly stylized, choreographed sensibility thrown up against this totally wild, chaotic and full-of-life city — it was fascinating. The architecture of the city became like a playground for us.

3

**What drew you to Toulouse-Lautrec as a focus for this work?** If you look at Toulouse-Lautrec's figures in

his paintings and the lines of their bodies, they have this kind of theatrical but almost grotesque quality to them. They're extremely vivid and have a lot of movement and shape.

Toulouse-Lautrec loved the outcasts of Paris: working-class people and artists, bohemians and queer people. He really wanted to embrace them and bring beauty and light and integrity to them. As a theater-maker, I love the untold stories.

4

**What do you find most exciting about immersive theater?** I believe theater has unparalleled power to make us feel our lives as we're living them. Sometimes the traditional audience configuration, where the audience is sitting in the dark, disassociated somewhat from the play, can sort of deaden the experience. I try to make my work an invitation for the audience to co-create the experience.

Northwestern taught me that theater can happen anywhere, anytime, and that we really need to loosen the boundaries of what performance is. We can invigorate traditional forms of theater by inviting the audience into a totally different relationship with the work. I like to say that I make boring things sexy. I love when audiences say, "You know, I've walked down 8th Street a million times, but I've never seen it like this." The power of the performance is in its unexpected surprises, in being able to make beauty anywhere.

5

**What's on the horizon for you?** We did about 350 performances of *Voyeur* through July 31, 2021. Now I'm obsessed with this kind of walking-tour model of theater. It's so exciting to look at the city as a narrative asset. I have another immersive performance in the works about Andy Warhol. I'm in an intensive devising phase right now.

*Kiss Me with Your Eyes: The Windows of Andy Warhol will open in the East Village in New York in March 2022.*



↑ *Voyeur* provided a window into Toulouse-Lautrec's mind.

## FINANCIAL MARKETS

### Flipping Over Crypto

In 2013 Daniel Polotsky '17 learned about cryptocurrency — a new kind of anonymized, often decentralized digital currency. He wanted to buy bitcoin but ran into difficulty. "People were literally meeting up in Starbucks," he says, "throwing cash on a table. The other person would scan a QR code to access their digital 'wallet' and send them



↑ Daniel Polotsky, right, and Benjamin Weiss of CoinFlip

bitcoin. It was just this wild, wild west."

Polotsky, a double major in economics and Slavic languages and literatures, saw an opportunity and co-founded CoinFlip, an ATM for cryptocurrencies, in 2015. "I felt like an ATM would be the fastest, easiest way to get bitcoin, along with 24/7 customer support," says Polotsky, now chief adviser and founder at CoinFlip. The ATMs allow customers to buy and sell cryptocurrency, with CoinFlip taking a small percentage of each transaction.

In 2021 CoinFlip was the fastest-growing company in Chicago, according to *Crain's Chicago Business*' annual Fast 50 list, with growth over the past five years at almost 2,000,000% (yes, that's 2 million percent). Polotsky estimates revenue next year to be around \$100 million off \$1.5 billion in transactions. CoinFlip has more than 2,000 ATMs in 47 states (plus Washington, D.C.), with plans to expand into the remaining three.

Polotsky says it was a challenge bootstrapping CoinFlip from his Bobb Hall dorm room — "I remember taking customer support calls at Dillo Day" — but he credits his liberal arts education and the Farley Center for Entrepreneurship and Innovation for helping him develop the skills and the business acumen to get CoinFlip off the ground and up into the highest (digital) heights.





## ENTREPRENEUR

## Making Business Personal

CEO and co-founder Eunice Byun's new line of kitchenware comes straight from the heart.

After working for more than a decade in finance, marketing and business development, Eunice Byun's career took an unconventional turn: In 2017 she quit her role as vice president of global digital marketing at Revlon to launch Material, a kitchenware company.

"When I had my first daughter, I realized I didn't want to work for anyone else," says Byun '04. She also wanted to create a business that was more meaningful to her. That meant getting back to her roots.

"Both my co-founder, Dave Nguyen, and I come from immigrant families, and I grew up in a Korean American household where cooking was very much our love language," says Byun, who met her husband, Daniel Lee '04, at Northwestern and now has two young daughters.

Channeling the familial love she felt in the kitchen while growing up, Byun created a sleek yet minimalist collection of kitchenware for home cooks. "Material is the business we felt was missing from the marketplace, not only from a

category perspective but very much from a values-driven perspective," says Byun, who believes in old-school growth tactics. "Word-of-mouth loyalty and retention are not sexy things — but those are really what help businesses scale over time," she says. "You've got to build a business that people trust, because if you (or your products) are being invited into someone's home, that's sacred space."

Since its launch, Material has donated about \$100,000 to organizations at the intersection of food and marginalized communities. Byun has been particularly focused on combating the rise of anti-Asian hate crimes during the coronavirus pandemic. In March 2021 she wrote an essay for *Mother* magazine on the racism she and her mother have experienced and witnessed throughout their lives. "It was the hardest piece I've ever had to write," Byun says. "But if I don't give voice to my story, I'd be doing a disservice to all the change that we're trying to usher in. If I want to be part of the change, I need to be vulnerable and transparent."

## ALBUM

## Desafío Candente

by Gustavo Cortiñas

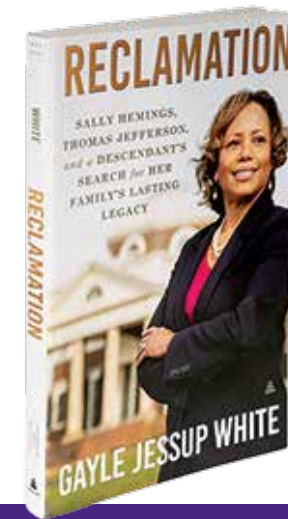
How does one evoke the rich cultural heritage of Latin America while also acknowledging the region's history of violent colonialism? Chicago-based drummer and composer Gustavo Cortiñas '13 MMus does just that on his critically acclaimed album *Desafío Candente*. Inspired by the themes of Uruguayan journalist Eduardo Galeano's *Open Veins of Latin America: Five Centuries of the Pillage of a Continent* (a book banned by several Latin American dictators), Cortiñas brings together 34 collaborators from 11 countries for an eclectic mix of jazz and Latin American rhythms with Spanish lyrics and spoken-word narration. "The album journeys through the American continent, denouncing its history of colonialism, imperialism and neoliberalism, while celebrating the resilience of its many diverse communities," says Cortiñas, adding that his studies at Northwestern allowed him to explore the jazz tradition and foster important relationships. "My time at Bienen was a turning point in my development as a musician and human being," he says.



## GOOD READS

## The Book Nook

New works by Northwestern alumni challenge history, celebrate activists and uplift mundane, everyday moments.



### **Reclamation: Sally Hemings, Thomas Jefferson and a Descendant's Search for Her Family's Lasting Legacy** GAYLE JESSUP WHITE

When she was just 13 years old, Gayle Jessup White learned she was a descendant of Thomas Jefferson. That family lore, passed down from her eldest sister, sent Jessup White '82 MS on a quest for truth. During the course of 40 years, she conducted research and pursued DNA evidence that ultimately confirmed her legacy and uncovered an even broader family tree, a journey she recounts in *Reclamation*.

A journalism alum who formerly worked at *The New York Times*, Jessup White is now the public relations and community engagement officer at Monticello, Thomas Jefferson's legendary estate. "Because Black people were considered property, documentation about many of our ancestors is hard to find, if it exists at all. So much was lost," says Jessup White. "My hope is that people will see their own family's struggles and successes in my family, that they will be inspired by their dignity and strength, and that they will seek their own truths."



### **Castaway Mountain: Love and Loss Among the Wastepickers of Mumbai** SAUMYA ROY

Set in the infamous Deonar dumping grounds of Mumbai, India, *Castaway Mountain* chronicles the lives of wastepickers who live at the edges of mountains of garbage, some roughly 20 stories high. Based on the real experiences of Mumbaikars who survive by reusing or reselling whatever they can find, this narrative nonfiction book by journalist Saumya Roy '02 MS tells a tale of love, family and community while exposing the poverty and health problems that result from urban overconsumption.



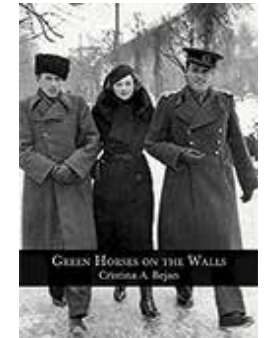
### **My Begging Chart** KEILER ROBERTS

In this autobiographical comic book, Keiler Roberts '02 MFA offers snippets of daily musings and mundanity from her family life in a minimalist art style, often with humor as dry as the grilled cheese sandwich crusts her daughter refuses to eat. While Roberts' multiple sclerosis diagnosis lingers in the background, her struggles to accurately measure out cinnamon for a recipe or avoid accidentally sitting on her daughter's imaginary friend make for a heartwarming, relatable and chuckle-inducing read.



### **Dennis Brutus: Poet and Political Activist** CRAIG ELLENPORT

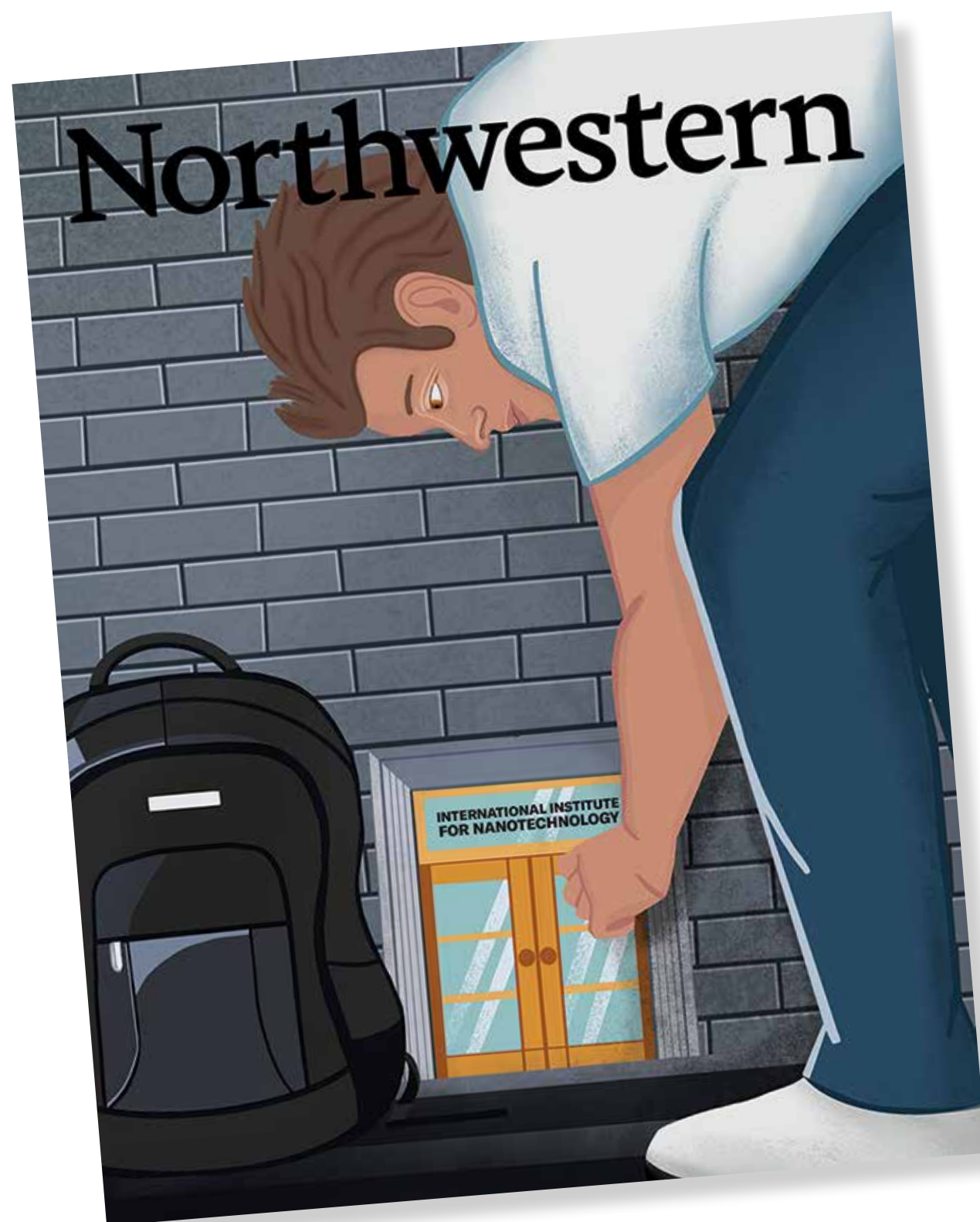
Journalist Craig Ellenport '87 opens his book with a personal anecdote from Northwestern: He recalls taking an African literature course taught by South African activist Dennis Brutus at the height of the anti-apartheid movement. When students began protesting in 1985, Brutus, who had occupied a jail cell next to Nelson Mandela on Robben Island, canceled class that day and joined them. Ellenport's middle-grade book details the life of the poet and activist who fought to end apartheid.



### **Green Horses on the Walls** CRISTINA A. BEJAN

A Romanian American poet, Rhodes Scholar, historian and playwright, Cristina A. Bejan '04 explores inherited trauma, crimes of communism and more in her first book of poetry. In the title poem, Bejan recalls being told "You only want green horses on the walls," a Romanian expression for "having delusions." It is, however, a starting point for her self-understanding: "From the start I was told my dreams / Weren't possible / That I was crazy ... / [But] I know my need to write exists / I know that the open page is the reservoir for my joy and pain."





**Our small science makes a big impact.** IIN director Chad Mirkin shares how breakthroughs in nanotechnology have shaped his Northwestern direction. See page 9.

ILLUSTRATION: LESLIE-ANNE MOCK

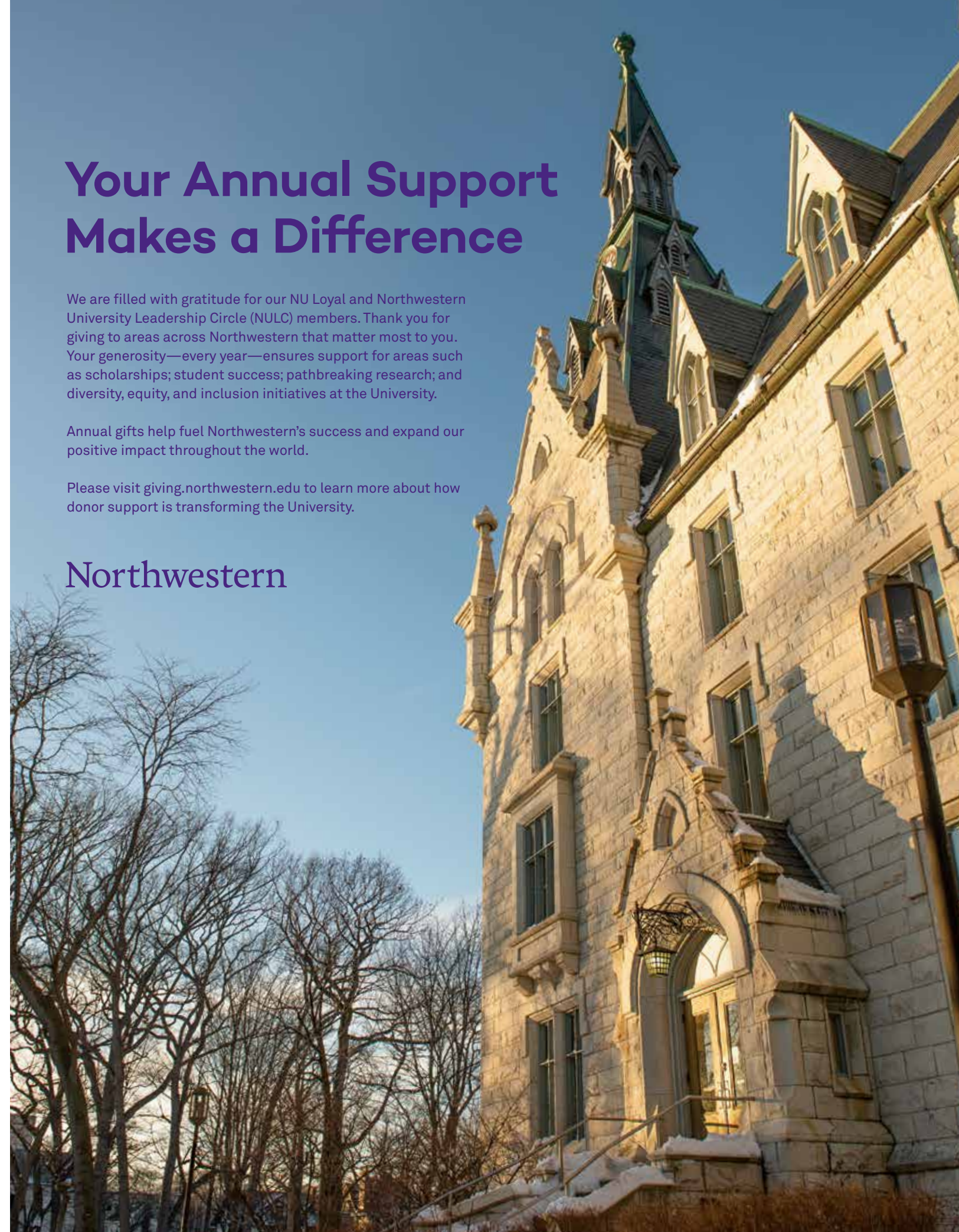
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## Northwestern





# Northwestern

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# \$209M

**The total scholarship money awarded by the University to undergraduate students in 2020–21. Read more on p. 44.**

