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Alia Crum’s psychology experiments have demonstrated the power of the mind to mitigate the effects of stress, boost the benefits of exercise, and enhance the efficacy of medical treatments. Now she’s trying to discern: Where are the limits of the mind’s influence over the body?

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Of the nine astronauts who could become the first woman on the moon, three are Stanford alumnae. Microbiologist Kate Rubins, PhD ’06, Navy pilot Nicole Aunapu Mann, MS ’01, and geologist Jessica Watkins, ‘10, talk about what it’s like prepping humankind for another lunar visit—and, one day, a mission to Mars.

44 The Botez Gambit
For Alexandra Botez, ’17, chess was a family tradition passed through generations. But as she became one of the best female youth players in the country, she eschewed the call to play professionally. Today, as a chess streamer, she’s transforming the game for a new era of players and fans.
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Introducing Coterie Cathedral Hill, a first-of-its-kind luxury residence that sets a new standard in senior living design and care.

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I am very proud of Stanford’s success in all sports, especially its high graduation rates. The recent changes, which allow unlimited transfers, threaten that model.

Whatever decisions Stanford makes regarding athletic participation, especially when it comes to transfers and compensation for athletes, I hope that it maintains the highest academic standards and emphasizes the student-athlete concept.

Tony White, ’58
Santa Rosa, California

When the head of the “amateur” NCAA makes about $3 million per year, any claim of adherence to principles other than making money is implausible. The article also makes assertions about the wonders of a college education for the students’ futures, ignoring the at least anecdotal evidence of numerous student-athletes admitted to colleges with little regard for their academic abilities, allowed to take trivial coursework, and abandoned once their NCAA career is completed. It seems obvious to any observer that the major sports at major colleges constitute a business based on the labor of the players and that those players should be compensated for that labor. If you don’t think that’s true, you need to show evidence for your position.

Daniel Dobkin, MS ’79, PhD ’85
Sunnyvale, California

I remain very proud of Stanford’s record supporting student-athletes. One element that should be in the discussion is that less than 2 percent of college athletes make it to professional careers in sports. So as a “minor league” for professional sports, collegiate athletics has a record that suggests we all should focus more on the student side, as Stanford has done. Like many, I cannot imagine a world in which student-athletes become even more privileged than they already are. Perhaps, following the music, art, and drama examples, local organizations should form semipro sports leagues in which students could play for wages.

Thanks for a lovely summary of the chaos.

James G.S. Clawson, ’69
Charlottesville, Virginia

I’m curious how NBA and NFL eligibility rules play into the amateur/professional quandary. I don’t doubt that time in college is generally a good investment in the athletic skills and physical development a professional athlete will eventually need (to say nothing of what it contributes to emotional and intellectual development), but whether to make that investment should be a judgment made by the athlete and the professional team.

Name, image, and likeness (NIL) have turned the SEC and the Big Ten into professional leagues. You could take some of the wind out of that sail by removing the requirements that prodigies have to wait a
year (NBA) or three years (NFL) after high school to enter the draft. If they’re pros, they’re pros. I think the NCAA has hoodwinked the NFL and the NBA, and it is helping destroy major college football and basketball for all but a handful of schools.

Mark Soane, MBA ’86
Denver, Colorado

I graduated from Yale in 1958 but moved to San Francisco in 1962 and have been a Stanford sports fan since. I still respect the Ivy League as a model.

Maisel explained and described all angles fairly, leaving the reader informed and worried. I believe NIL will go crazy and blow up from misuse. The NCAA will require total reorganization, and college sports will undergo major changes. I hope they are positive changes.

Christopher Smith, MBA ’66
Bend, Oregon

In 1975, as a skinny 5-foot-11-inch senior lacking credentials in any sport, I walked on to Stanford men’s crew—back then, a club team that received (we were told) $100 per year in support from the university. Over the rigorous course of that year, I gained 15 pounds of muscle and one of the defining experiences of my life. Some 47 years on, when opening the occasional plea from Stanford Athletics for donations, I still am surprised—and gratified—to read the salutation “Dear Stanford Athlete.” As far as it was possible for me to have any coherent thoughts during the frenzied agony of an eight-minute boat race, I remember a distinct awareness that I would be letting down my school and my team if I were to give less than all I was capable of. I am wondering now how student-athletes at any college in the future will enjoy such an experience as I had—walking on to a team and consciously playing for the honor of my school—when they are merely recruited, and retained, as paid performers?

Kent Edei, ’76
Delran, New Jersey

As a former Division III student-athlete (Lawrence College in Wisconsin), I shake my head at the extent to which various Division I universities are pushing the envelope to capitalize on income from TV rights under the guise of finding a way to fund the minor sports. That, combined with the transfer portal opportunity, which makes a mockery of a transfer student’s loyalty to a particular school for a final year to showcase one’s talents before trying to turn pro, has made the entire scene rather off-putting. But so long as some Division I public universities are convinced that having a top-ranked football program enhances student recruitment among out-of-state students who pay the full ride, I doubt many Division I college presidents are going to go so far as to advocate for an Ivy League model or to go as far as University of Chicago president Robert Maynard Hutchins did when he pulled his university out of football entirely in the 1930s. I retain affection for the Division III model to this day, which represents the proper balance between academics and sports.

David L. Mitchell
Former director of medical development, Stanford Medicine
San Francisco, California

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The United States is the only country that has this system of universities raising money through sports and supporting students to help in that process. Everywhere else, sport at universities is considered intramural, with participants enjoying the competition and with only a few friends and family watching. Sporting facilities are provided by the universities, but if travel is necessary, students pay their own way.

The U.S. system uses profits from the moneymaking sports to support other, less popular sports, which provide possible athletes for the U.S. Olympic team. This is quite different from many countries, where outside private clubs funded by entrance fees cater to this need by providing facilities, coaches, training, and intraclub competitions. It seems to work quite well at providing competitive athletes for the Olympic teams. I realize this is not the case in some countries where the government gets involved with helping their athletes attain competitive status.

I often wonder what would happen if Stanford opted out of this sporting rat race. Would alumni support dry up? What would be the gains and losses of such a policy?

Pierre Mouset-Jones, MS ’67
Reno, Nevada

Comprehensive, insightful, and realistic. Loved the humor and subtle sarcasm in the article also. How uninformed, naive, unaware, etc., I have been regarding all of this. Thanks for educating me.

Richard Swan, ’67
Irvine, California

while, someone told me point-blank that Parisians do not talk to strangers. So now I pick someone out in the crowd with a U.S. university sweatshirt and usually have better luck.

Don Wilson, MS ’84
Paris, France

Tell It to the Judge
For our September issue, journalist Pete Williams, ’74, sat down with retiring Supreme Court Justice Stephen Breyer, ’59.

I enjoyed the interview with Justice Breyer and the insight it gave on the man and the way decisions are made by the Supreme Court. I was somewhat dismayed by the writer’s repeated attempts to get Breyer to say that the Court has changed and now bases its decisions on politics. A more accurate statement would have been, “There’s a general feeling among people who share my point of view that the Court has become more political.” Breyer pointed out the obvious, that all Supreme Court justices are nominated and confirmed by politicians, who prefer judges whose judicial approach tends to “line up with the political results they want.” Ever since I can remember, the Supreme Court has been accused of political bias. Current claims to that effect are nothing new.

Gary Holzhausen, MS ’74, PhD ’78
Salinas, California

Justice Breyer unconvincingly dodged questions of whether the Court was newly politicized. In fairness, the institution—from Marbury to Dred Scott to Dobbs—has long been a bastion of political reactionaries, so the Court’s crisis is indeed not novel. Still, Breyer’s fondness for the institution as he wishes it were ought not divert readers from its grim reality. Three of the Court’s members were appointed by an insurrectionist president, each under conditions of questionable propriety. And the whole of its Republican majority has now shown itself willing to strip basic rights from Americans, including the vital right to abortion in a nakedly self-serving ruling. The question for the public is whether they will vindicate Breyer’s faith in active liberty by challenging the legitimacy and power of the Court he loved in order to protect the nation he served.

Craig Segall, JD ’07
Oakland, California
Major Moments
Our September issue included an essay on the purpose of a liberal education by Dan Edelstein, a professor of French who oversees Stanford’s new first-year requirement, COLLEGE.

One of the things I enjoyed most about Stanford was that I did not have to declare a major until my junior year, when I happily settled on sociology. And my older sister clued me in that I could sign up for more than a full load of classes at the beginning of each quarter, check out the profs, collect syllabi, and then drop the ones that didn’t appeal to me after the first week or two. This freedom to explore widely varied interests was a real gift that I hope undergrads can still enjoy.

Tom Goodhue, ’71
New York, New York

I am not sure I understand your argument that the liberal arts are primarily for the support of leisure or even the hypothesis that there is a difference between vocation and leisure. You present a good case for this argument; however, from my perspective, it does not seem right. I did not earn my degrees in engineering to become an engineer. I was born an engineer and earned these degrees in order to meet the minimum requirements to pursue engineering as a vocation. I hunger for knowledge and study both engineering and philosophy, which underlies all subjects, both on and off the job and well into retirement. In short, there is no difference for me in terms of pleasure between my job as an engineer and leisure—they are literally the same thing.

Joe Iaquinto, MS ’71
Leesburg, Virginia

Edelstein’s article espousing the virtues of a liberal education at Stanford omits one key reason why I took almost a dozen introductory humanities classes: The teachers for these classes were extraordinarily captivating. I probably would have sampled even more disciplines if Stanford hadn’t had that pesky “you have to pick a major” requirement.

Daniel Broderick, ’74
Pasadena, California

What if the purpose of a liberal education is to foster resilience, options, engagement in life, a belief that problems can be addressed (sometimes solved), and courage?

Ruth Kittel, ’63
Paradise and Chico, California

The Art of Sustainability
A July feature spotlighted plans for the new Stanford Doerr School of Sustainability.

I’m happy and heartened to read about plans for the new Stanford Doerr School of Sustainability, particularly its (necessarily) interdisciplinary approach. As an artist-cartographer and landscape architect with an interest in environmental aesthetics and perception, I believe this breadth would be further enriched by a humanities perspective. While I would love to see that take the form of its own department, I hope that the new school will at least cross-list environment-related courses in departments such as history, philosophy, and art and art history—and encourage those departments to expand such offerings.

Darren Sears, ’00
San Francisco, California
Heads Will Roll
And when we’re writing them, so will we.

SHOULD IT READ “I Think, I Can” or “I Think, Therefore I Can?” (Were we feeling more The Little Engine That Could or more Descartes?)

It was tempting to pay homage to a philosopher. This is an institution of higher learning, after all. But for this issue’s cover headline, we settled on the allusion to a children’s book, because the mindset of its valiant little locomotive better encapsulates the work of associate professor of psychology Alia Crum. We added a comma to subtly shift the meaning. (Punctuation saves lives, as the joke goes; it can also save headlines.)

Those were just two of the 60 headlines we brainstormed for the cover. For the story itself, which describes Crum’s research on locomotive better mindset of its valiant little children’s book, because the obvious: It’s hard to beat “Among the Stars” for a story about the three alumnae on NASA’s Artemis team, one of whom might become the first woman to set foot on the moon (page 38).

As soon as we make our selection, we cheer the staffer who first blurted it out. Over time, everyone gets celebrated. In this issue, props go to Tracie White (“I Think, I Can”), Sam Scott (“Better Believe It”), Jennifer Worrell (“Among the Stars” and “Stanford IRL,” a catch-up with the seven members of the Class of ’24 we’ve been following, page 22), and Jill Patton, ’03, MA ’04, (“Strength in Numbers,” about using data science for social change, page 26, and “The Botez Gambit,” a profile of a celebrity chess player, page 44).

You might ask why we spend upwards of 15 minutes, as a group, crafting a single headline. It’s not because we love what we do or enjoy spending time together, although those things are true. Packaging stories with just the right photography, illustration, headlines, and captions is not simply part of the joy of making a magazine; it’s part of the responsibility. A good headline can make the difference between whether readers dive into a story or turn the page. We know you’re busy, and we want to grab and hold your attention.

Better believe it.

Email Kathy at kathy2@stanford.edu.
Dr. Katharina Friedla has joined the Hoover Institution Library & Archives as the Taube Family Curator for European Collections. She will oversee one of the largest and most comprehensive parts of Hoover’s international holdings.

In recent years, Dr. Friedla has published work on nationalism, identity politics, state ideology, and forced migration in twentieth-century Europe. She holds a Ph.D. from the Department of History, Institute of Eastern European and Jewish History, University of Basel, Switzerland and studied History and East European and Jewish Studies at the Free University in Berlin and the Hebrew University in Jerusalem.

“We are proud to support Dr. Friedla’s research at Hoover, especially on documentation related to World War II and anti-communist opposition in Eastern Europe. Education is the most powerful means we have to change the world.”

—Tad Taube, Chairman of Taube Philanthropies
The Future of Learning
The Graduate School of Education is advancing new solutions to meet learners at all stages.

WHEN I WELCOME new students to Stanford each fall, there’s one message that I always strive to communicate: The world they will graduate into is changing rapidly. Their future and careers will be full of change, and the most interesting jobs of the next few decades may not even exist yet. So, while it is important for them to learn what they may need for a first job or for the next step in their educational careers, it is equally—if not more—important for them to learn how to continue learning, and how to adapt as knowledge continues to evolve.

This reality—coupled with the fact that learning is correlated with everything from better health outcomes to economic security to increased civic engagement—means that the way we educate all students, from pre-kindergarten through the college years and beyond, must evolve. To that end, researchers at the Stanford Graduate School of Education (GSE) are studying the best ways to prepare all students for lives of learning and adaptation, to support learners from marginalized communities, and to create educational solutions that can make a difference on a large scale.

As part of our Long-Range Vision for the future of the university, Stanford launched the Stanford Accelerator for Learning (SAL), a learner-centered effort based at the GSE that leverages the science and design of learning to develop new educational solutions. As a university-level initiative, the SAL leverages Stanford’s interdisciplinary strengths, combining insights from such disparate fields as neuroscience, data science, pediatrics, and sociology to reveal insights into how humans develop and learn. The accelerator then connects researchers with funding, infrastructure, technological resources, and external partners so that they can test their approaches and scale solutions for broader impact.

Through the SAL, researchers are exploring cutting-edge issues in learning—from how technology can provide better access to high-quality learning and opportunities to continue learning throughout a person’s lifetime, to how AI and data can help create more personalized and adaptive instruction and more precise feedback for learners and teachers alike.

As just one example, Jason Yeatman, PhD ’14, an assistant professor of pediatrics, of education, and of psychology and the director of the Brain Development & Education Lab, studies brain development in children learning how to read. During the pandemic, his lab developed a new tool, the Rapid Online Assessment of Reading, in order to continue online the reading assessments that they had been performing in person.

The tool proved highly effective and reliable—more so, in some cases, than in-person assessments. Jason’s lab then partnered with local school officials to pilot and refine its use in schools. Now, the tool is being used by more than 30 schools and community-based organizations to identify struggling readers and provide them with support more quickly. At the same time, the tool is generating data that is helping researchers better understand the diversity of reading hurdles some children face.

The GSE is also focused on making education more accessible, equitable, and affordable. Through the SAL’s initiative on underresourced and marginalized learners, researchers are studying the roles of factors like poverty, race, identity, culture, and community in learning, and developing strategies to create inclusive learning environments.

Learning is one of the most important levers for improving lives around the world. As we look to how Stanford can contribute to solving the great challenges we face, it’s clear that deploying our university’s resources to advance the science of learning can have enormous impact. Improving how we design and organize educational opportunities has the potential to make life more fulfilling for individuals, and to make entire communities healthier and more productive.
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WHO WE ARE

Meet Michael Wu

One man’s path from pirouettes to Canada’s Got Talent.

“You can never master all the styles of hip-hop. There’s blocking, popping, whacking, breaking. You can constantly be learning.”
WHEN MICHAEL WU was 6 years old, he stepped into a new dance studio—and froze. “All of the people in there are girls,” he recalls, “and all of them are wearing tights.” He’d been enjoying hip-hop classes at the local community center in Vancouver, British Columbia, when his mom signed him up for ballet without telling him.

Soon, Wu, ’25, fell in love with pirouettes and pas de bourrées. At 13, he was offered the chance to start on the professional track while cutting school back to four hours a day, but he turned it down. “I always want to have dance in my life, but I wanted to make sure that I could educate myself,” he says. “I didn’t want to become one-sided.” He did, however, find himself a hip-hop studio.

In high school, Wu competed on the debate team, practiced Italian opera, and sang Chinese love songs at charity events and English pop songs at festivals. He also buckled down on hip-hop—his studio was known for its tricky, hard-hitting style, and he worked hard to master it. By 2019, the studio’s coaches had recruited Wu to join a select crew, GRVMNT, that has since grown to 17 members and become as close as family. They’ve stuck together through hardship, practicing outdoors when the studio owner couldn’t pay rent. Their dancing and story caught the attention of television shows, including World of Dance and Canada’s Got Talent, where they advanced to the semifinals and season finale, respectively. During auditions, Wu shone as a spokesperson for the team. He missed weeks of his first year at Stanford, traveling back to Canada to train and perform. Luckily, he’s long been an expert at balancing.

“Ballet is very rigid, but you can also be very fluid. If you’re able to do that in hip-hop, it makes you more unique as a dancer. You have to be committed to hip-hop for years until you realize how much ballet, contemporary, and jazz really do transfer over.

“My dad didn’t want me to dance. He used to want me to become a lawyer and go into politics. . . . [But] when the first episode of World of Dance came out and he saw me talking for the interview, he said, ‘Maybe this isn’t so bad.’

“I remember the first time I messed up on a national stage. My teammates and their parents were talking about how I cost the team the competition. I locked myself in the closet and was just crying about it, and my studio owner was the only one who came to me, and he was like, ‘Use this as a learning opportunity. This is only the beginning.’

“When I was applying to different schools, I searched up the dance teams and a lot of them were only there for competitions instead of the community. But then I saw Stanford’s [Alliance dance team], and I was like, ‘Oh my God! This looks super chill, but it’s also a high level of dance.’ I really saw myself in the hip-hop community here.

“After my mom got her master’s in chemical engineering, she started to work in a research lab doing chemical dyes, and she hated it. She realized that if you get forced into a major that you don’t like, even if it makes you money, it’s going to be soul-sucking for you. She really wants me to pursue what I want to do.

“I fell in love with entertainment when I first got to the backstage of World of Dance. I want to be part of a big production too. My dream is, like, talk show producer, director, actor—all combined into one.”

WATCH VIDEO OF WU IN ACTION AT ALU.MS/MICHAELWU
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Stanford Summer Session invites visiting students to live and study on campus during the University’s fourth academic quarter.

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Visiting undergraduate, graduate, and high school students take courses alongside current Stanford students and visiting students from around the world, developing a global network of friends while experiencing life on the Farm.
Deck the Halls
Becki Goodloe couldn't find stores that sold Black Christmas decorations. So she started her own.

LIKE ALL GOOD CHRISTMAS STORIES, this one begins with a gift. When Becki Roberts Goodloe, ’86, started her family, her mother gave her two Black nutcrackers she'd had for years. The 3 1/2-foot-tall soldiers made regular appearances in the Goodloes’ Christmas cards, which sparked another tradition: friends asking Goodloe where she'd found those beautiful nutcrackers with brown skin. In her parents’ time, Goodloe says, “you had to buy something with a white face and paint it.” She and her husband, Paul, would like to have referred their friends to stores that sold Black nutcrackers, but they couldn’t find any. So they opened one themselves. In 2010, Goodloe launched Christmas in Color, an online store that sells Black nutcrackers, Santas, angels, ornaments, and Nativity scenes.

The first year came with hiccups. The nutcrackers Goodloe had ordered arrived with Black skin, silver facial hair—and blue eyes. “It didn’t occur to me to say, ‘Hey, you know, they’ve got to be brown eyes,’” she says. That season, the Goodloes learned how to paint eyes onto nutcrackers. Christmas in Color is a family enterprise: Paul organizes shipping plans and the couple’s two teenage sons help with inventory and local deliveries. They operate out of their house in the Atlanta suburbs, storing their stock in the basement and filling 300 to 500 orders each year, with most pouring in between October and January. (In 2020, that number jumped to 700 as pandemic-weary consumers flocked online.) A lot has changed since Goodloe started the business, and Black Christmas decorations can now be found in many stores. Yet she believes that the quality, curation, and variety of products offered by Christmas in Color keep customers coming back. “I think there's still a lot of people who like going to one place rather than going from retailer to retailer to find the perfect decoration.”

Goodloe’s goal for Christmas in Color was for everyone to have holiday decorations that represent them. Once, a friend dropped by to find a Santa that resembled her family, who have darker skin. “She bought those and then told all of her friends. She literally sold me out within a couple of hours by calling people,” Goodloe says, adding that it has been particularly moving to see people of her parents’ generation find Christmas decorations that match their skin tones. “They buy the most. Not because they need it but because they're just so happy. They now have the option to buy.”

Life’s a Bear
A tale of humor and health insurance.

Copays, deductibles, claim forms, denials—navigating medical insurance isn’t easy. For people with certain mental health conditions, it can compound a feeling of hopelessness. Writer Kathleen Founds, ’04, harnessed her sense of powerlessness after a run-in with her health plan to create a graphic novel that doubles as a call for reform. Bipolar Bear and the Terrible, Horrible, No Good, Very Bad Health Insurance: A Fable for Grownups (Graphic Mundi), which Founds wrote and illustrated over 13 years, follows Theodore, a bear with bipolar disorder, on the perilous journey that ensues after he plunges into the Labyrinth of Health Insurance Claims. Along the way, he falls prey to man-eating flowers, customer service snakes, and capitalistic fat cats. “When it comes to bureaucracy, comics can go where other forms of literature fear to tread,” says Founds. “Humor can accompany us through bleak spaces, and enable us to emerge feeling more human and less alone.” Especially when we’ve walked alongside a teddy bear.

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REUNION HOMECOMING

Red, White, and New
The Indigenous Alumni Summit and a pickleball tournament join the reunion festivities.

REUNION HOMECOMING FEATURED A FOOTBALL GAME for the first time since 2019, complete with groves of red-and-white tailgates and a victorious 15–14 final score over Arizona State. Elsewhere on campus, new activities were afoot. On Thursday, more than 90 alumni and their guests attended the inaugural Stanford Indigenous Alumni Summit, a collaborative effort of the Stanford Indigenous Alumni Association, Stanford’s Native American Cultural Center, and the Stanford American Indian Organization. On Saturday, paddles replaced rackets at the Taube South tennis courts as alums of all ages battled it out in the first-ever Pickleball Party Zone. Classes Without Quizzes took on serious issues, including the war in Ukraine, neurodiversity, and cryptocurrency. But at class parties and Dinner on the Quad, some 7,600 merrymakers partied like it was 2019.
YASMIN RAFIEI was a student at the School of Medicine when she read the research paper that changed her world. The 2020 working paper, whose lead author was Atul Gupta, MA ‘14, PhD ‘17, of the Wharton School, found that after private equity firms acquired nursing homes, death rates of Medicare patients increased by 10 percent.

Rafiei wanted to know why. “I’d be on a bike ride to get food from Arrillaga dining hall, and I’d be thinking about it,” she says. “I’d be in the shower, and I’d be thinking about it.”

So she turned her question into a quest. She had received a Stanford Medical Scholars Research fellowship, which allows medical students to pause their studies to conduct academic research, and had used it to join the Investigative Reporting Program at UC Berkeley. Now she had her focus.

She zeroed in on St. Joseph’s Home for the Aged in Richmond, Va., which had been run by Catholic nuns and was being acquired by an investment firm.

Her attempts at making contact went nowhere until she flew to Richmond and started knocking on doors. She found sources who brought her inside to witness the final days of the old system and the shift to the new. Staff and families described reductions in nurse staffing levels and in the attentiveness and amenities provided to residents. Prior to the June 2021 sale, the home had zero COVID deaths, Rafiei says. In the four months that followed, there were six.

When Rafiei pitched her story to the New Yorker, the editor made clear she didn’t pass the first of two criteria for judging freelancers: She had no track record of long-form journalism. But she aced the second: newsworthiness.

The result was a nearly 7,000-word investigative piece that appeared on the New Yorker’s web site in August. It illuminates how stagnant federal regulations reward nursing home owners for maximizing the number of patients—especially medically complex ones—rather than providing high-quality care. “As it stands, the incentives are not aligned,” Gupta tells Rafiei. “But that doesn’t mean that those incentives cannot be changed.”

Rafiei plans to finish her medical studies eventually. For now, she’s on to her next investigation. Like any good reporter, she won’t reveal the specifics, but the topic is domestic violence. “I’m just going to sprint as far as I can in the time period Stanford has given me.”

Clockwise from top: ERIN SONNENSCHEIN; ANDREW BRODHEAD/STANFORD NEWS SERVICE; BENGT OBERGER/WIKIMEDIA; SIMON WALKER/HM TREASURY; JEANETTE SESAY/UNIVERSITY OF ALBERTA

Rishi Sunak, MBA ‘06, is the United Kingdom’s new prime minister. He previously served as chancellor of the exchequer.…. Just up the road, harpsichordist Mahan Esfahani, ’05, has become the youngest-ever recipient of the Wigmore Medal, which recognizes significant figures in the classical music world who have a strong association with London’s Wigmore Hall.…. Back on this side of the pond, Stanford professor Carolyn Bertozzi won a Nobel Prize in chemistry for her work in bioorthogonal chemistry, a field she established. Bertozzi is the first woman on the Stanford science faculty to win a Nobel. She shares the prize with two others, including Barry Sharpless, PhD ’68, of Scripps Research, for his work on click chemistry. Sharpless is the fifth person ever to win two Nobels…. Speaking of goals, JT Batson, ’05, was named CEO and secretary general of U.S. Soccer in September.…. And Garry Tan, ’03, has his eye on the ball. In January, he’ll start work as president and CEO of Y Combinator, the startup accelerator that launched Airbnb and DoorDash.
ARI KELMAN JOLTED AWAKE. It was 3 a.m., and he’d suddenly realized that the advisory task force on the history of Jewish admissions and experience at Stanford, which he chaired, would need to understand the full picture of undergraduate admissions in 1953. “Who gets in?” he remembers wondering. “What was the process? What did the applications look like?”

So Kelman, an associate professor of education, emailed his research assistants. (By then, it was already 3:30 a.m.)

The researchers learned that it had only just become necessary for Stanford to choose among the qualified men who applied, rather than accepting them all. (Women had been subject to selective admissions for decades because of the enrollment cap imposed by Jane Stanford.) The university’s second director (and later its first dean) of admissions, Rixford Snyder, ’30, MA ’34, PhD ’40, asserted broad latitude in developing its selection policies. “He fiercely defended the admission of athletes, the allotment of legacy admissions, and his power to admit students who were wealthy and connected,” the task force wrote in its report.

Snyder “was making it up as he went along,” Kelman says. “In the ‘20s, when Harvard and Yale and Princeton and Columbia were putting limitations on Jewish enrollment, they were very clear about who a Harvard man was and who a Yalie was, and they were trying to protect a certain kind of person. Stanford didn’t have that in the ‘50s.” Snyder, the task force found, “emphasized the significance of ‘motivation, attitudes, character, and future potential as citizens’ in the creation of ‘strong alumni for the future,’” and the admissions committee based up to one-third of its evaluation on whether a prospective student would “fit in” at the residential university.

The task force was created after an August 2021 blog post by historian Charles Petersen unveiled a document he had found in Stanford’s archives. The February 1953 memo to Stanford president J.E. Wallace Sterling, PhD ’38, from the assistant to the president, Fred Glover, ’33, indicates that Snyder had stopped by to convey his concerns about a high number of Jewish male applicants. “Rix has been following a policy of picking the outstanding Jewish boys while endeavoring to keep a normal balance of Jewish men and women in the class,” Glover wrote, noting that admitting even a couple of students from heavily Jewish high schools in Los Angeles—“Beverly Hills and Fairfax are examples”—resulted in “a flood of Jewish applicants” the following year. “Rix feels that this problem is loaded with dynamite and he wanted you to know about it,” Glover wrote, “as he says that the situation forces him to disregard our stated policy of paying no attention to the race or religion of applicants.”

Indeed, the task force found, the director of admissions had begun to pay attention. The number of students who enrolled from...
Beverly Hills High School dropped from 67 in 1949–52 to 13 in 1952–55; for Fairfax, it dropped from 20 to 1. No other public high schools experienced such a drop. Moreover, in 1953, Snyder’s office stopped making recruiting trips to those two high schools.

“One thing I didn’t look into is how enrollments changed,” says Petersen, a postdoctoral scholar at Cornell. The task force, he says, “really documented that.”

Suppressing the admission of students from two high schools was a “blunt instrument,” Kelman says, but it was effective. Stanford was just beginning its rise to national prominence; its Jewish applicants were concentrated in Los Angeles. And although Snyder had come to embrace practices that would increase the diversity of the student body by the time he stepped down in 1969, rumors that Stanford limited the number of Jewish students persisted in the Los Angeles area for decades, Kelman says, dissuading some from applying. When questioned, campus leaders of the 1950s and ‘60s relied on a technical definition of the term quota to deny the practice.

On October 12, Stanford president Marc Tessier-Lavigne apologized on behalf of the university. “These actions were wrong. They were damaging. And they were unacknowledged for too long,” he wrote in a message to the Stanford community. “Today, we must work to do better, not only to atone for the wrongs of the past, but to ensure the supportive and bias-free experience for members of our Jewish community that we seek for all members of our Stanford community.” The university will act on the task force recommendations for enhancing Jewish life on campus today, including incorporating antisemitism into anti-bias training, clarifying Stanford’s relationship to Hillel, and improving accommodations for religious and cultural differences in housing and dining.

Kelman says the apology was “incredibly powerful” for Jewish alumni who both love Stanford and had previously heard rumors of suppressed admissions. His inbox is also full of people saying, “This is my story. This is my dad’s story. This is my uncle’s story.”

“What allowed antisemitism to exist in the administration in the 1950s was silence and secrecy,” Kelman says. “And our job is to daylight that—to do everything we can to have a frank conversation now, to integrate it into conversations about diversity, to make Jewish students feel at home on this campus.” After all, he says, universities’ investigations into their pasts reflect their core mission of scholarship and teaching. “Hard questions can be asked and hard issues can be faced, and we can, in fact, not just apologize and move on, but make those regular inquiries part of the ways in which the university does its work,” he says. “Hopefully ours has made a small nudge forward on that.”

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Today, the undergraduates who first entered Stanford during that tumultuous fall of 2020 want just one thing: normalcy. Thanks to the COVID-19 pandemic, for most, their first year was fully remote—no joining the raucous crowds for Big Game, no fountain hopping, not even simple pleasures, such as riding a bike through the Quad on your way to class. By sophomore year, most of the Class of 2024 had arrived on campus, but COVID restrictions lingered, especially during the omicron variant’s surge in winter quarter. Stanford caught up with the seven members of the class we’ve been following as they made their way back to the Farm for junior year.

Finally arriving on campus last fall after a year online was surreal—and sometimes hard.

**STACEY LUBAG:** I showed up and my family and I just dumped all my stuff in my room and then they were gone and that was the only move-in experience. I think that [Stanford] did their best, but it was hard, the dissonance between feeling like I was a new student because I had never been on campus before, but still not being a new student because I had already done a year and I wasn’t technically allowed to be part of those orientation activities.

**JENNA REED:** I feel like it’s very hard to replicate that initial excitement—doors open—the very big energy of having a freshman dorm. I’d spent all of my freshman year at home, and so coming in those first couple of weeks, it felt like, ‘Oh, some people already made their friends.’ I think we did end up finding each other. It just took a little bit of time.

**SALA BA:** I think I experienced the sophomore slump, but being that it was my first year on campus, it was like there was almost more pressure to avoid the sophomore slump. I felt like, ‘Oh, this is supposed to be the magical year that we’re on campus,’ so it was definitely a little trickier to get used to.

**STACEY:** The fact that we were all so eager to step into making new connections and to really form strong bonds with the people that we had met on Zoom and otherwise meant last fall very rapidly turned into one of the most beautiful quarters that I think I could ever have experienced.

Those who lived on campus for some or all of their first year due to special circumstances had their own adjustments to make.

**ELENA RECALDINI:** I do remember being quite overwhelmed at the beginning because I was used to campus being almost dead. Just having a dorm community was entirely new to me because freshman year we couldn’t even go into a friend’s room. I would say my closest two friends that I have currently, we formed our little trio freshman year when we were all on campus, so I think our freshman year definitely unified us.

**JENNA:** There were surprising moments of yearning for the few good things about that complicated frosh year.

**ELENA:** I do think it has been more difficult to balance a lot of things when things are in person. Freshman year, when everything was online, I was able to focus a lot on my studies just because that was all I had, especially when I was in Japan, but now there’s so much to be engaged in, in terms of social life. That’s still been a learning curve.
But being on campus provided chances for extracurricular and social opportunities that weren’t an option online. Eva Orozco trained to be an emergency medical technician, Elena went backpacking, and Jenna participated in a full-day, in-person simulation for her U.S. Intelligence course last spring and used Special Collections materials from the library for another course in the fall.

EVA OROZCO: I was very grateful to be a part of doing this work during the pandemic. I was able to feel like I had an avenue to help in a time of need.

ELENA: I took Outdoor 103—which is like a backpacking course—last spring and I loved it. This is a course that you can only experience fully when it’s in person, so I didn’t take it freshman year, but I love outdoor spaces, especially in California. They have so much to explore.

JENNA: I definitely will say, academically, I feel like I did get a good education online—I had a lot of great classes—but the in-person components were just great.

As the students began exploring majors, Kevin Thor connected his coursework in Asian American studies with his parents’ experiences as Hmong immigrants.

KEVIN THOR: I think that’s been a really cool thing—to talk to my parents about and gain their personal experiences, to learn about what it was like firsthand, coming to America from a completely different country because of war.

Winter was a darker period for many. Stacey endured a heartbreaking loss when her older brother died after an illness.

STACEY: The one thing that honestly was keeping me together for a good period of time was Stanford and the connections that I was making here.

Then came the omicron wave and a brief return to remote classes.

ELENA: I was like, “Oh no. I’m already used to how campus life is supposed to be. I don’t want to go back to what it was like freshman year.” So I did take classes for two weeks from Tokyo because I was already home for winter break. It gave me flashbacks to when I would take classes at 3 a.m. freshman year, which was not nice.

One who tested positive that winter found that under the right circumstances—when you and your roommate both have mild infections—COVID can provide a good memory.

SALA: It was like week seven of winter quarter, the most stressful time, but we were just hanging out watching movies, doing the online classes. It seems weird, as isolation is supposed to be socially isolated, but it was a super good time.

Once cases began to retreat, the sophomores had more of a chance to savor Stanford.

LOGAN BERZINS: As we moved into that spring sophomore year, we were finally like, OK, things are mellowing out. This is turning into a college experience. We can see our friends. Yes, there’s still the COVID isolation policy, but it’s slowly becoming less of a constraining and difficult procedure to maintain, so we’re going to hang out with our friends, go places, do things, go out to eat, and enjoy everything college has to offer.

ELENA: It’s the fact that I was able to actually work on [problem sets] with friends and just work with teammates on a project face-to-face instead of doing it over Zoom. I think those moments were very special because it just wasn’t a thing freshman year, and I think that’s what college is supposed to be.

Kevin and Eva found great jobs and community at the Asian American Activities Center and as a student manager for the Stanford women’s basketball team, respectively.

KEVIN: A3C is like my home away from home. The genuine connections that I’ve built in that center have been so amazing and have such a profound impact on my life here. Getting to learn more about what it’s like being Asian or Asian American on campus, and more about activism and Asian American history on campus specifically, has been really dope.

EVA: I get to support players who are working so hard alongside a staff who are dedicated not only to the game but to each other. I don’t even think of it as work.

Summer 2022 brought travel, research, and internships—in person! Sala interned at the aerospace company Blue Origin. Late in the summer, she was invited to introduce Vice President Kamala Harris during an event at Oakland’s Chabot Space and Science Center.

SALA: It was obviously the highlight of the summer. I got to introduce her, and I got to do the photo line, and I got to talk with her. She was super sweet.

As the football team geared up for fall, Logan, a center, loved the changes to COVID protocols.

LOGAN: On the athletic side, this year has been just night-and-day different. We’ve had a lot more freedom to do what we needed to do for practice, like not having to split into 10 different lift times and 10 different run times. We were able to train as a team, get better as a team, work as a team, to really improve that team-bonding experience.

As the students arrived back on campus this September, they had different visions of what junior year would look like, but all hoped for few or no restrictions.

KEVIN: Hopes and dreams? I guess just to be in person. Just to experience what I envision to be a normal college experience before COVID hit.

LOGAN: People are finally going to come out and want to watch things and be at the games and show that school spirit. There’s not going to be, like, half the school here, half the school online. So I’m excited. I really think it’s going to be amazing.

SALA: The campus feels so much different this year than it did last year. It feels very alive. Last year, it seemed very hush-hush, very “get to your dorm fast and wear a mask.” I feel like I’m starting to see the real Stanford, the old Stanford, the Stanford that I applied to. Just from these first few weeks on campus, it’s very promising that it looks like this already.

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School Counts

WHEN LYNZI ZIEGENHAGEN, ’93, graduated with a symbolic systems degree, her area of expertise was so new that people working in the field hadn’t yet agreed on what to call it. Some used names like data mining and knowledge discovery, but the one that stuck was data science—to describe the extraction of useful information from often quite messy data. As the field developed, many data scientists focused on enabling media-darling moon shots—self-driving cars or robotics—but Ziegenhagen had her eye on education.

“I was trying to figure out how all these cool new things that are available could actually be helpful to regular, hard-working people doing their job to make the world a better place, like teachers and principals and district leaders,” she says.

In 2007, after more than a decade as a corporate technical consultant, Ziegenhagen saw the opportunity to bring together “the thing I love to do and was good at and the thing I deeply cared about.” Aspire Public Schools, a nonprofit charter school system serving low-income communities throughout California, hired her as a data analyst to help teachers and administrators evaluate their schools’ health and efficacy. At the time, Aspire teachers used between 12 and 30 incompatible data systems to search for a student’s grades, standardized test scores, and attendance, among other metrics. “They would literally go page by page in the student information system to look up the number and write it down in a separate Google sheet or Excel file or on paper,” Ziegenhagen says. “And they did that for a hundred students, hypothetically.”

The challenges of America’s underfunded schools have hardly been a secret. A 2018 story in the New York Times, for example, ran with the headline “25-Year-Old Textbooks and Holes in the Ceiling: Inside America’s Public Schools.” That was before COVID-19 brought a slew of new challenges. Pre-pandemic estimates of how many teachers quit—or planned to—within their first five years of teaching ranged from 17 percent to 50 percent. Their reasons included poor pay, lack of respect, and far too much work time spent on documentation: of parent phone calls, student-teacher conferences, departmental meetings, and student behavior and performance, not to mention teacher self-evaluations and growth plans. As for lesson planning and grading, many teachers are left to do it at home. According to a 2022 National Education Association study, 55 percent of educators now say they are “more likely to leave or retire from education sooner than planned.”

The software that Ziegenhagen’s team built, based on interviews with the Aspire schools’ staff members, aggregates information such as student assessments, attendance statistics, and behavioral reports, allowing teachers to quickly access and compare metrics. For example, they can correlate poor grades with spotty attendance, and, when they assess English scores, take into consideration the language students speak at home. “People may know there’s an issue around oversuspension of African American students,” she says, “but it’s not until they see that it’s happening in their school and at a dramatically different
rate that the conversation is very different—when it’s not just a problem out there in the world but a problem “in my classroom and I am part of it.” Similarly, the software has helped bring to light gender-specific issues. In one school with low attendance numbers, the software identified that ninth-grade girls were frequently absent. This allowed administrators to dig into the cause—which turned out to be anxiety around social dynamics—and create a support system for that specific group.

Ziegenhagen created her own company in 2011 so that other schools could use the software too. That company, dubbed Schoolzilla, sold in 2019 to education technology firm Renaissance Learning, where Ziegenhagen now serves as senior vice president of product platform interoperability. Educators from some 2,100 school systems serving 20 million students use her software.

Drew Sarratore, principal of William G. Paden Elementary in California’s Alameda Unified School District, says Schoolzilla
Jacoby soon learned that prison administrators and parole officers didn’t have the information they needed to support people in the system, and nobody—neither administrators nor lawmakers and advocates—had the data to determine which programs and services worked best. “I was shocked that this system, which touched every community—and sits at the intersection of mental health challenges, addiction, economic mobility, and poverty—didn’t have modern analytics,” Jacoby says. She realized that providing as much information as possible would help parole officers to determine who needed support, prisons to decide whom to release, and lawmakers to assess how they might reform sentencing recommendations.

Jacoby and two co-workers decided to build an open-source database to clean and aggregate publicly available data about the criminal justice system, including information such as length of sentencing, incarceration rates, and reincarceration rates. “By the time we realized the enormity of the problem, we were in too deep—we had to start a company,” she says. In 2018, Jacoby and her colleagues launched Recidiviz (which now has 56 employees), and the next year she left Google to become the nonprofit’s full-time CEO.

Its name is a portmanteau of recidivism and visibility. Early on, Jacoby’s team focused on recidivism, derived from the Latin cadere—to fall—and thus meaning to fall back into criminality. But recidivism, she learned, “was measured differently in almost every context.” From state to state or county to county, a recidivism rate could indicate rearrest, revocation, or reincarceration; it could be measured over one to 10 years; and it could be based on cohort—say, everyone who was released from prison during a certain period—or on everyone uncategorized. Different definitions made comparing the effectiveness of programs between states—or even between the United States and other countries—extremely difficult. “One of the key heartbeat metrics for the system was fundamentally incomparable,” Jacoby says, “and that was just the tip of the iceberg.”

The iceberg in question is a sprawling criminal justice system consisting of incarcerated people as well as those on probation (supervision in lieu of imprisonment) and parole (early release with monitoring) and parole (early release with monitoring). The problem of recidivism led her team to a much larger problem: “Criminal justice data is so fragmented that we can’t even tell you how many people are in jail today,” she says. The state departments of correction had a tough job, she realized. “Collectively, the 50 directors run an $80 billion system. They have hundreds of thousands of staff,” she says. “You probably have better analytics on your personal website than these folks get on their flagship programs.” Such a warning system is especially important in preventing reincarceration.

“Once you go to prison, the likelihood that you will be rearrested within 9 years is 83 percent,” she says.
she points out. But people often age out of crime by 30. For social and developmental reasons, they become less inclined to take part in crime or less vulnerable to the circumstances fostering it. However, a criminal record often limits a person’s options for work and education, leading them to be more likely to commit crimes and get rearrested. If they’ve spent time in prison before age 30, Jacoby says, “they’re going to have a really, really hard time getting back on their feet.”

Recidiviz’s software consolidates information from a variety of criminal justice databases. “Instead of going through 13 steps, we just have one,” says Joshua Graham, district director for community supervision in the Tennessee Department of Corrections, where he oversees 70 employees in charge of more than 5,000 people on probation and parole. To decrease the officers’ workloads, Recidiviz’s online platform gathers information about individuals in the system and offers “a snapshot of the person,” Graham says. The software alerts parole officers when a person has met the eligibility requirements for release from supervision. It also sends notifications when people qualify for
Recidiviz also measures racial disparities at transition points—sentencing, reduced sentences for good behavior, parole, and revocation of parole—and compares disparities among counties and states to give “a more granular picture of what is happening in the system,” Jacoby says. This allows lawmakers, corrections officers, and advocates to see how race correlates with an individual’s experience in the system. Recidiviz has also supported advocates working on racial disparities in sentencing for crack and cocaine. Though nearly chemically identical, the two drugs have different cultural associations: crack with the Black community, and cocaine with the white, especially in more affluent or glamorized contexts. “For a long time, crack cases have been sentenced far more harshly than powder cocaine sentences,” says Molly Gill, vice president of policy for FAMM (Families Against Mandatory Minimums). To build arguments for sentencing reform, FAMM appeals both to fiscally conservative politicians, many of whom favor reducing prison costs, and to progressive politicians intent on reducing mass incarceration. Recidiviz supplies FAMM with data models for both, showing how a reform could decrease expenses while reducing prison populations. “Recidiviz provides these services for free to a lot of nonprofits,” Gill says. “That’s incredibly valuable. Most criminal-justice nonprofit organizations don’t have the staff or expertise or resources to do this kind of analysis themselves.”

Though Recidiviz now offers pro bono policy impact modeling to lawmakers and advocates in 19 states, renders services to 11 state departments of correction, and provides public-facing dashboards for researchers, journalists, and community members, Jacoby doesn’t see tech as the answer to pressing political alignment or changing hearts and minds. To do that well, you need to listen to people in the field, on the ground, who have been doing the work for longer than you have.” Rather, she views it as an accelerant: “That’s where tech can be so powerful.”
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MY SYMPTOMS ARE PROGRESS

OHHH... THIS IS DECADENT

BY SAM SCOTT
BELIEVE IT

A psychology professor’s quest to explain—and demonstrate—the power of the mind over our health.

I GET EXERCISE AT WORK

THANK YOU, DOCTOR. THIS WORKS GREAT
reporting no change in their job duties or outside activities. Their bodies seemed likewise convinced. They showed a decrease in weight, waist-to-hip ratio, and systolic blood pressure, which dropped an average of 10 points.

“These results support the hypothesis that exercise affects health in part or in whole via the placebo effect,” the pair wrote in the ensuing paper, published in Psychological Science in 2007. Crum may have been the first author, but the paper’s restrained academic tone didn’t come close to capturing the wonder she felt. “It really opened the floodgates,” she says. “If placebo-like effects matter in shaping the benefits of exercise, where else are they playing a role that we’re not paying attention to?”

MIND AS MESSENGER
NEARLY TWO DECADES LATER. Crum’s work suggests that similar belief effects are everywhere. To be clear, Crum—who became an elite triathlete after college—doesn’t think the benefits of exercise are purely mental in origin, but she absolutely believes that our beliefs about exercise influence the benefits we get. Ditto in every other aspect of our lives. “The total effect of anything is a combined product of what you’re actually doing and what you think about what you’re doing,” says Crum, an associate professor of psychology and lead investigator at the Stanford Mind & Body Lab.

The crux of Crum’s work is that we deploy mental filters, or mindsets, to simplify and lead investigator at the Stanford Mind & Body Lab.

Lucky Break
GROWING UP in Aspen, Colo., Crum was fascinated with mindset long before the term became ubiquitous. Her mother, Cathy, had been raised a Christian Scientist, a religion
known for its faith in the healing power of prayer. Although Crum didn’t grow up in the church, her mother modeled the belief that the mind has leverage over the body. She might take an Excedrin for a headache after, say, hiking one of Colorado’s fourteeners, Crum recalls. Otherwise, she seemingly never took medicine and never got sick.

On the other hand, Crum’s father, Tom—a college football star turned aikido master, motivational speaker, and author—was always taking vitamins. Yet he provided even more vivid illustrations of the power of the mind. She remembers him clad in the hakama of an aikido black belt, hosting outdoor mind, body, and meditation workshops. He would ask participants to stretch an arm outward and keep it straight as a partner tried to bend it at the elbow. Inevitably, the arms would bend. But then her dad would direct them to think of their arms surging with a flow of energy to someone they loved. Suddenly the arms around the group would become unyielding.

Crum experienced the power of his message firsthand as a young gymnast. In grade school, she was practicing for the chance to go to nationals when she slammed her ankles together on the vault. The pain, she says, was excruciating. Over the coming days, she did everything she could to recuperate by resting, elevating, and icing her ankle. Her dad, meanwhile, emphasized to her that healing wasn’t just a matter of tending to the body. He had her visualize her routines over and over, and directed her to send energy to her ankle. That weekend, she performed painlessly on the floor, bars, beam, and vault, qualifying for nationals. But the pain returned once she was off the mat. An X-ray revealed she’d been competing on a broken ankle.

Her experience stoked an unabating curiosity. “How could we do this better?” she wondered. “Are there limits? Could I have competed on two broken ankles? I always had those questions.”

When she left for Harvard nearly a decade later, she was also exposed to researchers like Langer who took the ideas seriously. And there she gravitated. “I became increasingly fascinated by the power of research to provide not just validation for things that I experienced firsthand or had seen others experience firsthand but also to take it further,” she says. “I felt like if we could actually understand what was going on here, we could leverage it even more than we do already.”

A THUMB ON THE SCALE

ONE NIGHT, in the middle of grad school at Yale, Crum was working late in the lab—beset with stress over deadlines and doubts about her dissertation—when a friend peeked in and read the anxiety on her face. “It’s just a cold, dark night on the side of Everest,” he said, as Crum recounted recently on an episode of Hidden Brain, a radio show and podcast hosted by Shankar Vedantam, MA ’93.

It took weeks for the meaning of the comment to dawn on her. She was at one of the world’s great universities trying to contribute new understandings to the field of psychology. Climbing the metaphoric mountain wasn’t supposed to be easy. The insight helped her recast the pressure making her miserable as the force pushing her higher. It also inspired her to look for similar ways to help others.

During the great economic upheaval of 2008, Crum and her collaborators—including Peter Salovey, ’80, MA ’80, now Yale’s president—worked with nearly 300 financial workers to assess the influence of positive versus negative messaging about stress. One group watched short videos reinforcing the corrosive sides of stress. The other saw videos emphasizing the power of stress to enhance performance. The latter group later reported not only higher levels of engagement at work but also fewer negative physical symptoms of stress, such as backaches, muscle tension, and insomnia.

It’s not that either mindset was wrong, Crum says: Stress can bring out the best in people and it can be toxic—but your expecta-
by the concerns preoccupying her as a student. In the 2011 study, Crum and her collaborators gave participants two milkshakes a week apart: one ostensibly a no-frills diet shake, the other an indulgent calorie bomb. Blood tests showed that participants’ levels of ghrelin—known as the hunger hormone, for its role in stimulating appetite—dropped three times faster after the calorie bomb than after the diet shake. The twist? They’d been the same shake. Only the labels had changed.

It was a personally shocking conclusion for Crum, who had struggled with disordered eating and expected the seemingly healthier choice to invoke the more beneficial mindset. Instead, the no-fat, low-calorie labeling had apparently inspired a mindset of deprivation. It led her to a new approach to her own eating, one that puts flavor and indulgence in the foreground even as she tries to eat healthfully. “Sure, get a salad,” she says. “But get lots of stuff on it—get the best stuff on it. Prepare healthy vegetables, but prepare them well. Make them tasty.” There was a broader lesson too, she says: The seemingly superior mindset may not actually lead to the best outcomes.

**SPECIAL TREATMENT**

**IN 2016,** Crum gave a grand rounds presentation at the School of Medicine, where she offered an overview of her research to an assembly of the school’s faculty. It was part of an evolution in her focus: She was growing more interested in finding medical applications for her research. “I just feel more inspired to tackle those problems right now rather than making productive people even more productive,” she says. Crum’s lab has since teamed with oncologists trying to help cancer patients improve their well-being. They’ve also trained doctors, nurses, and staff at Stanford Primary Care to shape patient mindsets, an effort led by Crum’s first doctoral student, Kari Leibowitz, MA ’18, PhD ’21.

In her collaboration with Kari Nadeau, a professor of medicine and of pediatrics who is a world-renowned researcher of food allergies, Crum has shown one way that physicians might harness mindset to ease the therapeutic process. Nadeau’s lab had been using a treatment called oral immunotherapy to desensitize children with peanut allergies by exposing them to tiny but increasing amounts of the allergen. The treatment is highly effective, but it often produces minor allergic symptoms that can terrify kids who’ve spent their lives in dread of serious reactions. Some had to take anti-anxiety drugs to complete the treatment, Nadeau says. Others skipped doses, dropped out, or never started.

The researchers divided 50 of Nadeau’s patients into two groups. Both were told that minor reactions to the treatment were expected. But while one group was given the standard message that such reactions were unfortunate side effects, the other was encouraged to consider them signs of progress. Like sore muscles after weight training or a fever during an illness, the discomfort could be seen as the body gaining strength.

Both ways of looking at the symptoms were equally valid, but the results suggested they weren’t equally valuable. By the end of the six-month therapy, the children who’d been encouraged to see minor allergic reactions as positive were less anxious (as were their parents) and less likely to experience side effects. That alone was a revelation for Nadeau, who says the results have transformed how researchers and companies working with similar therapies approach patients. But there was another intriguing result.

As part of the research, Crum’s team had taken blood samples before and after the treatment to see whether they could track any physiological signs of the intervention’s effect, the sort of physical evidence Crum showed in the milkshake study. The bloodwork indicated that children who were encouraged to see the reactions positively had a greater increase in an antibody called IgG4, a biomarker associated with allergic tolerance. “One of the things that is so inspiring about Ali’s research has been the number of times she has shown that this is true,” says Lauren Howe, Ph.D ’17, the study’s lead author. The finding requires further study, Nadeau says, but seeing physical manifestations from Crum’s approach adds to her sense of its potential. “Not only is it helpful for behavior and helpful for outcomes,” Nadeau says, “but to see that change biologically in the immune system—that’s amazing.”

**PLACEBO POWER**

**WHEN SHE WAS AN UNDERGRAD,** Crum was struck by the work of Fabrizio Benedetti, an Italian professor of physiology and neuroscience whose studies showed that patients who are aware that they’ve received a treatment—like morphine for postsurgical pain—benefited more than those who received the same dosage without knowing it, say, through a pump into their IV. Benedetti showed similar results with treatments for Parkinson’s disease, anxiety, and hypertension. The placebo effect, in other words, wasn’t just an artifact of fake medicine. It was also part of real medicine.

In 2017, Crum’s lab looked further into where the placebo effect occurs—this time,
expanding the idea to a physician’s bedside manner. The study involved giving test participants a prick of histamine on the inside of their forearm, which produces itchy red bumps. They were then given a cream (unknown to them, an unscented hand lotion) and told it would ease the irritation. Throughout the experiment, the cream didn’t change, but the demeanor of the health professional providing it did. In some cases, the provider appeared warm and competent; in others, disengaged and aloof. Participants who were attended by the former saw their rashes diminish; those attended by the latter did not. The placebo treatment had been constant, but the placebo effect had not, and the participants’ mindsets—shaped by the provider’s performance—had made the difference.

To Crum, these findings underscore that the placebo effect isn’t something limited to drug trials and sham medicines—it was as present in Benedetti’s study with real treatments as in hers with fake ones. The placebo effect is a constant passenger in all treatments. We can dial up its influence, through things as simple as attentiveness, presentation, and competence, or we can let it go to waste. For Dweck, this is Crum’s landmark contribution. “Her ingenious studies have shown the placebo effect is an integral part of the healing process.”

It’s not that you can think yourself to full health, Crum says. In the peanut allergy study, mindset interventions weren’t intended to cure the allergies. But they did give patients a better shot at completing an effective course of treatment. In this way, mindset interventions can be helpful in fighting cancer and other diseases. In collaboration with Stanford oncologists, the Crum lab found that cancer patients had a spectrum of attitudes that could be broken down into three categories: that the disease was a catastrophe, that it was manageable, or that it was an opportunity. These attitudes did not vary by the type of cancer or its severity. Those who considered the cancer a catastrophe reported lower levels of physical, social, and emotional functioning.

Sean Zion, PhD ’21, then a doctoral student in Crum’s lab, led the creation of a series of short documentary-style videos featuring former cancer patients talking about how they pivoted during treatment toward a more hopeful mindset, as well as psychologists and psychiatrists providing strategies on how to do so. In one video, survivors talked about how cancer can be a catalyst for a greater appreciation for life, as well as for personal growth, stronger relationships, new possibilities, and a greater sense of purpose.

At the end, participants who watched the videos and completed directed reflections about their experiences displayed a significant shift in mindset away from the idea that cancer is a catastrophe toward the idea that the disease is manageable or even an opportunity. Accordingly, they also reported greater physical, social, emotional, and functional well-being than those in the control group, and they showed less distress over symptoms. (COVID-19 sabotaged plans to include medical outcomes as part of the study, Crum says, but those will be part of a sequel.) “Just thought I’d let you know that I had a mastectomy 12/31 and will start radiation therapy soon,” one woman said, according to anonymized comments Crum provided. “Cancer is manageable’ and ‘My body is capable’ have become my mantras. I’m doing well and looking forward to becoming a very old lady with perky breasts.”

“For me, as a cancer doctor, it has been obvious for 30 years that for us to be as effective as we can be as physicians and healers, we need to take everything the person brings, not just their pathology report,” says Lidia Schapira, a medical oncologist focused on breast cancer and cancer survivorship who first connected with Crum at her grand rounds talk. “Ali got it, and she was able to come up with very creative ways of targeting what I was hoping to target all these years.”

**TESTING THE LIMITS**

**TO BE SURE**, there are skeptics. Back when Crum’s housekeeper study came out, Martin Binks, then director of behavioral health at the Duke Diet and Fitness Center in North Carolina, told NPR he doubted that the housekeepers’ health benefits came from a mindset change. “There’s a very high likelihood that [the housekeepers] behaved differently after they received that information,” he said, “and they were being more active and eating more healthfully.”

Fifteen years later, some still find it hard to accept that the mind can affect physical health and wellness. A doctor quoted in the New York Times last year likened a growing fascination with placebos to a return to medicine’s dark ages. “The idea that we can use placebos as a panacea for a range of health conditions is really problematic,” said Chris Maher, a professor at the University of Sydney’s School of Public Health. “It is bad for science and bad for patients.”

Ted Kaptchuk, a professor at Harvard Medical School and the director of a program in placebo studies, takes a more nuanced view. He has conducted experiments that showed that placebo treatments can ease discomfort from asthma and from irritable bowel syndrome. In the case of cancer, he says, placebo treatments can help with nausea, fatigue, and pain. But to attack the cancer itself, you need “real drugs that shrink tumors” and radiation.

Crum cautions that part of the reason the placebo effect is seen as most powerful against things like pain, depression, and anxiety is that’s where the lion’s share of the research has been focused. “There’s probably a lot more that we can do,” Crum says. “Can we cure a tumor? Maybe.” But as a practical matter, she acknowledges there is a long way to go to harness mindsets with curative intent against diseases. The only way to understand whether that might be possible is through rigorous scientific inquiry.

Ultimately, Crum thinks we don’t yet know enough to say when mindset doesn’t matter. There is a phrase she ascribes to Langer, the professor whose guidance helped Crum begin her career: “The power of the mind is likely not limitless, but we just don’t know where those limits are.”

“That,” Crum says, “I resonate with.”

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AMONG
A geologist, a microbiologist, and a pilot walk into a space station.

WHEN GEOLOGIST JESSICA WATKINS GETS ready to go to sleep on the International Space Station (ISS), she climbs into her sleeping bag and zips herself up. But while her crewmates tether themselves to the wall at both the head and foot of their bags—so that they don’t float off—Watkins, '10, likes to leave the bottom of her bag unattached. “My feet just kind of float up in space,” she says. “It’s super comfortable. Super easy to relax.”

One small nap for Watkins, one giant leap for NASA. Her work in space is key to the Artemis program, which aims to reestablish a human presence on the moon for the first time since 1972, including putting the first woman and first person of color on the lunar surface, as early as 2025. There are 18 astronauts on the Artemis team. Nine are women, and three of those are Stanford alumnae: Watkins, microbiologist Kate Rubins, PhD '06, and Navy pilot Nicole Aunapu Mann, MS '01. In other words, a third of the candidates for first woman to walk on the moon once walked through the Quad.

With the initial Artemis missions, NASA plans to lay the foundation for a lunar base camp at the unexplored south pole. That base, located near 4.3-billion-year-old moon rocks useful for geological research, will serve as a place for astronauts to live and work for up to two months at a time. And that is essential for Artemis’s ultimate goal: “Our sights are not set on the moon,” said chief astronaut Reid Wiseman in a NASA briefing to media this summer. “Our sights are clearly set on Mars . . . to inhabit another planet.”

The Artemis program has its first three missions planned: Artemis I, at press time scheduled for November 14, is a test of NASA’s Deep Space Exploration Systems. It will send NASA’s Space Launch System (a rocket as tall as the Empire State Building) and an uncrewed Orion space capsule on a test flight around the moon to ensure a safe reentry, splashdown, and recovery. Artemis II will circle the moon with astronauts on board, testing safety controls and life support equipment. And Artemis III will land two astronauts on the lunar surface, where they’ll stay for about a week, in preparation for later missions to establish the base camp.

NASA has not yet announced which astronauts will crew Artemis II and III, but all 18 are working—whether by conducting experiments on the ISS or crafting space suits back on Earth—toward the return to the moon. Regardless of whose boot prints are left in moondust, each of the astronauts is a part of the mission to go, ultimately, where no man or woman has gone before.
ROCK N’ ROLL

JESSICA WATKINS’S SIX-MONTH STINT ON the ISS, which ended October 14, was the manifestation of a dream that began when she was a 9-year-old in Maryland. She learned that Judith Resnik Elementary—where she attended an after-school program—was named for the second American woman in space, who died in the space shuttle Challenger disaster in 1986. The story might have discouraged a less adventurous youngster, but not Watkins. “I learned that you could go into space as a career, and I was definitely hooked,” she says. As an undergraduate at Stanford, Watkins studied geological and environmental sciences (now geological sciences) after perusing the course catalog and discovering GEOLSCI 121: What Makes a Habitable Planet? (She also was a member of the women’s rugby team, which won the 2008 national championship.) “I signed up for my first geology class; the rest is history,” she says. “I fell in love, and particularly in love with the idea of planetary geology—the idea of being able to study rocks on the surface of another planet just absolutely enamored me and still does to this day.” She earned a PhD in geology at UCLA, then accepted a postdoc position at Caltech, where she helped plan the daily activities of the NASA Mars rover Curiosity and conducted research on the red planet’s rock cycle. The collection of rock samples on the moon, and eventually on Mars, could one day help answer questions about the early formation of the moon, the Earth, and the universe, NASA says.

But it’s not all about rocks for Watkins. Every astronaut goes through arduous training beyond their professional specialty, including flight readiness, robotics operations, and spacecraft systems maintenance. And there’s a lot of lab work. For more than 20 years, ISS crews have conducted hundreds of microgravity experiments. “I think there are multiple benefits that we achieve from the science that we do up there,” Watkins says. “The advancements that we can make in terms of medical research—those have direct impacts into our daily lives.” So do those that could boost our food supply. Among the experiments Watkins has worked on is XROOTS, an agriculture study that uses hydroponic and aeroponic nourishing techniques to grow plants in microgravity. It could one day help humans grow crops on the moon or on Mars—essential if humans are to make a monthslong journey to the red planet and stay awhile. But the research could also enhance the cultivation of plants grown in greenhouses on terra firma, leading to better food security for people on Earth. “So much of what we do is contributing to those next steps going forward using the ISS as a test bed for future exploration,” she says.

THE VIEW FROM HERE: Watkins (left) floats 272 miles over the Atlantic Ocean and works with colleague Bob Hines to test air- and water-based plant-growing techniques.

WATCH OUR INTERVIEW WITH WATKINS IN SPACE

AMONG THE STARS
KATE RUBINS BECAME FASCINATED WITH the genetic alphabet at age 12, when her dad brought her from their home in Napa, Calif., to a recombinant DNA conference in San Francisco. After college at UC San Diego, she earned a doctorate in cancer biology from Stanford, then ran a microbiology lab at the MIT Whitehead Institute for Biomedical Research. She was studying viral diseases when, one day, while writing grants, she took a break to fill out a job application to be an astronaut. Sure, studying biology had been one of her childhood goals, but so had exploring space. “I’d gone to space camp and had photos on my walls of galaxies,” Rubins says. “I’d never forgotten the astronaut thing.”

She wasn’t the only one with space dreams. NASA received more than 3,500 astronaut applications for the nine-member, 2009 class. “I expected a polite letter saying, ‘Good luck next round,’” Rubins says. “I got an interview. It was quite surprising.”

Over her 13-year career as an astronaut—including 300 days in space, the fourth most by any U.S. woman—Rubins has worked on hundreds of experiments. In 2016, she became the first person to sequence DNA in space. Ongoing DNA work could one day allow astronauts to diagnose illnesses in space and identify DNA-based organisms on other planets; it has already helped identify microbes growing at the ISS without transporting them back home for testing.

It’s the 12 hours and 46 minutes that Rubins has accrued during four space walks, however, that are proving to be useful in her current assignment: helping engineers design future lunar space suits. “It’s really critical to have the experience of space walk,” she says. “You are in this permanent state of free fall. It changes how you work when you can’t put your tools down on a surface. Of course, you have absolute vacuum outside, so you have huge temperature swings, from freezing you instantly to boiling you instantly, in the course of 45 minutes. Your space suit is protecting you from all that.”

Walking on the moon will be similar. “You’ll carry a 300-pound life support system on your back,” she says. “It’s physically taxing. You’re still working against quite a bit of pressure. The inside can start to feel like steel when they pressurize you. It’s very bulky, and you lose your dexterity. The best analogy I’ve heard is that it’s like you put on oven mitts, put on roller skates, and then try to do brain surgery.”

So it helps that astronauts are required to exercise as much as two hours per day while on the ISS, she says. Space flight can be tough on the body, causing bone density loss, muscle degradation, and changes in vision and blood flow. Resistance and cardiovascular exercise, on the ground and in space, are countermeasures to keep astronauts healthy. “We definitely have to work out,” she says. “I do CrossFit, lots of squats and deadlifts.”
LEADING THE WAY

NICOLE AUNAPU MANN MADE HISTORY on October 5 when she launched to the ISS as commander of NASA’s SpaceX Crew-5, becoming the first Native woman in space. She’s serving on the space station until April 2023. “It’s an accomplishment I’ve been working toward for many, many years,” she says. “My family was very excited, maybe a little bit nervous.”

Raised in Penngrove, Calif., Mann says her earliest dream was to land among soccer stars. When she got the chance to play at the U.S. Naval Academy for her role model, coach Carin Gabarra (a member of the U.S. national team that won the first women’s World Cup in 1991), she grabbed it. After graduating from the Naval Academy, Mann earned her master’s in mechanical engineering at Stanford, then joined the Marines, followed by flight school.

“The summer before my senior year at the Academy, I got to ride in the back seat of an F/A-18,” she says. “That’s the same aircraft the Blue Angels fly. That was the first time I realized I could be a Marine and a fighter pilot. I thought, ‘That is the coolest thing.’”

Mann’s skill set as a Navy pilot and a mechanical engineer equipped her to lead the astronaut corps in the development of the Artemis Space Launch System rocket and the Orion spacecraft (the capsule holding the astronauts, atop the rocket). And she constantly draws on her ability to focus intensely, developed while landing jets on aircraft carriers during her deployments to Iraq and Afghanistan.

“Landing on an aircraft carrier is a difficult thing to learn,” she says. “Especially at night when the deck is pitching, especially after a long mission that could have been six or eight hours. It really teaches you to compartmentalize and focus on the task at hand.” (Her call sign, Duke—think Iceman from the movie Top Gun—came from her John Wayne–like swagger.)

That experience came in handy during what she calls the hardest part of the two-year astronaut program: spacewalk training in the Neutral Buoyancy Lab, where there are full-scale mock-ups of International Space Station modules at the bottom of a giant swimming pool. “The trainings are six to eight hours long, both mentally and physically exhausting,” Mann says. “You’re wearing a space suit the entire time. Basically, it’s like running a marathon.”

But this marathon could come with a historic payoff. When Mann was assigned to the Artemis team in 2020, she told her then-8-year-old son, Jack, that she might walk on the moon one day. He was awestruck.

“He said, ‘When you’re up there on the moon, will you look for me? Will you wave?’” Mann remembers. “For us, it was a very special moment. Now we always pause when we’re outside and see the moon.”

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THE BOTEZ GAMBIT

by Kali Shiloh
photography by Austin Cox

An enterprising chess streamer finds her opening.
HEN SHE WAS 15 years old, Alexandra Botez won a national chess tournament that could have changed her life. In the palpable silence of a hotel banquet hall in Chicago, she’d dominated all three days of the 2011 Kasparov Chess Foundation All-Girls Championships, famous for its coveted first-place prize: a four-year, full-ride chess scholarship to the University of Texas at Dallas. By the final day, Botez, ’17, was so far ahead of the other 235 players that she didn’t even need to win her last game. She took a comfortable draw and finished undefeated, winning the scholarship.

But while her parents celebrated the prospect of a free college education, Botez, who grew up in British Columbia and Oregon, imagined an unwanted life unfurling in front of her. “It was that moment that I freaked out,” she says. She didn’t want to go to UT Dallas, and, more important, she realized she didn’t want to play chess professionally. She’d loved the game since her father began teaching her when she was 6 years old—a tradition passed down through generations of their Romanian family—and, ultimately, she would become a five-time Canadian National Girls Champion, a three-time Chess Olympiad competitor, and one of the top 10 female players in Canada. But historically, only the top 20 or so chess players in the world could make a living at it. Botez sensed that she would never be a world champion. “I’m very much an all-or-nothing person,” Botez says. “I don’t want to compete unless it’s my only goal and the only thing driving me, because if I’m not competing at my best, it’s not worth it.”

Instead, she applied to her dream school, Stanford, on a single-minded quest to be the best at something. Little did she know that a decade later, chess would, in a way, be that thing.

Although today Botez is a women’s chess master, an elite title given to players with a very high skill level, she is nowhere near the top of the sport. Her world ranking, as of late October, was 26,647th. (For those who speak chess, she has a peak FIDE rating of 2,092.) On the new frontier of chess, however, where grandmasters have Instagram accounts and e-sports teams sign online players like the NFL signs quarterbacks, Botez is a pioneer. She is a chess streamer—a content creator who broadcasts live videos of herself playing. With more than 1 million followers, her channel has broken streaming viewership records for the game and garnered lucrative brand partnerships. Players who outrank her have tried to mimic her success, but in the chess-streaming hierarchy, followers can’t be won with impressive ratings or calculated moves. For Botez, it was forgoing a career as a professional that gave her the time and experience to become a top streamer. With an income that matches those of many top-ranked players, her decision to turn down the chess scholarship has more than paid off.

It’s lonely at the top

BY HER SENIOR YEAR at Stanford, Botez was balancing a full class load and a venture capital–funded start-up. “Chess has this type of escapism that I really missed, so I wanted to start playing chess again,” she says. She was the president of the Stanford Chess Club but found only one or two worthy opponents. “That’s the thing—she’s so strong comparatively,” says former Stanford classmate and chess grandmaster Daniel Naroditsky, ’19. “Most strong players tend to play online because you have access to a much wider pool of players.” That’s exactly what Botez began doing in her dorm room—playing against strangers on Chess.com. But those one-off games didn’t give her a sense of community, so she joined Twitch, a platform many video gamers use to livestream themselves while viewers chat in real time with the streamer and one another.

Botez would cue up a live game on Chess.com, point a camera at herself, and broadcast both her computer screen and her camera feed on her Twitch channel so that anyone watching could then see her and her online chess board. As she played, Botez would respond to messages that popped up in the chat box. With humility and humor rarely seen in high-level competitors, she attracted a small audience of novice players, who quickly became loyal fans.

Just a few miles south, in Los Altos, the CEO of Chess.com was looking for new talent to diversify his site. Erik Allebest, MBA ’07, had co-founded Chess.com during his final quarter at the Graduate School of Business, and it soon became the largest online chess platform in the world. Today, it boasts 5 million daily users. But as he and his team added exclusive videos and lessons to attract more subscribers, they noticed a problematic pattern. “We’re starting to do more shows, we’re starting to do more content, and everybody who’s involved is a white man,” he remembers.

The gender breakdown on Chess.com reflected that of the greater chess community. In the early 2000s, the U.S. Chess Federation (USCF) membership was less than 1 percent female. “Many young girls don’t feel comfortable being so outnumbered by boys,” says Susan Polgar, who, in 1991, became the first woman to advance to chess grandmaster. (As a child, Botez attended Polgar’s all-girls chess camp every year, and last year she was elected as the youngest board member of the Susan Polgar Foundation, which strives to support women in chess. After years of the foundation’s advocacy, USCF
Hoping to add women to their talent pool, Allebest and his team pulled up lists of the top female players in North and South America. Botez, they saw, was just a few miles away. At the Coupa Café outside Green Library, Allebest invited her to record videos and lessons for Chess.com subscribers. It wasn’t long before she was livestreaming with the site and commentating at tournaments around the country.

“I saw chess as a way to be able to get other opportunities,” Botez says, though she still didn’t see it as a career.

THREE YEARS AFTER Botez graduated, her start-up—an AI-based system to help content creators reply to messages—was still struggling to catch on. She and her co-founder shut it down, and she moved to New York to—at last—devote herself to livestreaming on Twitch full time.

“Running a channel is like running a business,” she says. “It’s just that you’re the product as well.” To optimize her viewership, she streamed every night from 5 p.m. to 3 a.m., when there was less competition and therefore a greater chance of gaining viewers. The schedule was lonely and brutal, but she was determined to do whatever it took to become a top streamer. “I wasn’t the best chess player. I wasn’t the best content creator. But I was the best at making content about chess, or one of the best,” she says.

By the summer of 2020, Botez was on camera, live, for about 250 hours per month—an average of 8 hours per day, 7 days per week. To keep her 1 million followers engaged, she constantly experimented with new content, whether it was hustling chess hustlers in New York City’s Union Square Park, traveling around the world to cover the game’s biggest tournaments, adding her younger sister, Andrea, as a streaming cohost, or inviting fans to build a chess board in Minecraft, which broke a viewership record on Twitch. In December 2021, she and her sister were among the first female chess streamers signed to an e-sports team, Team Envy.

“Alexandra does a phenomenal job connecting all of the [social media] nodes,” says Naroditsky, who is also now a chess streamer. Botez has one of the top chess channels on Twitch, as well as a carefully edited YouTube channel, an active Instagram page, and a disciplined streaming schedule—a strategic combination that keeps her large audience growing.

In the spring of 2021, the best player in the world, reigning world champion Magnus Carlsen, reached out to Botez, offering to collaborate on a livestream. With a large chess board on the left side of the screen and Carlsen’s and Botez’s camera streams on the right, they talked about Carlsen’s childhood approach to chess, traded good-humored trash talk, and discussed the game on the board.

“What are your thoughts on the McCutcheon, with bishop G5 instead of E5 on move four?” Botez asked at one point, referring to a variation of the French Defense opening. “In general, it’s more fun to play for white than for black,” Carlsen said. For viewers, getting insight from chess stars in real time while
rooting the players on in the chat box was the new way to experience chess—and on Botez’s channel, it happened all the time.

The pandemic and the premiere of *The Queen’s Gambit* on Netflix more than tripled the number of daily active users on Chess.com, while the site’s accessible, playful online content began to transform the elite, exclusive culture that once dominated the game. “Fifteen years ago, you would never see a chess broadcast where anyone would laugh—at all,” says Allebest. “And now the game’s totally changed.”

Sometimes, while thousands of followers watch, Botez makes a tactically bad move and loses a queen. It’s almost always a game-ending oversight. “A lot of players, when they’re strong, they react negatively when they make a mistake,” Naroditsky says. “Alexandra manages to integrate it into the experience. She embraces the mistakes and she laughs about it, and it creates this incredibly positive energy on her stream.” Her fans began calling blundered queens the Botez Gambit, a name that has caught on in the wider chess community.

She takes the joke in stride. When she started her channel back in her Stanford dorm room, Botez wasn’t trying to showcase her skill or the competitive aspects of the game; she was trying to create a community. “It can be a very intimidating game, but here is a situation where it’s actually fun,” she says. “There’s people hanging out, we’re laughing, we’re playing chess, we’re learning. That is what I like most about this game, so I wanted to share it with my audience.”

So in a way, even when she loses, she wins.

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*Sharon A. Hunt, MD ’72*
Professor Emerita of Medicine (Cardiovascular Medicine), Stanford School of Medicine

*Yvonne A. Maldonado, MD ’81*
Senior Associate Dean of Faculty Development and Diversity; Taube Professor of Global Health and Infectious Diseases, Stanford School of Medicine
TWO-THIRDS into her narrative, LaDoris Hazzard Cordell writes, “So, when I went off to law school, I knew that my path would lead to my being the defender of all things righteous.” By the end of her first year, there were hints that her path “might not be so clear cut.” Her Honor is a testimonial, unfeigned, simultaneously pragmatic and idealistic. It is the story of an overwhelmed law student questioning her own legitimacy who overcomes her insecurities and ascends to the bench, becoming the first African American woman judge in Northern California and retiring as a California Superior Court judge.

Cordell, JD ’74, describes her first day on the bench: “I slipped on the robe . . . assumed an actor’s air of confidence, and stepped into the courtroom, determined to sit down and get through the hearing without looking like a complete fraud.” A later passage underscores the gravity of her position: “[J]udging is as much a test of one’s character and courage as it is a test of one’s command of the law.” Using examples from her actual cases, including those of a mental health patient who refused electroconvulsive therapy and a juvenile charged with murder after setting up a friend, Cordell offers an inside look at the justice system.

There is a rhythm to the book. It beats with the urgency of purpose. “I believe that judges are either activists for justice or black-robed do-nothings,” Cordell writes. She carried the mantle of the former, holding “a deep and abiding respect for judicial precedent,” while critics decried her as “the poster child for out-of-control judicial activism.” Now, no longer silenced by judicial canons, Cordell candidly criticizes the inequities of the system she was a part of for over 20 years, while acknowledging the role she played. She then offers 10 suggestions for legal system reform. Some are novel, some nuanced, and some are never going to happen. Still, they are delivered with the same earnestness as her own story. Her Honor is not without comedy. A lifelong cartoonist, Cordell notes that her well-known legal system caricatures, including one featuring a former House Speaker, drew many admirers—and one anonymous complaint, filed with a judicial disciplinary agency. And it is not without controversy. The case of two young men charged with vandalizing a Black family’s home, including burning a cross on their lawn, gives her an opportunity to “keep an open mind when it was time to sentence them,” she writes, “their racist conduct notwithstanding.” Instead of sentencing them to jail, she orders them to take Third World Cultures, a local community college course, and then meet with her after they’ve passed it. She later notes that “judges, as do all of us, harbor conscious and unconscious bias,” and wonders of her decisions, “Did I do the right thing? I believe so; reasonable minds could differ.”

Thoughtful and thought-provoking, Cordell’s memoir is an appeal to serve with honor. •

For she who would be loved, judging is a frustrating line of work; whenever a judge renders a decision, she is bound to make someone unhappy.

—LaDoris Hazzard Cordell, JD ’74, in Her Honor: My Life on the Bench . . . What Works, What’s Broken, and How to Change It, Celadon Books
We Recommend

**The Work Wife**
Alison B. Hart, ’95; Graydon House.
Being at the beck and call of a Hollywood power couple comes with a sky-high salary—but at what cost? (Also, do read the author’s note.)

**The Immortal King Rao**
Vauhini Vara, ’04; Norton.
Twelve years in the making, this must-read debut novel explores a dystopian society that’s hurtling toward obliteration.

**Solito: A Memoir**
Javier Zamora, Stegner fellow 2016–18; Hogarth.
At age 9, he crossed 3,000 miles in seven weeks, alone but for six strangers and a human smuggler. Vivid and unguarded.

**Beloved Economies: Transforming the Way We Work**
Jess Rimington and Joanna L. Cea, ’03; Page Two.
A blueprint for boosting the well-being of people and the bottom line, informed by companies doing just that.

**The Underwater Eye: How the Movie Camera Opened the Depths and Unleashed New Realms of Fantasy**
Margaret Cohen, English professor; Princeton U. Press.
Day or night, the landlocked can explore the deep blue sea, thanks to scuba diving, technology, and artistry. Dive in.

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Day or night, we the landlocked can explore the deep blue sea, thanks to scuba diving, technology, and artistry. Dive in.
**Anatomy Of A Champion**

By Dick Gould, Emeritus Men’s Tennis Coach, ’59, MA ’60, with Tim Troupe Noonan ’75


Amazon.com: $9.95 eBook; $19.95 paperback; $26.95 hardcover. www.anatomyofachampion.net

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**Teaky Squeaker’s Greatest Plan**

By Michal Pasternak, BSME ’01, MSME ’02, illustrator: Armand Silvani

Teaky Squeaker is an anxious mouse. She sneezes every time she smells cheese and, even worse, she’s scared to leave her home. What happens when she is forced to confront her greatest fear? With creativity and bravery, Teaky comes up with a crazy plan. Hopefully it works! Kirkus Reviews calls this rhyming picture book “an engaging mouse adventure with a solid moral.” Available at TeakySqueaker.com

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**A Home Gamer’s Guide to Financial Independence**

By Marshall H. Kaplan, Ph.D. ’68

This new book is dedicated to teaching the retail investor how to successfully trade common stocks through online brokers while minimizing financial risks and avoiding high-anxiety situations. The methods and ideas presented will enable novice and new traders to become successful retail investors and achieve financial independence. Today’s stock investors must take advantage of 21st Century technology to be successful.

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**Flat Space Cosmology: A New Model of the Universe**

By Eugene Terry Tatum, ’78, and U.V.S. Seshavatharam

This compilation, based entirely upon recent peer-reviewed scientific journal publications, encapsulates how the Flat Space Cosmology model has become the primary competitor to the inflationary standard model of cosmology. New ideas concerning black holes, dark energy and dark matter are presented and shown to correlate well with astronomical observations. Available now in online bookstores.

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**Tattooed History: The Story of Mokomokai**

By Robert K. Paterson, JSM ’72

The story of Maori ancestral remains—preserved tattooed heads called mokomokai—that were the subject of acquisition and trade after New Zealand was explored by European and American visitors at the start of the 19th century. Most were to be found in museums and collections abroad until they became the subject of Maori repatriation requests that continue to the present. Described as being the standard reference work on its subject.


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**The Soul Solution: A Guide for Brilliant, Overwhelmed Women to Quiet the Noise, Find Their Superpower, and (Finally) Feel Satisfied**

By Vanessa Loder, GSB ’07

Many women hustle to overachieve at work and at home, and it leaves us exhausted, overwhelmed and looking for answers. What if the point isn’t to crush it in life, but to savor it? *The Soul Solution*, women’s leadership expert Vanessa Loder shares a powerful and practical guide to help women recover our true selves and our joy in living. www.vanessaloder.com/soul-solution

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**Marriage Unveiled: The Promise, Passion, and Pitfalls of Imperfectly Ever After**

By Sherry Cassedy, AB ’78

Prominent family lawyer, mediator, and marriage teacher, lifts the veil of silence to engage couples across the spectrum of love in reflection and renewal. Weaving the vulnerable story of her own marriage to Matt Sullivan (’78) with insights from her decades of work in the trenches of marriage and divorce, *Marriage Unveiled* offers essential information and inspiration for the marriage journey.

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**Great Lakes Rocks: 4 Billion Years of Geologic History in the Great Lakes Region**

By Stephen E. Kesler, PhD ’66

A fascinating overview of the history of our planet as seen in the beautiful Great Lakes region. The growing continent was flooded by the sea, covered by glaciers, hit by a giant meteorite, almost split apart, and grew mountains that rivaled the Himalayas. The resulting landscape controlled early European exploration of North America and presents important challenges for twenty-first century sustainability.
College Admissions: The Essential Guide for Busy Parents
By Beth (Kneeland) Pickett, '86
Overwhelmed by today’s college admissions process? Looking to support your teen without taking over? This book offers the latest guidance on building and balancing the college list, demonstrating interest, strategizing early application options, and more. A calm and confident application season is possible when you follow the steps in this guide. Available in Kindle, Audible, and paperback formats.

Almost Innocent: From Searching to Saved in America’s Criminal Justice System (Amplify, 2021)
By Shanti Bright Brien, JD ’99
Shanti Bright Brien was a practicing criminal defense lawyer and a recovering-NFL wife when the government began a criminal investigation of her husband’s company. Her personal-professional collision frames this memoir which shines a light on the accused and those who fight for them. Kirkus Review calls it one of the “Best Indie Books” of last year.

The Idea Which Thinks Itself
By Jon Foyt ’53, MBA ’55
It’s really a dialogue between the protagonist and his imaginary friend. Amazon says: The Idea Which Thinks Itself is avant-garde fiction about one man’s true self as influenced by his imaginary friend. Set in the Great Central Valley of California, the author meets local businessmen who prosper and young women who challenge the Capitalist system which they say is dominated by Old White Men.

COOL: Women Leaders Reversing Global Warming
By Paola Gianturco, ‘61
COOL features photographs and interviews with 27 women leaders in 10 countries who are reducing and, over time reversing, global warming. Their stories and practical suggestions will inspire you to take climate action. The book, co-created with Paola’s then-12-year-old granddaughter, is printed on Forest Stewardship Council certified paper; a tree will be planted for every book sold. A great gift!

Retirement, Living It and Writing About It
By Jon Foyt ’53, MBA ’55
Memories of growing up in The Great Depression, World War II, the Korean War, careers in radio, banking, and real estate, writing novels, then qualifying for retirement living.

Voices of Our Ancestors: Language Contact in Early South Carolina
By Patricia Causey Nichols, PhD ’76
The first detailed linguistic history of South Carolina describes contacts between distinctive language cultures in the colonial and early federal eras by Indigenous peoples, Africans, and Europeans. In a new preface, Nichols reflects on how diverse groups shape language communities then and now.

Glimmer
By Richard Alexander, MA ’74
A surrealistic thriller that explores the relationship between science and faith, reality and imagination, chaos and order. Researchers at a semi-secret laboratory in the Santa Cruz Mountains think they may have found a medical cure for the mass killings so frequently occurring in our modern world. However, things turn out not to be what anyone expected! Available on Amazon/Kindle.

Space, Time, Consciousness, Out-of-Body Experiences and Creating the Future
By Treilor Banks, ’72
This book describes Out-Of-Body Experiences. Our sensors (eyes, ears, nose, skin, taste buds) contain us in the present, or space. In order to move through time, we must shut off our sensors. Doing so frees us from the confines of space and we find ourselves in imaginary time, or the future, where OBEs occur. Available on Amazon.
Buffalo Dreamers
John Sutthoff Newman, ’71
Sam Comstock, a young Iraq war vet, suffers from suicidal PTSD. His Marine sniper skills lead him to Montana on a mission to kill migratory buffalo that are presumed to carry an infectious disease for cattle. Taken hostage by a band of Indian warrior-dreamers who are determined to save the buffalo from slaughter, Sam comes to depend on his captors and together they fight for survival. johnsnewman.com

The Fantastic Adventures of Alex in the Broccoli Forest
By Paul Insel, Dept. of Psychiatry, Stanford University
A positive remedy for children's picky eating—through the power of story and the inspiration of learning. Go on a whimsical journey with Alex, a little boy who discovers the secrets of the five food groups through his encounters with a series of friendly food characters. By learning how nutrients in different foods play important parts in our health, Alex gains a new enthusiasm for healthy foods.

Great Discoveries in Psychiatry
By Ronald Chase, ’62
"Chase’s ability to cultivate a winning, lively tone ... sets Great Discoveries in Psychiatry apart from other histories. It deserves a place as a foundation read in not just mental health collections, but for general-interest readers as well." —D. Donovan in Midwest Book Review. For more details go to ronaldchaseauthor.com.

Big Basin Redwood Forest: California's Oldest State Park
By Traci Bliss, ’70, MA ’82, PhD ’86
The Stanford community played a major role in creating Big Basin. Senator Leland Stanford's vision, together with a botany professor's undaunted stewardship, helped protect the forest land from a national scandal over Mark Hopkins' estate. Then women journalists galvanized Californians to save the ancient redwoods giving birth to the environmental movement. Includes dozens of color photos and enduring lessons for forest management.

Freelance Writing: How to Make Money
By Peter Saxton Schroeder, MBA ’70
"The business advice of other freelance writing books is wrong," explains Schroeder, a 30-year freelance writer. He presents strategies for both beginner and established writers to fly free worldwide, increase article income 50 to 100 percent, get comped accommodations at top resorts, resell the same articles, and earn an income comparable to that of a corporate CEO.

Dressing Up the Stars: The Story of Movie Costume Designer Edith Head
By Jeanne Walker Harvey, ’81

To purchase a book, visit publisher’s website, search Amazon.com or Barnesandnoble.com, or visit your local bookstore.
American Comparative Law: A History
By David S. Clark, AB ‘66, JD ’69, JSM ’72
Details the intellectual and social history for the importation of foreign, and export of American, legal rules, institutions, ideology, and culture from the colonial period through 2020. “A rich and absorbing contribution to the intellectual history of law in the modern world.” —Lawrence M. Friedman, Stanford University. Available at OUP, Amazon.

Heroes, Horror, & Humor in WWII
By Geoffrey S. Keeler, MS ’72
This collection is 60+ years of fascinating, inspiring, tragic, ironic, and even humorous personal stories told to the author about experiences in and surrounding WWII. The stories are about Allied and enemy soldiers/sailors/flyers, civilians, POWs, politicians, the Japanese Internment, Medal of Honor recipients, and also features adventures of two Stanford 1930s alumni! Maps, photos, and unique examples of postal material of the war era are also included.

A Hush Fell Over the World
By Kimberly Fitchen-Young
Illustrated by George Owen
Whimsical, yet raw, this rhythmical children’s book is written from a teen and his younger brother’s perspective as they navigate their lives uprooted by the global pandemic. A time capsule gem, it candidly portrays the difficult trials and challenges the world persevered through during an unprecedented era. For all ages, a bookshelf must have!

Get Fit For Life: My Journey With Fitness, Health, And Aging
By Jack Lowe, ’63, MBA ’65
“Growing old doesn’t mean resigning yourself to a slow and inevitable decline. Treat your life as an adventure: cherish each new voyage into the unknown and stay fit and healthy so that you can enjoy it. Most importantly, have fun doing it. It’s never too late to start—until it is.” —Jack Lowe. More information at www.fitforlife.foundation/news/book. Available on Amazon.com.

Benghazi: A New History
By Ethan Chorin, IPS ’93
The book argues that Benghazi profoundly shaped the world we live in today, accelerating polarization at home and risk aversion abroad. A former U.S. diplomat and witness to the attack, Chorin weaves together his and other dramatic witness accounts, reflections by former senior policy makers, and years of in-country experience to address questions never answered—and some never asked. He explains where the attack came from and challenges both Republican and Democratic narratives.

Robert L. Hays Ph.D. ’73
Looking for a gift for a young person in your life? Is he or she feeling uncertain, confused, misled, or manipulated about life in general? Is he or she willing to assume the world can be understood, and wants to take charge of life and make a difference? This book assumes evolution is true and the supernatural does not exist. It gives a scientist’s answers to questions about life and a person’s place in it. Amazon ASIN:B0B3S9F5JP

Robert L. Hays Ph.D. ’73
Did you know the basis of Western Civilization is to be found in “The Gap”—a 5 million-year period starting at the split between the lines leading to humans and chimpanzees, and ending with the rise of civilization? During The Gap, the distinctive aspects of human nature evolved while humans lived in small, family-centered, nomadic, and subsistence bands. Dr. Hays draws implications for improving Western Civilization today. Amazon ASIN: B095L92ZC7
The Walsingham Gambit: Deception, Entrapment and Execution of Mary Stuart, Queen of Scots
By R. Kent Tiernan, '67
A new and unique insight into the hidden history associated with the regicide of Mary, Queen of Scots. This hidden history is revealed in great detail describing how English deception planners led by Sir Francis Walsingham designed, engineered, and executed a complex 7-year operation to expand Queen Elizabeth I's power by ending Mary's life.

Marching Toward Coverage: How Women Can Lead the Fight For Universal Healthcare
By Rosemarie Day, '88
As we emerge from the pandemic, health reform expert Rosemarie Day provides a viable new path to reduce the suffering faced by Americans who lack healthcare. An empowering and engaging book! "The book is a primer in healthcare and an activist call to action in one, a must-read for anyone interested in better health for all in the U.S."
—Sandro Galea, Dean of Boston University School of Public Health

Ayomide and Seyi’s Kitchen: A Kids’ Guide to Plant-Based Nutrition from A to Z
By Margaret Towolawi, MD, '04
Dr. Margaret Towolawi is a doctor mama on a mission to get more people—young and old—to eat more plant-based. This book inspires children to develop a love for diverse plant foods at a young age by taking them on a whirlwind alphabet tour. Families are encouraged to try some of the foods mentioned in the book and start getting creative in the kitchen...
TOGETHER! www.margarettowolawind.com

The Black Fives: The Epic Story of Basketball’s Forgotten Era
By Claude Johnson, MS '84
A narrative non-fiction about the pre-NBA history of African Americans in basketball. Going back to the late-1800s, it humanizes the once-forgotten Black pioneers whose vision and efforts shaped today’s game, weaving through New York City, Washington DC, Pittsburgh, and Chicago to create an irresistible new sports quilt that rewrites basketball history. Abrams Press, May 2022, 480 pages. Available on Amazon.

Data Science In Context
By Alfred Spector, PhD ’81; Peter Norvig, Distinguished Education Fellow; Chris Wiggins; Jeanette M. Wing
Data science underlies applications used by billions and is having a rapidly growing impact on almost all areas of research. But, what do you really know about this world-changing, yet risky, discipline? Four leading experts convey the excitement and promise of data science and examine the challenges in gaining its benefits and mitigating its harms.

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FACULTY
Donald Robert Buechel, of Campbell, Calif., January 3, at 97. He served in the Navy for 32 years, during which time he was chair of anesthesiology at Chelsea, Oakland, and San Diego naval hospitals. He spent his last tour of duty as commanding officer of the naval hospital at Roosevelt Roads in Puerto Rico. He then practiced at Stanford and Santa Clara Valley Medical Center. He retired as professor emeritus of anesthesiology. Survivors: his wife of 69 years, Joan; children, June, ’73, Sally, Rob, ’79, and Rebecca, ’85; and three grandchildren.

William Arthur Tiller, of Scottsdale, Ariz., February 7, at 92. He was professor emeritus of materials science and engineering and a world-renowned scientist in the solidification of various materials. His work was critical to the then-nascent semiconductor industry. As a result of his academic contribution, he was the first Stanford faculty member to be appointed—rather than promoted to—full professor. He served on Wernher von Braun’s science team at NASA, leading the materials engineering efforts and developing materials for the Apollo nosecones and landers. He was predeceased by his wife, Jean, and son, Jeffrey. Survivors: his daughter, Andrea, ’79.

Nancy Jewell Cross, ’40 (physical science), PhD ’47 (chemistry), of San Francisco, March 8, at 101. She completed her undergraduate degree at Vassar College. In graduate school, she held a DuPont Fellowship in chemistry and worked during the summer for the Stanolind Oil and Gas Company. In the 1960s, she worked to expand public transit in the Menlo Park and Palo Alto areas, and in 1998, she was elected Alameda-Contra Costa transit director. She was passionate about tenants’ rights and the environment. Survivors: her seven nieces and nephews; nine grandnieces and grandnephews; and great-grandnephew.

Julius "Jay" Quetnick, ’41 (general engineering), of Hillsborough, Calif., June 24, at 101. He was a member of Phi Sigma Kappa. He worked for North American Aviation until World War II, during which he served in Africa and Italy. Returning to the Bay Area, he started a construction business in South San Francisco with his cousin, and later helped develop the Squaw Valley Inn for the 1960 Winter Olympics. He enjoyed a 75-year career in civil aviation. He was predeceased by his wife of 45 years, Pina. Survivors: his second wife, Helen Simonson; and daughters, Sandra and Lita, ’73.

Gerald John Origlia, ’46 (economics), MBA ’48, of Alamo, Calif., May 25, at 96. He served in the Navy. He worked for U.S. Steel for 20 years. After working at Davis Wire in Los Angeles, he and a partner formed Advanced Wire Technology, which was later purchased by Georgetown Steel Company. He was devoted to the John Muir Foundation and the environment. Survivors: her seven nieces and nephews; nine grandnieces and grandnephews; and great-grandnephew.

A Philanthropist at Heart

"I can’t stand rich people," Lorry Lokey once told a reporter.

Lokey, a colossal success by any measure, never forgot the lessons he learned as a child of the Depression. Even in lean years, his parents set aside about 8 percent of their income for charity. Lokey would go on to echo their example many times over.

He lived modestly—flying coach, buying suits on sale—and reveled in giving money away. "What a good feeling this gives me. I would have it this way any day before wanting a jet plane or yacht," Lokey wrote when he joined the Giving Pledge in 2010, committing to donate the majority of his fortune to charitable causes.

Lokey, ’49, founder of the press release distribution service Business Wire, died on October 1 in Atherton, Calif. He was 95. A onetime editor of the Stanford Daily, Lokey launched Business Wire in 1961. In 2006, he sold the company to Berkshire Hathaway. Over the course of his life, Lokey donated upwards of $800 million, more than 90 percent of his wealth. At Stanford, his philanthropy extends from endowed chairs and scholarships to the Stanford Daily Building and a leading-edge stem cell research facility.

Lokey’s support of emerging researchers at the Stanford Center for Definitive and Curative Medicine leads to clinical trials of groundbreaking new therapies for children with devastating diseases," says Lloyd Minor, dean of the School of Medicine. "I recall fondly Lorry’s face lighting up each time he learned about the impact these trials had on children and families."

"He was just really brilliant about the way that he gave his money away," says daughter Miriam Khalsa. "He would connect people working on the same types of projects so that they could collaborate. He went beyond just writing the check. His heart was quite into it, and he got as much out of it, I think, as people who received it.”

Classics professor Richard Saller, a former dean of the School of Humanities and Sciences, notes Lokey’s feisty wit. “I congratulated him and thanked him on the story that he was the 12th most generous philanthropist in the country the prior year, and he sharply corrected me that he was the 12th,” he says. “He smiled when he said that.”

In addition to Miriam, Lokey is survived by his wife of 73 years, Beth, and son, David. Survivors: her children, Len and Maggie, ’77; four grandchildren, including David Pringle, ’08; and three great-grandchildren.

Carlene Meredith Drake Putter, ’48 (social service), of Fresno, Calif., August 5, at 96, of cancer. After graduating, she worked for San Mateo County before moving to Fresno County and taking a job working with delinquent girls in the probation department. In 1967, she began a second career in the Fresno Unified School District, teaching preschool and kindergarten until she retired in 1991. She organized innumerable family camping trips to every corner of California, and loved college sports and her Sunday school group. She was predeceased by her husband, Owen. Survivors: her children, Diane White, Richard, and Brian; and five grandchildren.

1950s
Eula Bernice Hartley Holubar, ’50 (education), of Menlo Park, April 8, at 94. She taught at Oak Knoll School until her four children were born. She never lost touch with her family roots in Tulelake, Calif., making sure to bring her kids to her parents’ ranch there for extended summer stays. She was engaged in the Oak Knoll School PTA.
Farewells

the Menlo Park Presbyterian Church, and the Stanford Parents Club. She loved traveling and Hawaiian quilting techniques. She was predeceased by her first husband, Al, ’49, and second husband, Bill Gruber, ’47. Survivors: her children, Michael, ’75, Kent, ’78 MA ’79, Carey, and Jay; six grandchildren; and sister, Eileen. -

Margery McLeod Wheat Huyck, ’51 (history), of Aptos, Calif., December 28, 2021, at 92, of pneumonia. She worked briefly for NBC in San Francisco before getting married. After living in Marin County and Southern California, she moved to Aptos, where her husband established an engineering and architectural practice. She was an avid reader, gardener, and bridge player, and she made her home a popular gathering place for extended family. Survivors: her husband of 66 years, Richard; children, Jefferds, ’81, Amy, ’79, Nancy, and James; and granddaughter, and sister, Susan Wheat Cony, ’54.

Norma Irene Reddert Brown, ’52 (music), of Santa Rosa, Calif., May 13, 2021, at 89, of congestive heart failure and chronic obstructive pulmonary disease. After earning a master’s degree in musicology from Columbia University, she and her husband traveled to Vienna to study piano. When her son was appointed music director of the Santa Rosa Symphony, she volunteered behind the scenes raising funds, hosting visiting artists and helping to grow the orchestra. She started the Santa Rosa Junior College chamber music concert series in 1971. Survivors: her husband of 64 years, Corick, ’51, sons, Derek, MBA ’91, Keven, and Ryan; five grandchildren; and sister, Wilson Walker Leake, ’52 (biological sciences), of Kennewick, Wash., April 24, at 91, from Parkinson’s disease. He attended the University of Texas Medical Branch at Galveston. After completing an internship in anesthesia, he moved to Seattle and joined the Associated Anesthesiologists. He spent his final years of active practice as an anesthesiologist for the Seattle Hand Surgery Group. He was active in his church and medical mission work and enjoyed doing jigsaw puzzles and tai chi. Survivors: his wife, Jewel; children, Jennifer Leake Lutz, Wilson, Lawrence, and Nelda Yalowick; stepson, John MacDonald; nine grandchildren; and brother, Donald, ’57, MS ’58, PhD ’62.

Jean Eleanor Henderson Osborn, ’52 (history), of Champaign, Ill., June 20, 2021, at 91. She contributed to the Stanford Daily. While earning a master’s degree in education, she helped devise the direct instruction curriculum for teaching reading, language and arithmetic to disadvantaged children, a program that was eventually implemented nationwide. She became the associate director of the University of Illinois’s Center for the Study of Reading and was appointed to the advisory board for the National Institute for Literacy during the Bush administration. She was predeceased by her husband, Howard, PhD ’55. Survivors: her children, Mark, Steve, Adrien, Emily, PhD ’01, and six grandchildren. -

Garner Arthur Beckett Jr., ’53 (political science), of Carmel Valley, Calif., May 25, at 90. He served as a lieutenant junior grade in the Navy and earned his MBA from Harvard. After a distinguished business career, he spearheaded the creation of the Richard L. and Patricia R. Beckett Fund and the Chiler A. Beckett, Jr. and Joyce H. Beckett Undergraduate Scholarship Fund, both at Stanford. He was predeceased by his wife, Joyce (Hupp, ’54). Survivors: his children, Mark, ’80, MS ’81, Rick ’83, MBA ’87, and Katherine; six grandchildren, including Kendall.

Erland Howard Heginbotham, ’53 (economics), of North Bethesda, Md., June 2, at 90, of cancer. At Stanford, he was a member of Alpha Kappa Lambda and was involved with KZSU radio station and participated in the symphony orchestra. During a long foreign service and governmental career, he was founding director of the Foreign Commercial Service and received the Bronze Medall from the U.S. Department of State. He was the author of three books. He also founded Gateway Japan and taught classes in Asian economic development at Johns Hopkins University. Survivors: his wife of 62 years, Eleanor Elson; children, Robin Carol and Eric; three grandchildren; and brother, Stanley, ’59.

Carol Nelson Noman, ’53 (Romantic languages), of Hillsborough, Calif., July 20, at 91. She was a passionate traveler with a fondness for France. She brought her enthusiasm for French culture to the Bay Area by becoming a docent and lecturer for the Fine Arts Museums of San Francisco, and serving as president of Vieilles Maisons Françaises. She was a reader, card shark, and member of the Franciscan Club. She was predeceased by her son Andrew. Survivors: her children, Kathryn Urban, Cynthia Armacost, and Kipp; and five grandchildren, including Elizabeth Hogbin, MBA ’00.

Eyvind Marcus Payne Jr., ’54 (psychology), of Knights Landing, Calif., June 15, at 94, and Theta Chi. After receiving a degree in agricultural economics, he became a full-time farmer on his family’s Eldorado Ranch. During his 64 years of farming, he served as a California deputy secretary of agriculture and on numerous agricultural-related boards. He lived a life of music and creativity, building sculptures out of spare metal parts from old farm equipment and playing with a folk and bluegrass band, the Putah Creek Crawdads. Survivors: his wife of more than 60 years, Gerda; sons, Eric and Olen, ’88, and three grandchildren.

Robert Edwin Long, ’54 (geology), of Signal Hill, Calif., June 20, at 88. He was a member of Delta Chi. He was predeceased by his wife, Nancy. Valerie Marie Giorgi Maramont, ’54 (social service), of Clayton, Calif., December 7, 2021, at 88. After graduating at 20, she earned a teaching credential at San Jose State University. Her life’s passion was teaching grammar school students, and she served as a preschool principal before retiring as the director of a school with involved football games, her ‘49 Chevy, moonlight walks around Lake Lag, and symphony class. She was a born-again Christian. Survivors: her children, Rocky, Lee Ann, Alan, and Lisa; eight grandchildren; and two great-grandchildren.

Barbara Viola Bentley Packard, ’54, MS ’55 (mathematics), MS ’77 (computer science), of Palo Alto, May 21, at 90. She was a mathematician for NASA’s Ames Research Center before joining Hewlett-Packard, where she became an R&D engineer and manager while working toward her second master’s degree. She managed a portion of the National Science Foundation’s early development of Microsoft’s Windows. She was predeceased by her husband, John, ’55, MBA ’61, and her son, Robert, MBA ’89. Survivors: her daughters, Dana Dooley, ’79, MBA ’92, Becky Nagy, and Leslie Martin; six grandchildren; and brother, Donald, ’55, MS ’58, PhD ’62.

Nathan Alan Fred, ’55 (economics), of Greenwich, Conn., March 12, at 87. She contributed to the Chaparral rum magazine. She was a research collaborator at UCLA’s Institute of Archaeology, where she studied a collection of Stone Age tools. In 1975, she established a nonprofit, the 3rd armored division in Germany. He managed a portion of the National STEM Program. At Stone and Webster, he helped build nuclear reactors and coal-fired power plants. He retired to Pasco Springs, where he enjoyed skiing, hiking with the Gray Wolves Club, and working at the local ski shop. He was predeceased by his wife of 50 years, Carol. Survivors: his children, Rocky, Lee Ann, Alan, and Lisa; eight grandchildren; and two great-grandchildren. -

Elmer Alvah Thomas, ’55 (mechanical engineering), of Pasogo Springs, Colo., July 14, at 94. He was a member of Phi Kappa Psi. He served in the Navy during the Korean War in the flight crew of an amphibious PBY, carrying VIPs and classified mail. At Stanford, he worked on nuclear projects for the U.S. space program. At Stone and Webster, he helped build nuclear reactors and coal-fired power plants. He retired to Pasgo Springs, where he enjoyed skiing, hiking with the Gray Wolves Club, and working at the local ski shop. He was predeceased by his wife of 50 years, Carol. Survivors: his children, Suzanne Lauritzen, Lynda, and Brian; four grandchildren; and sister, Ruth Ellen Jahne Waters, ’55 (communication), of Redwood City, June 13, at 88, after a fall. She contributed to the Stanford Daily. She started her career in the newspaper business before shifting to art and community building. Her sculptures were exhibited around the country and overseas, and for the past 45 years, she built spaces in the Bay Area where artists could share their work. In

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2014, she was named Woman of the Year by U.S. Rep. Jackie Speier. Survivors: her husband of nearly 68 years, Phil, '55, MA '57; children, Kirk, Richard, and Sharon; and three grandchildren.

Frank Dennis "Denny" Boren, '56 (economics), JD '58, of Pacific Grove, Calif., May 25, at 88. He was a member of the Class of 1958 and served in the Air Force. He worked as an attorney for 20 years before shifting to real estate development. His real love was the natural world and starting in 1986 he devoted himself to conservation work. During his three years as president of The Nature Conservancy, membership doubled and over 1 million acres of land was protected. He was predeceased by his second wife, Gail Simpson. Survivors: his daughters, Ashley, '83, MA '89, MBA '89, Dana, and Sarah; stepdaughter, Suzie Forsyth; seven grandchildren; and four stepgrandchildren.

Craig Tricou Callahan, '56 (history), of Pawleys Island, S.C., August 2, at 88. He was a member of Delta Upsilon, played on the golf team, and joined the Marine Reserves. He was a sales representative for the American Can Company and later worked for Reynolds Metals in Richmond, Va. His amateur golf pursuits spanned more than 65 years and included an Olymcpilcub championship. He was a longtime member of Trinity Lutheran Church. Survivors: his wife of almost 64 years, Dee; three daughters, Lisa, Cathy, and Lori; and seven grandchildren.

David John Dunn, '56 (social science/social thought), of San Rafael, Calif., June 17, at 87, of heart disease. He was a member of Alpha Tau Omega, was on the basketball team, and played baseball. He served in the Army. He worked for more than 50 years as an investment adviser, retiring at age 85. He and his wife loved traveling to Maui, Ireland, and London. He was predeceased by his wife of more than 50 years, Janet. Survivors: his children, Daniel, '84, MBA '91, Susan, Diane, and David; and eight grandchildren, including Hannah, '24.

Elisabeth Janet Pischel Heisler, '56 (nursing), of San Francisco, May 29, at 88, of complications from a hip fracture. After raising her children and volunteering at their schools, she trekked through India and Pakistan, biked across Iowa, and sailed the coast of California with her second husband, Felix Knauth. She discovered her Eastern roots with numerous solo trips to Austria and Germany. She loved Fallen Leaf Lake, poetry, and classical music. She was predeceased by her first husband, Ivan, '44, MD '48. Survivors: her children, Karl, '80, and Karen; and granddaughter.

Richard Lars Kyberg, '56 (petroleum), of Denver, July 26, at 88, of heart failure. He was a member of Alpha Delta Phi. He earned an MBA from Harvard, worked briefly in the oil industry, and acquired Kenney's Marine, a recreational boat dealership. He was active in the Denver Rotary, Denver Country Club, and Colorado Air Club, and he enjoyed visiting his Swedish relatives. He established the annual Brother Lars Kyberg four-year scholarship for qualifying Stanford undergraduates. Survivors: his sons, Richard, '84, and Robert, '86; two grandchildren; and sister.

Lewis H. Mottley Jr., '56 (economics), MBA '58, of Bowie, Md., May 7, at 87. He was a member of the Kappa Alpha. He went from teaching at City College of San Francisco to a long career in market research. He then worked as an adjunct professor of business before wrapping up his professional life at the Visitor Services Office of the Library of Congress. He was predeceased by his wife of 50 years, Joanne. Survivors: his daughters, Katharine, '90, MA '91, and Sarah; and two grandchildren.

Barbara Anne Roche,'56 (history), of Louisville, Ky., May 8, 2021, at 86, following a head injury. She contributed to the Stanford Daily. She was an ordained elder and minister in the Presbyterian Church. She spent a year at United Theological College in Bangalore, India, served as editor of Horizons magazine, and became a member of the Board of Directors of the Incarnation Center in the late 1970s by the Graduate Theological Union Women’s Center. She toured the world as a journalist, consultant, and clergy member. Survivors: her sister, Georgia Gleason, '60; niece, Katie Gleason; nephew, Patrick Gleason; and cat, Cooper.

Ronald Albert Wagner, '56 (history), LLB '59, of Walnut Creek, Calif., May 23, at 87, of cardiovascular disease. He was a member of Delta Tau Delta, played on the baseball and basketball teams, and worked as an investigative agent in the Air Force. An attorney for 50 years, he established the Law Office of Wagner & Wagner with his second wife. He taught law at the community-college level and performed as part of the Ron Wagner Quartet for 40 years. He was predeceased by his first wife, Paddy. Survivors: his wife, Sandi (Fouke, '65); daughters, Wendy and Gretchen; three grandchildren; and sister.

Hartley Dumas, '56 (communication), of San Francisco, June 2, at 87. He was a member of Sigma Nu/Beta Chi. After serving in the Navy, he joined the family insurance firm, Cravens, Dargan, and Co., in San Francisco. He was president of the Pacific-Union Club and San Francisco Golf Club and served on the board of the Cypress Point Club. He was a patron of the arts, an avid foodie, and played a mean game of dominoes. Survivors: his wife, Mary Lou Myers; children, Martha, '80, Malcolm, Alice, Frank, and Julia Cravens Whitney; stepchildren, Paul Myers, Stephen Myers, and Claire Myers; grandchildren; great-grandchildren; four sisters, including Susan Good, '59; and former wife, Nellie Norris Cravens, '58.

Joyce Hildegarde Tanno Hansen, '57 (biological sciences), of Napa Valley, Calif., May 14, at 86. She completed two years of Stanford Medical School before getting married. She was curious about everything she encountered, and made academic a priority as she raised her children. Her strength of mind helped her to achieve a 100-pound weight loss. She loved classical music. She was predeceased by her husband, Peter. Survivors: her children, Chris, Jil, Thor, Liz, and Alex.

John Douglas Trousdale, '57 (economics), of Mansfield, Texas, August 12, 2021, at 85, of progressive supranuclear palsy. In his government and military career, he worked for the Air Force, Army, and Army Air Force Exchange Service. He was a member of Hope Lutheran Church and had a passion for gardening, investment clubs, and watching the Texas Rangers. He is remembered for his dedication to his family and friends. Survivors: his wife, Virginia; children, Amy Fornero, Michael, and Shannan; and five grandchildren.

Kathleen Patricia Concannon Brooks, '58 (history), of Morgantown, W. Va., May 21, at 85. After earning a PhD in biochemistry at UC Davis, she worked as a researcher at West Virginia University. In the mid-1980s, she joined as a clinical chemist and served as associate laboratory director at Ruby Memorial Hospital. She was a Benedictine oblate. She enjoyed tennis, swimming, and being outdoors in West Virginia and the Sierra Nevada. She was predeceased by her son David. Survivors: his wife of nearly 56 years, Margaret; sons, Scott and Christopher; four grandchildren; and brother.

Mirrie Kay Brown Hopper, '58 (history), of Point Roberts, Wash., February 13, at 85. After raising her children, she worked as a substitute teacher in the Los Angeles Unified School District, primarily with students with special needs. She was the president of her local Stanford alumni group and her children's school social clubs for freshmen and current students. She held season tickets for Stanford football games for many years. She was predeceased by her daughter, Amanda. Survivors: her husband of 63 years, Buck, '58; and sons, Tom, and Ted, '84, MA '95.

James Monte Pollock, '58 (history), of Portola Valley, Calif., July 5, at 86. He was a member of Sigma Chi. He worked for the Penn Mutual Life Insurance Company and later formed Pollock Financial Group, working alongside his sons. His civic work included serving on the Stanford Athletic Board and the Peninsula Covenant Church. He met weekly with his men’s Bible study group for 30 years, was in the World’s Wrist Wrestling Hall of Fame, and played the 4-string banjo for six U.S. presidents. Survivors: his wife, Guila; children, Jeff and Jennifer; stepchildren, Jeff, Dirk, and Garth Leon; 10 grandchildren; and brother, Gay Kopschalk Stephans, '58 (communication), of San Carlos, Calif., July 19, at 86, of breast cancer. She met her future husband, a Norwegian foreign exchange student, at Stanford, where they danced at many International Club events. She worked at Sunset magazine before starting her family. She volunteered with the Girl Scouts of San Mateo County and worked for the Country Almanac as a proof-reader before retiring. She was predeceased by her husband of 59 years, Knut Vli, '58, MS '62, Engr '67. Survivors: her children, Bert McCuen and Knut Vli; three grandchildren; and great-granddaughter.

Michael Lance Seal, '59 (German studies), MD '64, of Berkeley, December 27, 2021, at 83, of complications from Lewy body dementia. In 1958, he was part of the first student group at Stanford's first overseas campus, Stanford in Germany. His was the first class to attend Stanford’s new medical school on campus. He practiced internal medicine for 30 years in El Cerrito, Calif. In retirement, he continued to play jazz piano, study German, and attend the performance and civic work included serving on the Stanford Ath-
1960s
Russell Monteith Coombs, ’60 (education), of Delanco, N.J., June 5, at 84, of kidney failure. He was a member of Alpha Kappa Lambda and the golf team and contributed to the Stanford Daily. A graduate of Harvard Law School, he developed expertise in criminal law, organized crime, and interstate child custody disputes. He taught at Rutgers Law School for more than 30 years and briefly served as chief counsel to the Pennsylvania Crime Commission. He was preceded by his first wife, Virginia. Survivors: his wife, Rosalie; children, Thomas, and Jesse; stepchildren, Larry and Anne; 12 grandchildren; and four great-grandchildren.

Ray E. Stanford, ’61 (mathematics), of Medford, Ore., May 28, at 82. He attended medical school at UCLA and did his residency in pathology at the University of Colorado. During his years in Denver, he practiced at the VA, Webb Waring Lung Institute, and Colorado General Hospital, and wrote or co-wrote numerous papers in the field of lung pathology. He had a passion for lepidoptery, the study of butterflies and moths. He published the *Atlas of Western USA Butterflies* in 1993 and contributed to *Butterflies of the Rocky Mountain States*. Survivors: his wife of 57 years, Kit; children, Scott, ’92, MS ’98, and Linda, ’89; four grandchildren; and sister, Gail, ’64, MA ’65.

Esther Celia Jacob Janowsky, ’62 (German studies), of La Jolla, Calif., July 22, at 81, of gallbladder cancer. She attended medical school at UCSF, one of 10 women in her class of 110. She practiced as an academic anesthesiologist for nearly 20 years. While raising her six children, she was revered as a mentor and teacher at Vanderbilt, UCSD, and UNC-Chapel Hill, where she earned an MPH and a PhD in epidemiology, studying the link between vitamin D and breast cancer. Survivors: her husband of more than 60 years, Dave; children, Steve, Ted, Sonia, Kara, Amy, and Mariel; nine grandchildren; and three siblings.

David Charles Stewart, ’62 (industrial engineering), of San Carlos, Calif., May 13, at 82, after heart complications and a fall. He was a member of Sigma Alphas, a department chair for nine years for a term. As a client project manager at Arthur Andersen, he lived in Argentina for five years. In California, he worked as a high-level program engineering manager for several corporations and was instrumental in developing Ricoh’s first high-speed multifunction printers. Survivors: his first wife, Ann Newton Holmes, ’62; second wife, Margaret Stewart; and partner of 30 years, Nyla Moore.

Lawrence E. Ailioto, ’63 (French), of San Francisco, August 10, at 80. After law school at UC Berkeley, he practiced law for 56 years without interruption. He had a brilliant legal mind and an undying love for golf, but he will be remembered most as an intellectual powerhouse and a true Renaissance man. He enjoyed stage acting, chess, and learning languages. He memorized Shakespearean plays but would also laugh uncontrollably at Johnny Carson and Chevy Chase. He was predeceased by his wife, Ann. Survivors: his sons, Joseph; Lawrence; five grandchildren; and five siblings.

Wallace J. Ederinger, ’63 (English), of Baltimore, June 19, 2021, at 79, of pulmonary fibrosis. He obtained his PhD in English at the University of Wisconsin, Madison. He taught at UCLA as an assistant professor and spent a year on a Mellon fellowship at Harvard before joining the English department at the University of Maryland Baltimore County, where he remained until his retirement in 2008. He published a book, monograph, and numerous articles on Samuel Johnson and 18th century critical theory and practice. Survivors: his wife, Barbara, and two children. In addition to Sheba, Wilson is survived by his wife, Sara (Carlton, ’63); daughters, Anne Reddy and Elizabeth; and three grandchildren.

Jorge Pablo Nouhra, ’63, MS ’77 (civil engineering), of Wyoming Hills, Pa., October 29, 2021, at 85, of a heart attack. He was born in Guayaquil, Ecuador, and over the course of his career, he worked in Ecuador, Peru, and the United States. He was a member of the American Society of Civil Engineers and a founding member of the Model Airplane Collectors Association. He coached girls and boys club soccer for over 25 years, and in retirement became an adjunct professor of Spanish. Survivors: his wife of 55 years, Patricia, MA ’78; children, Eid, Patrick, and Gabrielle; and four grandchildren.

Gerald A. Hanweck, ’64 (economics), of Vienna, Va., December 6, 2021, at 79. He was a member of Delta Chi and the golf team. He served the associate dean for graduate programs during his 35-year tenure with George Mason University’s School of Business and taught courses including corporate finance and applied global macroeconomics. He also served as a consultant to government agencies, banks, and businesses, and as an expert witness in litigation involving financial institutions and government agencies. Survivors: his wife, Barbara, and two children.

Harriett L. Ridlen Rothschild, ’64 (German studies), MA ’65 (education), of San Marino, Calif., January 14, at 79, of Alzheimer’s disease. She was in the marching band and participated in Stanford in Germany. She taught high school German and eventually became a high school dean and an assistant principal. She and her husband enjoyed traveling with friends, especially to his native Germany. Survivors: her husband of 52 years, Alfred; four stepchildren; eight grandchildren; 10 great-grandchildren; and sister.

Robert Malcolm Smelick, ’64 (economics), of Ketchum, Idaho, July 12, at 80. He was a member of Beta Theta Phi. He worked for the National Cash Register Company in Australia, then earned an MBA from Harvard and began his investment banking career, ultimately founding two investment firms. He spent 20 years as a professor of leadership education, teaching at numerous universities and founding the McBryde Institute, which brought business leaders into the classroom. He was the founder and chairman of Sun Valley Ballet. Survivors: his wife, Gail; children, Christopher, Alexandra McBryde, and William; and five grandchildren.

Margaret Jean Hay, ’65 (history), of Tempe, Ariz., July 11, at 78. She earned master’s and doctorate degrees at the University of Wisconsin, Madison, and her graduate work brought her to Kenya and Egypt. She was a professor of African studies at Wellesley College and Boston University. As a scholar, she pioneered the use of African oral histories to counterbalance the views of Eurocentric writers. She served as editor for the *International Journal of African Historical Studies* and as founding editor and co-editor of the journal *African Economic History*. She was predeceased by her husband, Gerry. Survivors: her son and her sister.

Charles Raymond Donnelly, ’67 (physical science), of Camarillo, Calif., June 13, at 76. He was the manager for the marching band for two years. After serving in the Coast Guard during the Vietnam War, he earned an MBA from CSU Long Beach. He was a pioneer in the Southern California computer industry, helping to build influential IT businesses with companies including PeopleSoft and DAK products. He and his wife later started a consulting business, Donnelly International. He loved playing piano in a klezmer group and traveling in Europe, Asia, and Australia.

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**Farewells**

**Trailblazing Medical Anthropologist**

In 1990, American health care workers were struggling to gain a foothold in Tanzania as the country faced the rapidly escalating HIV/AIDS epidemic with no available treatment. Medical anthropologist Ruth Wilson, one of the first Black professionals in the Africa Child Survival Initiative at the U.S. Centers for Disease Control and Prevention (CDC), was asked to assist. Her expertise, say program director Cheryl Scott, was “humbling.” It was that expertise and her talent for connecting with people that earned her the trust of Tanzanian health ministry officials. Wilson’s resulting recommendations to the CDC, says Scott, “filled a behavioral health gap that significantly impacted our care and treatment plan and supported the United States’ role with the minister of health and their partners.” She traveled around the continent, working with the World Health Organization, UNICEF, and 13 ministries of health in sub-Saharan Africa.

Ruth Pearl Wilson, MA ’78, PhD ’85, a professor emerita and former department chair of African American studies at San José State University, died on May 15 in Redding, Calif. She was 70. Wilson attended segregated schools in rural Texas before her family moved to Tulare, in California’s Central Valley. As an undergraduate at UC Santa Cruz, she lived with a suite of Tagalog-speaking students. She later earned a PhD from San Jose State University, S.C., immersing herself in a culture that maintains strong ties to its African heritage. A six-month internship in Lesotho collecting health data set the stage for her career in medical anthropology. She was devoted to advancing the field, doing extensive research on obesity in Black and African communities and how culture frames health care choices.

Wilson’s passion for supporting Black communities extended beyond academia. “There’s a picture of her next to the Black Panther leader [ Huey Newton],” says her daughter, Sheba Sawyer. “It now sits next to Wilson’s urn in her daughter’s living room, “a space that is filled with love.” Before joining the CDC, Wilson was an assistant professor at Rutgers University, and she later held faculty positions at Southern Methodist University and, finally, San José State, where she received a Fulbright-Hays award and was a department chair for nine years. In response to praise, Wilson would often say she was just a small-town girl. “She was a trailblazer,” says her daughter, “but she wasn’t trying to blaze trails.” In addition to Sheba, Wilson is survived by two grandchildren and six siblings.—Kail Shihot
vors: his wife of 47 years, Hana; children, Sam and Ariella; four grandchildren; and sister.

John Russell Brazil, ’68 (history), of Boerne, Texas, June 2, at 76. He was on the basketball team. He received a master’s in philosophy and a PhD in American studies from Yale University, where he began his teaching career. He became the vice president of academic affairs at San José State before becoming a Fulbright Senior Scholar at the University of Sydney in Australia. He went on to become president of three universities, the last of which was Trinity University in San Antonio, Texas. Survivors: his wife of 50 years, Janice; children, Adrian and Morgan; five grandchildren; and three siblings.

Thomas Henry Carmody III, ’68 (history), of Port Orange, Fla., May 4, at 75. He was a member of Phi Delta Theta and played baseball. Survivors: his wife, Renee; daughters, Shannon Keyes, Kerry, and Kendall; four grandchildren; and sister.

1970s

Isaiah Brown Jr., ’70 (history), MA ’73 (education), of Palmade, Calif., July 25, at 73. He was a member of the football team and track and field team and was drafted to play for the Pittsburgh Steelers in 1970. He was predeceased by his wife, Ann, ‘71. Survivors: his children, A. Jamaal, ’91, Markisha, and Roz. James Foster Wright, ’70 (general engineering), of Carlisle, Ky., June 2, at 74, of complications from myasthenia gravis. He was a member of Alpha Kappa Lambda and was in the marching band. He earned an MBA from UNC-Chapel Hill. He lived life to the fullest, taking every adventure God laid before him, including becoming a licensed pilot and a pyrotechnic engineer. In retirement, he built his dream home and farm in Carlisle. Survivors: his wife of 47 years, Teresa; mother, Winnie; and sister. Mary Janis Havenner Ferrari, ’71 (communication), of Palm Desert, Calif., February 27, at 73, of cardiac arrest. She was an award-winning real estate agent, a mother, and a grandmother. Survivors: her husband, Michael, ’69, MBA ’71; children, Carina McAdams and Mike Jr.; and grandchildren. Terry Albert Levin, ’74 (human biology), MA ’81 (physical therapy), of San Francisco, August 1, at 69, of ovarian cancer. She participated in student government and was on the tennis team. She received a second master’s degree in public health, from UCLA and practiced orthopedic physical therapy at the Center for Sports Medicine in San Francisco. She chaired five consecutive Stanford class reunions over a 25-year period. Survivors: her husband of 42 years, John, MA ’70, JD ’73; twin daughters, Caroline Levin Hoeweler, ’10, and Alexandra, ’09; two grandchildren; and sisters, Nancy James, ’65, and Jane Willens, ’67.

1980s

Craig Daryl Kensek, ’80 (chemical engineering), of San Mateo, Calif., July 31, at 63. He received an MBA from Northwestern University, but his loyalties were with Stanford. He cheered for the Stanford football team, attended special events, and volunteered on campus. He worked in cybersecurity marketing and contributed to the success of many firms. He was especially proud of his work with IT-Harvest and being a board member of the California microbrewery Umunhum. He enjoyed running, musicals, and Golden Gate Park. His greatest self-proclaimed personal accomplishment was teaching his cat Sinatra how to play fetch.

1990s

Adolfo Montesinos Mendez, ’91 (mechanical engineering), MS ’93 (petroleum engineering), MBA ’97, of Austin, Texas, August 9, at 52. He was born in Valencia, Spain. Despite speaking no English when he moved to the United States, he went to become the valedictorian of his high school in Texas. He met his wife playing in a company volleyball league and worked in the oil and gas industry. After earning an MBA, he worked in the consulting industry. He loved traveling, hiking, and cooking. Survivors: his wife, Renee Welsh; children, Elena and Santiago; parents, Adolfo and Delia; and three siblings, including Delia, ’90, MA ’91, and Miriam, ’95.

Nathan Lucas Lipscomb, ’98 (political science), of Menlo Park, MA ’06, of heart attack. He was a member of Sigma Chi. He graduated from California Law School and met his wife during a human rights fellowship in Tanzania. He joined Davis Polk & Wardwell, taking a break from his career to be a stay-at-home dad. He used the time to teach himself to code and developed a learn-to-read app for children, which rose to the top of the App Store charts. He later became a senior product counsel at YouTube, where he led a team focused on the company’s efforts to foster a responsible, open platform. He loved surfing, snowboarding, and barbecuing. Survivors: his wife; Rosie; sons, Jackson and Mateo; parents, Paul and Donna; and two siblings.

John Laird Hubbard, MBA ’60, of Scottsdale, Ariz., February 9, at 86. He was the president and owner of Pan Abode Cedar Homes in Renton, Wash., for 25 years. Upon retiring in 1998, he and his wife gave the company to the key employees who continue to own and operate the business today. Survivors: his wife of 63 years, Jan; children, Cindy Babmy, Deb Beckman, and Mike; and six grandchildren.

Douglas Gordon Draeseke, MBA ’66, of Naples, Fla., June 30, at 79, of pulmonary fibrosis. He was a consulting actuary, a fellow of the Society of Actuaries, and a member of the American Academy of Actuaries. He was an avid bocce player and loved a glass of wine, a tough Sudoku, and a great story. Survivors: his wife, Polly; sons, Robert, Andrew, David, and Trevor; two granddaughters; and two sisters.

Rose Fucile, MA ’50, of Cupertino, Calif., August 11, at 95. A high school English teacher for 32 years, she last taught at Fremont High School in Sunnyvale, Calif. She leaves behind many friends from her worldwide travels and her active membership in several organizations. Survivors: her siblings, Christina Fucile Magazzu, MA ’50, and Alexander; and niece, Laura Magazzu.

Herbert Grayson Hart, MA ’52, of Alameda, Calif., May 5, at 99. While at Stanford, he played tennis and participated in the arts. He was predeceased by his wife, Marion. Survivors: his children, Kim Cooper-Hart and Linda; and three grandchildren. Sonia Fredrika Berdan Anderson, MA ’61, of Seattle, June 30, at 91, of cancer. She began her 30-year career in education as a PE teacher before working as a drug counselor and a high school special ed teacher. She spent a decade raising and showing purebred Korat cats around the U.S. and in Canada. As she moved into retirement, she knit and sold homemade preserves. Her former husband, Karl, MA ’61, died on September 3. Survivors: her daughters, Megan Ware and Malary Hathcox.

Nina Hansotia Myers, MA ’63, of Los Altos Hills, July 4, at 81, of pulmonary failure. In her native India, she led social projects in remote villages. She attended Stanford on a full scholarship for foreign student leaders. She was a teacher for 30 years in India, England, New York, and California, where she started the first computer course with help from Apple co-founder Steve Wozniak. She owned six businesses. She was predeceased by her son Andrew. Survivors: her husband of 60 years, Myron, ’63; children Tinaiz Sheerer and Myron III; two grandchildren; and brother.

ENGINEERING

Raymond E. Hirst Jr., MS ’64 (mechanical engineering), of Indialantic, Fla., November 7, 2020, at 85, of cancer. He served in the Navy after graduating from the United States Merchant Marine Academy. He earned an MBA from Florida State University. He was an engineer for Pan American World Airways, then worked for the Air Force and the Department of Defense, where he oversaw the installation of a land-based radar in Saipan. He was predeceased by his wife, Sabine. Survivors: his daughters, Julie Hirst Hart and Audrey; sister; and significant other, Diane Karschnick.

Larry Thomas Shoenberger, MS ’65 (industrial engineering), of Belmont, Calif., May 24, at 85. Before attending Stanford, he received his undergraduate degree in physics from the University of Colorado Boulder. Survivors: his brother, Dan.

Geoffrey Crawford Hintze, MS ’73 (computer science), of Huntsville, Ala., May 16, at 76. Before Stanford, he earned a master’s degree in aeronautical engineering. He was a senior software engineer at NASA from 1967 to 2008, developing flight software for manned and unmanned projects. He was a member of the Sons of Union Veterans, a life master in contract bridge, and an avid Virginia Tech and Stanford sports fan. He enjoyed taking cruises and genealogical research. Survivors include his sister, Patricia Bertine.

Edward Ray Murray, PhD ’74 (mechanical engineering), of Palo Alto, April 20, at 76, of a coronary event while swimming. At SRI International in Menlo Park, he was the director of the system technology division, overseeing 215 employees conducting research in areas including over-the-horizon radar and electro-optics. He received the Army’s Distinguished Service Award among other honors. He later brought his skills to the semiconductor industry, as an LCD display program development expert in high-tech industries. He was a lifetime fitness buff. Survivors: his wife of 33 years, Susan Hathaway; sons, Scott and Michael; and three grandchildren.

HUMANITIES AND SCIENCES

Maynard Man-Wai Chan, MS ’58 (statistics), of Alameda, Calif., June 22, at 89, of dementia complicated by COVID. A survivor of the Chinese Civil War and the Japanese occupation of China, he escaped to Hong Kong and came to Stanford to study statistics. His first job in the United States was working as a ticket-taker at Stanford’s football stadium. As an engineer at IBM, he helped develop seminal computer technologies like the CPU clock and the hard drive. After 30 years with IBM, he worked as a financial adviser at Merrill Lynch. He was predeceased by his wife of 55 years, Vailee. Survivors: his daughters, Irene Chan Wolfe and Felicia; and two sisters.

Stuart Thomas Spence, MS ’64, PhD ’67 (physics), of Sunland, Calif., May 29, 2021, at 83, of pneumonia. A native of Belfast, Ireland, he graduated from Oxford and apprenticed at his family’s linen factory in Northern Ireland before becoming a Fulbright travel scholar at Stanford. He created the first microprocessor-controlled printer, was a key contributor to the development of 3D printing, and held dozens of related patents. He and his wife
shared a passion for collecting contemporary art. Survivors: his wife, Judith Vida-Spence, MD ‘69; sons, Theodore and Jonathan; and granddaughter, Ira Ralph Telford, MA ‘64 (political science), of Titusville, Fla., November 21, 2021, at 87, of renal disease. He taught political science and history for 20 years at Weber State University in Ogden, Utah, then worked at Western Wyoming Community College until he retired. His missions on behalf of the Church of Jesus Christ of Latter-day Saints brought him to the South Pacific and Japan. He was predeceased by his daughter Kimberly. Survivors: his wife of 27 years, Tina; daughters Denise Harper and Valerie Anderson; stepchildren, Art Brothers, Ravonne Ross, and Ken Brothers; grandchildren; and two siblings.

Carolyn Lou Kraft Whiting, MA ‘67 (geography), of Rathdrum, Idaho, March 30, at 88, of Alzheimer’s disease. She grew up on a peach farm and worked as a baker’s assistant during high school. She spent 20 years as an elementary school teacher in the United States and Canada. She then worked in the natural resource industry with employers including the Solar Energy Research Institute (now NREL) and the University of Alberta. After her first retirement at 65, she became a baker and continued to work until she was 80. She was predeceased by her husband of 67 years, Jerry, PhD ’68. Survivors: her son, Gregory.

Kenneth M. Goldsmith, MA ‘68 (music), of Houston, June 26, 2020, at 81. At 19, he became the youngest member of the Detroit Symphony Orchestra. He continued his studies at Stanford and taught violin at a number of prominent universities, including Vanderbilt and Stanford, before beginning a 30-year tenure at Rice University’s Shepherd School of Music. He was a devoted teacher and also played in several chamber groups including the Mirecourt Trio, which commissioned and premiered more than 80 new works and recorded 30 albums. He was a consummate storyteller, he collected fine art, and he loved cats. Survivors: his wife, JoAnne Ritacca.

LAW

John Franklin Wells, LLB ’52, of Sonoma, Calif., June 23, at 95. He was the editor of the Stanford Law Review. He finished second in his class behind John Franklin Wells, PhD ’68, Stanford.

Yvette Bowser, ’87, Los Angeles

Mary Burns, ’12, MA ’13, Los Angeles

Hans Carstensen, ’70, MBA ’74, Shelburne, VT

Preston DuFauchard, ’78, Oakland

Irenea Erteza, MS ’87, PhD ’93, Albuquerque, N.M.

Sako Fisher, ’82, San Francisco

Ivan Fong, JD ’87, Minneapolis

Patricia Gumport, MA ’82, MA ’86, PhD ’87, Stanford

Michael and Douglas; 16 grandchildren; and six children, Robert, Timothy, Mary, and Jane; stepsons, Michael and Douglas; 16 grandchildren; and six great-grandchildren.

Donald Wayne Rees, JD ’62, of Sherman Oaks, Calif., July 17, at 86. He served in the Army prior to attending law school. He practiced law in Los Angeles and San Francisco before helping to launch Gordon & Rees—the first firm in the country to open offices in all 50 states. Today, it has more than 800 attorneys and has grown to become one of the largest firms in the United States. Rees was a leading figure in the legal community and was known for his dedication to public service.

SUSTAINABILITY

Paul Robert Nixon, MS ’66 (hydrology), of Fredericksburg, Texas, September 29, 2021, at 97. The son of missionaries, he was raised primarily in Kenya. During WWII, he joined the U.S. Army in Eritrea, helping to build airfields before becoming a chaplain’s assistant in Germany. He eventually attended college at Iowa State University and then Stanford. He spent his career with the U.S. Department of Agriculture, conducting water management investigations and research in remote sensing. He was predeceased by his wife of 55 years, Emma. Survivors: his second wife, Esther; Shaffer; son, James; two grandchildren; and great-granddaughter.

Jerry Max Whiting, PhD ’68 (mining and mineral engineering), of Rathdrum, Idaho, September 3, 2021, at 89, of Alzheimer’s disease. After serving in the Navy, he worked in mining engineering as an engineer, manager, and consultant, and professor at the universities of Idaho and Alberta. He came out of retirement to pursue a lifelong interest in music as the director of R&D at Gibson Guitar. At 80, he spent a semester as interim head of the mining and engineering department at the Botswana International University of Science and Technology. His wife of 67 years, Carolyn, MA ’67, died in March 2022. Survivors: his son, Gregory.

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I DIDN’T MEAN TO STARE, but when she bent down to retrieve her wallet, Together Forever written across the soft flesh of her lower back, I couldn’t look away. Who is together forever? I wish I had asked her, but it seemed odd. As if seeing her art wasn’t intimate but asking her about it was. When she stood up again, the waistband of her jeans eclipsing the words, I turned my head, scared that my face might betray my fascination.

I’ve never had a tattoo. When friends in college were getting dolphins on their ankles, I supported them but never felt the pang of joining in. What word or symbol do I love enough that I could place it on my body for eternity? I’m not sure. Some people know what they’d want: names of children, partners, pets. A hummingbird, for those who identify with its inability to commit to one place for too long. And words like listen and imagine, to remind them what they need to do. Years ago, a friend told me she wanted to get the word kumquat tattooed on her wrist because it made her laugh. She thought it’d be a kick to glance at it and giggle, for the rest of her life.

And as mysterious as tattoos themselves are, the sentiment—the motivation—is as familiar to me as any other. For I think many of us wear those birds and those words, but we wear them on the inside.

I have this image in my mind of a machine, like a scanner at the airport, that reveals not our pocket change and other metal objects but our invisible tattoos—an X-ray for the hurt and love and all the things we carry around but aren’t courageous enough to share. I have plenty, just below the surface of my skin. It’s as if you could read them through touch.

I have tears for the loss of my grandmother and my father. So many that I’ve often thought they’re starting to show, and I wonder why no one stops me on the street to ask, “Why do you have those tears on your face?” I’d tell them I wear them to remember and to forget, all at the same time.

Not all of my invisible tattoos are sad. I have the number $-\frac{1}{12}$ for my younger son, because we learned from a science program that if you add up all the whole numbers to infinity, it miraculously adds up to $-\frac{1}{12}$, and that is how much I love him. To infinity and then just around the corner.

If I were to ink my invisible tattoos across my skin, there wouldn’t be enough room left to make a mark with the tip of a pencil. I’d be swirling with words and pictures, and keep adding to them, through each moment of grief and hilarity, until I was a walking picture book, and you would see me and read me and know where I’ve been. But I’m not brave enough for that. Some I will always keep secret, lying just under the surface, away from strangers’ eyes until I feel ready. Others I will share, taking someone’s hand and pressing their fingers against my skin, as if to say, “Can you read that?”

Katie Mauro Zeigler, ’95, MA ’96, is a writer in Walnut Creek, Calif. Email her at stanford.magazine@stanford.edu.
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