ETERNALLY DAMMED?
HOW TO BRIDGE TROUBLED WATER

REDUCE, REUSE, RESTORE

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MORE HYDROPOWER TO YOU
Her real estate advice doubled as family counseling.

The lake house was where the family felt most connected and now our father was selling it to keep from tearing the family apart. Better to let it go, he believed, than for his children to fight over it after he was gone. But one glimpse of a framed photo of my brothers and me at the house was all it took for Rebecca to see how it brought the family together. She showed us options to keep the house in the family that didn't involve leaving it to any one of the kids. Rebecca could see the big picture because she stopped to take notice of the little things.

— Molly, Lake Tahoe
32 Brains and Heart
Michelle Monje, MD ’04, PhD ’04, has found unshakable purpose in both researching and treating kids with a rare, fatal pediatric brain cancer called DIPG. Along the way, the Stanford neurologist defined a new branch of medicine—cancer neuroscience—that’s changing the way we take on all manner of brain tumors.

40 Watershed Moment
For more than 100 years, environmentalists and industry have sparred over dams. Pros: They provide water and power. Cons: They destroy habitats and communities. Now a working group at Stanford is stemming that uncomfortable divide.

48 Rare Turn
When Sanjay Saverimuttu, ’12, came to Stanford, he majored in biology. But a competitive premed culture sent him back into the arms of dance as a form of expression and release. Ten years later and against the odds, he’s a professional at the Louisville Ballet pushing the art form in new directions.
13
Meet Davíd Morales
A doctoral student in education examines colonialism, community and cultural exchange.

20
‘A Brief but Glorious Season’
Two former journalists who reported from Moscow in the 1980s for the New York Times reflect on the Kremlin’s longtime clampdown on information and the short reprieve that left many longing for a freer society.

28
The Detour
I expected to graduate in 1991. But when “Let’s party!” became the mantra of my senior spring, life had some different lessons to teach me.
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Can You Hear Me Now?  
Our March cover story examined the tools scholars are using to help people improve their civic literacy and to deliberate meaningfully with those who hold opposing views.

Jill Patton [‘03, MA ‘04] establishes the importance of decision-makers seeing both sides of a story. Our judicial system is effective because it is deliberately structured to meet this test. On the other hand, the court of public opinion often fails because there, decision-makers regularly see but one side.

A well-informed electorate is the foundation of a healthy democracy. Patton demonstrates that current media in our country lead to a misinformed electorate, placing our democracy at risk. Some have suggested that misinformation be identified and banned. A constructive alternative would be to promote civic deliberation by requiring that any discussion of a controversial issue be paired with the most compelling argument from the other side.

Jim Fox, ‘64  
Fairfax, Virginia

As government expands, fewer of the remedies to civic issues are addressed on their merits. Rather, solutions to problems are decided by political expediency. People are aware that solutions to problems are increasingly politicized, so they become cynical and disengage. Other people stay engaged but as activists, with goals to lobby government rather than to work with opposing parties to solve an issue. The solution is to shrink the size of state and federal government, returning decisions to the market economy or to local governments.

Jim Rosenbaum, MS ‘71  
Whitefish Bay, Wisconsin

I am the president of Constitutional Rights Foundation, which for nearly 60 years has been providing civic education resources and programs for students and teachers all over the country. Programs like Mock Trial and Civic Action Project help create a pipeline of lifelong active participants in our democracy. Our focus is primarily on closing the opportunity gap in underserved school districts. The work is endless and endlessly gratifying.

As funding for civic education has been cut over the past two decades, fewer and fewer young people have graduated from high school with the knowledge, skills or
dispositions to assume roles of leadership in civic life. Civic education, done properly, doesn’t just teach children how democracy works. It teaches them how to engage in civil discourse and how to separate fact from fiction. Engaging youth to become informed and empowered is a process that involves social and emotional learning, increases confidence, and—for children who have experienced trauma, like domestic violence—builds resilience. Research shows that young people’s civic learning and sense of belonging is made stronger when they learn about multiple perspectives on U.S. history and contemporary issues.

Thank you for devoting a cover story to such an important subject.

Amanda Susskind, ’78
Los Angeles, California

If these scholars are serious about dialogue, they should focus their efforts at home: on college campuses. The left and far left are already well represented, but centrist and conservative viewpoints are almost completely absent. A first step would be to hire a faculty that cover the full range of political viewpoints. Thanks to the Hoover Institution, Stanford is probably better off than most Ivies and liberal arts colleges, but the faculty is still far from representative of the U.S. body politic. Over time, a more diverse faculty might lead to an intellectually diverse student body.

This would then lead to more inclusive discussions that are more representative of U.S. political views.

Spencer Klein, PhD ’88
Berkeley, CA

Recognized

In March, we talked with civil rights lawyer Jose Padilla, ’74, about his life and 40-year career as head of California Rural Legal Assistance.

I really enjoyed your write-up of Jose’s career, indeed an inspiration to anyone who reads it. I am also from Brawley, Calif., and grew up as a farmworker. I attended Stanford at the same time as Jose, so his story has special significance for me. Thank you for writing it.

Jose Perales, ’72
Panama City, Florida

Readers of STANFORD might be interested to know that Padilla’s organization, California Rural Legal Assistance, gave its archive (1966–2000) to the Stanford Libraries, joining archives there from the Mexican American Legal Defense and Educational Fund archive and the National Council of La Raza archive.

Michael A. Keller
University librarian and vice provost for teaching and learning
Stanford, California

MaQua! (Main Quad.) Still trying to make this happen.

Meredith Manda, ’19

Mem Chu, Mem Claw, so Mem Churro makes sense . . . right?

Sue DeLong, MA ’68

Xu Zhen’s Hello, which will perch above Meyer Green for two years, immediately garnered a student nickname: the Churro. Not to be outdone, alumni offered the following refinements.

Chu on This
Give a Dam, Take a Dam
A parable for a polarized time.

WHEN WE ASSIGNED our new senior writer, Tracie White, her first cover story for the magazine, we had no idea her dad, civil engineer Richard White, had helped build the Akosombo Dam in Ghana. Tracie, then a toddler, grew up knowing that the dam had brought electricity to many, but less aware of the destruction and displacement it left in its wake.

Meanwhile, senior editor Jill Patton, ’03, MA ’04, is married to Ben, ’03, who works in the renewable energy field. His mom, Leah Hair, ’68, has devoted herself to protecting salmon in the Pacific Northwest.

Which means Tracie and Jill are an ideal team to explore what happens when two oppositional forces—those who build and maintain dams and those who want to remove them to restore ecosystems—come together.

The paradox: Dams have destroyed fish populations and Indigenous peoples’ livelihoods, but they can also generate hydropower, providing some 7 percent of the United States’ energy morning, noon and night. The brave (or possibly foolhardy) hero: Dan Reicher, JD ’78, a senior research scholar at the Stanford Woods Institute for the Environment, who wondered whether we could boost the nation’s hydropower output. The setting: the Uncommon Dialogue on hydropower, a program of the Woods Institute that brought together conservationists, industry execs and tribal representatives to see what they could agree on.

Which could sound like a whole lot of nattering on about infrastructure. But when I read Tracie’s story, which begins on page 40, it seems instead like a parable for a polarized time. Groups that have battled one another for decades have begun to find and agree on common interests. All, for example, are concerned about climate change, because extreme weather events both dry up rivers and threaten the integrity of dams. Also, the groups learned to stop talking past one another. It turns out only 3 percent of the nation’s dams are used for hydropower, and environmentalists are often looking to tear down old mill dams that aren’t suitable for producing electricity anyway. There are plenty of wins to find.

So if you were wondering why you should give a dam, think of the story not as one about concrete or spillways or even fish ladders. Think of it as what can happen when longtime adversaries set aside old assumptions and start listening. For starters, they’ve been able to get senators on both sides of the aisle to collaborate on dam rehabilitation, retrofitting and removal. And they see the initial $2.4 billion allocated in the Bipartisan Infrastructure Bill as simply a down payment. They have a vision for making dams safer and more hospitable to fish passage, adding hydropower where feasible, and tearing down dams that can’t be made safe or environmentally sound. They intend to keep working together to realize it.

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New Contract Options Now Available

Celebrating a Half-Century of the Stanford Powwow

The return of the in-person Powwow provides an opportunity to reflect on Stanford’s relationship with Native American communities.

This May, we welcome the Stanford Powwow back to campus after two years of virtual gatherings. I expect many of our alumni have fond memories of Powwow—a student-led event that brings Native American dancers, singers and artists from across the country to Stanford for a celebration of Indigenous cultures. Last year, the Stanford American Indian Organization (SAIO) celebrated the 50th anniversary of Powwow, so it feels especially meaningful to be back in person this year.

SAIO was founded in 1970 to increase educational opportunities for Native American students at Stanford. The organization hit the ground running, launching Powwow in 1971, successfully advocating for the discontinuation of Stanford’s Indian mascot in 1972 and working to increase Indigenous enrollment through the early 1970s. Today, Stanford’s community includes more than 450 Indigenous-identifying students, representing more than 50 tribes and island nations. The Native American Cultural Center, the Muwekma-Tah-Ruk theme house and Native American studies serve as key spaces for conversation, learning and connection centered on Stanford’s Native American community.

Now, three alumni are telling the 50-year story of SAIO in new ways. Matt Yellowtail, ’18, and Constance Owl, ’18, current resident fellows of Muwekma-Tah-Ruk, are working on a story map and oral history project with interviews, archives and stories told by Native American students and alumni. This complements a remarkable oral history series, 50 for 50, created by previous resident fellow Shoney Hixson Blake, ’06, and featuring interviews with Indigenous alumni each week for the 50 weeks that led up to the 50th Powwow in May 2021.

We continue to work to strengthen the relationship between the university and Native American members of our community, as well as neighboring tribes. In this work, we have found key partners in the Muwekma Ohlone Tribe, on whose ancestral territory the university is located. Working with tribal leadership, the university began the process of repatriating Ohlone remains in the 1980s. Today, Stanford researchers work with the tribe on research projects that focus on tribal priorities, including identifying Muwekma Ohlone sites and uncovering more about the group’s history in the region.

Native American community members have advocated for important developments on our campus too. In 2019, the university renamed some but not all of the campus landmarks previously named for Junípero Serra, founder of the California mission system. The renaming was a collaborative process, involving our Native American community on campus, leaders of the Muwekma Ohlone Tribe, and other affected groups. At the community’s suggestion, one building was renamed for Carolyn (Lewis) Attneave, MA ’47, PhD ’52, a Stanford alumna of Lenni Lenape descent who established the field of Native American mental health.

In collaboration with the Muwekma Ohlone, the university also finalized its land acknowledgement in October 2021. The statement honors the significance of the land to the Muwekma Ohlone people and recognizes the university’s responsibility of stewardship. The land acknowledgement website launched on Indigenous Peoples Day in 2021 and offers guidance for members of the Stanford community who wish to incorporate this show of respect into campus activities and events.

We have more work to do. But it is through sharing stories and traditions, collaborating with local tribes, and making ongoing efforts to strengthen diversity, equity and inclusion on campus that we can continue to deepen Stanford’s relationship with Native people, as well as improve our understanding of the full history of Stanford. As we celebrate our community through multicultural gatherings like Powwow and the first-ever Indigenous alumni summit, which will take place this fall, I’m filled with gratitude for the partnership and rich contributions of Indigenous people in our community and across our region.
Thank you to all our health care heroes

We admire your strength of purpose and resilience. In extraordinary circumstances, you went above and beyond to help your colleagues and our community.

You took on extra shifts, learned new jobs, and filled in for each other when no one else could.

You kept our operations running, answered the calls, and worked to keep everyone safe.

You held patients’ hands, listened to families, vaccinated thousands, tested more than one million, and so much more.

It was challenging, but you adapted. And you continue to bring our shared mission to life. Pulling together. Working hard. Reinventing as needed. You inspire us all.

Thank you for everything because that’s what you give.
In Solidarity

Eight days after Ukraine came under siege by Russian forces, dozens of Stanford community members—including such faculty as political science professor and former U.S. ambassador to Russia Michael McFaul, ’86, MA ’86 (left)—came together in White Plaza to support one another and share ways to help during the crisis. Students hailing from Russia, including the undergrad majoring in symbolic systems and art practice at right, held up anti-war signs in support of their Ukrainian counterparts, for whom fate seemed to hang on a string.

For analysis and commentary on the invasion of Ukraine, go to fsi.stanford.edu.

PHOTOGRAPH BY ANDREW BRODHEAD
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WHO WE ARE

Meet David Morales

A doctoral student and teacher on the value of exchange.

“Teaching is, for me, to be part of the community, to be for the community, to be in the community.”
Early on in high school, I came to view education as a tool for social change and an avenue for possibility, for transformation.

“I was drawn to [RILE] because of the focus that it has on populations of students and teachers that I consider to be my community or that are marginalized and racialized. That really resonates with me and my experiences in schooling.

“RILE intentionally makes race and language part of the conversation and actually puts these two things in conversation. So, how people’s linguistic abilities are perceived based on how their race is perceived, how these two things are intertwined in many ways, and how those logics shift throughout geography is, for example, something I’m interested in.

“In every single intercambio that I’ve helped lead, there are three parts. Part one is preparing for it, and part two is the actual trip. Part three—probably the most important—is you come back and you do the work of translation and apply what you’ve learned. You share what you’ve learned with your community.

“To me, the power of intercambio is to meet and to realize that we’re all fighting, we’re all interconnected, and we’re not alone here. I still keep in contact with most students who participated in these different trips, and they talk about how it has changed the way they view things.

“I love San Diego. I rep it hard, always. The experiences I had there, through schooling, are what forged me. I want to be with my community, and there’s so much work to be done. Eventually, I hope that I can return to San Diego—maybe as a professor. I’m still defining where I fit, how I situate myself.”

GROWING UP IN WORKING-CLASS neighborhoods in San Diego, David Morales observed a divide at his majority-minority high school: The advanced classes were filled mostly with white students, while other students were funneled into regular classes, vocational electives or—even without asking for it—JROTC, where some learned to shoot firearms.

Morales, MA ’16, now a second-year PhD student at Stanford’s Graduate School of Education, credits his high school Spanish teacher, Luis Villanueva, with helping him start to think critically about issues such as inequity and militarism. Villanueva advised Morales and other student activists as they persuaded the school district to close all on-campus shooting ranges.

Seeing the possibilities that education can create, Morales went on to UC San Diego, where he majored in Latin American studies with a minor in education. In the years that followed, he taught English in Ecuador on a Fulbright grant and high school Spanish in San Diego. In 2016, he earned a master’s degree and a permanent teaching credential through the Stanford Teacher Education Program (STEP), then returned to teaching—first in San Francisco and then in San Diego.

Morales believes in the educational power of intercambio—what he calls “reciprocal exchanges amongst movements, amongst peoples in different geographies.” In 2019, he co-led a study trip to Puerto Rico, where he helped his students understand past and present colonial history, including the gentrification of the La Perla neighborhood in Old San Juan. “For my students, it was really powerful to see that, to make connections to the gentrification that they’re experiencing,” Morales says.

In 2020, Morales returned to Stanford to enroll in the GSE’s Race, Inequality and Language in Education (RILE) doctoral program. This winter, he also taught and supervised students in the STEP program.

—Evan Peng, ’22
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Ripple Effects


THE JULY 2021 COVER STORY of Stanford, “A Friendship Mission: The improbable, coincidental and utterly true story of an alum who went missing for 13 years, and the friends who found him,” is testament to the bonds of the alumni community. The article recounts the journey of John Coyle, ‘90, and several of his friends as they searched for—and ultimately reunited with—Kevin Bennett, ‘90, who was living outdoors in New Orleans.

“It was overwhelming to realize he was still alive,” says Coyle, who flew from his home in Las Vegas to New Orleans the day after receiving a happenstance Facebook message from a photographer there. It took two trips searching in homeless encampments, but when Coyle found Bennett, the lifelong best friends ran into each other’s arms.

“Many amazing things have resulted from the article,” says Coyle in an email to the magazine. “Not least is Kevin reconnecting with friends and fans all over the globe.” And the ripple effects go well beyond the personal.

Bennett continues to struggle with mental health issues, but he is benefiting from stable housing and friends who help him obtain his medication regularly. The article has even helped him return to his career as the published writer that Stanford trained him to become. “I happened to read this warming story about a guy and his friends and then the two poems at the back of the story,” says graduate student Katherine Whatley, an editor of the Stanford literary journal Mantis. “I thought, ‘Holy crap, these poems are amazing.’” As a result, Mantis is featuring several of Bennett’s poems this spring.

One reader has asked about retaining the film rights to the story. Another, attorney John Whitelaw, JD ‘86, was struck by how Bennett’s “pitifully low” disability payments were being garnished to pay off student debt. “I thought, here was a perfect example of someone falling through the cracks,” says Whitelaw. He has since used Bennett’s story and others like it to secure changes in federal student loan regulations, enabling $5.8 billion in loan forgiveness for those with long-term disabilities. When enacted, the new regulations will allow such individuals to be automatically enrolled in the forgiveness program.

Meanwhile, the two best friends keep in touch weekly and are collaborating on a book of Bennett’s poems. Its early title: “Poems from the Edge of the World.”

“What might display a little spirit?” Crossword constructor Meredith Colton Hazy, ’13, MBA ’19, won’t give you the answer—that’s one of the clever clues in her debut New York Times puzzle. (We’ll tell you, though: It’s minibar.)… Big on spirit is former Cardinal standout Vanessa Nygaard, ’97, who has been named head coach of the WNBA’s Phoenix Mercury. Her step up comes as Charli Turner Thorne, ’88, steps down from 25 seasons coaching Arizona State women’s basketball—the winningest coach in the team’s history…. And we can’t talk about having skin in the game without giving a shout-out to chemical engineering professor Zhenan Bao, who won the inaugural VinFuture Prize for female innovators for her pioneering work on skin-like electronics…. Speaking of firsts, Patricia Guerrero, JD ’97, was confirmed in March as the first Latina to serve on the California Supreme Court. She joins associate justices Goodwin Liu, ’91, and Joshua Groban, ’95, and replaces Mariano-Florentino Cuéllar, MA ’96, PhD ’01, who stepped down to become the president of the Carnegie Foundation for International Peace.
‘People Are Waiting for Our Message’

Behind the tech that is connecting farmworkers with aid.

On April 22, 2020, cars snaked along the dry, dusty roads of Delano, Calif. Despite harvesting the fruits and nuts that would fill grocery store shelves during the pandemic’s early days, farmworkers were struggling to feed their families. The UFW Foundation—a nonprofit arm of the United Farm Workers of America, the union co-founded by Cesar Chavez—had helped organize a meal giveaway and announced the event on dedicated farmworker radio stations.

They had 1,000 meals to give out, says UFW Foundation executive director Diana Tellefson-Torres, ’98. “We needed 4,000.” So many people were still in line when the food ran out that Tellefson-Torres’s staff couldn’t realistically tell them all that they should go home, let alone explain when to come back.

Farmworkers, she says, are notoriously cut off from support organizations by geography, low literacy rates and limited awareness of their legal rights. But by the time the pandemic hit, Tellefson-Torres’s husband, Jesus Torres, ’98, was developing a solution.

In 2018, Torres, himself the son of a sharecropper and a cotton picker, and Stanford friends Jorge Flores, ’00, and Rene Solorzano, ’98, co-founded Entidad, a public benefit corporation that aims to make services more accessible to farmworkers. “You’ve got millions of farmworkers across the U.S. with a computer in their pocket,” Torres says. “How are we not taking advantage of that?” Entidad made it easier to sign up for UFW Foundation’s text messaging system, which now reaches 41,000 farmworkers, and helped the foundation replace a pencil-and-paper intake system they were using to distribute $23 million in COVID-19 relief. Later this year, Entidad will launch a mobile app that uses blockchain-based technology to help farmworkers securely upload sensitive immigration documents and apply for financial aid without traveling—sometimes for hours—to the nearest UFW Foundation office.

In California’s Tulare County, blueberry picker and UFW Foundation volunteer Cristina Romero has seen firsthand the difference these tools make. At a recent meal giveaway, Romero worried that no visitors would show up. But once the UFW Foundation text notification went out (late, due to a glitch), farmworkers arrived, some within minutes. “People are waiting for our message,” Romero says in Spanish, “to know where the help is.”

For Jessica Jordan, a doctoral student in English, there’s always been something special about the printed page. “Books have that tactile, humane, personable effect as physical objects,” she says. “I’m susceptible to that.”

They’ve also made her something of a competitive juggernaut. Jordan, who has about 20,000 books, is the reigning champion of the National Collegiate Book Collecting Contest. This after top finishes in contests around the country, such as one for women collectors under age 30 and Stanford’s own Wreden Prize for Collecting Books and Related Materials—named for Byra and William Wreden, ’34, and the event that started Jordan on this path in 2017. (She took second prize and $1,000 for prepublication copies of 31 science-fiction works.)

Her NCBCC title recognized her collection of works by illustrators Leo and Diane Dillon, a trailblazing interracial couple whose art first caught Jordan’s eye when she was 10. The win came with a $2,500 check. That could buy a lot of books. Or maybe pay for movers to haul them next year, when Jordan anticipates finishing her PhD.
UNDER THE HOOD

The Need for Speed

A former Cardinal athlete coached NASCAR pit crews into racing shape—and made the sport even faster.

BY KELLI ANDERSON

As he recovered from back surgery in the winter of 1991, Andy Papathanassiou was coming to grips with the end of his sports career. Then a NASCAR race popped up on his TV. A former offensive guard on the Stanford football team as well as a shot putter and discus thrower for Cardinal track and field, Papathanassiou, ’89, MA ’90, noticed something familiar about the pit stops.

“I saw this uniformed group performing this coordinated team activity in competition with other teams, with one group ultimately helping bring their car to the winner’s circle with high-fives and Champagne and all that,” he says. “It clicked for me as an athletic event, not a mechanical event.”

Within a few months, Papa, as he is known, had sneaked into the garages at Sears Point Raceway (now called Sonoma Raceway) to experience a race weekend, quit his sales support job at Oracle, moved to North Carolina and caught on with a NASCAR pit crew as a jackman. At the time, pit crews were mostly made up of mechanics, who pit crewed in their spare time. Pit-stop practice was unheard of.

That would change when Hendrick Motorsports hired Papa near the end of the 1992 race season to be NASCAR’s first-ever pit crew coach. Working for newcomer Jeff Gordon’s car, Papa implemented athletic concepts such as practice, fitness training, team building, injury rehab, nutritional support, video review and recruiting. Some old-timers scoffed—but not for long.

As Gordon’s time in the pits dropped and his successes mounted—he was Rookie of the Year in 1991 and 1993 and won NASCAR championships in ’95, ’97, ’98, and ’01—the rest of NASCAR followed Papa’s lead. Thirty years later, typical pit stops have dropped from 19 to 11 seconds, and pit crews, now five people instead of eight, are largely staffed by former college athletes who have gone pro in a sport they’d never envisioned. “They have to reinvent themselves,” says Papa, “because nobody plays pit crew when they’re 8 years old.”

Kelli Anderson, ’84, is a writer in Sonoma, Calif. Email her at stanford.magazine@stanford.edu.
THE NUMBER OF PIT STOPS in a NASCAR race varies from three to 15 or so, depending on race length, course type (oval vs. road), age and texture of the track, team strategy, and caution flags. For a 10-month season, with 39 races in 19 states, top pit athletes can make over $200,000. The SPORTS that tend to feed pit crews—football, wrestling, hockey, baseball—bring advantages and disadvantages to pit road, says Papa. Football players understand teamwork but need to check their aggression. Wrestlers are appropriately deliberate but must learn there’s little room to improvise. A pit stop has a football feel to it—loud, with frenzied bursts of choreographed action—but it’s really more like golf, says Papa. “You have to hit the same stroke over and over, and you have to maintain a calm state, even though you’re about to perform a very physically demanding task.”

The JACKMAN needs a linebacker’s combo of strength, size and speed to steer a 27-lb. jack into position and lift the car in one stroke. He then places a new front tire into position for a tire changer. He repeats his moves on the wall side of the car, positioning a new rear tire. Once the tires are on and fueling is complete, he drops the car and pulls the jack, which signals the driver to go.

The main task for the two TIRE CHANGERS is to bolt the tires to the car—in seconds. Quickness, hip flexibility and hand-eye coordination are key; long arms are a plus. Hockey goalies, shortstops and second basemen make great tire changers—if they have a deft touch. “The lugs have to be on tight enough that they don’t loosen but not so tight that you waste time getting them off on the next stop,” says Papa.
CONSIDER THIS

‘A Brief but Glorious Season’

We worked for the New York Times in Moscow during the Gorbachev era. We look forward to a day when information flows freely in Russia again.

BY PHILIP TAUBMAN AND FELICITY BARRINGER

As Vladimir Putin throttled the last remnants of a free press in Russia this month, we have been thinking about the all-too-brief era of openness that began in the mid-1980s as Mikhail Gorbachev assumed control of the Kremlin. The Soviet Union was nearing its 70th anniversary. State-controlled radio and television filled the airwaves with risible propaganda: Communist Party leaders serving the people, patriotic farmers harvesting grain, beribboned children studying Lenin, brave soldiers bringing peace to Afghanistan.

Then suddenly and subversively, in 1987, Vitaly Korotich, the editor of the magazine Ogonyok, started publishing Artyom Borovik’s accounts of young Soviet soldiers stumbling through the quagmire of the Soviet occupation of Afghanistan, where about 13,000 Soviet troops had already died. Borovik’s reports began a brief but glorious season of unfettered news coverage and historical reckoning. During his 22 years in power, Putin has slowly extinguished that era; many outlets have been closed and two dozen journalists have been slain.

The penultimate moment for free speech came this past December with the shutdown of the civil rights group Memorial, founded in 1989 to chronicle the repression of Stalin’s victims. The end came March 1, days after Putin’s troops invaded Ukraine, as the last independent outlets—the radio station Ekho Moskvy and the television channel Dozhd—were silenced. Some independent journalists prepared to quit Russia, their flight recalling those of the White Russians who fled in the wake of the 1917 Russian Revolution.

A new law criminalizing “fake news”—a phrase the Kremlin borrowed from Donald Trump—means the mere reference to the Russian invasion of Ukraine, much less unvarnished reporting about the conflict, is punishable by 15 years in prison. Even foreign journalists based in Russia fear prosecution, and many have left the country.

ABOVE THE FOLD: The Times front page of May 31, 1988, illustrates the partnership between Taubman (center) and Barringer (right, with the couple’s son Gregory) in Moscow.
The New York Times Moscow bureau, where we worked from 1985 through 1988, and where generations of reporters chronicled the rise and fall of the Soviet Union, is now closed, temporarily, we hope.

The end of the brief open era brings back memories of its beginnings. We witnessed changes in expression that old Moscow hands, among them our editors, found hard to believe. Now, 35 years later, it is disheartening to see it ending.

The information revolution was just beginning when we arrived in Moscow. There was, practically speaking, no internet, no social media, no cell phones. The Kremlin was in control of the Soviet information ecosystem. Books and movies with even a hint of dissent were banned. Art that did not conform to censors’ whims was barred from view. When Russians tried to tune their radios to BBC or Radio Free Europe or Voice of America, they heard only static; jamming towers surrounded Moscow, Leningrad and other cities. Soviet newspapers like Pravda (literally *truth*) stuck to uplifting stories about Soviet accomplishments and occasional attacks on Western correspondents—before Twitter, trolling happened in print. Telephone connections beyond Soviet borders required government consent. Even foreign correspondents had to book a date and time to place an international call.

Soviet citizens starved for information turned to a trickle of newspapers and books smuggled into the Soviet Union. People brave enough to question the Kremlin produced essays and books or manuscripts, some of which were slipped across the border in diplomatic mailbags that were not subject to inspection. Some of these prohibited materials, called samizdat by those who wrote and read them, were eventually published in the West. Those who openly criticized the Kremlin, such as the nuclear physicist Andrei Sakharov, were held under house arrest, jailed, involuntarily committed to psychiatric institutions, or killed.

Despite the Kremlin stranglehold on information, glimpses of a different world outside the Soviet Union seeped through. Russian scholars, writers, scientists, artists and others with bits of access to the outside world clustered around kitchen tables in cramped apartments and talked in hushed voices about the failures of Communism and hardships of Soviet life. We sat at some of those tables, privileged to be invited into people’s private lives.

Our own work was hampered by myriad restrictions and intimidation efforts. Our offices and apartments were bugged, our calls monitored, our movements tracked by KGB agents, our Soviet sources threatened. Almost all travel outside Moscow needed government approval. If we drove from Moscow to Leningrad, our progress was checked every 20 kilometers or so by police stationed along the highway. Soviet militiamen in long coats, carrying swagger sticks, would come out of their small guard posts, note our passage on a clipboard and alert the next post of our progress. When one reporter pulled over to picnic between posts, a swarm of policemen soon arrived. Imagine needing government permission to drive from San Francisco to Los Angeles and the California Highway Patrol closely tracking your progress every 20 miles. (Of course, that could now be done remotely by checking your cell phone location as you made your way to Southern California.)

American TV broadcasters had to reserve time to transmit their reports via a Soviet satellite. When the news coverage was deemed objectionable, the government denied satellite access. A cottage industry developed—Western journalists or their spouses hand-carried videotape cassettes to network bureaus in London.

But at least we had access to news that the Soviet citizens around us did not; the New York Times foreign desk sent a daily summary of front-page stories by telex overnight. The International Herald Tribune came by mail from Europe a couple of days late. Print copies of the Times arrived by mail weeks later. When the Chernobyl nuclear power plant exploded in April 1986, a three-sentence announcement appeared on Soviet TV news and in the newspapers. It assured the public that the authorities were “liquidating the consequences of the accident.” We learned the magnitude of the disaster from the Swedish ambassador in Moscow, who reported high levels of radiation over his nation. When Felicity interviewed Muscovites on the street about the news, many repeated the anodyne propaganda about the accident verbatim. She hears echoes of those interviews now in accounts about Ukrainians whose relatives in Russia say that there is no war, or that Ukrainian “Nazis,” not Russian forces, are shelling Ukrainian cities.

Our telex telecommunications link was only slightly more advanced than sending a telegram. As the words were routed to London and on to New York, they were simultaneously diverted to the KGB. Phil vividly recalls the unnerving moment when a Soviet “journalist” pulled him aside at a foreign ministry press conference to comment on a story about Viktor Chebrikov, then-head of the KGB, that Phil had transmitted to New York a few days before, but that had not yet been published.

When we took the overnight train to Leningrad or some other distant destination, the travelers who shared our compartment were either KGB operatives or Soviet citizens terrified to find themselves in the company of American reporters. A bottle of vodka could lighten the atmosphere, but suspicion never left. Entrapment was part of the KGB playbook. A British reporter rejected the advances of a scantily clad woman seated next to him at a hotel bar in a provincial city. The next night, an attractive young man tried

We take small comfort knowing that in the 1980s, the heavy hand of Soviet rule did not keep many Russians from understanding that they lived in a dysfunctional society.
to chat him up. Once, Phil returned to his hotel room in Kazakhstan earlier than expected to find two KGB agents photographing his address book.

On a government-sponsored trip to western Ukraine, Felicity briefly evaded her official escorts to visit dissidents in the city of Ternopil. That night she was overcome by acute abdominal distress; the accompanying headache was so intense she could barely get on the plane back to Moscow the next morning. She dismissed it as food poisoning. No, a former British ambassador to Moscow told her years later. She had likely been poisoned by the Ukrainian KGB, delivering a message that she should not interview dissidents.

Foreign reporters whose coverage annoyed the Kremlin were harassed, threatened, detained, accused of crimes they did not commit, and sometimes expelled. The most famous case during our years in Moscow was the arrest of Nicholas Daniolf, a fluent Russian speaker and the U.S. News and World Report bureau chief. Nick was falsely accused and held in Lefortovo Prison in Moscow for more than a week before Washington and Moscow agreed on a prisoner exchange involving a KGB officer held by the FBI in New York.

Before the invasion of Ukraine, Russians could get unfiltered news from a wide range of social media and news sources online, including Twitter, Instagram, Facebook, Western newspaper websites and apps, and most importantly, the tiny but courageous set of Russian media outlets. Putin slammed the door on all of these sources as the invasion began.

As we watch the bloodshed unfolding in Ukraine and the Kremlin’s censorship, we take small comfort knowing that in the 1980s, the heavy hand of Soviet rule did not keep many Russians from understanding that they lived in a dysfunctional society. They yearned for greater liberty and a better life. Gorbachev was one of them. Today, we hope that their children and grandchildren can also overcome the fog of censorship and disinformation. Will old-style repression prevail in the free-for-all world of personal communication in 2022? The answer will play a vital role in shaping the future of Russia.

Philip Taubman, ’70, was a reporter and editor at the New York Times for nearly 30 years, including serving as Moscow bureau chief from 1986 to 1988. He is currently a lecturer at Stanford’s Center for International Security and Cooperation. His biography of George Shultz will be published by Stanford University Press in early 2023. Felicity Barringer, ’72, was a correspondent in Moscow for the New York Times and covered the United Nations before working as the paper’s national environmental correspondent for 10 years. She is the writer in residence at Stanford’s Bill Lane Center for the American West. Email the authors at stanford.magazine@stanford.edu.
When the Social Security Act of 1935 established 65 as the age of retirement in the United States, Monopoly was advertised as a “sensational” game and Fred Astaire was a socko performer. Also, people said socko. The average monthly Social Security check, which started rolling out a few years later, was around $22—if you lived long enough to qualify for it. The average life expectancy at the time was 60 for men and 64 for women.

Life since then has changed—and extended—dramatically, but the expected retirement age has barely budged. Of the babies born in the United States today, more than half can expect to celebrate their 100th birthday, and these future centenarians are just the latest additions to a slow-growing but inexorable “gray tsunami” that is increasingly worrying economists, health care providers and employers. If young people today live life as their parents have, preventable medical conditions will proliferate, pressure will increase on an already jeopardized Social Security program, and a shrinking labor force will bear the burden of an entire generation of out-of-work, elderly TikTokers.

ADVICE
5 Ways to Prepare for a Longer Life

Today’s youth likely have decades of ‘extra’ time coming to them. Psychologist Laura Carstensen wants them to spread those years out.

BY KALI SHILOH
We may have cracked the code on how to live longer, but we still haven’t addressed the critical question of how to manage 35 years of “extra” time.

Laura Carstensen, professor of psychology and founder of Stanford’s Center on Longevity, has been studying the gift and curse of a longer life for three decades. “When we hear these negative, frightening kinds of predictions about the future, they’re all premised on the idea that nothing changes,” she says. Fortunately, change is not only possible but also the reason people in the United States are living longer in the first place. Investments in science, technology and policy to date have primarily protected young life, Carstensen says. In the 20th century, reductions in infant mortality, advances in sanitation and medicine, and the creation of child labor laws earned us the single greatest increase in life expectancy in human history. Now, she says, it’s time to focus on the other end of the age spectrum.

That’s what the Center on Longevity has done for the past three years. To create The New Map of Life, a report published by the center in November 2021, a team of postdoctoral fellows reimagined a society molded around 100-year life spans. They analyzed nine domains—including the built
environment, health and technology, and financial security—and identified ways to enhance the quality of century-long lives, especially in terms of belonging, purpose and worth. Their recommendations address everything from the depth of subway steps to the number of hours in the workweek. “What we’ve come to see is that they’re all connected, and that is why we need a big grand plan,” Carstensen says. “In some ways, the hardest time is right now: What’s the first step?”

Many assume that the government will lead the charge by enacting policies that reshape school, work and retirement, but Carstensen doesn’t foresee that happening until individuals break from convention. And although serious disparities exist across socioeconomic groups in the United States, with zip code alone a predictor for up to 20-year differences in life expectancy, she has identified five ways that nearly everyone can prepare for better longer lives, starting now.

Plan to work longer and differently.

At 65 years old, workers are bursting with knowledge and are often at peak performance in their careers. Combine that with studies linking retirement to substantially higher rates of depression and physical illness, and there is a strong case for staying in the workforce past the age set by the Social Security Act. This doesn’t have to mean working a traditional 9-to-5 at age 95, though. The New Map of Life lays out options for working less rather than full time or not at all. Consider a “glide path” into retirement that involves decreasing work hours gradually over a period of years.

Look into educational opportunities that allow you to learn new skills or redirect your career path. Or try a “returnship,” a twist on an internship that incentivizes retirees to return to the workplace to share expertise and alleviate labor shortages. The New Map of Life paints an ideal employment picture with shorter workweeks and more flexibility to leave and return to careers, which could take some pressure off those decades in which Americans tend to burn the career-and-family candle at both ends. While her ideal isn’t yet a reality for most people, Carstensen cites pandemic-driven remote and hybrid work models as a sign that things are moving in that direction: “COVID has opened big cracks in our current culture, our current system. This is an ideal time to begin to make some big changes.”

Change how you save money.

One counterintuitive change longer lives may afford is the option of maintaining a smaller savings account. “The typical financial advice is to keep saving an increasingly larger pot of gold for the end. You’re told that unless you really save a lot of money, you’re going to be poor,” says Carstensen. But she suggests that people—especially young people—base their financial plans on a shorter retirement that starts later and includes occasional paid work.

She urges those hoping to fully retire at the traditional age to look at the arithmetic and factor in decades of no income. Referring to the research of John Shoven, professor emeritus of economics and a founding faculty member at the Center on Longevity, Carstensen cautions: “You can’t save enough in 40 years of work to support yourself for another 30.”
Exercise, exercise, exercise.

One of the most important ways you can prepare for a longer life now is to maintain health and functional mobility with regular exercise. On average, Americans over 30 gain about a pound a year, and by 40, they begin to lose muscle mass. But many resulting health changes that were once thought to be inevitable signs of aging can, in fact, be attributed almost entirely to disuse. A moderate-intensity exercise routine—for example, 30-minute walks five times a week and muscle-strengthening activities twice a week, per the CDC—can mitigate common medical conditions like hypertension and high cholesterol while decreasing the likelihood of osteoporosis and improving neurocognitive function. “[Function] is what’s really important,” Carstensen says. “If we’re going to live much longer, that’s really only going to be satisfying if we can be relatively healthy for most of those extra years.”

Hang on to friends.

Midlife for many is packed with childrearing and the most productive years of work. Consequently, close friendships are often deprioritized. That’s a risky move, according to Carstensen. She recommends making an effort to put friendship high on your list, especially during your busiest years, when it’s at risk of slipping away. “Our social relationships are strong predictors of our health and even length of life,” she says. Loneliness represents a significant public health risk, with many studies now attributing years of life expectancy to the quality of social relationships. But maintaining a social scene doesn’t mean you need to be the life of every party. In general, people with three to five close friends report the highest levels of life satisfaction.

Envision a good longer life.

“When we ask people how long they expect to live, people tend to look to whatever ages their parents lived to, and that’s how long they think they’re going to live. That’s not a good measure anymore,” Carstensen says. Her frustration is that although we’ve added 30 years to our life expectancy, we’ve merely tacked them on to the end. She wants people to think about 90- and 100-year lives now, and make plans that take advantage of those extra 30 years throughout their lives. Pick up a new sport at 40, go back to school at 50, start a new career at 60.

When Carstensen and her team conducted a survey asking people what their goals, hopes and dreams would be if they lived to 100, “the most common responses we got were ‘I hope I don’t have dementia’ and ‘I hope I haven’t run out of money,’” she says. “We need to raise the bar.”

Kali Shiloh is a staff writer at Stanford. Email her at kshiloh@stanford.edu.
All Right Now

OU KNOW HOW there are certain common dreams that everybody has? You dream of flying or falling, or of your teeth falling out, or of being naked in public.

Do you have those? Yeah, me too.

There’s another common dream that a lot of people have:

It’s the day of the final exam . . .
and you show up to the room to take the test . . .
but you realize you haven’t attended any of the classes . . .
or learned any of the material . . .
Panic sets in . . .
you wake up in a cold sweat . . .
with your heart beating out of your chest.

I’ve been having that dream for 30 years. Rewind to the spring of 1991. I’m a senior at Stanford. I’ve just retired from competitive swimming after 17 years, so for the first time since I was 4 years old, I don’t have swim practice tomorrow, or next week, or the weeks after that. Moreover, I’ve secured a job at a prestigious consulting firm and will start in July. They’ve even sent me my business cards already.

I am ready to celebrate!

The only real responsibility I have is to wrap up a few more classes so I can walk across a stage with a degree in industrial engineering. I’m signed up for everything I need to finish.

But like I said, I am ready to celebrate!

I spend spring quarter partying my tail
off. My friends and I are day drinking before it’s called day drinking. We leave Zotts when it gets dark and close down the Goose or the Old Pro. I hand out my new business cards between pitchers of beer. I sleep through most of my classes and do the minimum amount of work to get through. I go hungover to midterms.

One of my courses is Engineering 10: Statics. That’s a branch of physics dealing with forces and objects and mass and direction and vectors and stuff. It’s basically solving a bunch of equations. I don’t grasp it at baseline, and certainly not in the state I am generally in. I stumble through the final in early June and await what I expect will be a pretty poor grade.

When I go to check the grades posted on the window of the professor’s office, there’s an NP next to my student ID number. Not Passed. See, at Stanford, we don’t call it an F.

I immediately feel nauseated. What have I done? I’m not going to graduate. What am I going to tell my parents? I’m an idiot.

But I hatch a plan. I make an appointment to see the professor the next day. I spend the day and evening correcting all my old problem sets and doing the ones I didn’t turn in. I go in the next day, hat in hand. I present him with all of my assignments. I ask whether I can retake the final, or whether there is anything I can do for extra credit. “What can I do to get you to give me just a D-minus? Please.”

“I’m sorry, Matt. You did not do the amount of work required to pass this course.”

The next couple of days were a blur. The department administrator, a woman named Lori, got involved and had my adviser, the department chair, implore the professor to give me a break. No luck. I resumed partying to drown my sorrows and tried to figure out what I was going to do.

Lori told me I’d still get to walk through the graduation ceremony, but the leather-bound folder handed to me would be empty. I still have it. My parents arrived and I told them that I messed up and wouldn’t be graduating, but I was glad they were there, and we should still celebrate, and I would take care of the last class soon.

But I didn’t.

I moved to San Francisco and started my job and my new life. And I kept partying. That consulting firm asked me once for my final transcript, but I conveniently ignored the request. “What can I do to get you to give me just a D-minus? Please.”

“I’m sorry, Matt. You did not do the amount of work required to pass this course.”

The next couple of days were a blur. The department administrator, a woman named Lori, got involved and had my adviser, the department chair, implore the professor to give me a break. No luck. I resumed partying to drown my sorrows and tried to figure out what I was going to do.

and I was too busy with my new life to go back to Stanford or look for a similar class somewhere else and sort out how to transfer credits. Way too much to figure out.

I didn’t lie about not having my degree—my résumé and LinkedIn profile never said I had a bachelor’s degree, just that I studied industrial engineering at Stanford from 1987 to 1991. I told potential employers doing background checks that I was one class shy. I think it cost me a job opportunity or two, but the consequences were never awful. The external consequences, that is. Inside, it ate away at me, and it would regularly manifest in the dream.

I made two feeble attempts at finishing. In the mid-1990s, I enrolled in a correspondence course for statics at Utah State University. They mailed me the textbook and the first couple of assignments. I completed and mailed back a problem set or two, but eventually I got tired of the hassle and blew it off.

Then, in 2002, I gave it another go. I was newly sober and a new parent. I enrolled in a statics class at the local community college. I went a couple of nights a week for several weeks, but eventually life got in the way—business travel, family life, etc. Or at least that’s what I told myself.

As the calendar turned, year after year, the dream continued to pop up with some regularity, usually in times of self-doubt. Unlike with some dreams, I didn’t have to spend too much time analyzing what this one meant.

Then in the fall of 2020, when we were all on lockdown, and every class in the world

Thirty years after drunkenly stumbling through a lost academic quarter, I officially graduated from Stanford University.

I’m still embarrassed by the whole situation. I really do not want people to congratulate me or to hold up my tale as anything to be admired.
was being taught online, I reached back out to Lori, the department administrator at Stanford. She's still there, 30 years later (although the major is now called management science and engineering). She had been sympathetic in 1991 and helpful and encouraging in my two attempts to finish since.

“Matt! So nice to hear from you. Let’s get this done! Your timing couldn’t be better. You can enroll in one Stanford course spring quarter under what is called Flex Term. It is a policy just for this year to allow students to be less than full time in one quarter during the pandemic craziness. Most of our undergraduates take ENGR21—the Engineering of Systems. I think you’d like it, and it will complete your last requirement. I think I want you to get your degree almost as much as you do!”

I applied for the Flex Term program, including writing a letter requesting to be reinstated as a student. It was like writing a college essay all over again, and I was honest and vulnerable. (My new adviser suggested I remove the phrase f*cked up from my letter.) Stanford accepted my request, and I was reinstated. I chose a new email address: matt9121@stanford.edu.

So I spent several months in the spring of 2021 taking ENGR21. Lectures were Tuesday and Thursday mornings from 8:30 to 10 on Zoom and were recorded, which meant I could keep up if I missed them. The professor was my age (we bonded over that) and a department head at the NASA research center in Mountain View (we did not bond over that). I was assigned a partner for the two-person class project—a bright senior double majoring in computer science and bioengineering. She’s a close friend of the daughter of two of my Stanford classmates. I apologized that she was stuck with the random old dude in the class, but she could not have been more gracious. I struggled to start to be proud of what I (finally) accomplished; and I can focus on what my experience could teach others. Namely:

We all have things we regret from our past.
It’s never too late to do something about them.
Addressing them is not as painful as you imagine.
You’ll feel better when you do.
Oh, and one more benefit for me personally: I haven’t had that dream since last June.

MATT RODGERS, ’91/’21, parlayed that job at the consulting firm into a 30-year (and counting) career in the software industry. He lives in Marin County, Calif. Email him at stanford.magazine@stanford.edu.
The girl was an only child, with wavy dark hair, big eyes with long lashes, and a dazzling smile to match a radiant spirit. She loved Disney characters and dotted the ‘i’ in her name with a little heart, as 9-year-old girls sometimes do. Michelle Monje, a Stanford MD/PhD student when she met the girl in 2002, was smitten.

Twenty years later, Monje remembers how she sat alongside the girl’s mother in the family’s kitchen after the funeral as the grandmother, in tears, cooked for guests.

The girl was the first patient that Monje, MD ’04, PhD ’04, had ever seen with the rare pediatric brain cancer called diffuse intrinsic pontine glioma (DIPG). Perhaps because it strikes a few hundred children a year in the United States—usually between the ages of 4 and 11—and does its lethal work swiftly, DIPG is far less notorious than it deserves to be. It’s the leading cause of death from pediatric brain cancer. Otherwise healthy children suddenly have some clumsiness, weakness on one side or one eye that turns inward. As the tumor weaves itself around healthy tissue in a deep part of the brainstem, foreclosing the possibility of surgery, the nerves that control the head, neck and face start to fail. The typical therapy is six weeks of radiation, which might shrink the tumor, buying kids some time and
giving them some function back. But the disease always returns and leads to a death of increasing paralysis, with patients unable to move, communicate, swallow, control secretions or, eventually, breathe—but still perfectly aware of everything that is happening. Patients with glioblastoma, the most common adult brain cancer, face a five-year survival rate of just 7 percent. The outlook for DIPG patients is even grimmer: The five-year survival rate is less than 1 percent. Most patients die within a year of diagnosis.

As her young patient followed DIPG’s predictably cruel trajectory, her beautiful smile fading to sadness, Monje felt grief, frustration and what would become unshakable purpose. “I had never seen anything as horrible as this disease,” she says. “I was stunned that we knew so little about it.” No one knew what mutations drove the disease or what developmental process went awry. There were no animal models, such as mice implanted with the tumor, to study. “It was a black box with no tools,” says Monje.

In the two decades since that girl died, Monje, now a professor of neurology at Stanford, has devoted herself to ripping open that box. She has done far more than that: By shedding light on the dark secrets of DIPG and other high-grade gliomas—the deadliest of the cancers that arise from glia, the brain cells that support and surround neurons—and highlighting the role of neuro-developmental biology in pediatric brain cancer, she has upended the whole field of brain tumor research.

Tracy Batchelor, neurologist-in-chief at Brigham and Women’s Hospital in Boston, says Monje has shown scientists “what we had been ignoring for too long: that the brain’s micro-environment is critical to brain tumors.” By revealing how tumors exploit that environment, Monje has “opened up a whole new axis of biology, and that’s opened up a new therapeutic opportunity,” Batchelor says. “We can now begin to think about how we might manipulate that interaction to better treat gliomas.”

That achievement alone “would have been a success story for any investigator over a lifetime,” says David Gutmann, a pediatric neurologist at Washington University in St. Louis and a frequent Monje collaborator. But Monje’s research interests don’t end with disease states. Her lab also studies the way that the nervous system develops and remains plastic throughout adulthood and how cancer treatments like chemotherapy disrupt that plasticity, leading to the mental fog known as chemo brain. Tying all those threads together, Monje has spearheaded the emergence of a new field of research (which she named): cancer neuroscience, the study of cancer and nervous system interactions.
In September, Monje was awarded a MacArthur Foundation “genius” grant of $625,000 and named a Howard Hughes Medical Institute investigator, an honor that comes with $9 million in funding over seven years. As a physician-scientist—that is, a researcher who treats patients who have the disease she studies—Monje says the support couldn’t have come at a better time. “It really is wind at my back because now that we have a foundation for understanding these diseases, there are some really exciting new directions I want to immediately go.”

Monje goes in a lot of directions already. On a recent holiday plane trip with her family—Monje and her husband, the prominent Stanford neuroscientist Karl Deisseroth, MD ’98, PhD ’00, have four children between the ages of 6 and 13 and a son, Cole, ’19, from Deisseroth’s previous marriage—they picked up a breakthrough case of COVID-19. Sweating out a fever in bed, she took the opportunity to write a report, based on research by her team and another lab, that even mild cases of COVID-19 can have cognitive impacts similar to chemo brain.

Deisseroth, who met Monje more than 20 years ago on a neurology rotation at Stanford—where he was “blown away by how good she was at everything”—says Monje is defined, in part, by two seemingly contradictory personality traits. “She is warm, empathic person who always has great relationships with patients and families, and she has a relentless, have-to-solve-it, this-is-what-needs-to-be-done drive. That combination is very rare.”

Stanford professor of psychiatry and behavioral sciences Rob Malenka, PhD ’82, MD ’83, was Deisseroth’s postdoctoral adviser and is now a family friend and occasional Monje collaborator. He says Monje shares a number of qualities with Deisseroth, a psychiatrist-bioengineer who is famed for developing optogenetics, the groundbreaking research technique that controls neurons using light-sensitive microbial proteins. Malenka, who calls the couple “the Pierre and Marie Curie of the neurosciences,” says both are visionaries—and fearless. “In their own ways, they took major risks early on in their careers to try to do something really new and impactful. They both have a fire of I’m gonna make this happen, but you don’t see it. If they ever get stressed out, it’s really hard to tell.”

Monje has been achieving uncommon equilibrium and making difficult things look easy since her days as a competitive figure skater in Indiana and later Danville, Calif. She spent so many hours on the ice, practicing at 5 a.m. and competing in regional events on weekends, that her mom finally asked her, when she was in junior high, “Are you going to do anything that helps other people, or is it just going to be you practicing your figure eights all the time?”

Monje had a friend with Down syndrome, so she decided to start a program teaching kids with neurological disabilities how to skate. “I loved that,” she says. “It felt so much more rewarding than trying to get a gold medal.”

Fascinated by how her skating pupils’ nervous systems developed in ways that created challenges but also often led to strengths like emotional intelligence, Monje envisioned a future in biology and medicine. But a high school biology teacher stuck a pin in that plan. When she asked him about a subpar test result one day, he told her, “Don’t worry, sweetheart. It’s a rare woman who has a mind for science.”

Convinced she wasn’t smart enough for biology, Monje entered Vassar in 1994 intending to study English and possibly law beyond that. But her assigned adviser, biology professor Kathleen Susman, talked her into giving biology another try. Monje quickly became a star of the department, eventually first-authoring a paper with Susman on the roles vitamins E and C play in mitigating free radical damage in the aftermath of stroke, a research direction that was Monje’s idea and a pivot for Susman. “That was the first time I decided to follow the instincts of a student on a research project,” says Susman.

Monje has continued to have a strong sense of the right path forward, the right thing to do next—even when that thing is unheard of. As a PhD student between her third and fourth years in medical school at Stanford, Monje was studying neural development and what goes wrong after cranial radiation. She wanted to know whether what she was seeing in rats was happening in patients. To do that, she’d need human tissue.

Paul Fisher, a Stanford neuro-oncologist and chief of the division of child neurology, remembers the day Monje approached him and colleague Gary Dahl with a previously unthinkable request. Could they get some postmortem tissue from leukemia or brain cancer patients who had had radiation? “You can imagine: This poor family just lost their child to a horrible cancer, and I’m going to come in like a vulture and ask for their child’s brain?” says Fisher, ’85.

To Fisher’s surprise, families were willing to donate tissue if it would lead to advances in treatment. “Suddenly, there was a window to do real science,” he says. Monje and her PhD adviser, professor of neurosurgery Theo Palmer, subsequently found that cranial radiation therapy can cause cognitive deficits in the hippocampus, the area of the brain central to memory formation. Their research laid the groundwork for a shift in the way radiation is delivered.

It was about this time Monje met that first DIPG patient. Something Fisher had pointed out in clinic one day had really struck her: DIPG and other pediatric brain tumors happen in a predictable spatial-temporal pattern. “If you tell me the age of the patient, I’ll tell you where their brain tumor is,” Fisher had said. Unlike most adult cancers, which tend to be diseases of exposure accumulation, brain tumors showed up in kids at the same place and same developmental stage over and over. It seemed obvious to Monje that DIPG and similar cancers appear because of something gone awry in brain development. But that’s not how the disease was being approached.

It was something Monje thought of often during her residency in adult neurology at Harvard through Brigham and Women’s Hospital and Massachusetts General Hospital. The program, which focuses on neurological issues of adulthood but has a strong pediatric/developmental component, gave Monje perspective on the full life span of the brain and nervous system, and it
trained her in a range of clinical skills. But she kept thinking about DIPG and that young girl she had met during medical school.

In 2008, she returned to Stanford for a pediatric neuro-oncology fellowship with Fisher and a postdoc with Stanford developmental biologist Phil Beachy. “I really thought developmental neurobiology was the way to approach DIPG,” she says.

There was one big—and familiar—problem. Because DIPG tumors entwine around healthy cells in the pons, a part of the brain stem that controls vital functions like breathing and heartbeat, biopsies were all but impossible.

No one had ever cultured DIPG cells or developed a mouse model for it. Several people warned Monje that DIPG was a research dead end because without tissue, there was no way to study it.

In late 2008, Monje met the DIPG patient who would change that. Dylan Jewett was a bright 5-year-old who loved superheroes and his Thomas the Tank Engine toy. But he was suffering from a tumor so aggressive it didn’t even make sense to complete the course of radiation. When his family asked if they could donate his organs after he passed, Monje asked if they would donate his tumor. They agreed. From Dylan’s donation, Monje produced the first-ever cell culture and mouse model of DIPG.

Inspired by a story about Dylan’s gift in Stanford Medicine magazine, parents of other DIPG patients reached out to arrange for donations. The autopsy program Monje created has been logistically challenging—tissue donation requires time-sensitive collaboration with physicians and pathologists around the country—but transformative. Monje has shared the DIPG cell lines with hundreds of labs around the world. She is still shattered by every DIPG loss, usually waiting until her kids are in bed before weeping over another young life cut short. “I don’t care who finds the answer,” she says. “I just want someone to.”

‘IT MAKES SO MUCH SENSE THAT THESE CANCERS THAT GROW IN THE BRAIN TAKE ADVANTAGE OF THE SIGNALS IN THE BRAIN. BUT THAT WAS NOT RECOGNIZED BEFORE.’

Myelination is the process that gives the brain’s white matter its color and, more important, wraps nerves in an insulating sheath to ensure speedy and efficient signaling. Distinctly timed and located waves of myelination occur throughout infancy, childhood and well into young adulthood, starting with the brain stem, then the spinal cord and proceeding throughout the brain. Those waves, Monje would discover as a postdoc, are key to the spatial-temporal pattern of childhood brain cancers.

Studying healthy pons tissue samples, Monje had found that oligodendrocyte precursor cells (OPCs)—which become oligodendrocytes, which make myelin—showed up in increased numbers right at the peak of the myelination wave that happens at the location (ventral pons) and age range (6 to 8 years) in which DIPG tends to show up. That’s also the age when kids tend to step up their motor-skills game by learning to skip or ride a bike. Monje suspected that dysfunctional OPCs were the genesis of DIPG, a suspicion that her lab and others later confirmed. She also found that the peaks of other waves corresponded with the timing and locations of other childhood high-grade gliomas.

By the time she opened her own lab in 2011, Monje had collected a few other clues about DIPG. One of the striking aspects of all glial malignancies is that patients have minimal symptoms to begin with—maybe a bit of slurred speech or an eye turning inward—but imaging shows large areas of their brain, brain stem or spinal cord occupied by the tumor. “We think about cancer as a space-occupying and destructive process,” says Monje. “But if it were, in this case, that whole part of the brain wouldn’t work. So something else is going on.”

Moreover, looking at DIPG samples under a microscope, she was struck by an observation that was first made decades ago: Glioma cells cluster around neurons like a halo, which...
suggested to her a strong relationship between the two. Although gliomas can enter the bloodstream, they almost never grow anywhere but the nervous system. They seem to need the brain’s environment to thrive. She had a hunch that the thing that drives brain development and plasticity, which is the activity of the nervous system itself, might also be driving the cancer. It was a radical idea. “People didn’t expect neurons to have a role in cancer, but it made so much sense,” she says.

To explore her hypothesis, Monje first looked at what happens in the circuit of a healthy brain. Using optogenetics—which many researchers do, but “conveniently, I have the great benefit of living with a great innovator of tools to study the nervous system,” Monje says—she and her team found that light-induced nerve activity led to the production and remodeling of myelin in the activated circuit. Moreover, that myelin modulation improved function in that circuit—in this case, the limb of a mouse. The upshot of the findings, published in Science in 2014: Myelination, once considered a process that ended in young adulthood, continues, triggered by nerve activity, throughout adulthood and contributes to ongoing neural circuit “tuning” that’s critical for brain function.

In a follow-up study, Monje found that nerve activity likewise drove the growth of gliomas. Her research also identified a growth factor, the neural protein neuroligin-3, that helped drive cancer cell proliferation and could be a target for drug therapy. That paper, published in Cell in 2015, made a splash even beyond the neuroscience community.

Monje’s game-changer paper, as she calls it, came out in Nature in 2019. It contained even bigger news about gliomas: They form synapses and electrically integrate and communicate with neurons. In other words, the tumors hijack the brain’s normal process and become part of it.

Another lab had discovered the same thing, so the two labs submitted their papers together. A third paper in the same issue showed that when breast cancer metastasizes to the brain, it also glean electrical signals from the brain, albeit in a different way.

“So all of a sudden, it was like, brain cancers need brain physiology,” says Monje. “It makes so much sense that these cancers that grow in the brain take advantage of the signals in the brain. But that was not recognized before those three papers came out in Nature.”

Monje has the cover of that issue framed and hanging on a wall at home. The cover illustration, which she conceptualized, shows a flower with a root system in the shape of a brain next to a weed whose root system has intertwined with the flower’s. A garden-gloved hand is poised to pluck the weed. “We have to pluck out the weed, and we have to take its root system with it,” she says. “That’s a whole other way to think about cancer, and it really changes the way we need to start approaching it. In addition to the traditional ways of fighting cancer, we have to disintegrate it from the nervous system and target the way it’s communicating with the nervous system.” Some drugs developed for psychiatric disease, epilepsy and migraine do exactly that and are already showing promise in mouse models, says Monje. “We just hadn’t been thinking of these things as cancer therapies.”

In the wake of the 2019 Nature paper, Monje has become something of a rock star in the neuroscience community. Stanford pediatric neuro-oncology colleague Cynthia Campen, MS ’11, recalls planning to meet Monje for tea after the latter’s keynote at the Society of Neuro-Oncologists meeting in Phoenix in 2019. The crowd of scientists wanting to talk with Monje afterward was so big that tea had to be postponed. The scene reminded Campen of a quote from a 2015 New Yorker article about Deisseroth. Upon seeing neuroscience conference attendees crowd around her husband in the wake of his optogenetics breakthrough, Monje said she realized she was “married to a Beatle, the nerdy Beatle.” Now it was her turn. Says Campen, laughing, “Michelle was having a moment. It was fun to see.”
of the reason for her and her lab’s success—and for my success."

In addition to feeling supported, anyone working in Monje’s lab will learn a lot about unfamiliar methodologies and the fruits of collaboration. Chimeric antigen receptor (CAR) T-cell therapy involves taking T cells, a type of immune cell, from a patient’s blood, engineering them to attack specific molecular targets, and then returning them to the patient. It’s not a specialty of Monje’s lab. But in 2016, after attending one too many meetings where researchers hypothesized which molecules on DIPG might make good immunotherapy targets—instead of actually looking at the DIPG cells she offered them—Monje had her lab do the looking. “And,” she says, “we found GD-2.”

GD-2 is a sugar molecule, and it was abundant on the surface of DIPG tumor cells that Monje’s lab examined. Results in hand, Monje walked down the hall from her lab in the Lorry I. Lokey Stem Cell Research Building and knocked on the door of cancer immunotherapy expert Crystal Mackall, who had already engineered CAR-T cells to target GD-2 on the cells of another pediatric brain cancer, neuroblastoma. “That started a perfect collaboration,” says Mackall, who also leads Stanford’s efforts to translate research into immune therapies for cancer.

Mackall compares CAR-T cells to bloodhounds that go after a scent. “We had the bloodhounds, and Michelle gave us the scent. She had found us an almost perfect target.” When given to mice with DIPG tumors, the CAR-T cells sniffed out the GD-2 on the DIPG cells and all but obliterated the tumors, leaving only a few cancer cells.

After that study came out in *Nature Medicine* in 2018, Monje and Mackall moved swiftly to their first clinical trial, the results of which were published in *Nature* in February. All four of the initial patients eventually died from DIPG or its complications, but three experienced significant tumor shrinkage and symptom improvement after getting the CAR-T cells. When he joined the trial in September 2020, Jace Ward, a 21-year-old University of Kansas student, had double vision, a stiff jaw, and weakness on the left side of his face and right side of his body. His intravenous first dose provided impressive but temporary symptom reversals. When his symptoms returned, Ward went back to Stanford in January of 2021 for a second dose. This time, he arrived in a wheelchair, unable to walk or open his mouth much. For the second dose, patients received the CAR-T cells directly into the cerebrospinal fluid through an intracranial port. Monje leveraged her extensive training in the neurocritical care unit during her residency in Boston to anticipate and manage subsequent tumor inflammation.

The results were stunning. Two weeks after his infusion, “Jace walked out of the hospital and got a big hamburger,” says his mom, Lisa. Not long after, he was able to walk four miles a day and attend the 2021 Super Bowl. Ward had three more infusions before he succumbed, on July 3, 2021, to a tumor bleed unrelated to the trial. “Throughout the trial, Dr. Monje was so compassionate, so accessible, so engaged, and, really, so brave,” says Lisa. “She has given the DIPG community so much hope.”

Deisseroth says this trial—one of a handful Monje has run—might be the most mind-blowing thing his wife has accomplished to date. Its success depended on “a convergence of four threads that I don’t think are unified in another human being on the planet”—her compassion, her relentlessness, her deep knowledge of molecular biology and her neuro-ICU training. “It’s not typical for a neuro-oncologist to have years of neuro-ICU training,” he says. “Who knew that would turn out to be essential?”

Monje cautions that the trial team still has much to learn and that effective treatment of DIPG and other high-grade gliomas will require more than one type of therapy, including drugs to disrupt neuron-glioma communication. But the CAR-T cell trial has given her hope for real progress against an unyielding disease. “We’re seeing some incredible responses,” she says. “In some ways, it’s almost more devastating when I lose a patient now, because I start out thinking maybe we’re going to cure it this time. It feels that close.”

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DAMS HELP US. DAMS HARM US. NOW, LONGTIME ADVERSARIES ARE COMING TOGETHER TO BRIDGE THAT UNCOMFORTABLE DIVIDE.

BY TRACIE WHITE

ILLUSTRATIONS BY MICHAEL CRAMPTON
Dave Steindorf knows California’s North Fork Feather River like his backyard. He’s driven along its banks so many times, people wave to him as he goes by. As he passes, he takes mental notes about any day-to-day changes—silt backup in reservoirs that could muck up habitat, or river levels low enough to threaten frog and trout spawning grounds. His personal slogan is “Couch potatoes make poor river advocates,” so he gets out in the river whenever he can, on his kayak or with a fly-fishing rod in his hands.

“It’s still beautiful up here,” says Steindorf, a negotiator for the conservation nonprofit American Whitewater who works to return water flow to California rivers and to repair ecological damage caused by dams. “It’s just an amazing canyon.”

Absent all the dams, this would be one of the premier whitewater rivers in the state for paddling and rafting, he says. As he drives, he points down through the oak and cottonwood trees to several dams that, one after the other, line the river and control the water flow: the Poe dam, built in 1958; the Rock Creek (1950) and Cresta (1949) dams; and Bucks, the first permanent pair of dams on the North Fork, completed in 1928.

From its headwaters in the Sierra Nevada, the Feather River flows some 3,600 feet downhill, where, in Oroville, it meets the tallest dam in the nation. Its path shows exactly why California geology is ideal for the production of hydropower. It’s physics. The higher the mountains, the faster the water falls. Hydropower dams capture this power and divert it through spinning turbines in nearby powerhouses that activate generators to produce electricity. But all this hydropower comes at a cost.

The river was once legendary for its salmon runs, but the dams blocked migration upstream, destroying the fish’s spawning grounds, Steindorf says. He still comes up here to fly-fish for trout, but the salmon are all gone. He notes the lack of fish ladders—step-up structures that help migrating fish surmount dams. And yet he also knows these dams are a permanent part of the landscape, bringing electricity into thousands of homes throughout the Sacramento Valley, including his own.

Now, the irony is that the hydroelectricity produced by these dams could help protect the watershed from further damage—the idea being that by limiting our use of fossil fuels, we mitigate climate change and its destruction of ecosystems due to drought and flooding. For an environmentalist who has worked for decades to repair damage to rivers from dams, it can be a hard concept to wrap one’s head around.

In 2018, Steindorf wanted to do just that, so he joined a working group on hydropower and healthy rivers convened through Stanford’s Uncommon Dialogue program. Organized by Dan Reicher, JD ’83, a senior research scholar at the Stanford Woods Institute for the Environment, the gathering brought together two long-feuding groups: representatives of the hydropower industry, which builds and maintains dams, and the environmentalists bent on tearing them down. The goal was to get the sides talking about the pros and cons of hydropower, and about maintaining healthy rivers. Since then, they’ve come to substantial agreement—14 pages of it, in fact—and are using that agreement to effect public policy change, including billions of dollars in federal funding.

“It’s remarkable Dan was able to get these groups together at all,” Steindorf says. “There’s a lot of baggage.”

THE 100-YEAR FEUD

In fact, turmoil over the building of a dam in the early 1900s helped launch the environmental movement. The proposed damming of California’s pristine Hetch Hetchy Valley, twin sister to Yosemite Valley, prompted the fledgling Sierra Club, led by early conservationist...
John Muir, to wage a seven-year-long lobbying battle to stop it. The Sierra Club lost, and today the Hetch Hetchy Water Project produces hydroelectricity and delivers drinking water to 2.7 million people in the Bay Area. But as the valley disappeared beneath the waters of the Hetch Hetchy reservoir, an environmental movement emerged, built upon a mission to take down—and prevent—dams.

For more than a century, the battle over dams has raged. One side believes it’s fighting for the preservation of rivers, Native lands and the natural world: Dams have destroyed fish populations, damaged the ecological health of river basins, and cut off access and destroyed the livelihoods of Indigenous peoples. Notably, the 2014 documentary DamNation juxtaposed a clip of President Franklin D. Roosevelt at the dedication of the Hoover Dam with that of a 30-pound salmon hurtling itself against a dam over and over in its failed attempt to reach the barricaded spawning grounds upriver.

The other side stands proud of its dams as feats of engineering that deliver electricity into American homes and water to parched lands. Hydroelectricity created by the Hetch Hetchy power system, for example, generates nearly 20 percent of San Francisco’s energy.
Dams provide jobs and revenue, drinking water, irrigation to agricultural fields and flood control, not to mention reservoirs for recreation. The Oroville Dam has minimized damage from major flooding events in the Feather River watershed nearly every decade since its construction, according to the Water Education Foundation.

Today, there are more than 90,000 dams across the United States, diverting many of the nation’s river waters. Unlike the North Fork Feather River’s dams, most were built primarily for irrigation or flood control and don’t actually produce hydropower. Only 3 percent of all U.S. dams are powered, but they produce a significant 7 percent of the nation’s energy. Which raises the question: Why, when the need for renewable energy has never been greater, aren’t more dams producing hydropower, a renewable energy available 24/7—at least, as long as rivers continue to flow?

This was exactly the type of question that Reicher, an environmental lawyer, began to ponder more than four years ago while teaching energy policy classes at Stanford. Well versed in the politics and economics of solar and wind power, Reicher, a former U.S. assistant secretary of energy, understood the growing need for renewable energy. He began to wonder why more people weren’t talking about hydropower. An avid kayaker (and member of the first team to paddle the entire 1,888-mile Rio Grande), he also considers himself an environmentalist who has seen firsthand the damage dams can do to rivers. Would it be possible, he wondered, to create additional hydroelectricity without causing even more ecological harm to American rivers?

Reicher soon approached Chris Field, PhD ‘81, a professor of earth system science and of biology who directs the Stanford Woods Institute for the Environment, and asked whether he could tackle that question through the institute’s Uncommon Dialogue program. For more than a decade, the program has provided a neutral platform to bring together divergent groups in search of real-world solutions to environmental problems. “These two groups have been at each other’s throats for decades,” Reicher says. But with severe droughts and floods threatening to damage both rivers and the dams that depend on them, maybe they could find some common ground. Field agreed to the plan.

The Woods Institute went on to co-sponsor the group alongside Stanford’s Steyer-Taylor Center for Energy Policy and Finance (where Reicher was the founding director) and the nonprofit Energy Futures Initiative.

“There was really just a glimmer of hope that this one would work,” Field says. “It would be hard to find two communities more diametrically opposed to each other than environmentalists and the hydropower industry.”

IN THE ROOM WHERE IT HAPPENS

Brian Graber, a civil and environmental engineer, has worked for the past 15 years on the removal of 250 dams for the conservation group American Rivers. Many of the dams were obsolete—they no longer performed any of the functions for which they were built—but they continued to create safety hazards and environmental damage. When a dam comes down, he says, almost immediately the river roars back to life. Migrating fish populations return to old spawning grounds after decades away. The natural flowing rivers eventually remove pollutants from previously stagnant waters and re-establish normal sediment patterns, while an entire watershed blossoms with returning plant and animal life. According to the Nature Conservancy, roughly 1,200 dams nationwide have been torn down since the first major dam removal in 1999. That year, the Edwards Dam was excised from Maine’s Kennebec River—the same river where Graber happened to spend summers while he was growing up.

“There’s no faster or more effective way of bringing a river back to life than by taking out a dam,” he says. He’s watched many times as a hydraulic hammer chips away at the concrete wall until the dam crumbles down. “That first rush of water, it’s incredibly exciting,” he says. “After years of work, it’s like a big sigh.”

I worked on one project in Wisconsin. We had just taken out a dam and I was standing in the river. A brook trout swam right between my legs where, for many years, there hadn’t been any.”

But the reality is, the long process of planning and lobbying to tear down dams is far too slow to be the only answer to restoring rivers. Climate change is threatening American rivers now, Graber says. He joined Reicher’s Uncommon Dialogue in search of new answers.
In March 2018, a group of about 20 participants invited by Reicher arrived on the Stanford campus for the first meeting of the Uncommon Dialogue on hydropower. Among them were representatives from the environmental advocacy groups American Rivers, the Nature Conservancy, the Union of Concerned Scientists, the World Wildlife Fund and the Natural Resources Defense Council. Tribal representatives were also there, along with hydropower company representatives, investors and lobbyists. The tension was palpable during those first few meetings, Reicher says, and there was a good deal of posturing going on.

First, everyone’s fears needed to be aired out. The hydropower groups saw dam removal efforts as threats to their livelihood. And across the table sat the people who tore them down—individuals who thought that anyone trying to build a dam didn’t care at all about the environment. It took a lot of back and forth to figure out that some of this old baggage could be chucked.

“First off, the U.S. hasn’t built any major new dams in 50 years. That era of big dam building is over,” says Malcolm Woolf, president and CEO of the National Hydropower Association, which represents more than 250 companies in the hydropower industry. Besides, he says, most of the good spots have already been taken. On the flip side, most of the dams these environmental groups were working to tear down were obsolete anyway and weren’t producing hydropower. Many were rundown old mill dams that polluted rivers. “It took getting industry to understand they don’t have to fight every time [others] talked about dam removal,” Woolf says.

Meanwhile, some river advocates didn’t even want to recognize hydropower as clean energy, Graber says. “The challenge is understanding whether hydropower is clean energy, and the view among conservationists is mixed,” he says. “The desire to get more clean, renewable energy, though, is really high.” He refers to hydropower as clean energy, but with a caveat. Dams can, and must, be managed so that they are less damaging to the environment.

The participants were never going to agree on everything. That was apparent from the get-go. But they kept coming back. “Both sides recognized that because of climate change and our collective agendas, we have to find a way to get to yes,” Woolf says. Over 2 ½ years of meetings and conversations, they began to reach some compromises. What they did agree on was that to produce more hydropower while continuing to restore rivers would take funding. If they could agree on anything, it was that.

The Oroville Dam, which sits majestically on a hillside overlooking the city, is a triumph of engineering. The 770-foot-high curving concrete wall retains the contents of Lake Oroville—about 3.5 million acre-feet—and distributes the waters of the Feather River to the entire Sacramento Valley. (One acre-foot equals 326,000 gallons—enough to cover a football field with one foot of water.) The dam was built in 1968 to provide hydropower and to deliver irrigation and drinking water far across the state, including to Southern California and the agricultural fields of the San Joaquin Valley.

Five years ago, amid heavy rains and due to weak infrastructure in the spillways designed to divert floodwaters, Oroville Dam made headlines. Over seven days, media
showed the billowing, frothing white waters of the Feather River crashing across the damaged spillways. Fearing the spillways would collapse, resulting in the release of a 30-foot wall of water onto Oroville and the communities below, authorities evacuated nearly 200,000 people from the valley. The rains eventually stopped, the waters receded, and no lives were lost. The cost of repair topped $1.1 billion.

For a moment in time, this got even politicians in Washington, D.C., talking about dams. Infrastructure, apparently, wasn’t all about roads and bridges. A few years later, a report by the American Society of Civil Engineers found that more than 70 percent of the nation’s dams would be over 50 years old by 2030, and many of those no longer meet safety standards due to the weather fluctuations caused by climate change.

“Several years prior to that disaster, conservation groups warned that the Oroville Dam’s spillways needed to be upgraded,” Steindorf says, “but nothing was done.” At the Uncommon Dialogue, safety became the No. 1 issue that all sides could get behind. Then the negotiations really took off. Another story about a water restoration project on the Penobscot River in Maine became a model for them to base their work on, Reicher says.

The Penobscot restoration project, completed in 2016, was a collaborative effort to balance fisheries restoration and hydropower production in the state’s largest watershed. The hydropower industry, river advocates and the Penobscot Indian Nation, long in conflict with one another, had negotiated for six years. The upshot was that some useless dams got torn down; new fish ladders got installed; and hydropower production levels were maintained.

“The Penobscot project took out two big dams, changed the operation of others, and opened a thousand miles of habitat for Atlantic salmon while continuing to generate electricity,” says Bob Irvin, who represented American Rivers at the Uncommon Dialogue until his retirement in January. (New president Tom Kiernan, MBA ’89, has grabbed the baton.) “It was our model: How can we do this around the country?”

Members began to pinpoint overlapping interests. The environmentalists agreed to help push for more hydropower to be added to existing dams, but only if it were done as safely as possible for the ecosystem. The hydropower industry agreed to support the removal or rehabilitation of dams that were dangerous or obsolete.

Reicher had become particularly interested in hydropower’s growth potential as a renewable energy because of its electricity storage capacity. Hydropower projects that include pumped storage, such as the Oroville Dam, push water from a lower reservoir up to a higher one when there is excess electricity in the grid. The water gets stored there—picture the reservoir as a battery—until it’s needed. Then it’s released downstream to spin the turbines that activate generators to create electricity, just like conventional hydropower.

Here was an energy source that could feed the power grid when solar and wind were unavailable to keep it constantly running with zero-carbon emissions. “That was an eye opener to me,” Reicher says. Thus continued the give-and-take behind the Uncommon Dialogue’s eventual compromise: I’ll support more pumped storage if you get behind funding for new fish ladders.

“Trying to find commonality and agreement was hard,” says Mary Pavel, a lawyer representing the Skokomish Tribe of Washington state, whose culture and livelihood were trammelled by the construction of the Cushman Dam on the Skokomish River in 1930. She’s been a member of the Uncommon Dialogue for four years.

“I often have to take my advocate hat off and really try to listen,” she says. “A dam nearly destroyed my reservation, and I’ve got to get it back. But if we push for our interests alone, then nothing gets done. That is really the point of the Uncommon Dialogue. Are we better off with nothing? Most people would say no. There has to be a place for dialogue.”

**GIVING A DAM**

In October 2020, the Uncommon Dialogue members had finally agreed on enough to fill a 14-page document. When they published their agreement, the *New York Times* considered it groundbreaking enough to run a story headlined “Environmentalists and Dam Operators, at War for Years, Start Making Peace.”

Their lodestar is what they call the “three R’s”:

- **Rehabilitating:** to upgrade all U.S. dams to current technological
Once they had developed the agreement, the members began anew, this time collaborating to advocate for increased funding for their plan through lobbying and the legislative process. The group began with an initial $63 billion proposal delivered to the Biden administration and Congress on April 23, 2021, that “if fully enacted,” it says, “would support or create approximately 500,000 good-paying jobs, restore over 20,000 miles of rivers, enhancing their climate resilience, and secure more than 80 gigawatts of existing renewable hydropower and 23 gigawatts of electricity storage capacity.” (Those numbers represent the nation’s total hydropower capacity.)

That proposal remains a work-in-progress, one that the group continues to rely on and revise to press for federal support. After negotiations on the original proposal with Rep. Annie Kuster of New Hampshire and others, it was revised into the Twenty-First Century Dams Act and introduced to the House in July 2021. The bill, if passed, would allot $21.1 billion in federal funds to “enhance the safety, grid resilience benefits and power generating capacity of America’s dams and provide historic funding to remove dams that are no longer necessary,” according to a press release from the office of Sen. Dianne Feinstein, ’55, the Democrat who introduced the bill in the Senate.

Around the same time, the Uncommon Dialogue on hydropower also delivered a funding proposal to Congress in time to influence negotiations on the Bipartisan Infrastructure Bill. This time, the team worked with politicians including Sen. Rob Portman, a Republican from Ohio and long-time kayaking buddy of Reicher’s from their Dartmouth College years. (The two paddled together after law school on the Yangtze River in China before the building of the world’s largest hydroelectric dam, Three Gorges.)

When President Biden signed the infrastructure bill into law on November 15, 2021, it included $2.4 billion for dams, including roughly $800 million for dam removal, $800 million for dam safety and $800 million for dam retrofitting. “This is a rare example of people getting out of their bubbles and working together to solve problems,” says the Hydropower Association’s Woolf. “It hasn’t been easy, but it rang the cash register faster than anyone would have expected.”

Portman says the Uncommon Dialogue proposal played a key role in influencing the allotment of funds. “The $2.4 billion is a lot of money for dams that generally go ignored,” he says. “My hope is we can continue to work with Uncommon Dialogue in the future.”

“That was a huge success,” says Graber of American Rivers. “We see it as a down payment for what’s really needed.”

And so the work continues. Members meet over Zoom multiple times a week, working hard to get more funding for the three R’s. One of their many projects includes pushing for three-R provisions in the proposed Water Resources Development Act of 2022. Another is advocating for tax credits for those who invest in the three Rs. “All of the three Rs are expensive,” Graber notes. “Tax credits could help out.” And this spring, the group sent a new agreement to Capitol Hill recommending changes to federal dam licensing processes.

Members admit that over the years, they’ve even become friends with former adversaries. They don’t always agree, of course, but the previous animosity has been replaced by a willingness to listen. “What I learned from my conservation work over the years is that each side has the ability to block the other side from getting anything they want done,” says Irvin, the former American Rivers president. “It takes cooperation and dialogue.”

The success of the project has inspired a new Uncommon Dialogue, one that began in February on controversies over where to build future large solar projects, Reicher says.

Steindorf continues to work full time on getting utility companies to increase water flow along the Feather River and beyond, while squeezing in several Uncommon Dialogue meetings a week during his spare hours. Now, thanks to the work of the group, there may be money available from the infrastructure bill to install fish ladders on the North Fork Feather River, he says, and perhaps even to modernize old turbines built 70 years ago with 100-year-old technology. It will be a race to keep up with climate change. Last summer, Oroville Lake’s record low level prevented hydropower generation for the first time since the dam opened in 1968.

He shakes his head at the warm February day.

“California and the West are in the midst of the worst drought in 1,200 years,” he says, scanning the horizon for any sign of snow dusting the Sierra Nevada. Beneath him flowed the river dependent on that snowmelt, at the mercy of the many it sustains.

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WHEN HE CHOSE STANFORD, SANJAY SAVERIMUTTU ASSUMED HE WAS CLOSING THE DOOR ON A CAREER IN BALLET. LIFE DIDN’T GO AS PLANNED.
Rare Turn

BY SAM SCOTT

PHOTOGRAPHY BY SAM ENGLISH
A lifetime in ballet has left dancer Sanjay Saverimuttu with mixed feelings about the Nutcracker. The fan favorite, he points out, fills houses, provides financial lifeblood to ballet companies, and gives dancers a yearly yardstick to measure their growth over many returns to the same roles. But by the end of every holiday season, he'd prefer a trigger warning before anyone subjects him to another “Dance of the Sugar Plum Fairy.” As he puts it, “You don't want to hear Nutcracker music until November.” Familiarity, as they say . . .

This December, though, was hardly like all the others. For one, he was the Nutcracker—the iconic toy soldier who comes alive on Christmas Eve only to find himself in a deadly sword fight with giant rodents. It was Saverimuttu’s first lead role since arriving at the Louisville Ballet as a trainee a decade ago. But perhaps more importantly, he was performing the Christmas classic to real crowds, shaking off a year of virtual pandemic performances. After the fury of dueling with vermin, the role peaks with a moment of beauty in a winter wonderland. It’s just the Nutcracker—transformed into a prince—and the young heroine (Marie in this version, but often called Clara) alone on the stage in a six-minute pas de deux of lung-busting lifts and turns during which the audience should perceive only effortless grace. “By the end of it all, it was just a nice feeling of accomplishment,” says Saverimuttu, ’12, “and, as always, the applause and cheers are very validating.”

Such ovations seemed a long way off at the peak of the pandemic. A dancer can’t so easily bring his work online, lift a partner while maintaining social distancing or keep up his conditioning while trying not to kick the coffee table. For five months in the heart of 2020, as Saverimuttu practiced in a spare room at his house, using PVC pipe as an improvised barre and trying to steer clear of his dogs, lockdown felt like an existential threat to the art form. “I’m scared of looking at myself in a mirror / I’m scared of dancing on marley or in ballet shoes / I’m scared of dancing in a mask / I’m scared I won’t pick up choreography like I used to / I’m scared of jumping,” Saverimuttu wrote in a poem called “I’m Scared of Going Back,” which has received more than 70,000 views on his website. (Marley is one of two floor surfaces, the other being wood, that ballet studios typically use.)

Indeed, as lockdown transitioned into a gradual and uncertain return that included working in separate pods and dancing, masked, in individual imaginary six-foot boxes, many of Saverimuttu’s colleagues did not come back. In the best of times, the exit is never far away for most dancers, who often retire by their 30s, drained by the physical toll or feeling the pressure to figure out a second act. Even before COVID, Saverimuttu was contemplating what his next step looked like—he also choreographs and teaches ballet and is interested in artistic leadership. But in the end, the turmoil renewed his commitment to continue. A pandemic wouldn’t be the thing to call time on his life’s work. “I was resilient enough or just stubborn enough to be like, ‘I’m not letting COVID take me out.’”

A Stanford education can take you many places, but a professional ballet stage is generally not one of them. Several students and alums enjoyed storied ballet careers prior to matriculation; most recently, Beatriz Stix-Brunell, ’25, retired from an 11-year career with the Royal Ballet in London to enroll at Stanford as a 29-year-old freshman. But beginning a career after graduation is rarer. The rigor and culture of ballet is such that most dancers forgo or postpone university to join a company, or they attend colleges with intensive dance programs. Even among male dancers, a scarcer group with a wider path to success, professionals who do neither are uncommon. Stanford offers a minor in dance, though not a major. Saverimuttu studied biology.

Not that he was late to the barre. His parents, seeking escape from civil war in their native Sri Lanka, emigrated while his mother was pregnant, and enrolled at Purdue University, where his uncle was a professor. His uncle had married a ballet dancer who ran her own school, and as a baby, Saverimuttu was passed around backstage while his parents helped with costume changes at productions. But nobody pushed him into dancing, says his aunt, Sandra Peticolas, who continues to run Lafayette Ballet Company in central Indiana. He chose it himself, she says, drawn as much as anything to the storytelling inherent in the art. “He choreographed very fine ballets and stories for his stuffed animals.” When Saverimuttu’s family moved to South Florida, where his parents are both professors, Peticolas helped them find a ballet school for the 7-year-old.

Part of the early appeal, Saverimuttu is quick to admit, was flattery. As a boy in ballet, he received special attention not nearly so available to girls, including scholarships to summer intensives that put him among the art’s rising elite. Growing up, he was often the only boy at his home studio, and even at the intensives, the ratio was at least 2:1. (The nonprofit Dance Data Project says girls generally outnumber boys 20:1.)

But beyond that, he came to love the mental, physical and artistic challenge of chasing an ever-closer, never-quietly-attainable perfection, not just as an individual but as part of the collective. The larger patterns of dance have always blazed brighter in his mind than the starring role.

By the end of high school, he’d been burning his candle hard on both academic and dance ends, intent on keeping all his options open. When Stanford offered him admission, it seemed too great an opportunity to pass up, even if it meant he was likely closing the book on a dance career. “I definitely would not have foreseen me
VERSATILE: Saverimuttu with Tiffany Bovard rehearsing Sleeping Beauty, as the Nutcracker Prince partnering Anna Ford, and choreographing Spring for an event at Louisville’s botanical gardens.
being in a ballet company like this.”

At Stanford, he dabbled in environmental engineering before switching to biology, where he felt alienated from the fierce competition for grades among peers aiming for med school. He was in the uncomfortable new position of being far from the best student. He found surer footing in the student-run Cardinal Ballet and in Stanford’s dance classes. “My release and escape from all that stress and tension was dance,” he says.

The demands of his new dance life didn’t approach the intensity of the old. In high school, he frequently took class seven days a week, often twice a day. At Stanford, it could be less than half that. But he took every class he could, branching out into modern dance with renowned choreographer Robert Moses and others who challenged him to expand his physical vocabulary. “He was just in the studio all the time,” says instructor Diane Frank, who is retiring this spring after three decades of teaching at Stanford. “He was very adventurous in his movement appetites and his willingness to try a lot of different things.”

He was serious about pushing his choreography in new directions, too, says Katherine Disenhof, ’12, who has worked as a contemporary dancer since graduation. As fellow “ballet nerds,” they would trade YouTube videos back and forth, she says, but Saverimuttu always wanted to include other influences. His pieces, she says, were intricate and quick. “He would really push the envelope in terms of what your brain could take in remembering all the counts and the steps and directions and coordinating these really complex groups. There was no skating by and sleeping through it,” she says. Saverimuttu had a bit of drill sergeant in him, she says, but it was leavened with a wry sense of humor. “We called it the ‘Sanjay sass.’”

But Saverimuttu’s most important undergraduate dance experience occurred far from the Farm. His junior year, he studied abroad in Cape Town, South Africa, where he taught for an organization called Dance for All, which provides free ballet education for kids living in segregated townships outside the city. Up until this point, his love for dance had been inwardly focused, he says. Working with children and teens from starkly impoverished backgrounds and seeing the joy dance gave them provided him a larger, more generous perspective, he says. Dance could be healing. “I always have to come back to this moment whenever I feel down about dance because there is such a bigger purpose for it and for arts education in general,” he says. “You can just see what having a passion for something, especially in children, can do, how it can be life-saving.”

It was this experience, he says, that made him decide to give a dance career a shot. Stanford may not have been the obvious path to this end, but without its broadening influence, he says, he may not have become a professional, and very likely would not have lasted as one. “I probably would have burned out.”

His senior year, he auditioned for Bay Area ballets, though, he says, he wasn’t really in shape. After graduating, he was training at his home studio in Boca Raton, Fla., when he crossed paths with Mikelle Bruzina, the ballet mistress at Louisville, who regularly taught summer sessions at the Florida school. Having seen his development, particularly his abilities to grasp choreography and to partner, she encouraged him to try out for Louisville’s trainee program. “Some people just catch your eye,” she says. “He’s somebody who learns
SAVERIMUTTU HAD A BIT OF DRILL SERGEANT IN HIM, BUT IT WAS LEAVENED WITH A WRY SENSE OF HUMOR. ‘WE CALLED IT THE “SANJAY SASS.”’

relevance even if they may need reimagining, he says. More contemporary, experimental and thematically thorny choreography keeps the art relevant and expands its reach beyond its exclusive roots. His own works, performed at the Louisville Ballet and elsewhere, have examined his parents’ immigration tale, the idea of toxic masculinity, gay friendship and the Pulse shooting, which killed 49 people at a queer nightclub in Florida. In Amid Exes and Whys, Saverimuttu choreographed a spare performance that begins with two dancers—one male, one female—on either side of an illuminated frame, each mirroring the other’s exploratory movements. “I wanted to get at the concept of having a queer child looking in the mirror and trying to figure out who they are as a person,” he says. As the piece progresses, the male dancer is joined by a woman and the female dancer by a man, pairings that swap back and forth through the mirror as the dance progresses and the symmetry begins to break down. For Saverimuttu, it's a shattering of the gender binary and a proclamation that you can be who you are.

Ultimately, he’d love to be a full-time choreographer, though that’s an even more difficult nut to crack than becoming a professional dancer. “If I knew the path to get there, I probably would have done it by now,” he says.

Meanwhile, rehearsal beckons. “The socially relevant works can challenge you as a dancer and artist, and just breathe new life into the art form,” he says. And that’s just the thing that can freshen you up for the next Nutcracker.

SAM SCOTT is a senior writer at Stanford. Email him at sscott3@stanford.edu.
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Jon Blum, ‘84 is a selfless mentor to students and fellow alumni, inspiring and unlocking the potential of many Stanford rising stars. He is a key leader for the Office of Undergraduate Admission’s OVAL program, a devoted visionary for BEAM’s Stanford Alumni Mentoring (SAM), a stalwart New York volunteer and a respected former Trustee. Through his tremendous ongoing commitment to the greater university family, Jon has touched countless lives.

Hong Seh Lim, MS ’83, MS ’83, MS ’87, PhD ’87 is an ardent volunteer whose often understated demeanor belies his outsized impact. Over thirty years, he has proven himself a vital link between Stanford and Asia, serving as a key liaison for the Office of Development, and has held leadership roles for the Parents’ Advisory Board, School of Engineering, Athletics, Interdisciplinary Life Sciences, and numerous campaigns. Hong Seh’s devotion to and sincere love for the university are truly unmatched.

Ruthanne Hosterman Mefford, ’77 has been the ultimate banner carrier for the university for four decades, bringing enthusiasm and strategic prowess to every endeavor. She has held nearly every Stanford leadership role in greater Houston, championed her class campaigns and reunions, and proved a singular force on the SAA Board of Directors, where she served as chair. Ruthanne is the embodiment of the energy, inclusivity and vision that are Stanford’s hallmarks.
In Silicon Valley’s early days, David Boggs supplied the hands-on engineering know-how needed to build a key internet interface that let devices in proximity communicate—and led to today’s Wi-Fi.

**David R. Boggs**, MS ’73, PhD ’82, died on February 19 of heart failure at Stanford Hospital, according to his wife, Marcia Bush. She and his older brother, Walter, are his only immediate survivors. He was 71.

Boggs’s name appears alongside those of other Ethernet pioneers, like Vinton Cerf, ’65, and Bob Metcalfe, on a plaque and an exhibit at the Jen-Hsun Huang Engineering Center in Stanford’s Science and Engineering Quad.

Boggs was among the Stanford grad students who worked on futuristic projects at Palo Alto’s Xerox PARC, where academics, scientists and engineers mingled in creative ferment. One day in early 1973, he was in the basement of Building 34 configuring some Nova 800 minicomputers the size of a microwave oven when he offered to help researcher Metcalfe, who was struggling with an oscilloscope and a coaxial cable while seeking to send pulses down the wire.

“Dave had been putting connectors on coaxial cable for years. He did not draw blood,” Metcalfe reminisced. “Boggs and I were inseparable for the next two years.” Together, the Boggs Twins, as some called them, built the first Ethernet.

Over the course of his career, Boggs worked as a researcher at PARC and at Digital Equipment Corp. before founding the Ethernet company LAN Media. Little by little, Ethernet became the primary way to construct networks in office buildings and, later, homes.

During his student days, Boggs joined the Stanford Amateur Radio Club. His experiences as a radio operator helped him envision connections between radio broadcasting technology and Metcalfe’s theoretical work. Ethernet arose from the over-the-air packet radio technology that powered ALOHAnet, a wireless networking system developed at the University of Hawaii with which Boggs and Metcalfe were familiar, according to David Leeson, PhD ’62, an adjunct professor of electrical engineering at Stanford and the club’s current faculty adviser.

As a ham radio operator who has died, Boggs now qualifies for SK or silent key status, according to David Leeson, PhD ’62, an adjunct professor of electrical engineering at Stanford and the club’s current faculty adviser. He enjoyed golf, dining out and traveling to visit his granddaughter. He followed the stock market religiously. He was predeceased by his wife of 45 years, Barbara. Survivors: his daughters, Bonnie Besly and Nancy; and granddaughter.

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**Engineer Helped Build the First Ethernet**
Farewells

Charles Wesley “Wes” Poulsón, ’51 (economics), of Palo Alto, January 10, at 91. He was a member of Phi Gamma Delta and played football and rugby. He earned an MBA from Harvard and then joined the medical director of USC’s student health center. She was the associate medical director at Stanford’s Cowell Medical Center until 1974, when she became the medical director of USC’s student health center. She was predeceased by her husband, Maurice. Survivors: her stepchildren, Nancy Osborne Almquist, ’70, and Richard; and five grandchildren.

James Chapple Soper, ’51 (undergraduate law), JD ’53, of Piedmont, Calif., November 15, at 92. He was a member of Sigma Nu/Beta Chi and ROTC. He served as a lieutenant in the Army. At Fitzgerald Abbott & Beardsley (now Donahue Fitzgerald) in Oakland, he practiced law for 60 years, chairing the firm’s business and corporate transactions and trusts and estates groups. He and his wife enjoyed tennis, traveling and destination bicycle trips. He was predeceased by his wife, Lora “Suzy” (Simon, ’54). Survivors: his children, Claire Faughnan and John Faughnan (and a granddaughter, Marsha Beatrice Watson Kirkpatrick, ’52 (social science/social thought), of Myrtle Beach, S.C., December 26, 2020, at 89. After graduating, she worked as a secretary for Stanford’s economics department and then at the U.S. Embassy in Tehran, Iran, where she met her husband. They traveled to embassies in Paris, Beirut, Cyprus, Warsaw and Vienna. In 1982, they retired to Adirondack Park in upstate New York before moving to Myrtle Beach in 1987. She was predeceased by her husband, Robert. Survivors: her sons, Donald and Douglas; and two sisters.

Natalie Monument Hodgson Hahn, ’53 (English), of Berkeley, October 11, at 90. She was an announcer, sportscaster and music broadcaster for KZSU. After raising her children, she earned a master’s degree in library science and developed such expertise that in later years she went to China to deliver talks on library referencing systems. She was an active volunteer at UC Berkeley and a cat lover, traveler and actress, performing in plays well into her 80s. She was predeceased by her first husband, Walter Hodgson, and her second husband, Erwin Hahn. Survivors: her children, Welles and Elisabeth Hodgson; stepchildren, David, Deborah and Katherine Hahn; three grandchildren; and five great-grandchildren.

Wayne Kenneth Lowell, ’53 (basic medical sciences), MD ’56, of Modesto, Calif., December 19, at 90. He served as the base obstetrician at the U.S. Army base in Ft. Lewis, Wash., before returning to Stanford as a fellow in ear, nose and throat surgery. He was one of the founding physicians at Gould Medical Group in Modesto, where he rose to become president. He enjoyed fly-fishing, playing tennis and piloting a Cessna 180. He was predeceased by his first wife, Nancy (Coleman, ’54). Survivors: his wife, Jean; children, Clift, ’79, Elizabeth Lowell Dixon, ’84, and Kathryn, ’87; stepdaughter, Carolyn Walker, ’84; five grandchildren, including Benjamin Lowell, MA ’11, and Wesley Dixon, ’18; and two stepgrandchildren, including James Shaw, ’16. Joan-Marie Shelley, ’54 (French), MA ’63 (teaching), of San Francisco, November 10, at 88, of heart failure and complications from diabetes. She taught French at Lowell High School in San Francisco, where students loved her genuine and emotional teaching style. She was a staunch champion of labor and a lifelong Democrat, walking the picket lines on teacher strikes numerous times.

With a mastery of chaotic waters and an environmental nonprofit Surfrider to protect the shoreline he loved so much.

He’s mentioned in every book I can find about surfing in Hawaii,” says friend, Olympic water polo player, and longtime Stanford swimming and water polo coach Jim Gaughran, ’54, JD ’58. Cole often attributed his longevity in surfing to his relationships with Gaughran and his other friends and family. He never burned out, he said, because he had a balanced life. He spent many years as a Navy computer systems analyst, and he founded the Oahu chapter of environmental nonprofit Surfrider to protect the

Peter Cole set his schedule by the waves, planning his life around the height of the swells off the coast of Oahu. For 50 years, when the waves were good, he’d paddle out and wait for hours to catch the perfect one.

Cole, ’53, who helped pioneer the sport of big-wave surfing, died February 5. He was 91. He fell in love with the water at 14, when he and his twin brother, Corry, would carry their huge wooden surfboard down to the beach in Santa Monica. But it was at Stanford, where he became the third-fastest middle-distance swimmer in the country, that he developed his affinity for larger waves. More than a decade before surfers discovered the massive waves at Mavericks, off Half Moon Bay, Cole dedicated himself to the swell at Steamer Lane in Santa Cruz.

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After graduation, he moved to Hawaii to be near legendary surf spots like Sunset Beach. Before the 1950s, surfers mastered tricks and turns on small waves—hotdogging, they called it then—but he and his friends were the first to tackle waves that topped 20 feet, and Cole was one of the first people ever to catch a 30-foot wave at Waimea Bay. Unlike nearly every other surfer, Cole never wore a leash to connect his ankle to his board. He saw leashes as one of the worst things to happen to surfing because they removed the consequences of losing a board, enabling poor wave selection and crowding. “He was a real purist in a lot of things,” says his son Douglass. With a mastery of chaotic waters and an edge honed through his achievements in swimming and lifeguarding, Cole won the Makaha International Surf Contest in 1958, putting him at the forefront of the big-wave scene, where he stayed for decades.

“He’s mentioned in every book I can find about surfing in Hawaii,” says friend, Olympic water polo player, and longtime Stanford swimming and water polo coach Jim Gaughran, ’54, JD ’58.

Cole often attributed his longevity in surfing to his relationships with Gaughran and his other friends and family. He never burned out, he said, because he had a balanced life. He spent many years as a Navy computer systems analyst, and he founded the Oahu chapter of environmental nonprofit Surfrider to protect the shoreline he loved so much.

“When he’d surf a really good wave,” says Douglass, “he’d always say, ‘You’re looking in at a beautiful place.’”

Cole was predeceased by his twin brother, Cornelius. In addition to Douglass, he is survived by his wife, Sally; sons Peter and Ka’aina; stepdaughter, Kaulana Fraser; six grandchildren; and brother Schuyler.

—Kali Shiloh
opportunities and chances to engage with Japanese-American culture. She and her second husband enjoyed traveling, dancing and bowling. She was predeceased by her first husband, Shiro Nick Satō; and her second husband, of 35 years, Akira Honda. Survivors: her children and Susan Satō; stepchildren, Alan, Blaine and Vivian Honda; and grandchildren.

Harold Timothy Treacy Jr., '55 (communication), of Dayton, Nev., in 2021, at 89. He contributed to the Stanford Chaparral humor magazine. After joining the Army, he served in Berlin with the 522nd Military Intelligence Battalion. Throughout his career, he pursued interests in geology, archeology, metaphysics, publishing and photography. He founded the Cooti Research Institute, helped organize 40 nonprofit groups and dedicated his life to scientific archives, documenting the work of Wilhelm Reich, Elizabeth Rauscher and the International Tesla Society. He was known for his generosity and brilliant mind. Survivors: his daughters, Selen Sutherland Ayaode and Virginia Treacy Burke; six grandchildren; and three great-grandchildren.

James Dryden Westphal, '59 (economics), MBA '59, of Monterey, Calif., March 30, 2021, at 87 of heart failure. He was a member of Delta Xi Delta and played on the basketball team. He worked in sales and marketing at Crown Zellerbach in San Francisco for more than 30 years, and then worked in residential real estate in Truckee, Calif. As a greeter at his church, he provided each congregant with a program and a personalized “one-liner,” and he was known for his self-effacing humor, unriveting moral compass and generosity of spirit. He was predeceased by his wife of 59 years, Barbara. Survivors: his son, James Charles “Jiggs” Davis Jr., '56 (geology), of Piedmont, Calif., December 24, at 87. He was a member of Theta Xi, contributed to KZSU radio station and served in the Army as an intelligence officer. He was a serial entrepreneur who had a hand in founding and developing more than 30 companies, from consumer goods to biotechnology. He was the 32nd global chairman emeritus of the Young Presidents’ Organization and founder of its P4O Forum. He was predeceased by his first wife, Judith Lee, '57. Survivors: his wife of more than 50 years, Jackie; children, Lora Lee Zaky, Jeff, '82, Suzi Fenn and Mike; and five grandchildren.

Anne Adams Mayhew Helms, '56 (English), of Salinas, Calif., December 16, at 86. She earned a master’s degree in anthropology from San Francisco State. After her first husband died suddenly, she took over the family publishing business, Museum Graphics. After retiring, she traveled and conducted genealogical research (the daughter of photographer Ansel Adams, she self-published four books of family history). She was a nature enthusiast and active in the social justice community. She was predeceased by her first husband, Charles Mayhew, and her second husband, Ken Helms. Survivors: her daughters, Virginia Mayhew, Alison Jaques and Sylvia Desin; stepsons, Jeff, Nathan and Drew Helms; four grandchildren; great-grandchild; and brother, Michael Adams, '55. Michael Harris, '57 (economics), of Los Angeles, December 29, at 86, of cancer. He was a member of the choir. He attended law school at UCLA and later served as a lieutenant in the Air Force Reserve. He practiced civil law with Rogers and Harris, served as a board member of the Los Angeles Youth Network and published three books on life on the Westside of Los Angeles. He was indebted to his brother and Stanley and Steven Rogers for their caring support throughout his adult life. Survivors: his wife Jeanne; former wife, Barbara; children, Lilli Lee and Brooke; three grandchildren; and brother, Godfrey, '59.

Judith Gretchen Scholtz Kays, '57 (art), MA '59 (education), of Palo Alto, September 2, at 86, of cancer. She taught at Cubberley High School in Palo Alto, '57, and stepdaughter Nancy, '71. Survivors: her sons, Dan Adams, MS '92, and Bob Adams, '84, MS '88; stepdaughters Leslie Hunger, Meg Faye, '75, and Elizabeth Rowan-Mitchell, '79, MS '79; grandchildren; stepgrandchildren, including William Rowan, '11, MS '12; and brother, Steven Scholtz, '59. Stewart Weitzman, '57 (political science), of Bend, Ore., December 29, at 86, from colon cancer. He was a member of Phi Gamma Delta and spent two years in the Marine Corps. While pursuing an MBA at Portland State, he founded dental product manufacturer Pacemaker Corporation. He later founded pest control product manufacturer Weitech, where he was joined by his sons and stepsons. He was then an executive leader in the men’s movement and his love of cars, magazine and scanning the classifieds for business opportunities. He was predeceased by his brother Morrel. Survivors: his wife of 61 years, Verle; sons, Marcus and Todd, '85; five grandchildren; and brother Ronald, '52, MA '54.

Stephen Knight Whipple, '57, MS '58 (civil engineering), of Sierra Vista, Ariz., December 14, at 85. He served in the Army and was a civilian employee in the Army Corps of Engineers for 35 years. He worked on the New Hogan Dam, the New Melones Dam and numerous flood control projects, but his longest assignment was supervising the construction of Army and Air Force installation projects in various western states. His favorite pastimes were researching family history and traveling the world with his wife. Survivors: his wife of 55 years, Linda; son, Stephen; and two grandchildren.

John Hampton Lynch III, '58 (geography), of Kentfield, Calif., Oct. 21, at 85. He spent three years in the Peace Corps in what is now Pakistan, where he financed to finish his degree. His banking career took the family to New York City and Brussels before they settled in Marin County. He loved the St. Louis Cardinals, fishing, boating and racing cars, but his greatest joy was spending time with family. He was predeceased by his son Andrew. Survivors: his wife of 59 years, Gay; children Lindsay Lynch Lytle and John IV; and six grandchildren.

John Carrel Weaver Jr., '58 (biological sciences), of Oakland, November 12, at 85. He was a member of Alpha Tau Omega and was on the swim team. After medical school at Northwestern U., he served as a Navy doctor based in Okinawa, Japan. Later, he joined what became the Oakland Medical Group and started the chronic hemodialysis program at Providence Hospital, making him the first physician to provide dialysis services in the East Bay. He studied Spanish to better serve his patients and volunteered his medical skills locally and abroad. He was predeceased by his wife and his first and second wives. Survivors: his children, Jamey Bing Taylor and Dana; four grandchildren; and sister, Diana Bing Davis McLaughlin, '62.

Michael Earles McGoldrick, '59 (history), MA '62 (economics), of Evergreen, Colo., December 12, at 84. A Seattle native, he became an economist and investment manager who served on the faculty at the U. of Oregon and the American U. in Bulgaria. He also managed funds at Janus Investments. He loved fly-fishing, music, visual art and opera. Survivors: his partner of 23 years, Terry Galpin-Plattner.

1960s

Peter Caine Daw, '60 (philosophy), MD '64, of Madera, Calif., May 25, at 82, of a stroke. He was on the coaching staff at Stanford and served as a Navy doctor based in Okinawa, Japan. Later, he served as an investment counselor at Willis and Christy (later Scudder, Stevens & Clark). He earned an MBA from USC, he worked at Jet Propulsion Laboratory for two years during the Vietnam War. He had a pet alligator as a child. After joining UCSF, he developed the world’s first treatment for myasthenia gravis, a debilitating neurological disease. He later founded a biotech company that specialized in DNA sequencing. He was a devoted father who coached, quizzed and swam with his daughters often. Survivors: his wife, Carol; children, Branton Kenton-Dau, Birgitt, '96, Kirstin Lenane and Mairike; seven grandchildren; and sister.

James Franklin Fries, '60 (philosophy), of Boulder, Colo., November 7, at 83, of a stroke. He was a member of Phi Sigma Kappa and the gymnastics team. He was a pioneering professor of immunology and rheumatology at Stanford Medical School who made significant contributions to the field of public health and wrote numerous bestselling books on aging. With his wife, he established the Fries Foundation to award prizes for achievement in public health and health education, '89, of demen- tia. He served in the Army for two years. After earning an MBA from USC, he worked at Jet Propulsion Laboratory for 42 years, becoming manager of industrial computing. He was an avid skier and an
He moved to Santa Fe in 1966 and was fortunate to have many adventures and opportunities to pursue his passions for journalism, history, skeet shooting, fly-fishing, golf, and raising llamas and cattle. He founded and coached the state's first lacrosse program at Santa Fe Preparatory School. Survivors: his wife, Kirsten; four grandchildren; and brother, Russ.

**James Roger Hamilton**, '65 (statistics), of Vancouver, Wash., October 22, at 78, of brain cancer. He was a member of the Phi Sigma Kappa. His career began with computer programming and political campaign management. After graduating from the U. of Oregon Law School, he pioneered computerized legal research and received a computers and law fellowship from Stanford before practicing corporate law. He developed a passion for soccer in his 30s and served for 32 years as president of the Oregon Adult Soccer Association. Survivors: his children, James, Michael and Kirsten; four grandchildren; and brother, Russ.

**Gary Kersey Hart**, '65 (history), of Sacramento, Calif., January 27, at 78, of pancreatic cancer. He was on the football team. He earned a graduate degree from Harvard and taught government and edited policy courses at several colleges. He was a member of the California State Legislature for 20 years, leading many education, environment and political reform measures. A productive state lawmaker, he authored bills to advance education, the environment and women's rights. In 1998, he was appointed secretary of education by California governor Gray Davis, '64, his Stanford roommate; Survivors: his wife of 52 years, Cary; daughters, Elissa Hart Mahan, Laura Murray and Katherine; and six grandchildren.

**Joseph Sebastian Englert Jr.**, '66 (political science), of Tiburon, Calif., November 13, at 77, of complications from a stroke. He was a member of Zeta Psi and played on the football team. After earning a law degree at UCLA and an MBA at UC Berkeley, he spent 25 years as in-house counsel with PG&E in San Francisco. He retired at 50 and moved to Tiburon with decades to enjoy traveling, studying, hiking, and time spent with family and friends. His many collections included rugs, Chinaware, and lead soldiers and antique military firearms. Survivors: his wife of 53 years, Vicki; sons Joseph, Peter and David; three grandchildren; and four siblings.

**James Richard Drake**, '67 (communication), of Freeland, Wash., January 10, at 77, of cancer. At Stanford, he was a member of the early scatter band, which became the LSJUMB. Following directorial work at CBS in New York and Tandem Productions in Los Angeles, he earned a Directors Guild of America nomination for his work on *Mary Hartman, Mary Hartman*, and his first Emmy nomination for *Buffalo Bill*. His credits span hundreds of television shows, as well as TV and theatrical movies, including *The Golden Girls, Night Court* and *Newhart*. Survivors: his wife, Brigit; first wife, Laura; children, Christina, '98, and Kevin; stepdaughter, Christel Layton; granddaughter; stepgranddaughter; and brother.

**Jeffrey Terry Edwards**, '68 (biological sciences), of Austin, Minn., July 15, of cancer. He was a member of Delta Tau Delta. After a bout with mononucleosis interrupted his academic plans, he traveled throughout the U.S. and Europe for many years, living as a nomad in forests and abandoned buildings while performing odd jobs. He was a talented tile setter, cabinet maker, a quilter extraordinaire, a die-hard Joni Mitchell fan and a lover of old clocks and an intrepid genealogist. Survivors: his daughter, Evelyn; and siblings, Jon, Margaret and Liz.

**Frances Elizabeth Draper**, '71 (industrial engineering), of Palo Alto, Calif., December 4, at 56. He participated in the Craftsman-era Pagah Village in Los Angeles, which won the Governor’s Historic Preservation and L.A. Conservancy awards. She worked for many years on neighborhood improvement projects. She was also an enthusiastic political activist, a salsa dancer, and a quilter extraordinaire, a die-hard Joni Mitchell fan and a lover of old clocks and an intrepid genealogist. Survivors: her daughter, Evelyn; and siblings, Jon, Margaret and Liz.

**Bruce Jay Rubin**, '81 (political science), of Boulder, Colo., July 6, at 61. He was on the wrestling team. He was the COO for Westchester Capital Management and a competitive athlete who ran several marathons. He enjoyed kayaking, rock climbing and ice climbing, and was passionate about many causes, especially human rights. Survivors: his wife, Lisa Beck; children Karl Kumli and Anneka Kumli-Dole, '13; stepson, Antone Minard; granddaughter; and two brothers.

**Linda Lorraine Nash**, '84 (civil engineering and history), of Seattle, October 17, at 59, of lymphoma. She earned an MS in energy and resources from UC Berkeley and a PhD in history from the U. of Washington. As a professor at UW, she was director of the Center for the Study of the Pacific Northwest and co-founded the Cascadia Environmental History Collaborative. She loved teaching, and her friends relished the happy hours where she helped them make sense of the latest ballot initiatives and current events. Survivors: her husband, Michael Minard; children Karl Kumli and Anneka Kumli-Dole, '13; stepson, Antone Minard; granddaughter; and two siblings.

**Sarah M. Hays**, '84 (anthropology), of Los Angeles, October 23, 2020, at 66, following a stroke. She trained as an architect, specializing in affordable housing. Her projects included the 2007 rehabilitation of the Craftsman-era Pagah Village in Los Angeles, which won the Governor’s Historic Preservation and L.A. Conservancy awards. She worked for many years on neighborhood improvement projects. She was also an enthusiastic political activist, a salsa dancer, and a quilter extraordinaire, a die-hard Joni Mitchell fan and a lover of old clocks and an intrepid genealogist. Survivors: her daughter, Evelyn; and siblings, Jon, Margaret and Liz.
member of the Catholic church and volunteer in his local community. Survivors: his siblings, Karen, Judy and Jay.

2000s

Michael Evan Hughes, ‘02, MS ’02 (biological sciences), of Saint Louis, Mo., May 4, at 41, of glioblastoma. He studied at the Hopkins Marine Station and had a deep love for Stanford and the surrounding foothills. After earning a PhD in neuroscience at Harvard Medical School, he did postdoctoral training at Penn and Yale, where he made seminal contributions to circadian transcriptomics. He joined the faculty at the U. of St. Louis-Missouri before becoming an assistant professor at Washington U. School of Medicine. His favorite activity was dotting on his daughters. Survivors: his wife, Jing, ’02, MS ’02; and daughters, Sophie, Quinn and Carolyn.

Stacy Lynn Pepper, ’06 (political science), JD ‘11, of Denver, July 26, at 37, in a hit-and-run accident. As an undergrad, she studied at Stanford in Washington and Stanford in Florence. In law school, she was a student attorney in the Three Strikes Project Clinic and won the Best Oralist award. She moved to Chicago for a clerkship and then joined Kirkland & Ellis as a litigator, eventually being named a partner at the firm. She was incomparably vibrant and endlessly curious, forged lifelong friendships, and guided her family on trips to Sri Lanka, Israel, Japan and beyond. Survivors: her parents, Cindy and Neil; grandmother; and sisters, Marci, ’08, and Stephanie.

2010s

Thomas Stanley Scher, ‘11 (political science), of Menlo Park, December 3, at 33. He moved to the Philippines after graduation to become senior director of marketing and visual content for WikiHow. Returning to the Bay Area, he joined Beyond Type 1, where he eventually became CEO and tirelessly advanced the nonprofit’s mission to improve the lives of those affected by diabetes. He served as mock trial head coach at Stanford for the past five years, bringing individuals and the program 83 awards and making him the most awarded coach in Stanford’s history. He was a devoted parent to his dog, Kermit. Survivors: his sisters, Carrie Adkins and Laura Romero; and best friend, Logan Levant.

BUSINESS

Robert Hanna Waterman, Jr., MBA ’61, of Hillsborough, Calif., January 2, at 85. He served in the Army Corps of Engineers. He worked at the U. of Denver Research Institute before embarking on a 21-year career at McKinsey & Company. Based in the firm’s San Francisco office, he worked on projects around the globe and moved his family to Japan and Australia. He also published numerous business books and served as a board member or senior adviser for many organizations. He was passionate about skiing, loved math and science, and was an accomplished painter. Survivors: his wife, Kendall; children, Kendall Crosby, ’87, and Robb, ’85; MBA ’95; four grandchildren; and sister.

Gary Smith “Knute” Westergren, MBA ’62, of San Jose, December 6, at 85. Before business school, he played professional baseball for the Red Sox farm team. After graduation, he worked for the Pillsbury company in Minneapolis and then moved to Europe with his family to pursue a career in international business and marketing, with frequent travel to Africa and the Middle East. He eventually retired to California, but continued teaching international marketing to engineering students at Santa Clara U. A dedicated father, he was unconditionally supportive of his children’s interests and dreams. Survivors: his wife, Liz; and children, Luba, Artur, Gabrielle, ’86, Timothy, ’88, and Andrew, ’90.

George Henry Von Gehr Jr., JD ’66, MBA ’68, of Friday Harbor, Wash., November 16, at 80, of heart failure. After working for several management consulting firms, he founded Alliant Partners, a boutique investment banking firm in Palo Alto that worked with high-tech companies in Silicon Valley and internationally. He was a devoted father who was always available to talk through issues and prioritized time with his kids despite his demanding work schedule. He loved cars, boats, opera and movie nights. Survivors: his wife, Barbara (Koshes, MBA ’77); children, Karla and David; stepsons, Adam and Andrew; two grandchildren; and siblings, Lois and Greg, MBA ’79.

Raleigh William Klein, MBA ’73, of Davis, Calif., in 2021, at 72, of pancreatic cancer. After five years as a CPA, he entered the equipment leasing industry, working for Bank of America Leasing & Capital Group. In his banking career, he negotiated complex financial transactions involving railcars, airplanes, satellites and power plants. After retiring, he provided free consulting services to local nonprofits through the Stanford Business School Alumni Consulting Team program. He and his wife took an annual trip to see the country through various major and minor league ballparks. Survivors: his wife of 39 years, Nan; son, Jim; and sister.

Mary Elizabeth Durham Keeler, MBA ’79, of Las Vegas, December 15, at 73. After graduating, she moved to New York to work for IBM and then Pepsi. In 1984, she was on the team that managed the Los Angeles Summer Olympics. She later moved to Colorado, where she became a talented trout fly fisherwoman, and then to Las Vegas, where she进一步ed her passion for playing in bridge tournaments. She started a home business as a tax advisor. As a member of the Red Hat Society, she frequented a local theater group and was active with the Nevada SPCA, fostering many elderly cats.

EARTH, ENERGY AND ENVIRONMENTAL SCIENCES

Arthur Grantz, MS ’61, PhD ’66 (geology) of Palo Alto, November 18, at 94. During a 46-year career with the U.S. Geological Survey, he made significant contributions to researching both onshore and offshore Alaskan and Arctic geology. He was recognized for his scientific leadership in the study of environmental geology, earthquake hazard reduction and the geology of Alaska. He loved hiking, kayaking and gardening, and explored wildlife with his family in Africa, the Galapagos and Glacier Bay. He was predeceased by his former wife, Willene. Survivors: his wife, Charla; children, David, Eric, Carol Bohan and Sally Jones; two stepchildren; six grandchildren; three great-grandchildren; and sister.

John Lynn Redmond, MS ’62 (geology), of Denver, June 11, at 90. Born in Canada, he had a zeal for the outdoors and a perpetual curiosity about natural sciences. After trying his hand at ranching in Alberta, he studied geology and math at the U. of Tulsa, Stanford and the U. of Oregon. After earning a PhD, he worked in oil exploration, a pursuit that took him all over the world and led to adventures that fueled the many stories he warmly shared. Survivors: his wife, Sherry; children, Mike and Marc; and brother, Bill.

Human Rights Advocate

Championed People on the Margins

Pulled into the world with such force that her left arm became partially paralyzed, Lise MacPhee began her short, purposeful life with a birth injury, perhaps most defining not for what it took but for what it gave her: compassion. Her profound empathy for others fueled an uncompromising commitment to human rights. By the time she graduated from Stanford, MacPhee, ’19, had already worked on Syrian refugee asylum cases, documented human rights abuses in Bangladesh, and managed violence and homicide data that guided international policy. She was helping transform crime documentation in Latin America before she died of an arteriovenous malformation brain bleed on May 2, 2021. She was 23.

Throughout her youth, “Lise was fiercely determined to do everything that she wanted to do,” says her mother, Pamela (Blom, ’86). Growing up, MacPhee played basketball, softball and soccer competitively. At Stanford, when she was dominating the Spikeball scene, she was studying international relations and practicing her Spanish in preparation to study abroad in Santiago, Chile.

After graduating, she became a program associate at the Pan American Development Foundation, a nongovernmental organization created to lift up disadvantaged groups in Latin America and the Caribbean. Her most notable project involved seeking accountability for serious human rights violations and acts of corruption. Alongside program manager Chloe Zoeller, MacPhee trained civil society organizations across 13 Latin American countries to collect and compile evidence of, for example, torture and extrajudicial killings, and present them as cases to foreign governments, with the goal of bringing criminal perpetrators to justice.

“Three cases that Lise worked on have already seen sanctions from the U.S. government, so there’s very clear evidence of her lasting impact,” says Zoeller.

And yet MacPhee was consistently in search of more. “It’s easy for someone on the outside to listen to our job and think, ‘Wow, amazing, heroic,’” says Zoeller. “And that’s true; it’s cool. But Lise—even in that job—was like, ‘This is not enough for me; this is not holding people accountable enough.’”

MacPhee is survived by her parents, Pamela and Robert; grandparents John, ’55, and Brenda Blom; and siblings, Duncan and Kellie.

—Kali Shiloh

S T A N F O R D 61
Farewells

EDUCATION
Louis A. Schmidt, Gr. ’51, of Los Gatos, Calif., December 1, at 96. He joined the Navy and served in the Pacific throughout World War II. After dental school at the U. of the Pacific, he opened a private practice in San Geronimo, Calif., and practiced dentistry until well into his 80s. He loved to ski, a passion he passed along to both of his children, travel and play tennis. He was also an accomplished ice skater and pilot. Survivors: his longtime partner, Lenore; two children; three grandchildren; and three great-grandchildren.

Margaret JoAnne Williams Doole, MA ’61, of Germantown, Tenn., November 20, at 86. She was an alumna of Wellesley College, the U. of Colorado, Stanford and Rutgers, and her field of study was art history. She worked as a middle and high school teacher in Nebraska, Montana and California. She loved to travel and led the family on numerous adventures, especially throughout Europe during three years overseas. Survivors: her husband of 60 years, Bill, MS ’61; children, Bruce and Mary; three grandchildren; and sister.

George Burton “Burt” Norrell, MA ’62, of Palo Alto, December 8, at 89. He was a teacher, principal and school administrator in Menlo Park, Portola Valley, Berkeley and Daly City schools. He always made education a priority, valuing the efforts of teachers, working to facilitate challenging school programs, and communicating with students and their parents. Survivors: his wife, Maria; son, Steven, MBA ’01; and granddaughter.

ENGINEERING
Robert Tolman Avery, MS ’48 (mechanical engineering), of Saratoga, Calif., December 29, at 95. He was a member of Delta Tau Delta. Early in his career, he designed scientific equipment for the UC Radiation Laboratory (what became Lawrence Berkeley National Laboratory) and helped develop color television. At Varian Associates, he was one of the principal engineers working on the first commercial medical linear accelerator. He received numerous patents, designed cyclotrons and earned his doctor of mechanical engineering at UC Berkeley mid-career. He and his wife enjoyed golf, dominoes and traveling around the United States in their RV. Survivors: his wife of 73 years, Beverly; and daughter, Leslie Avery Ward.

George A. Caryotakis, MS ’52, PhD ’55 (electrical engineering), of El Dorado Hills, Calif., November 22, at 92, of renal failure. Originally from Athens, he enjoyed a career in the Bay Area that spanned over 45 years. He was president of the electron device group at Varian Associates and later served as liaison for the company’s European operations out of Zug, Switzerland. At Stanford Linear Accelerator Center, he was appointed head of the kilatron microwave department and helped produce klystrons to power the next generation of particle colliders. Survivors: his wife Lisa; children, Christine Steele, Alexandra, Eleni, Peter ’85, MA ’88, and Paul; eight grandchildren, including Nik; ’22; and four great-grandchildren.

Andrew J. “Nick” Nichols III, MS ’62, PhD ’65 (electrical engineering), of San Francisco, December 30, at 86, of mesothelioma. He was president of Probitas Inc., having worked as a technology expert and an engineer at Millennium Systems, Intel Corp., American Microsystems, Novar Corp. and Lockheed Martin & Space Co. He held several patents and advised judges in several high-stakes technology court cases, including Applied Materials v. MultiMechs and the Napster case that helped shape the modern music-streaming industry. Survivors: his wife, Linda McPharlin; daughter, Michéle Taylor; stepson, Sean McPharlin; two grandchildren; stepgrandson; and sister.

HumaniTIES AND ScIENCEs
Gaylon Loray Caldwell, PhD ’52 (political science), of Fairfield, Calif., November 26, at 101. He served in the Air Force during World War II and then earned a master’s degree at the U. of Nebraska, Omaha. He taught at Brigham Young U. He served as cultural attaché for the U.S. Information Agency in Guatemala, Peru and Mexico, and was dean of Elbert Covell College at the U. of the Pacific. In 1998, he moved to Paradise Valley Estates in Fairfield, a community of retired military officers. Survivors: his children, Thomas, Camden, Melissa Carter and Kim Estlin; 10 grandchildren; and 10 great-grandchildren.

Jon Meyer Ericson, MA ’53, PhD ’61 (speech & drama), of Pacific Grove, Calif., January 19, 2021, at 92. He enlisted in the Navy in 1946 as a medical corpsman. He was an active debater and served as a debate coach while a member of the Stanford faculty from 1959-1964. In 1965, he published The Debater’s Guide, a resource that remains popular among competitive debaters and in university speech courses. As founding dean of the School of Communicative Arts and Humanities at California Polytechnic State U., he pioneered the London Study Program, which became the largest study-abroad program in the country. He was predeceased by his son Jon. Survivors: his wife, Amy; and children Beth, Ingrid and Joel.

Roy Clifton “Cliff” Jenkins, MS ’64 (chemistry), of Sunnyvale, Calif., September 10, at 83, of dementia and gastric cancer. He worked on behalf of the San Mateo County Office of Education, helping adults earn their GED at a Daly City learning center and at the main jail in Redwood City. He also taught courses to help people pass graduate school entrance exams and teacher credential tests. He loved his land in the Santa Cruz Mountains, where dancers and families gathered semiannually for folk dance weekends. He was predeceased by his grandson; and brother, Donald. He practiced antitrust law before becoming a patent litigator and chair of the firm’s intellectual property group. He was a voracious reader, an adventurous traveler and a passionate cook who hosted gatherings with gracious hospitality, great food and a touch of whimsy. He was predeceased by his brother, John. Survivors: his wife of 38 years, Nancy; daughter, Maggie; and sister, Catherine, MS ’85.

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Hat’s Off
I’d lie down in traffic for my Cardinal cap.
Or would I?

WE HAD ONLY WANTED to grab a few beers downtown. I began to build speed as I cycled ahead of two friends into the afternoon breeze. The wind picked up, and I felt my cap—my new favorite Stanford hat—start to fly off. In my panicked grab to save it, I lost control of the handlebar. It twisted and I hurtled toward the asphalt, landing on top of my once-reliable bike.

I’ve stayed a loyal Stanford fan since my undergraduate days, gloating in the remarkable success of our teams over the years. I’ve been a Buck/Cardinal Club member for decades and the proud owner of various pieces of Stanford-insignia clothing, hats included.

And every year, I’ve driven from San Diego to campus to spend a football weekend renewing my connection to all things Stanford. Tailgating with classmates in the Chuck Taylor Grove, watching a football game, and riding that same old bike all around the Farm. I’ve marveled at the growth of the place and stopped in familiar places, letting nostalgia wash over me.

A few years back, at one of those games, I realized that my Stanford hat had simply worn out. I rode up to the Stanford Bookstore to buy a new one but found most of the current styles garish or ill-fitting. Finally, one caught my eye. Although brand new, the baseball cap appeared to have been in the sun for years, the Cardinal fabric faded almost to pink. The Stanford logo, with the tree in the middle, was small and discreet. It was perfect—and it fit.

The day of the crash, I had rejected my bike helmet, with its broken visor, in favor of that Stanford hat. We were planning to ride over the same local streets that I had ridden for 40 years, so I didn’t think a helmet was necessary. Big mistake. Though I was lucky to avoid a head injury, when I collapsed onto the bike and pavement, the brake lever gashed my calf. The force of the blow left me breathless. I managed to crawl to the curb, but I knew I had really hurt myself. My buddies rode up, asked whether I was OK, then rescued my bike and hat, which had blown into the traffic lane.

Dazed and in a bit of shock, I insisted that we continue. My friend straightened the now-wobbly bike into rideable form, and we rode on to get those beers. I could go to urgent care later.

After three months and multiple doctor visits, the leg wound finally closed. But my shoulder, which took the brunt of the fall, continued to give me problems. The surgeon showed me the MRI and explained that the rotator cuff was torn so severely that normal procedures wouldn’t work. He would attempt to repair it using donated skin from a cadaver.

I was in a sling for months. Looking back, should I have just let the hat go? Was I like Othello, who “loved not wisely, but too well”? Nah. I’ll be fine—as long as that cadaver wasn’t a USC or Cal guy.

Wayne Raffesberger, ’73, is a writer in San Diego who regularly competes in the Hemingway Look-Alike Contest in Key West, Fla. Email him at stanford.magazine@stanford.edu.
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