



**THE
UNIVERSITY
OF
CHICAGO
MAGAZINE**

FALL 2018, VOLUME 111, NUMBER 1

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MAGAZINE

VOLUME 111, NUMBER 1, FALL 2018

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 SENIOR EDITOR *Mary Ruth Yoe*
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 GRAPHIC DESIGNER *Laura Lorenz*
 CONTRIBUTING EDITORS *John Easton, AM'77;*
Carrie Golus, AB'91, AM'93; Brooke E. O'Neill,
AM'04; Amy Braverman Puma

Editorial Office *The University of Chicago Magazine*, 5235 South Harper Court, Suite 500, Chicago, IL 60615.
 TELEPHONE 773.702.2163; FAX 773.702.8836
 EMAIL uchicago-magazine@uchicago.edu.
 The University of Chicago Alumni Association has its offices at 5235 South Harper Court, 7th Floor, Chicago, IL 60615.
 TELEPHONE 773.702.2150; FAX 773.702.2166.
 ADDRESS CHANGES 800.955.0065 or alumni-support@uchicago.edu.
 WEB mag.uchicago.edu

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EDITOR'S NOTES

CAUGHT IN THE LEGEND

BY LAURA DEMANSKI, AM'94

For a long time Sessue Hayakawa was on the *Magazine's* future story ideas list. According to many sources, including the *New York Times*—and, well, the *University of Chicago Magazine*—the Japanese-born actor attended the College and played varsity football before becoming a cinema sensation and unlikely American matinee idol in the 1910s. We wanted to know more, and thought many of you might like to as well.

It was over a year ago that the writer, **Amy Monaghan**, AM'93, first turned in the story, yet it's just now appearing. What made the journey from draft to print so long?

When we first assigned the piece, we knew Hayakawa had not graduated but thought he had attended long enough to be called a nondegreed alumnus ("EX" in the *Magazine's* language). But further research showed only that Hayakawa enrolled in two correspondence courses—and had a San Francisco address at the time. *Cap and Gown* yearbooks from the early 20th century contain no trace of him. The actor, it seemed, completed no coursework and may never have been on campus at all, despite his colorful anecdotes to the contrary. Even going by the *Magazine's* and the University's most inclusive definitions, he was not an alumnus.

The revelation led us to view much of Hayakawa's own telling of his life story—stretching from before his star turn in 1915's *The Cheat* to after his Oscar-nominated 1957 performance in *The Bridge on the River Kwai*—with skepticism. Writer and editors had to hedge some bets as we tacked across the accounts of official records, movie magazines, film scholars, and the actor's own memoir, sifting for the truth. Some of the story is still uncertain. But we think it's worth telling. Hayakawa's life was remarkable regardless of which version you credit, and the reasons he inflated his UChicago connection are culturally illuminating.

The new look Notice anything different around here? With this new volume, the *Magazine* staff is delighted to introduce a refreshed design. While keeping the fundamentals, we've added more color, art, and air, and moved to a more readable typeface. We based the changes on a survey some of you completed last January, two Chicago focus groups, and feedback you've given us over time, along with the ideas of *Magazine* folks and colleagues. We're excited to unveil this new look and hope you'll find the reading experience brighter and better. As always, we'd love to hear what you think. ♦

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On the Cover

When he's not photographing musicians and horse races, **Henry Horenstein**, EX'69, turns his camera on the strange geometries of the natural world. His close-ups of a giraffe (on the cover) and a hippo (above) are part of a series called *Animalia*, a collection of images taken at zoos and aquariums around the world. For more on Horenstein's work, see "Historian with a Camera," page 38.

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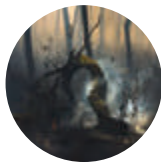
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LETTERS

Books: A love story

My book collection had its beginnings when I was an undergraduate as well (“Bibliomania,” Summer/18). Having never been in a used bookstore before, I was fascinated by the tiny one that was tucked away in the basement of the Reynolds Club in the 1960s. There I bought a very undistinguished copy of *Moby-Dick* and a nicely bound *On the Origin of Species* that had lovely marbled endpapers. Thus began decades of searching dusty, feline-filled used book emporia for the volumes that demanded to be taken home. Among those acquired over the years is a lavishly bound and illustrated *Moby* that now keeps company with fine editions of Herman Melville’s *Omoo* and *Typee*, and *Origin* sits cheek to cheek with *The Voyage of the Beagle*.

A couple of feet of shelf space are devoted to books related to each of my minor passions: photography, ornithology, music, poetry. But the vast majority of the thousand-plus volumes are well-bound and/or illustrated tomes of American and English literature. My bibliophilic children (daughter Dianna, an academic librarian, and son Jeffrey A. Sachs, AM’07, a Middle East scholar) are already plotting how to divvy up the treasures after I am gone.

Richard A. Sachs, AB’70
GRANTHAM, NEW HAMPSHIRE

For the birds

“Towering Insights” (Summer/18) is illustrated with a photograph captioned as “Chicago’s Home Insurance Building, completed in 1885.” I would hope that any Chicagoan would recognize

the building in the photo as being, in fact, the Rookery, completed in 1888, and, unlike the Home Insurance Building, still standing. (It is, fortunately, a landmarked building.)

Those interested in learning about the Rookery, or for that matter the Home Insurance



Building, would be well advised to take the Chicago Architecture Center’s (CAC) historic skyscrapers tour. There is also a CAC tour specifically of the Rookery, including a visit to the 11th floor where Burnham and Root had their offices. For tour information, visit architecture.org.

Bob Michaelson, SB’66, AM’73
EVANSTON, ILLINOIS

We are grateful to Michaelson for the correction.—Ed.

Skirting the issues

As I customarily do with the *Magazine*, I read the Summer/18 issue cover to cover, even more than skimming the Alumni News notes, but perhaps that was my problem. It myopically encouraged me to overlook the glaring observation that

hit me like a sledgehammer with this issue. For all the major social, political, and economic problems our nation faces, there is not a peep about any of those problems in the *Magazine*, usually, or especially in this issue, with the arguable exception of “Corrective Measures” (Summer/18), on overincarceration. It is an unseen elephant in the parlor, and I am chagrined I missed it until now.

Much is academically inclined light pieces and news bulletins, but nowhere is there any effort to address any of the serious problems we face. Virtually all is irrelevant to those problems, like the University is on a different planet.

I am not urging a steady diet of problematic angst, but some recognition we live in a seriously troubled world and might have some good thoughts

about it would be fitting, I think.

Kimball J. Corson,
AM’68, JD’71
PAGO PAGO, AMERICAN SAMOA

Non-exponentially yours

There has been a quantum leap in the use of “exponential growth” in the *University of Chicago Magazine* and the *Core*. Anne Walters Robertson claims that two years ago her perspective about the role of the humanities grew exponentially (On the Agenda, Summer/18). And François Richard says that “over the last five years, the newness in Dakar has been exponential” (“Nine Weeks in Dakar,” the *Core*, Summer/18).

In fact, exponential growth has a precise meaning. It is characterized by increases of the same ratio during

any fixed period of time. Exponential growth frequently arises when the rate of growth of a quantity is proportional to the size of the quantity. Growth of a financial investment at a constant rate of return and unconstrained population growth are examples that are accurately modeled by exponential growth.

Even if we grant some way to quantify a person's perspective on a subject, it is unlikely that the increase during the brief initial period was followed by similar rates of increase during subsequent time intervals of the same duration. And even if we grant a way to measure newness, it seems doubtful that newness increased by the same ratio each year.

The likely source of the misuse of exponential growth is the misconception that it is large or rapid growth. But exponential growth can occur with a low growth rate. One dollar invested at 2 percent annual interest grows exponentially. But after 100 years, the account will be a modest seven dollars and change. Yet if Calpurnia had made such an investment at the time of Caesar's death, the account would now exceed half a quintillion dollars, enough to repay the current US national debt roughly 25,000 times.

We can probably trust the calculations of Enrico Fermi when he announced, "The reaction is self-sustaining. The curve is exponential." Otherwise, be wary of claims of exponential growth.

Robert Messer, SB'71
ALBION, MICHIGAN

Fair assessment

I was delighted to read "Value Judgment" (UChicago Journal, Summer/18), about Christopher Berry's (AM'98, PhD'02) work on Cook County's property tax system. The unfairness of the current assessment system has a dramatically negative impact on the area's economy and politics, with damage greatest in black and immigrant neighborhoods. The topic richly merits your spotlight.

I was also glad that you mentioned me and my victory over the incumbent Cook County assessor, Joe Berrios. Assuming we beat the Republican nominee in , we will indeed have a tough job ahead when we take office in December.

Given your readership, I want to give a shout out to the University of Chicago community in helping me get to this point. First, my father, Walter Emil Kaegi Jr., professor emeritus in history and the College, just retired from the Department of History and the Oriental Institute after 52 years on the faculty. Many UChicago alumni, students, and faculty powered our campaign, most notably campaign manager Meaghan Murphy, AB'15. One of Berry's coauthors, Robert Ross, AM'16, is leading our transition team's efforts to revamp the office's modeling.

I don't have a UChicago degree but am affiliated through my 10 years at the Laboratory Schools and the several courses I've taken at the University over the years. I am not sure how that's rendered in alumni shorthand, but count me as a fan and friend.

Fritz Kaegi
OAK PARK, ILLINOIS

Age of ambiguity

On the inside front cover of the *Core* (Summer/18), there is a fine photo of June Gordon Marks Patinkin, LAB'44, AB'18 (Class of 1946), who received her College degree this June. The caption says, "At 90, she is the College's oldest graduate."

Did you mean, she is the College graduate who received her degree at an age older than any other graduate of the College?

I'll politely note that I made it out of the College in 1947 and am now 91. Thus, I am an older graduate of the College than Patinkin. I doubt that I'm alone in that category.

Richard L. Forstall, PhB'47
ALEXANDRIA, VIRGINIA

We did intend to convey that Patinkin is the College graduate who was oldest at the time she received her diploma, and thank Forstall for keeping us on our toes.—Ed.



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Can get there from here

As an undergraduate geography major, I became deeply interested in place (“Let’s Get Lost,” Spring/18). Being a native New Yorker and a driver for 47 years, the study and experience of cities and space combined to form a passionate avocation. Maps, places, and getting deliberately lost on vacation have been lifelong pursuits.

It appears to me anecdotally that in our society, we have literally lost our sense of direction, especially as each succeeding generation relies increasingly on technology. Serendipitously discovering a restaurant that hasn’t been Yelp reviewed to death, or stumbling onto a neighborhood where the storekeepers speak a dialect of a language we thought we knew, seem like quaint artifacts.

About 10 years ago a friend of mine complained that his stepson didn’t even think of what direction he was headed when driving; he just turned on the GPS and with blind faith let it lead him. Having driven as a sales rep for much of my adult life, I find my well-honed sense of direction invaluable. In fact, my stepson and his mom, my wife, call me “the human GPS.”

Overall, I have found technology invaluable. Far more personally satisfying, though, are the rich experiences

It appears to me anecdotally that in our society, we have literally lost our sense of direction.

stumbled onto whether driving, walking, or looking through train windows, and sharing them with loved ones. The journey itself typically spawns tales of travel adventure.

Similarly, my experience with what is now labeled as “guerrilla marketing”—i.e., approaching a potential customer and personally introducing myself—often results in a far more rewarding life

experience, sale consummated or not. By the way, it is more often successful than a lobbed email request to a stranger for an appointment.

A good sense of direction takes longer to hone and implement. But for me the results are far more rewarding than the few minutes saved by technology.

Adam Stoler, AB’78 (Class of 1977)
BRONX, NEW YORK



Regret for Yerkes

On a recent visit to Yerkes Observatory, I was surprised and disappointed to learn that the University would be suspending operations there as of October 1. Revisiting the Spring/18 issue of the *Magazine*, I find only a one-paragraph announcement of this development, buried in the middle of For the Record under the unrevealing headline “Fond Farewell,” where it was easy to miss—and I indeed missed it.

The *Magazine* has celebrated the observatory over the years, such as in web exclusives like “Yerkes’s New Tricks” (2013) and “Astronomers at the Wheel” (2015). The March–April/15 issue displayed a full-page photo, introducing the Peer Review section, of Mary Ross Calvert peering through the eyepiece of Yerkes’s 12-inch refractor telescope in 1926. It is ironic that the University’s announcement of its severance from Yerkes should come exactly three years later and receive short shrift in the *Magazine* then.

The University has apparently considered Yerkes a drag on its resources for over a decade, having announced in 2005 it would sell the building and land to a developer, only to suspend that decision in the face of opposition. The opposition was understandable, given that the developer’s plan, among other af-

fronts, would have obliterated grounds designed by John Charles Olmsted.

It seems to me that the architectural value of the observatory building itself, a widely admired work of Henry Ives Cobb, should encourage the University to maintain its tie to Yerkes, which it founded in 1897. The historical value of the facility, at which many University stars (Subrahmanyan Chandrasekhar; Edwin Hubble, SB 1910, PhD 1917; Gerard Kuiper; Carl Sagan, AB’54, SB’55, SM’56, PhD’60) conducted studies, is irreproducible. Yerkes’s educational programs have for many years demonstrated the University’s lively interest in public outreach. And the observatory continues in full working order. While it is not the Very Large Array, it is capable of worthwhile observations.

The University’s sacrifice of this irreplaceable asset appears to be a terrible miscalculation and a sad betrayal of the animating ethos of its first decade.

Daniel R. Campion, AB’70
IOWA CITY, IOWA

Abbreviated history

As one who was present at the demonstrations around Robert McNamara, I submit that the description of the events in “The Long View” (*UChicago Journal*, Spring/18) represent alternative facts, or at least revisionist history. “A faculty committee invited ... Robert McNamara” is an incomplete, disingenuous version of what happened. A “selection committee of five faculty members, the provost, a trustee and the president of the Chicago Council on Foreign Relations chose McNamara” as the first recipient of the Albert Pick Jr. Award for International Understanding (*Chicago Maroon*, May 11, 1979). One-thousand six-hundred people conducted 9.5 hours of peaceful protest activities before arrests took place, and approximately 300 members of the faculty, including 13 department chairs, the directors of 20 programs, and the head of the Court Theatre signed a petition of dissociation (*Chicago Maroon*, May 22, 1979).

Furthermore, the initiation of the award and the structure and deliberations of the committee were all conducted in secret, and only after

the announcement of the award was the rationalization of the nomination as “for his work as president of the World Bank” promulgated. In a letter to the University Senate (May 14, 1979), Hanna Gray herself stated, “it is a matter of great regret that the establishment of the Award was not publicly announced at the time and that the Committee and its mandate were not then announced at the time of its appointment in the following month.”

With regard to the demonstrations on the day of the award, it wasn’t just “even Studs Terkel, PhB’32, JD’34.” Speakers included Del Close, then a director at Second City; David Dellinger, one of the original Chicago Seven; Clark Kissinger, former national president of the Students for a Democratic Society; Ron Kovic, author of *Born on the Fourth of July* (McGraw-Hill, 1976); and several faculty members, including professor of anthropology Marshall Sahlins, who in the 1960s had organized the first antiwar teach-in at the University of Michigan.

Susanne Rudolph, then chair of the political science department and a member of the selection committee, stated that she was “very distressed about the procedures through which the award was given” (*Chicago Maroon*, Friday, May 11, 1979).

To summarize, the award was initiated and awarded (I believe for the first and only time) in secret, the choice of honoree was rationalized post hoc, and in response to repeated requests for discourse, Mrs. Gray and the University stonewalled. I struggle to see how this is academic freedom.

Victor S. Sloan, AB’80
FLEMINGTON, NEW JERSEY

Our account of the circumstances surrounding McNamara’s appearance was compressed in a story about Hanna Gray’s memoir and broader career. The Magazine’s contemporary reporting on the event appears at mag.uchicago.edu/pickaward.—Ed.

Policy talk

After stating all the expected behaviors resulting from inductive reasoning about the behavior of people with health insurance, Katherine Baicker

(“Measuring Medicaid,” *UChicago Journal*, Spring/18) seems surprised that David Hume was correct. Trusting causality based on custom and emotion, although common, is often wrong. As a board-certified emergency medicine physician, I knew for decades that the conventional wisdom was wrong.

Perhaps most significant, to me, was the statement that Medicaid provides “benefits” when none were documented. It is hard to give up beliefs. More significant, though not surprising, was that the director of a school of public policy, when confronted with evidence that a health policy had no positive health outcome, abdicates and refuses to advocate for ending an ineffective program.

It might also be interesting to have the business school comment on “tax breaks” for those who pay no taxes.

J. Curtis Kovacs, AB’63, MD’67
SUN CITY, ARIZONA

Re: Writing

I was very pleased to learn the College now offers students a major and a diverse range of classes in creative writing (“The Writing on the Wall,” *UChicago Journal*, Spring/18). When my wife, Alicia Rasley, EX’77, and I were students in the 1970s, Richard Stern taught the College’s two creative writing classes, one on poetry and the other on the short story. Alicia took the poetry class, and I took short story. Stern conducted the classes in the then innovative, and now traditional, workshop style supplemented with readings he chose to illustrate particular styles in great English literature.

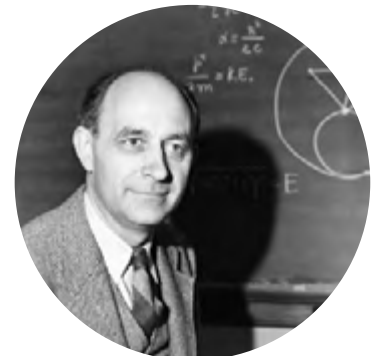
Stern was a sensitive reader and a sharp critic. He was always encouraging but would not let you off the hook. He was an adviser for my General Studies in Humanities BA paper, which at 130 pages was intended to be a fictionalized version of my cross-country motorcycle trip—sort of like *Zen and the Art of Motorcycle Maintenance*, but with sex, drugs, and rock ‘n’ roll. In Stern’s comments he termed my undergrad magnum opus “a magnificent failure ... well-intentioned, but it really doesn’t work.”

I was also delighted to read the mature comments of the students who

are taking creative writing classes. Indeed, very few writers develop a lucrative career in creative writing. But I can affirm that at least two of Stern’s students became better readers and writers. Alicia is an award-winning and Amazon best-selling romance and craft writer, an English professor, and currently a writing instructor at the University of Maryland. My writing skills were daily tested as a lawyer, and outside of the law I managed to write more than 70 published articles and 10 books. All these decades later, Alicia and I still enjoy reminiscing about “Stern expressions” and our experiences in his classes. His two creative writing classes are a family treasure and still an inspiration to these two still-aspiring writers.

Jeff Rasley, AB’75
INDIANAPOLIS

For another remembrance of a Richard Stern writing class, see [The UChicagoan](#), page 96.—Ed.



Frankly appalled

No doubt letters focusing on memories of U of C experiences further stimulate alumni-related memories followed by letters, though, of course, not ad infinitum. This happened to me recently when I read “Fermi Memories,” a letter from Lester R. Dragstedt Jr. (Spring/18), about the writer’s father, chief of surgery at the U of C medical center, who treated Enrico Fermi’s stomach cancer. Until now, I never thought of why Fermi passed away at such an early age, only 53.

In 1948, as a World War II veteran and a student in the College, I had the good fortune to be assigned to Fermi for my physical science course. He was

an outstanding lecturer and had written the syllabus with each opposite page blank to allow students to record notes as his lectures proceeded. I still have it, the only course syllabus I have retained for almost 70 years.

The memory still sharply in my mind is not related, however, to physics, but to the discovery I made while standing behind Fermi in the “chow” line of Hutchinson Commons one evening.

Being the son of a devotee of Gayelord Hauser, a nutritionist of that time

I was anxious to see what Fermi would select for his dinner. To my befuddlement and chagrin, the renowned physicist eagerly chose hot dogs.

(his statue still remains in Kyoto, Japan) and a passionate advocate of blackstrap molasses and no-red-meat meals, I was anxious to see what Fermi would select for his dinner. To my befuddlement and chagrin, the world-renowned physicist eagerly chose hot dogs. It is a family joke (even my eight grandchildren know about my absolute aversion to hot dogs) that after this experience I decided my choice for a major would be economics. I confess, I never saw the dinners Milton Friedman, AM’33, selected. But I do know that he passed away well into his 90s. Now into my 90s myself, from my educational path and experience I know enough to avoid reaching conclusions based on very small samples.

Bertrand Horwitz, AB’49, AM’51
ASHEVILLE, NORTH CAROLINA

Courting trouble

In his Summer/18 letter, Ernest A. Dorko, SM’61, PhD’64, proposes a constitutional amendment that decisions

by the US Supreme Court only “become the law of the land” if they come by a vote of 7–2, “or better yet,” 8–1. But the Supreme Court often resolves issues on which federal courts of appeals in different circuits have disagreed. In precisely those cases, different justices will most likely have different opinions. To prevent a 5–4 or 6–3 court majority from resolving divisions among the federal circuits would leave those divisions standing, so federal law would mean something different, maybe indefinitely, depending on the circuit. Even worse, state courts too have the power to interpret federal law. If the Supreme Court couldn’t resolve differences among the state courts, because it couldn’t get 7 or 8 justices to agree, federal law would mean something different not only in each circuit but also in each state. The framers knew what they were doing when they set up one court and made it supreme.

I doubt Dorko has thought about how he would treat precedent. Under his proposal, could courts around the country simply disregard any Supreme Court precedent that didn’t get the requisite 7–2 or 8–1 vote? But if his proposal only required that future court decisions have a supermajority, it looks like a patently obvious device to stop the court from overruling precedent. After a few years of Supreme Court decisions with which he disagrees, Dorko will likely have much less interest in requiring the court to have a supermajority to overturn precedent.

It might encourage court unanimity if court appointments needed confirmation by more than a bare Senate majority. Since each state, however large or small, has two senators, senators representing 18 percent, and supported by just over 9 percent, of the American electorate can control the Senate and confirm justices. Perhaps if federal judges needed a supermajority for confirmation, the political parties would work together to confirm judicial appointments based on competence rather than ideology, leading to more Supreme Court unanimity. Unfortunately, the Senate’s 2016 stonewalling of Merrick Garland’s Supreme Court nomination implies that even that remedy would have limited effect. But at least it

worked for generations. It was called the filibuster.

David Sobelsohn, AB’74
WASHINGTON, DC

Destructive force

In a letter published in Winter/18, I stated that dropping the two nuclear bombs caused the Japanese to surrender, thus saving the lives of millions of Japanese who would otherwise have died if an American attack on the Japanese mainland had been required to end the war.

In his Spring/18 letter, Bob Michaelson, SB’66, AM’73, challenged my statement, claiming that the nuclear bombs were not the cause of the Japanese surrender. He supports his claim by pointing out that the Japanese did not surrender even though “the Japanese death toll from US conventional bombing in World War II exceeded 500,000.” Since the death toll from the two nuclear bombs together was far smaller, he states that it is unreasonable to attribute the Japanese surrender to the nuclear bombs. Michaelson attributes the Japanese surrender to the Soviet Union’s entry into the war. His argument ignores one important fact. The 500,000 deaths resulted from an American conventional bombing campaign that extended over many months. The destruction of Hiroshima and Nagasaki each resulted from one single bomb. And the Japanese had no way of knowing that the United States had no additional nuclear bombs. Japan surrendered six days after the nuclear destruction of Nagasaki.

Enormous death tolls from conventional warfare, both civilian and military, did not diminish Japan’s determination to fight to the bitter end. More than 110,000 died defending the island of Okinawa, and yet the Japanese continued fighting. Millions more Japanese would have died in defense of their homeland.

There is a good reason why the world views nuclear warfare as vastly more destructive than conventional warfare. One single nuclear bomb can destroy an entire city. Let us hope that nuclear bombs will never again be used in disputes between nations.

Nathan Aviezer, né Wisner,
SM’59, PhD’65
PETAH TIKVA, ISRAEL

A COMMUNITY OF SCHOLARS

BY AMANDA WOODWARD

DEAN OF THE DIVISION OF THE SOCIAL
SCIENCES AND WILLIAM S. GRAY
DISTINGUISHED SERVICE PROFESSOR
OF PSYCHOLOGY



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We provide doctoral, master's, and College students with an exceptional breadth and depth of educational opportunities, through PhD degrees in nine disciplines, master of arts degrees in five interdisciplinary fields, and a rich set of joint graduate programs in partnership with other divisions and schools. Interdisciplinary initiatives in international research and in social data analytics position us to lead in crucial emerging areas and further enrich our academic offerings.

Undergraduate interaction with division faculty is a cornerstone of the College experience, both in the Core curriculum and in a dynamic set of majors and minors that continue to grow and evolve. Last spring we launched specializations in business economics and data science within the economics major (the largest College major), building on strong connections with Chicago

Booth and the Department of Computer Science. In the coming year, we will introduce interdisciplinary minors focusing on health, education, and data analytics, programs enriched by offerings in Harris Public Policy, the School of Social Service Administration, and the Biological Sciences Division.

We also bring our scholarship to bear on the diverse and pressing problems we face as a society. For example, **Ada Palmer**, an associate professor in the Department of History who appears in this issue of the *Magazine* (see Original Source, page 44), is co-organizing a fall quarter dialogue series, Censorship and Information Control During Information Revolutions, that brings together scholars of earlier information revolutions and places them in conversation with journalists, editors, authors, activists, and other experts on the contemporary information revolution. Each session is open to the public and will be recorded for viewing online. The series is complemented by an exhibit in Regenstein's Special Collections Research Center that runs through December 14.

New developments reinforce our capacity to continue such transformational approaches. Among many examples, the \$125 million gift commitment from **Kenneth C. Griffin**, a

University trustee, to our Department of Economics is expanding our leadership in education and research, increasing financial support for students, and augmenting our efforts to impact the world through economic inquiry and analysis. Resulting initiatives through its new research incubator will span micro- and macroeconomics and reflect the increasingly interdisciplinary nature of the social sciences.

With support from members of the Social Sciences Council, our Social Sciences Research Center is fostering multimethod collaborative approaches and providing specialized resources for launching and scaling pilot projects into major programs. The SSRC maximizes our flexibility to respond to evolving research needs and strategic priorities, including new data science and quantitative approaches, and offers significant opportunities for continued innovation.

At the core of these and all our other achievements is a defining characteristic: we are a community of scholars. Those connections extend from our faculty and students to our alumni and to those interested in the crucial questions explored across social science disciplines. We strive for a sense of connectedness in our long-term and strategic plans and in our day-to-day as well. This fall, for example, we have reinstated the SocTea, a division tradition. These monthly gatherings bring faculty and doctoral students together informally, and those afternoons' introductions and conversations both reflect and extend the legacy of transformational research and education upon which we are built.

We sustain and are enriched by activities that naturally reach across divisions and schools, from faculty research collaboration to graduate education and undergraduate teaching. I am honored to serve as dean and look forward to all that our students, faculty, and alumni will continue to achieve. ♦

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AT THE FOREFRONT

UChicago Medicine

UCHICAGO JOURNAL

RESEARCH AND NEWS IN BRIEF

LIFE CYCLE

In her photo series *The Burn*, Jane Fulton Alt, AM'75, documents a decade of controlled prairie fires intended to replenish the land for future growth. To read more about the SSA alumna and her photographic career, visit mag.uchicago.edu/alt.

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Treating violence as a public health issue

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How Hollywood stars get that glow

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With stable schedules, everybody wins



The doctors who joined the trauma team are united by a desire to address the root causes of violence, not just its effects. Left to right: trauma surgeons Kenneth Wilson, David Hampton, Priya Prakash, Selwyn O. Rogers Jr., Jennifer Cone, and Peter Bendix.

MEDICINE

Taking on trauma

By treating violence as a public health issue, UChicago Medicine trauma experts seek to transform care on Chicago's South Side.

BY BROOKE O'NEILL, AM'04

“Obviously it’s a huge job to stand up a level I trauma center from the ground up,” says **Selwyn O. Rogers Jr.**, director of the University of Chicago Medicine’s new level I adult trauma center and chief of trauma and acute care surgery. “But it can’t be the only solution.” UChicago Medicine began providing adult trauma services in May and averaged nine patients a day from May 1 to September 30.

For Rogers, filling the 27-year absence of adult trauma care on Chicago’s South Side is part of a much larger mission: to reduce the violence that has left residents devastated and a generation traumatized. Although most of

the patients UChicago Medicine treats won’t be gunshot victims—the most common life-threatening injuries that bring people to any trauma center are car accidents and falls—many will be.

“If we don’t address violence as a public health issue,” Rogers says, “and deal with its root causes—the impact of trauma over the life cycle, the lived experiences of communities that are chronically disinvested in, and the resulting poverty, discrimination, and lack of economic opportunity—we will continue to see the problem of intentional violence manifest itself.”

Joining Rogers’s trauma surgery team this year are five professionals from cities such as Flint, Michigan; Los Angeles; and Cleveland, all besieged by violence of their own. Most have come to the South Side frustrated by what they see as a disconnect between what they do in the operating room and the situations that bring patients there in the first place.

“It’s very easy for us as trauma surgeons to just operate on people, take care of them in the ICU, and leave it at that,” says **Jennifer Cone**, a Chicago native who completed her surgical fellowship at Los Angeles County Medical Center. “But that’s not fixing anything when we get the same patients in over and over.”

Military veteran **Kenneth Wilson** agrees. “My entire surgical career I’ve struggled with the fact that we’ve gotten very good at fixing the physiology as a consequence of trauma—and often pat ourselves on the back—but we’ve never tackled the psychology of what gets you into that situation.”

Over the past two decades, local leaders have fought hard to bring adult trauma care to the South Side and to the University. The outcry reached fever pitch in August 2010 when Damian Turner, an 18-year-old activist, was gunned down in a drive-by shooting several blocks from the UChicago Medicine campus. Para-

We’ll focus on restoring people’s physiology, but entry starts off with a conversation, not a judgment. A few simple words: “How can I help?”

medics took him to the nearest adult trauma center, more than nine miles away. According to news reports, he was pronounced dead about 90 minutes after the shooting.

“There was a lot of frustration and anger within the community,” says Rogers, who came to Chicago in 2017 from the University of Texas Medical Branch in Galveston, where he served as vice president and chief medical officer. Once UChicago Medicine made the decision to offer adult trauma services, however, residents fueled its creation with “incredible passion.” More than 100 individuals applied to join UChicago Medicine’s 20-person Community Advisory Council, a task force designed to keep community health needs at the forefront.

Holistic care is critical. “Obviously, we’ll focus on restoring people’s physiology,” Rogers says, “but entry starts off with a conversation, not a judgment. A few simple words: ‘How can I help?’”

It’s a fleeting moment that can be transformative, particularly for someone who’s grown up in a traumatic environment.

“Many of these kids coming in are surrounded by neighborhood violence, many suffering from post-traumatic stress disorder,” says **Debra Allen**, a registered nurse and clinical director of trauma services. “There is a moment of opportunity—and this is rare in a person’s life—where we can change the path they’re on. One of those moments is when people are injured.”



The trauma team has cared for an average of nine patients a day since the opening of the new level I adult trauma center in May.

The trauma center’s violence recovery program has forged connections with local organizations including Chicago Survivors, the Heartland Alliance, and the YMCA. In late 2017 the trauma team and University faculty from medicine, law, and history came together with more than 100 community partners to begin shaping a hospital-based violence recovery program designed for the South Side.

Mental wellness emerged as a key focus. “We know that after trauma, it doesn’t just affect the individual who has been traumatized, but also close contacts and friends,” Rogers says. He pointed to one heartbreaking example among far too many: the deaths of two young South Side girls, Takiya Holmes, 11, and Kanari Gentry-Bowers, 12, both shot by stray bullets in separate incidents on February 11, 2017.

“What’s the effect on their peers as they move forward?” he asks. “Where does their hope for a better day come from?”

“We want our trauma center to be a leader in thinking about violence,” says **Kenneth S. Polonsky**, dean of the Biological Sciences Division and the Pritzker School of Medicine and executive vice president for medical affairs for the University of Chicago. “How can you prevent it? How can you identify people who are at risk? How can you reduce the risk of recurrence in people who have already been involved? Dr. Rogers is extraordinarily well qualified for that.”

Just as combating violence requires all hands on deck, Rogers says, the same is true for creating a world-class trauma hospital. From designing a system of comprehensive care to implementing quality improvements,

ABSTRACT

A BETTER RECIPE FOR USEFUL MOLECULES

If you want to make an omelet, you’ve got to break a few eggs. If you want to make a molecule, you’ve got to convince the ingredients to attach in the right order. This process is notoriously fussy for arenes, a class of molecules useful in developing new pharmaceuticals and chemicals for agriculture. In a June 25 paper in *Nature Chemistry*, **Guangbin Dong**, professor of chemistry; graduate student and lead author **Jianchun Wang**; **Renhe Li**, SM’17; and **Zhe Dong**, PhD’18, found a better way. Their approach uses a palladium catalyst and molecules called bridgehead-modified norbornenes. The norbornenes serve as a bridge, allowing scientists to guide ingredients to the right spots. Making arenes used to be a seven-step process; with this new method, it’s only two.—S. A. ♦

hiring surgeons, and connecting to a regional trauma network, Rogers and UChicago physicians, nurses, and other clinicians have built a center that will deliver the highest level of care for life-threatening injuries.

In December 2017 the medical center opened a new \$39 million adult emergency department, the primary entry point for trauma patients, who are treated there and moved to other parts of the hospital once stabilized. Designed to dramatically improve speed and efficiency, the state-of-the-art facility has three rapid assessment bays for initial physician screenings; four specialized bays for stroke, heart, and trauma patients; and 24/7 emergency radiology services, a first for the hospital. Adult trauma also builds on UChicago Medicine's existing level 1 pediatric trauma program and its Burn and Complex Wound Center.

"The opening of the trauma center reflects what can be accomplished when the University, UChicago Medicine, and the community come together to work toward common goals," says **Derek Douglas**, the University's vice president for civic engagement and external affairs. "In that same spirit of partnership, the University is leveraging its strengths in education, research, innovation, and community engagement to identify ways to prevent violence."

"The trauma center isn't a place, it's a network," says **Kam Buckner**, lecturer in public policy studies in the College, who cotaught a field research course on health care disparities in Chicago with Rogers last year. Among other campus partnerships, the trauma center is cosponsoring a yearlong lecture series through the MacLean Center for Clinical Medical Ethics.

"We have the opportunity to do something transformative here on the South Side," says Rogers, who aims to create models of violence prevention that can be replicated nationally. "I'm trying to challenge people to think differently. Certainly, UChicago Medicine and UChicago cannot do it by ourselves, but we have powerful voices." ♦

ACCOLADES

Triple crowns

Three UChicago alumni earned front-page honors this year: a Nobel Prize, a MacArthur Fellowship, and a Pulitzer Prize. Congratulations to these innovative scholars and artists. For the University's full list of major accolades, visit uchicago.edu/about/accolades.—L. D.

1



PAUL ROMER, SB'77, PHD'83
Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel

Romer, who teaches at New York University, shared the prize with Yale's William Nordhaus. Romer's work to integrate technological innovations into macroeconomic analysis, said the Nobel press release, "has generated vast amounts of new research into the regulations and policies that encourage new ideas and long-term prosperity."

2



REBECCA SANDEFUR, AM'97, PHD'01
MacArthur Foundation Fellowship

In awarding the \$625,000 fellowship grant to Sandefur, the foundation cited the University of Illinois at Urbana-Champaign sociologist's work to understand access to civil justice and how to make it more accessible to low-income populations. Her research is providing empirical evidence that can undergird reform.

3



MARTYNA MAJOK, AB'07
Pulitzer Prize for Drama

Majok's play *Cost of Living* was recognized with the prize in April 2018. The Pulitzer board noted the "honesty and originality" of the play's exploration of two complex relationships: between a recently paralyzed woman and her unemployed ex-husband, and between a graduate student with cerebral palsy and the woman who is his caregiver.

ASTRONOMY

Something new under the sun

Justin Kasper, AB'99, once built a working nuclear reactor for Scav. Now he's built an equally impossible instrument for NASA's Parker Solar Probe.

BY LOUISE LERNER, AB'05

Nestled in the mountains near the French-Spanish border is a wall of mirrors seven stories high. When sunlight strikes the mirrors, it focuses on a single room that reaches 6,300 degrees Fahrenheit. “That’s one of the things we used to convince NASA we had a shot in hell of working,” says **Justin Kasper**, AB’99.

Kasper heads a team that built a key instrument aboard NASA’s Parker Solar Probe, launched August 12. It will fly closer to the sun than any previous craft.

Named after **Eugene Parker**, the S. Chandrasekhar Distinguished Service Professor Emeritus in Physics, who in 1958 first predicted the existence of solar wind, the little spacecraft’s mission is a difficult one. As it travels across deep space and then dips into the sun’s corona, it will experience external temperatures from well below zero to more than a million degrees Fahrenheit. (The craft itself will heat up to thousands of degrees Fahrenheit.) It will be bombarded with radiation, the equivalent of a couple of megawatts’ worth of sunlight, and possibly dust particles flying faster than bullets.

Most of its instruments will be safely tucked behind a heat shield. “And then there’s ours,” Kasper says—a tool to capture direct readings of the solar wind—“which stares directly at the sun 24/7 throughout the whole mission.”

ABSTRACT

HEY, GET DOWN FROM THERE!

Some childhood pastimes are timeless: a recent analysis of an ancient child’s fossilized foot suggests that, more than three million years ago, our youthful ancestors had adaptations that allowed them to climb trees. **Zeresenay Alemseged** was the senior author of the study, published in the July 4 *Science Advances*, which reveals that early humans retained certain ape-like characteristics. Alemseged, professor in the Department of Organismal Biology and Anatomy, found the nearly complete skeleton of Selam, a two-and-a-half-year-old female *Australopithecus afarensis*, in Ethiopia. The skeletal structure of Selam’s foot indicates she could walk upright. But her big toe, which was more movable than an older *Australopithecus afarensis*’s and allowed her to grasp tree branches, suggests that children like Selam probably spent more time in trees than adults did. This likely provided juveniles a safe alternative to walking in moments of danger.—S. A. ♦



Watching the August 12 launch of the Parker Solar Probe—with the instrument his team built aboard—was a career highlight for Justin Kasper, AB’99.

Kasper has experience making things that shouldn't exist. He and roommate **Fred Niell**, AB'99, became campus legends when they built a working breeder nuclear reactor in Kasper's Burton-Judson dorm room for the 1999 Scav Hunt.

"That's kind of what I do professionally," says Kasper, now a University of Michigan professor and a research associate with the Smithsonian Astrophysical Observatory. "Every year NASA puts out a list of things that need to be built for some crazy mission, and you look at the list and you get a group of people together and tell them, 'I know this sounds crazy, but we're going to try to figure out how to get a sample of the sun's atmosphere.'"

Kasper's latest project, now on its way to the sun, is the Solar Wind Electrons Alphas and Protons investigation, or SWEAP. Its job is to scoop up incoming particles of the solar wind and analyze them to better understand how these winds are formed, heated, and accelerated off the sun's surface.

"These are some of the fundamental questions about our sun motivated by Professor Parker's landmark 1958 paper," says **Angela Olinto**, dean of the Physical Sciences Division.

With few protocols for building machinery that can function in the intense conditions near the sun, Kasper and his team had to start almost from scratch. They had hoped to get tips from scientists working on nuclear fu-

sion. Nothing doing: "They said, 'We have no idea. We're looking forward to what you find out.'"

So Kasper's team turned to the French wall of mirrors. The Odeillo Solar Furnace helped them identify materials that could best withstand the brutal heat and sunlight. One by one, the pieces came together. SWEAP's cup is made of heat-resistant metals like tungsten and niobium; sapphire is threaded through the design, holding grids in place and insulating its wires.

Then it was time to test SWEAP's metals and mettle. In one test, the team cobbled together a setup combining a particle accelerator, a vacuum chamber, and old IMAX projectors bought off eBay to see whether the cup could measure incoming particles under extreme conditions. It did—taking more than 100 measurements per second. "We refer to it as 'the bravest little instrument,'" says Nicola Fox, the Johns Hopkins Applied Physics Laboratory heliophysicist who's the mission scientist for the Parker Solar Probe.

All in all, it's been a nearly decade-long journey. "I can't tell you how many times we've had to stop and have a meeting where we're staring at a melted piece of sad instrument, but I love those moments," Kasper said.

"We're not giving up, we're going to fix it, and finally someone stands up and says hey—we'll put it in backwards, and that will fix the issue."

When Kasper learned last year that the spacecraft would be named after Parker, it brought the trip full circle. His adviser at UChicago was John Simpson, who hired Eugene Parker

in the 1950s and put him onto the problem that led to his solar wind proposal. Kasper remembers the two men discussing the idea of sending a spacecraft to the sun. First proposed as a NASA mission even before NASA itself was formed, it

was scrapped because the technology wasn't there yet.

This August Kasper watched the launch in Cape Canaveral with Parker, now 91, and a group of scientists, officials, and engineers. They whooped and cheered as the rocket took off into the dark, meteor-streaked sky, the probe and its instruments onboard.

Soon after, the Applied Physics Laboratory announced that it had communicated with all of the instruments—and that SWEAP had captured an early gust of solar wind. In October, the spacecraft swung around Venus and prepared to hitch its wagon to a star. Next stop: the sun. ♦

I can't tell you how many times we've had to stop and have a meeting where we're staring at a melted piece of sad instrument.

ABSTRACT

THE STUBBORN RACIAL EARNINGS GAP

The earnings gap between a median black man and a median white man is as wide today as it was in 1950. That's the sobering conclusion of a July Becker Friedman Institute working paper by **Kerwin Charles**, the Edwin A. and Betty L. Bergman Distinguished Service Professor at Harris Public Policy. Charles and his coauthor studied the earnings of all working-age men, including those who are incarcerated or unemployed. They also analyzed the earnings gap in the top, middle, and bottom of the income distribution separately. The overall increase in earnings inequality, as well as the growing importance of education in the labor market, have disproportionately harmed black men, the researchers found—S. A. ♦

The Constitution goes to school

Law School professor Justin Driver explores how education law became a cultural flashpoint.

BY BECKY BEAUPRE GILLESPIE



Illustration by Sandra Dionisi/theisspot

“No other arena of constitutional decision making ... comes close to matching the cultural import of the Supreme Court’s jurisprudence governing public schools,” Justin Driver writes in his new book, *The Schoolhouse Gate*.

Justin Driver’s new book was either four years or three decades in the making, depending on how you count it.

There are the recent years he spent researching and writing *The Schoolhouse Gate: Public Education, the Supreme Court, and the Battle for the American Mind* (Pantheon Books, 2018). And then there’s the lifetime of personal experiences—as a student, a high school teacher, a Supreme Court clerk, a scholar of constitutional law, and a father—that triggered his inquiry.

Over the years, Driver, the Harry N. Wyatt Professor of Law, realized that millions are shaped for better or worse by their educational experiences—making public schools the “most significant site of constitutional interpretation within the nation’s history,” he writes in *The Schoolhouse Gate*. Most Americans are required to attend school, and few have options beyond public education. Schools represent “the first sustained exposure that most citizens have to a governmental entity,” Driver says.

Although Driver includes plenty of legal analysis, the book is, at its core, a story about the people at the center of precedent-setting cases—individuals including John and Mary Beth Tinker, who fought to express a political belief by wearing black armbands to school; or Gavin Grimm, who fought to use the bathroom that matched his gender identity (an issue that still has not been resolved); or Oliver Brown, who fought to send his daughter Linda to the all-white school just seven blocks from their house.

Driver examines how education law mirrors America’s broader struggle with civil liberties. In the past century, the Supreme Court has considered public education cases dealing with religion, free speech, due process, racial segregation, and more. “The public school has become a major flashpoint for the larger cultural conflicts that pervade our society,” Driver says.

At points, he questions cherished narratives—wondering, for instance, whether the mission to achieve unanimity in *Brown v. Board of Education*

EPIC JOURNEY

in 1954 hindered future efforts to address persistent racial isolation in urban schools. He also challenges the idea that the Supreme Court tends to follow the predominant views of the American public, pointing to the 1962 ban on teacher-led prayer in *Engel v. Vitale*, which drew widespread public rebuke, and *Tinker v. Des Moines Independent Community School District*. That 1969 ruling affirmed students' right to engage in symbolic antiwar speech.

Although the *Tinker* decision was heralded in the media at the time, Driver believes Justice Hugo Black's dissent offered the better barometer of public opinion. Black's views reflected "a deep wellspring of cultural anxiety" that schools would lose control of their students, Driver says. Several subsequent cases limited *Tinker's* reach by allowing schools to suppress sexually suggestive language and speech that promotes drug use. For some, those cases were an overdue restoration of schoolhouse order.

Driver worries about the erosion of *Tinker* and other recent trends limiting student rights: the rise of police officers stationed in schools and rulings that have exempted schools from certain aspects of the Fourth Amendment ban on unreasonable search.

His area of greatest concern is the continued practice of corporal punishment. In the 1977 ruling *Ingraham v. Wright*, the court made what Driver views as "a grave misstep," arguing that the Eighth Amendment prohibition on cruel and unusual punishment "has no meaning within the school at all," Driver says.

Reforms in these areas are possible regardless of the court's makeup, he adds, pointing to state courts and legislative bodies as possible avenues. Whatever form it takes, however, change will probably require the courage of people like the *Tinkers* or the *Browns*.

"Even if one disagrees with the underlying constitutional claims," Driver writes, "it is often difficult not to admire the students and their families for being willing to stand up for their understandings of the Constitution." ♦



Orientation Week can feel like an odyssey: Which one's the Reynolds Club? You can't wash a red sweatshirt with your whites? Excuse me, it gets how cold here in February? So it's appropriate that members of the Class of 2022 embarked on the experience with some literary assistance—their very own copy of Homer's *Odyssey*, translated by Robert Fagles. The books were funded by donations from College alumni who have already completed their monumental voyage on the maroon-dark sea. (For the record: the big one at 57th and University; not unless you want pink socks; just wait and see.)—S. A. ♦

Photography by John Zich

PROFILE

Everyone can have great skin

Start by eating healthy and wearing sunscreen, says Hollywood's go-to aesthetician Joanna Vargas, AB'93.

BY SUSIE ALLEN, AB'09

Any of us can have the glowing complexion of a Hollywood star. That's the heartening message of aesthetician **Joanna Vargas**, AB'93, who would know—Vargas spends her days tending to the skin of various (and luminous) actors including Mindy Kaling, Elisabeth Moss, and Naomi Watts. Her signature facials, which include microdermabrasion, microcurrent, and oxygen therapy, are in frequent demand in the weeks before the Oscars and the Met Ball.

“Earlier on in my career there was more of a notion that you had to be born with good skin in order to have it,” says Vargas, who has her own line of products and sees clients at her salons in New York and Los Angeles. But she's found that a healthy diet, the right lotions and potions, and sunscreen (“the sun causes most of the damage that you're going to complain about later in life”) can keep skin clear and youthful.

Vargas gained her customers' trust with innovative but noninvasive techniques. She's partial to LED light therapy, in which a machine emitting different light wavelengths, each with its own benefits, is placed over the face. Her clients were so happy with the results that Vargas developed and patented an LED light bed for the full body. (Several clinical studies support the effectiveness of light therapy for antiaging, and the American Academy of Dermatology has deemed it effective against acne.)

She wants to see people “think less in extremes,” Vargas says. “In the past 15 years in the beauty industry there's



“I wish everybody would wash their face at night before they went to bed, without fail,” says Joanna Vargas, AB'93. For more of her tips, see mag.uchicago.edu/vargas.

been a lot of focus on invasive stuff—on filler, on Botox, on a ton of laser, on surgery.” In her view, radiant skin can be achieved without those measures, and without their side effects.

Vargas keeps her eyes and ears open for new tools and ingredients, scouring (or should we say exfoliating?) scientific publications for information. She reads the studies submitted to the FDA before it approved a device—“What are the side effects, if any? What are the contraindications, if any?”—and tries new treatments on herself before offering them to clients.

Vargas has been her own beauty product guinea pig since childhood. Growing up, “I definitely was the girl who had the most bubble bath and lip glosses.” Her interest in beauty deepened as she took courses in women's studies at UChicago; her BA the-

sis focused on the commodification of the female image. In it, Vargas argued that women dress and wear makeup for their own pleasure, not solely in response to societal pressures.

The connection between looking good and feeling good was apparent to Vargas when she entered beauty school after a career in fashion photography didn't work out. “The thing that I fell in love with immediately was the idea

that I could transform somebody in terms of just how she felt about herself,” she says.

Today Vargas is an evangelist not just for the collagen-promoting benefits of LED, but also for taking unexpected career paths. “Younger people think that they

have to have everything decided very, very early in life,” she says. “Sometimes being curious is the best education, once you finish school.” ♦

The thing that I fell in love with immediately was the idea that I could transform somebody in terms of just how she felt about herself.

The Hours

A study from the School of Social Service Administration points the way toward better lives for hourly workers—and a stronger corporate bottom line.

BY SEAN CARR, AB'90

It should be an easy question: What are you doing tomorrow?

If you're an hourly worker in a field such as food service, health care, or retail, answering gets tricky. Standard scheduling practices in those industries can mean shifts changing on a weekly basis, little advance notice of when you'll be working, and having almost no say in when or how much you work.

So good luck arranging childcare, attending school, or juggling your other jobs. And with managers incentivized to boost profits by limiting staff hours, your income can vary wildly from week to week, adding household budgeting to the struggle.

"We can document the carnage of these things," says **Susan Lambert**, associate professor at UChicago's School of Social Service Administration, who has spent 30 years studying the impact of job quality on workers' lives. "But what do we do about it?"



"Unstable work schedules make it difficult for employees to do their job well and to plan their life outside of work," Susan Lambert says.

In 2015 Lambert and colleagues from the University of California Hastings College of the Law and the University of North Carolina's Kenan-Flagler Business School decided to find out. With input from senior management at Gap, they conducted a trial of several interventions that, Lambert

says, "would be feasible for managers to implement and that would make a difference to workers." The first results from the Stable Scheduling Study, published earlier this year, provide evidence that scheduling instability isn't just bad for workers—it's bad for business.

PARTY CRASHERS

In highly polarized political environments, outsider candidates can "crash" political parties and emerge victorious in elections, according to a new working paper from **Peter Buisseret**, an assistant professor at Harris Public Policy. With his coauthor, Buisseret developed a theoretical electoral model that explains the unanticipated success of nonestablishment candidates such as Donald Trump and **Bernie Sanders**, AB'64. These candidates, the research suggests, are often stronger in a general election than establishment candidates because their views and policies are aligned with the public, rather than with party elites. What's more, the authors argue, party elites who could block the outsider's nomination will often choose not to in the interest of party unity.—S. A. ♦

THE MAJORS

1 in 6

Proportion of College students
majoring in economics

5

Students in each of the two
smallest majors, Jewish
studies and medieval studies

30

Students working toward
bachelor's and master's
degrees simultaneously

18

Students in the newest
College major, astrophysics

79

Students in the College's
only engineering program,
molecular engineering

4

Maximum number of majors
a student may declare

1

Current students with
four declared majors
(mathematics, statistics,
economics, computer science)

The researchers randomly assigned 28 Gap stores in the San Francisco Bay Area, where Gap is headquartered, and around Chicago to either treatment or control status. At the latter, it was business as usual. (Workers in San Francisco already had more protection than many retail workers, thanks to a city ordinance that requires managers to provide employees their schedules two weeks in advance.)

At the treatment stores, managers were encouraged to put several new practices into effect. As much as possible, employees were to be scheduled consistently—the same days and start and stop times—from week to week. Some managers had the flexibility to give a core group of employees 20 or more hours a week and to add additional staff when it was likely to increase sales. The study team also introduced a mobile app that made it easy to swap shifts, giving employees more say in when they worked.

From November 2015 to August 2016, the researchers gathered data from surveys, interviews, and focus groups with store managers and sales associates, and from transactions within the shift-swapping app. Gap also shared weekly schedules, sales and traffic records in 15-minute increments, and other store metrics.

Once crunched, Lambert says, the numbers showed that they had “moved the needle” on consistency in scheduling. The hard data on consistent schedules, employee input, and other measures didn’t show a huge difference between treatment and control stores in the overall structure of the job or scheduling, but in surveys, employees in the treatment stores felt there was greater consistency and that they had more of a voice in when they worked. What did change—dramatically—were sales. In treatment stores,

they went up by 7 percent, a huge number in an industry where 1 or 2 percent increases are hard won.

The researchers have some theories about what happened. One is that, given the opportunity to promise some employees more hours, managers tended to favor their most productive workers. Second, more stable scheduling appeared to increase how long people worked for a store, and that extended tenure made them into better sellers.

Still, Lambert is “surprised that such modest differences could reap such a big result.” And, she adds, “There’s still a lot of instability that could be tamed.”

In retail, it’s widely assumed that unpredictable customer patterns make stable schedules impossible. But the

**What did change—
dramatically—were
sales. In treatment
stores, they went up
by 7 percent, a huge
number in an
industry where 1 or 2
percent increases
are hard won.**

study showed that only a fraction of the variability—30 percent—stems from changes in customer traffic. The rest results from moving in-store promotion dates, changes in shipment sizes, and unexpected senior leadership visits. Managers scramble to cover for such surprises by pulling staff off the floor

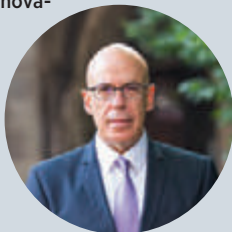
and into the stockroom, leaving fewer employees to shelve merchandise and help customers.

Lambert can’t say how Gap and other retailers will act on this information. But the report, like Lambert’s previous work, provides “an empirical basis for making policy decisions” around the country—in Seattle, San Francisco, and New York City, where stable scheduling laws are already in action, and in Chicago, where the city council is considering a similar ordinance. “Is two weeks’ advance notice too much for employers to do?” Lambert asks. “Is it too little for employees? Those are the kinds of thing our data help inform.” ♦

For the record

LAB CATALYST

In August **Juan de Pablo**, Liew Family Professor in Molecular Engineering and senior scientist at Argonne National Laboratory, was named vice president for national laboratories. De Pablo will lead the University's stewardship of two US Department of Energy national laboratories, Argonne National Laboratory and Fermilab. In addition, he will collaborate with other leaders in research and innovation to build programs and links between the national laboratories and the University, as well as the Marine Biological Laboratory.



OBAMA SCHOLARS ON CAMPUS

On August 27 the Obama Foundation and the University of Chicago welcomed the inaugural class of Obama Foundation Scholars at Harris Public Policy. The international group of 25 scholars are focused on global issues, including climate change, education, and government transparency. The scholars are enrolled in a new master of arts in international development and policy degree program at Harris. The Obama Foundation Scholars program's first cohort also includes 12 students participating in a yearlong immersive learning experience at Columbia University.

NADELLA JOINS BOARD

Satya Nadella, MBA'97, chief executive officer of Microsoft, has been elected to the University of Chicago Board of Trustees. He began his five-year term in September. Nadella was named chief executive officer of Microsoft in 2014 after holding leadership roles in both enterprise and consumer businesses across the company. He previously served as executive vice president of Microsoft's cloud and enterprise group, leading its transformation to the cloud infrastructure and services business. Before joining Microsoft, Nadella was a member of the technology staff at Sun Microsystems.



SHAPING RESEARCH

Ka Yee Lee, professor in chemistry, the James Franck Institute, and the Institute for Biophysical Dynamics, was named vice provost for research in August. Lee will work with faculty and deans to enhance and expand research activities at the University. Among the programs she will oversee are University Research Administration, the University of Chicago Consortium for Advanced Science and Engineering, the Office of Research Safety, and the Research Computing Center.

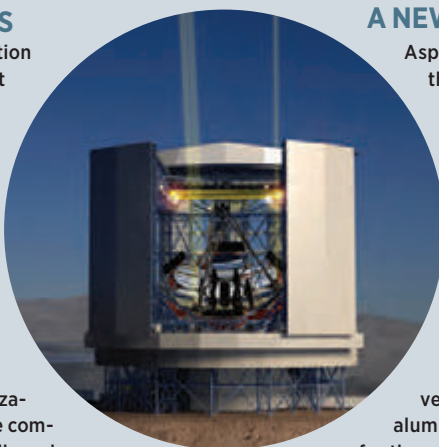


RECHARGED

The US Department of Energy announced its decision September 18 to renew the Joint Center for Energy Storage Research (JCESR), providing \$120 million over the next five years. Led by Argonne National Laboratory, JCESR aims to create next-generation energy storage technologies that will transform transportation and the electric grid in the same way lithium-ion batteries transformed personal electronics. The University is one of 18 partners in JCESR, alongside other national laboratories, universities, and an industrial firm.

GIANT STEPS

Hard rock excavation began this August for the Giant Magellan Telescope (GMT), which is expected to see first light as early as 2024. The University became a founding member of the Giant Magellan Telescope Organization in 2010. Once complete, the GMT will produce images 10 times sharper in the infrared region of the spectrum than those from the Hubble Space Telescope. Astronomers will use these images to study planets around other stars and to look back to the time when the first galaxies formed. The telescope, housed at Las Campanas Observatory in Chile, will have a final weight of



about 1,600 metric tons and will comprise seven mirrors supported by a steel telescope structure seated on a concrete pier.

HER AIM IS TRUE

Gabriel Richardson Lear, professor in philosophy and the John U. Nef Committee on Social Thought, delivered the Aims of Education address to the College Class of 2022. Part of Orientation Week since 1962, the lecture provides incoming undergraduates an opportunity to reflect on the purpose and definition of education. In her remarks, Lear focused on the concept of wonder, telling UChicago News, "The sort of wonder that orients us to wisdom is already an intellectual accomplishment. I try to clarify what wonder is, in the hopes that this will help students take the first step in their education."

HOW DO YOU FEEL ABOUT WEDNESDAY?

In keeping with College tradition, aspiring members of the Class of 2023 will be required to answer one of six unconventional essay questions, released June 25. This year's prompts include creating a new word and describing its meaning; devising a Harry Potter-style charm to solve a life problem of your choosing; and (inspired by Melbourne, Australia's email service for trees) writing a letter to your favorite object.

A NEW INNOVATION

Aspiring CEOs, take note: the Polsky Center for Entrepreneurship and Innovation announced the creation of the Alumni New Venture Challenge (ANVC), a program dedicated to supporting alumni in the process of launching and developing start-up ventures. All UChicago alumni are eligible to apply for the competitive accelerator program and work toward a spot in the global finals on May 2. The ANVC is the latest addition to the **Edward L. Kaplan**, MBA'71, New Venture Challenge, which also includes tracks for undergraduates, graduate students, Chicago Booth executive MBA students and alumni, and ventures with a social mission.

Clockwise from top left: Photography by Robert Kozloff; photography by Jean Lachet; courtesy Giant Magellan Telescope - GMTO Corporation; courtesy Brian Smale and Microsoft (CC BY-SA 4.0)



INTERVIEW

Paper chase

When tariffs on Canadian newsprint threatened US papers, political scientist turned trade lawyer Elliot J. Feldman, AB'69, built a case and a coalition.

BY LAURA DEMANSKI, AM'94

In August, the US International Trade Commission (ITC) blocked tariffs on imported Canadian newsprint imposed by the Trump administration in January. The decision was celebrated by paper companies, newspapers, and US congresspeople on both sides of the aisle. Newspapers large and small had suffered from the tariffs, laying off employees and, in at least one case, folding.

Elliot J. Feldman, AB'69, a partner at the law firm BakerHostetler, crafted the winning strategy in his role representing a Montreal-based paper company. Feldman, who taught political science at US and Canadian universities before earning his law degree from Harvard, spoke to the *Magazine* about the tariff case. This interview has been edited and condensed.

What was your argument that resulted in the tariffs' lifting?

I wanted to make a First Amendment case. The newspapers operate at such small margins that imposing these tariffs starts putting them out of business. The Tampa Bay paper released 60 peo-

ple in its newsroom to cut costs. Papers that had been dailies announced they were going weekly. Others reduced the size or number of pages.

I argued that if Congress is not permitted to pass a law that abridges freedom of the press, then no agency is permitted to interpret a law of Congress such that it would abridge freedom of the press. Going back to *McCulloch v. Maryland* in the 19th century, the power to tax is the power to destroy, and a tariff is a tax. So if you impose a tariff, you're exercising the power to destroy the press. This argument was a long shot because I thought the commissioners would rely on the doctrine of constitutional avoidance, but it helped frame the gravity of our case.

How did you rally support?

I encouraged my client to mount a public relations effort. We talked to the News Media Alliance, which represents about 10,000 newspapers and magazines in the United States, and their vice president took quickly to the case. We talked to members of Con-

gress, emphasizing the First Amendment, and 19 representatives and senators came to testify on our side. No one in the trade bar here could remember any member of Congress testifying for a respondent to the ITC.

The First Amendment argument was not the decisive one. The word "Constitution" doesn't appear anywhere in the determination. They found for us on other grounds on which we also built a very strong case—around the elements of the law that define material injury and threat of material injury. But the testimony from members of Congress was very bipartisan, which could not have been lost on the commissioners.

Where does this leave newspapers?

The temporary tariff deposits that were collected from the newsprint companies will start to be returned. The price for newsprint is high now because there have been a lot of closures in that industry and there's a shortage of newsprint, ironically. But the market will achieve equilibrium again, and this particular pressure is off the newspapers.

Why did you switch from academics to law?

In 1984 I was an international affairs fellow at the Council on Foreign Relations, and I spent the year as an assistant to the assistant secretary of defense in the Pentagon. I worked on the viability of the all-volunteer Army. That year was intense and exciting. I was engaged in issues that were really important. I came away from that having been exposed to stakes that were much higher, which I found out I liked.

When I wrote books as an academic, nobody ever read them. The proof is that my last royalty check from Duke University Press is on the wall of my office for \$3.51. Now I write for a very small audience, for a judge or a five-person panel or an agency, but what I write is read very carefully. ♦



C VITAE

A CHANGE WILL COME

BY JASON KELLY

Timuel D. Black Jr., AM'54, stands at the front of the bus, telling stories. Most of them originate on these streets, in Bronzeville, just north of the University of Chicago campus, and today he's dispensing the wisdom of his 100 years to about 20 first-year students on an Orientation Week tour.

A microphone lifts Black's voice above the rattle and hiss of the bus, and he rests one hand on a seat for support, swaying a little in the aisle with each stop and start. Those sitting closest to him seem to be on low-key alert, in case the momentum of the moving vehicle causes Black to lose his balance. **Bart Schultz**, PhD'87, director of the Civic Knowledge Project, organizer of the tour, and editor of Black's forthcoming autobiography, also stands ready with names or facts that might escape him.

None of the precautions are necessary. Evidence of Black's age is minimal, a slight shuffle in his step and a circuitous storytelling style, like his beloved jazz, that wends its way to unexpected places only to circle back to a refrain. "A change is gonna come,

young people," he says again and again to punctuate his riffs.

From beneath the brim of his Tuskegee Airmen cap, Black shares insights into how he worked for change during America's contentious 20th century. His narrative meanders across decades—from the boldfaced names he knew as a boy (Nat King Cole, the artist Charles White, the original Harlem Globetrotters) to his experiences in Normandy, the Battle of the Bulge, and Buchenwald in World War II; to the civil rights movement; to his association with black political pioneers Harold Washington; **Carol Moseley Braun**, JD'72; and Barack Obama.

"He is one of the city's great storytellers," says **Kenneth Warren**, the Fairfax M. Cone Distinguished Service Professor in English. "He's lived long enough to have known in person various players on the scene of the city of Chicago going back to the early part of the 20th century. He is a kind of walking history."

Black's family migrated from his birthplace in Birmingham, Alabama, to Chicago in 1919. From when he was an infant, he experienced the racial degradations of restrictive covenants that kept families like his confined to

South Side neighborhoods known as "the black belt." By law and custom, he grew up restricted and disrespected.

When Charles Lindbergh appeared in Chicago after his 1927 solo flight across the Atlantic, Black was among the students from Edmund Burke Elementary School who went to see the American hero. Lindbergh patted all the white children on the head, but not their black classmates. The sting of Lucky Lindy's slight stayed with little Tim Black for years and, when the aviator became a Nazi sympathizer, "all those who had not been patted on the head were not surprised," Black says.

After US involvement in World War II became inevitable, Black at first felt no patriotic impulse to fight. On December 7, 1941, his 23rd birthday, he shrugged off shouts of "Pearl Harbor has been bombed!" and the subsequent American mobilization with wisecracks: "She shouldn't have drank so much" and "I don't have an Uncle Sam." In 1943, though, he was drafted and Private Black went to Europe, where he would be exposed to humanity at its worst.

Four days after D-Day, Black's unit waded ashore at Utah Beach. Occasional German planes still strafed the Allied

Photo courtesy Vivian G. Harsh Society

Timuel Black (right) and Martin Luther King Jr. (left), shown here with labor leaders in Chicago in the 1960s, got to know each other well during the civil rights movement.

troops in Normandy. Land mines exploded across the French countryside and dead animals littered the ground. Meanwhile, local residents went about their daily chores, hanging their laundry to dry amid the detritus of battle.

Black endured the Battle of the Bulge at the end of 1944 and advanced into Germany as the war wound down, bracing to see the liberated concentration camps, the subject of stories more horrific than anything he had witnessed in combat. The Jews and Roma still clinging to life at the Buchenwald camp etched themselves into Black's memory even before he saw them. An odor and a wail carried beyond the walls.

"It was barely recognizable as human," he writes in his autobiography, *Sacred Ground: The Chicago Streets of Timuel Black* (Northwestern University Press, forthcoming 2019). "Nowhere had I encountered anything like that smell or that sound."

He associated the suffering of Nazi victims with that of American slaves, including his grandparents. Black returned from World War II, decorated with four battle stars, as an activist intent on insisting his country live up to its ideals, not only for the racially oppressed, but for stockyard laborers like his father, for women, and for religious minorities alike.

Black went to college first, earning a sociology degree in 1952 from Roosevelt University, then on to the University of Chicago for his master's and course work toward a PhD. The civil rights movement

kept his dissertation in a drawer.

In December 1955, Black saw Martin Luther King Jr. on television discussing the Montgomery bus boycott. Black felt so inspired that he was on a plane to Alabama within days. Months later, his efforts helped bring King to Rockefeller Chapel for his first major speech in Chicago.

Immersing himself in the movement, Black got to know King so well that they sometimes called each other "TD" and "Doc." Although Black supported non-violent protest as a tactic, he writes that he "could not share it at the spiritual level of Dr. King," not after facing police dogs and firehoses outside the 16th Street Baptist Church in Birmingham.

For Black, "the links between jobs and justice," the labor issues that A. Philip Randolph had championed since the 1910s as vital to African American freedom, represented the essence of the struggle. Randolph led the 1963 March on Washington, and Black served as an organizer of Chicago's "freedom trains" that ferried thousands to the site of King's "I Have a Dream" speech.

Despite his connections to icons like King and Randolph, and his influential political activism on behalf of city, state, and national politicians, Black retains a grassroots sensibility. The stories of students and strangers, and especially his neighbors on the "sacred" South Side streets where he has lived his whole life, still interest him most.

Teaching high school for more than a decade, including in South Side pub-

lic schools, he helped educate a generation coming of age as the country confronted its insufficient commitment to equality. Black influenced students like Hyde Park Academy's Jesse Brown, who joined the Marines and, after being wounded in Vietnam, would go on to become the Disabled American Veterans executive director and US secretary of veterans affairs under President Bill Clinton.

"You taught us to have self-respect," Brown says in the second volume of Black's oral history, *Bridges of Memory* (Northwestern University Press, 2007), "and helped us to learn that we as a people don't have any reason to be ashamed of who we are or apologize to anyone for the way that we look."

Bridges of Memory collects stories like Brown's and those of Black's family, chronicling the lives they built after fleeing the Jim Crow South for Chicago. Those works, Warren says, place Black in the tradition of Carl Sandburg and Studs Terkel, PhD'32, JD'34, as "individuals who are part of the political life of the city, but who are also able to synthesize a view of Chicago history, most importantly, from the standpoint of ... everyday working Chicagoans who are trying to live through the transformations and conflicts" of their times.

Black engaged the conflicts and shaped the transformations, valuing action over talk as a measure of impact. "It's not what you say, it's what you do that makes a difference," Black tells the students on the bus tour, updating a mantra of his grandma's, against which even the public figures he most admired were sometimes found wanting.

As he relates in *Sacred Ground*, when his grandma caught him playing with matches or otherwise misbehaving she would wave away his denials with, "Baby, I can't hear whatcha sayin' because whatcha doin' talks so loud."

Politicians and boys with matches might not be able to withstand such scrutiny, but the measure of Black's long life, in word and deed, holds up well. ♦

MILESTONES

1944-45 Landed on Utah Beach days after the invasion of Normandy, participated in the Battle of the Bulge, and visited Buchenwald concentration camp.
1955 Traveled to Alabama to join the Montgomery bus boycott.
1963 Lost campaign for Chicago alderman as part

of an effort with other candidates to unseat the "Silent Six," black officials loyal to Mayor Richard J. Daley.
1963-64 Mobilized over 200,000 people for two boycotts of Chicago Public Schools in an effort to end school segregation.
1982 Led a voter registration initiative in support of

Chicago mayoral candidate Harold Washington, which added 250,000 people to the city's rolls.
2012 Received the University of Chicago's William Benton Medal for Distinguished Public Service.
2015 Received the University's Diversity Leadership Alumni Award.

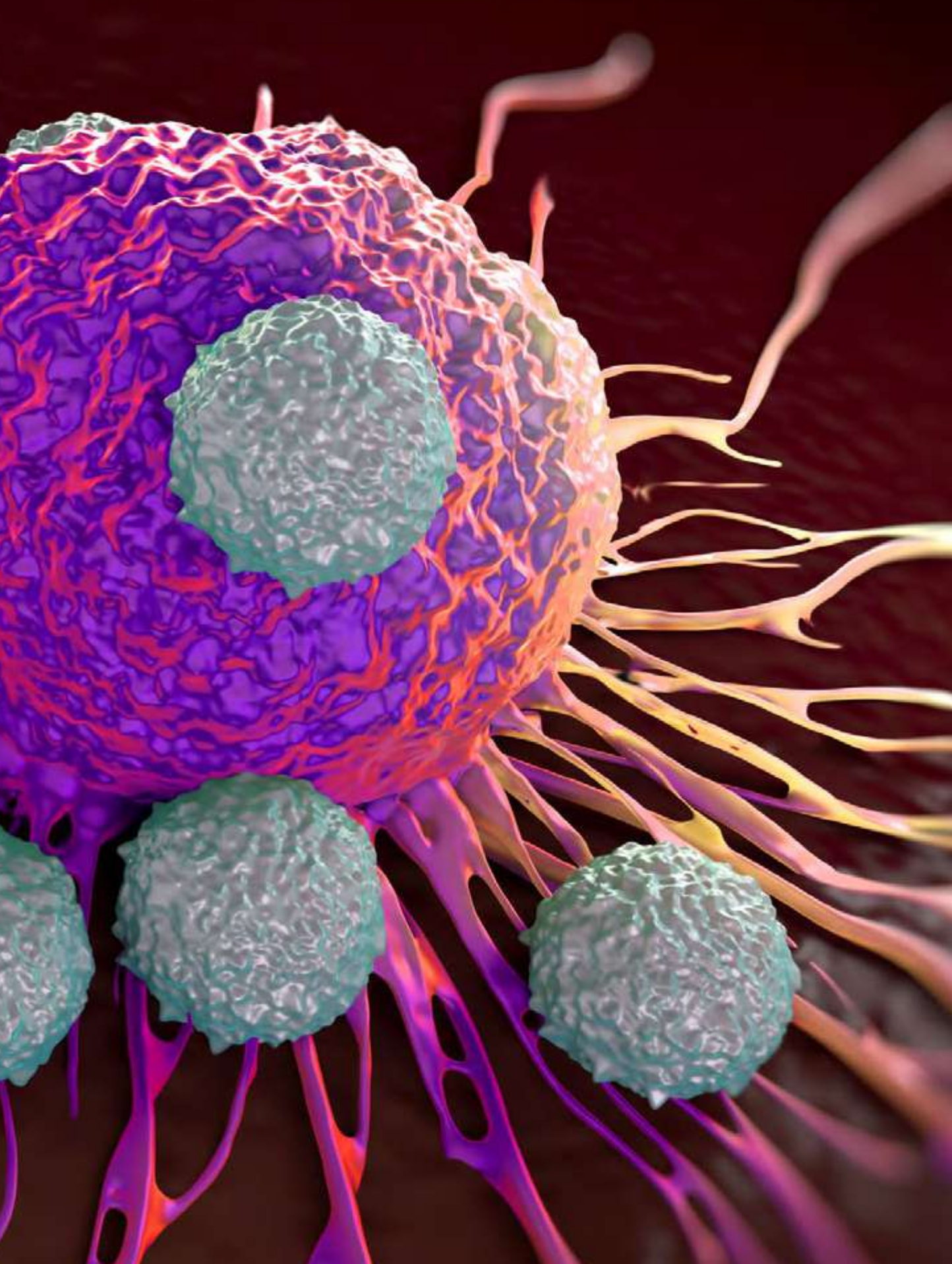


MEDICINE

PLANS OF ATTACK

*For the UChicago doctors and
molecular engineers working to enlist
our own immune systems in the battle against cancer,
successes and setbacks alike are critical
to making the next leap.*

BY SHARLA A. PAUL



When telling the story of immunotherapy and cancer and how the two battle it out, it's awfully challenging not to pull out the old *A Tale of Two Cities* cliché. Because everyone agrees: It is the best of times in cancer research and treatment.

Over the past five years, the standard of care for treatment of many cancers has made a decided shift toward marshalling a patient's own immune system to attack the disease. The full spectrum of immunotherapies available are administered at the University of Chicago Medicine Comprehensive Cancer Center.

Researchers here are shaping the future of cancer treatment from every corner. Work on the role of the human microbiome has entered a phase 1 clinical trial. The search for biomarkers, also in clinical trials, is designed to better target patients who will respond to specific therapies. Precisely engineered molecules, still in the first stages of development, could enable therapies to be delivered directly to tumors, rather than systemically, reducing toxic or autoimmune side effects. A new understanding of the basic biology of the lymphatic system has the potential, farther down the road, to bring immunotherapies to more patients.

This work, and far more, comes out of the network of labs that constitute the Comprehensive Cancer Center, one of only two National Cancer Institute–designated cancer centers in Illinois. Founded on good old-fashioned UChicago interdisciplinarity, the Cancer Center brings together faculty members from UChicago Medicine, the Biological Sciences Division, and the Physical Sciences Division. Some are also members of the two-year-old Microbiome Center and the seven-year-old Institute for Molecular Engineering. With so many minds at work, the effort is moving fast, and findings rapidly build upon each other.

And yet, for so many cancer patients still, it is the worst of times.

Immunotherapy is available for only some types of cancer. Last year, in an editorial in *STAT*, two oncologists at Oregon Health & Science University estimated that “two-thirds (68.8 percent) of Americans predicted to die of cancer will die of one that currently has no FDA-approved immunotherapy options.” Many patients' immune systems do not respond to treatment. Some patients experience toxic side effects that may end the therapy or be fatal. Advanced clinical trials can fail; UChicago was part of one multinational phase 3 trial that failed this past year. The cost of treatment can be in the hundreds of thousands of dollars, and insurance coverage is not certain.

In 2013 *Science* heralded immunotherapy as the Breakthrough of the Year. By spring 2016 the cover of *Time* called immunotherapy clinical trials—the main means of access to the therapy—“brutally selective, hugely expensive, lifesaving.”

Wisdom, foolishness; belief, incredulity; light, darkness; hope, despair. Cancer still beats us too much of the time. For the UChicago Medicine physician-clinician making rounds and researching treatments, cancer will also inspire redoubled efforts to beat it back.

And so we enter our story, well under way.

The mice have played their parts. A promising immunotherapy has left the lab. Late-stage cancer patients enroll in clinical trials under the watchful eyes of the nation's oncologists. These physicians await whichever therapies will achieve endpoints, gain FDA approval, and help care for their long lists of patients: those whose disease they have barely staved off for years, and those whom the oncologists hope not to need to tell that they have an advanced case and may not have long to live.



Thomas Gajewski, AB'84, PhD'89, MD'91, has made vast contributions to the development of immunotherapy treatments.

Chicago, June 4, 2018, in the early morning hours. Two of our main characters are onstage among a group of eight. It's dark, and the crowd is swaying and whooping.

"Baby, don't you know it's a damn crying shame?" Buddy Guy—yes, that Buddy Guy—growls into his microphone.

To Guy's right, the lead guitarist, an unassuming white man in glasses, jeans, and a maroon polo, grinds out an accompanying riff. The oncological twittersphere lights up.

"It's midnight at #ASCO and do you know where some of the world's most famous #immunotherapists are?" comes the tweet from Bernard A. Fox, a cancer immunotherapist and academic researcher from Oregon. It is the end of day three of the annual meeting of the American Society of Clinical Oncology in Chicago, and some of the world's most famous immunotherapists are up on stage with Buddy Guy.

The unassuming lead guitarist? **Thomas Gajewski**, AB'84, PhD'89, MD'91, the AbbVie Foundation Professor of Cancer Immunotherapy.

Gajewski has published more than 200 papers on the basic science of T-cell biology, antitumor immunity, and melanoma therapy—a vast contribution to the development of today's immunotherapy treatments. He is also a clinical researcher, studying patients' responses to cancer therapy. Gajewski received a 2016 Outstanding Investigator Award from the National Cancer Institute at the National Institutes of Health, and he was named a 2017 Giant of Cancer Care by *OncLive*, the website of the Oncology Specialty Group, a national peer group for oncologists.

The grinning dark-haired man, slightly behind Gajewski and Guy, trumpet at the ready? **Jason Luke**, assistant professor of medicine.

It was Gajewski's work on T cells in cancer that led Luke to join UChicago in 2014 from the Dana-Farber Cancer Institute and the Harvard Medical School faculty. Luke works with Gajewski to manage clinical trials of novel immunotherapies, including new combinations of drugs, and just opened a phase 3 melanoma trial for stage 2 disease.

Gajewski, like Luke, specializes in melanoma, but the



Jason Luke (right) focuses on melanoma in his research and clinical practice.

trials also seek to bring immunotherapies to patients with other types of cancer tumors. They have built a "bIObank" (bank of ImmunoOncology samples) of patients' tissues, tumor biopsies, and complex blood tests, which are packed with information about patients' immune responses to the therapies—or, most likely, lack thereof. Information from the bIObank feeds back into the basic science research conducted in Gajewski's lab and by other researchers, including those at the Institute for Molecular Engineering.

The rest of the musicians performing with Guy are renowned oncologists from cancer centers and academic institutions across the country. Sax, trombone, drums, another guitar, a harmonica, vocals—to the crowd recording the scene with raised smartphones, these are the stars of their field.

"You know it's a crying shame," Guy sings, bemoaning a two-timing woman while Gajewski's guitar whines.

For Luke, the crying shame is the two-timing immune system.

He and his bandmates named themselves the CheckPoints after a critical mechanism in the human body's immune response. The basic idea is as follows: The body depends on the immune system generally to remain in default mode, recognizing normal cells and leaving them be. Checkpoints are the proteins on cells that keep the immune system in check in the presence of healthy cells. (PD-1, PD-L1, and CTLA-4 are among the main proteins involved in current immunotherapies.)

When the immune system detects an antigen—any molecular structure it can identify as foreign—it goes on the attack. T cells, the white blood cells that drive the body's adaptive immune response, lead the way. But in the complex game of hide-and-seek that occurs within a cancer patient's tumor cells, the cancer can use these very same checkpoints to make the T cells stand down, allowing the cancer cells to mutate and multiply. If unchecked, the tumors may spread, and the cancer could metastasize.

THESE PHYSICIANS AWAIT WHICHEVER THERAPIES WILL ACHIEVE ENDPOINTS, GAIN FDA APPROVAL, AND HELP CARE FOR THEIR LONG LISTS OF PATIENTS.

Checkpoint inhibitor drugs, the largest and most studied category of available immunotherapies, suppress the checkpoint proteins on cancer cells that enable those cells to fool the immune system into leaving them alone.

In addition to checkpoint inhibitors, other forms of immunotherapy in use include CAR T-cell therapy, a process by which T cells are removed, supercharged, cloned, and re-introduced into the body. (UChicago Medicine was the first site in the country to be certified to treat both adult and pediatric patients with FDA-approved CAR T-cell therapies for specific blood cancers; see “Supercharged,” page 34.) There are also cancer vaccines. While these therapies, and combinations of them, are currently FDA approved or in clinical trials available for late-stage patients, in the lab researchers have moved beyond them and are seeking the next wave of immune-boosting treatments.

Cancer patients, Luke explained a few days before the ASCO meeting, are divided into two subsets. There are those fortunate few whose immune systems recognize cancer and have an immune response—which cannot beat cancer on its own, but is a response just the same.

These patients have what’s called a “hot,” or “T-cell inflamed,” tumor microenvironment. Their tumors are populated by T cells that are suppressed but that, if given support by immunotherapies, might fight the cancer cells. But most patients’ tumors are “cold,” or devoid of T cells, a situation that Gajewski calls a “failure to recruit,” making the tumor far less likely to respond to immunotherapy.

“We try not to use the c-word,” Luke says, referring to the pursuit of a cure, “because we don’t want to overpromise what we’re talking about, but certainly we have patients who got immunotherapy five years out, 10 years, and longer, with no recurrence and not needing any more treatment. It’s sort of like a vaccine, in the fact that if the immune system figures it out, you don’t need any more treatment program.”

On a midday break during his Friday rounds, Luke wears a white lab coat and has the youthful appearance of an assistant professor. He makes rounds every day, tending to melanoma patients on Tuesdays. His name regularly pops up on melanoma.org’s “find support” message boards. (“If I was in the Chicago area this is who I would seek out,” wrote one patient to another in May.)

To understand why immunotherapy does not work for the majority of patients, researchers must keep going back to the minority for whom it does. Patients who respond to immunotherapy are “paradigm,” Luke says.

What is it about these patients, their immune systems, their cells, their genes—whatever it might be—that prompts an immune response? One clue could be biomarkers, internal biological molecules whose presence predicts particular clinical outcomes, and for Luke and Gajewski’s purposes might indicate which type of immunotherapy would be most effective in an individual cancer patient. Both are among the researchers now working in the lab to understand biomarkers, comparing tissue samples and blood tests of patients who don’t respond

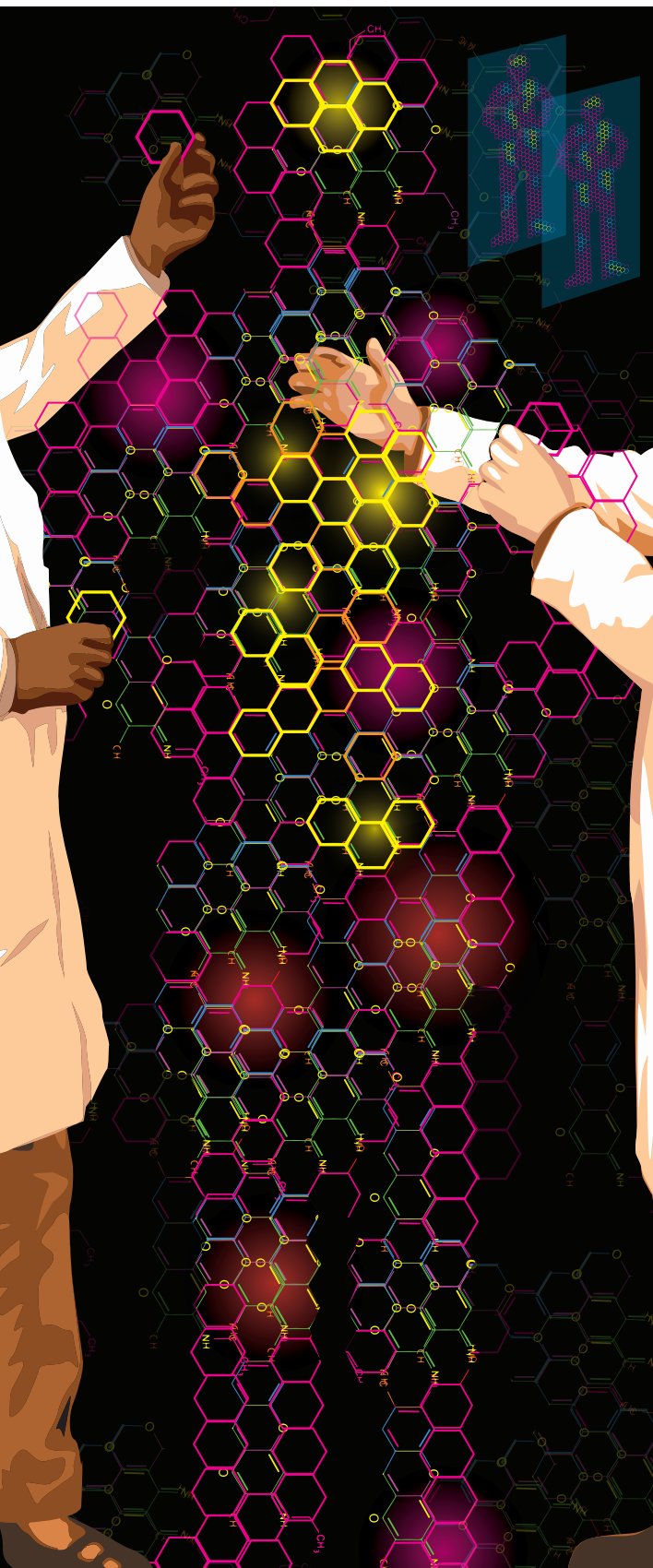
to immunotherapy with those of responsive patients to understand what’s different. Pinpointing biomarkers is the primary focus of a new UChicago clinical trial, begun this past March with Luke as the principal investigator.

Examples of biomarkers include oncogenes, genes that under certain circumstances may transform a cell into a cancerous tumor cell. Another biomarker could be the mutation rate within tumors and its effect on how a patient responds to immunotherapy. “Extrinsic” biomarkers include the presence or absence of certain bacteria in a patient’s gut microbiome.

Gajewski and his team were among the early discoverers of one extrinsic biomarker, a healthy bacteria strain known as *Bifidobacterium*. In 2015 the team discovered that mice procured for their lab from one supplier tended to

have a robust spontaneous immune response to melanoma tumors implanted under the skin. Mice from a different supplier had a much weaker response. When the researchers mixed the mice from both cages together, they found that both sets of mice had a robust response. The team traced the change to *Bifidobacterium*, which was present in the intestines of the immune-responding mice who shared it with their new neighbors. The anticancer effects of the gut bacteria were comparable to treatment with checkpoint inhibitors. A similar human study from Gajewski’s group that transplanted stool samples in patients was “quite compelling,” Gajewski told UChicago Medicine’s publication *Medicine on the Midway* last fall. Gajewski worked with the University’s Polsky Center for Entrepreneurship and Innovation to file patent applications and

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the University licensed the technology to Evelo Biosciences, a biotech company in Cambridge, Massachusetts.

The next step, Gajewski said in *Medicine on the Midway*, are “probiotics that could boost antitumor immunity in patients.” The week before ASCO, the FDA gave Luke the green light to run a clinical trial to assess the effects of two Evelo probiotic pills in patients with different types of cancer, including colon and skin cancer.

The patent-to-pill path of that bacteria strain is an example of “translational” science, taking research and turning it into drug therapies eventually bound for clinical trials, with FDA approval as the endgame. Gajewski is an inventor on 46 patents and has contributed inventive discoveries to at least four immunotherapies. Three of his patent portfolios are licensed to companies developing immunotherapies, and he’s been at work with the University on a start-up company, launching in 2019, that will build immunotherapies based on new discoveries in his lab.

In addition, Gajewski worked with scientists at Aduro Biotech to understand how STING agonists (the name stands for “stimulator of interferon genes,” a protein complex that helps detect tumor cells and promotes an aggressive antitumor response) can be used to stimulate an immune response. The therapy is now in phase 1 trials.

His work to determine that immune-boosting compounds that block an enzyme called indoleamine 2,3-dioxygenase (IDO) can work in combination with checkpoint inhibitors was key to the development of a class of drugs known as IDO inhibitors. But, like any road to discovery, this one is fraught with obstacles: Gajewski’s IDO collaborator, the biotech company Incyte, was among three companies to cancel major multinational phase 3 clinical trials of IDO inhibitors this past year. In a May 2018 article, *Science* magazine called the cancellations a “surprising failure” that “quickly reverberated across the pharmaceutical industry.”

That setback explains why Luke is careful about using the c-word. Just when it looks like a cure might be at hand, the prospect can just as likely slip away. Best of times, worst of times.

“That was supposed to be the next big thing in melanoma, and it was just an absolute bust,” says Luke. “That really set the field to take a step back, and that was probably a good thing.”

Another take on the trial result comes from **Thelma Tennant**, PhD’03, the oncology innovations and ventures lead at Polsky. “Cancer drug development is high risk, high reward,” says Tennant, who has worked with Gajewski for more than 10 years to translate his research into patents, licenses, and partnerships that bring drugs to trial. The risk, she says, must be offset by sound planning, from the

I'VE SEEN THIS PLACE GO FROM, "I CAN'T BELIEVE YOU'RE STUDYING SOMETHING SO APPLIED AS A DISEASE," TO FACULTY STARTING THEIR OWN COMPANIES. IT'S A HUGE CULTURAL SHIFT.

inception of the idea to the design and implementation of the clinical trial.

"Jason and Tom are among many clinician-researchers doing a lot of deep thinking on what happened with Epacadostat" she says, refer-

ring to Incyte's canceled IDO inhibitor trial. "One problem was that they didn't have a clear biomarker."

The next crucial work is to trace the line from the trial failure back to the lab, where Gajewski and Luke are now pursuing biomarkers. Even the setbacks in cancer immunotherapy furnish precious information that will be critical to making the next leap.

"We have a collection of clinical researchers who excel at both clinical research and bench research," Tennant says. "They see what's happening in patients and take it back to the lab and make new discoveries that can rationalize what's happening in the clinic or, better yet, revolutionize the field."

Partnering with clinical researchers like Gajewski and Luke are molecular engineers, who look for leaks and systemic problems and set to work on fabricating solutions. They peer into the tumor microenvironment, which may be hot—or, more likely, cold, lacking T cells—and has all kinds of other characteristics.

In 2014 the husband-wife team of **Jeffrey Hubbell**, the inaugural Eugene Bell Professor in Tissue Engineering, and **Melody Swartz**, the William B. Ogden Professor in Molecular Engineering, came from the Institute of Bioengineering in Lausanne, Switzerland, to lead the immunoengineering and cancer effort at the Institute for Molecular Engineering (IME). Their labs are in the bright and airy William Eckhardt Research Center on Ellis Avenue.

Hubbell and Swartz keep a close eye on the published outcomes of immunotherapy, Hubbell says, constantly asking, "Can we improve them?"

One challenge for oncologists is recognizing and managing side effects of immunotherapy, which tend to be autoimmune responses, where the im-

mune system attacks healthy tissue. Most common are skin rashes (dermatitis), but more dangerous side effects include autoimmune inflammation in the organs, such as the colon (signaled by diarrhea) and lungs (indicated by shortness of breath), as well as acutely serious conditions such as inflammation of the thyroid, heart, or liver.

Autoimmune responses occur because current immunotherapies are systemic, "leaking" into the rest of the body. "With the existing drugs," Hubbell says, "the purpose is to induce immune responses to the tumor, but the side effect is inducing immune responses to the self. They go hand-in-hand. It's very difficult to have one without the other."

So Hubbell's group seeks alternatives to systemic treatment. Much of their work takes place in the body's "interstices," the small spaces between cells, particularly in the rapidly changing and unpredictable microenvironment of a tumor. The physiology of a tumor is determined by its own particular mutations, with their own cellular structures, which can affect how the body's fluids flow in and through it. Where tumors present physiological and flow-related "interstitial barriers," Hubbell's group builds nanomaterials for drug delivery. The goal is to make the nanomaterials small enough to penetrate the interstitial barriers, but not so small that they'll get lost in the ebb and flow of bodily fluids. Hubbell also builds nanoplateforms able to deliver drug molecules directly to tumors. Right now the research is in mouse models; the aim is to translate it to the clinic and humans.

In these projects, Hubbell works with existing drugs, which he reengineers for higher efficacy and lower toxicity. Why work with existing drugs? Because new drugs present the risk of unknown biological interactions. "If a molecule has already been in use then you know a lot about it," he explains. "You're less likely to be surprised in an untoward way."

The inherent "leakiness" of the tumor structure raises the question, "How would I make the drugs stay in the tumor?" Hubbell says. His group has figured out how to build into the



For the past decade, molecular engineer Melody Swartz has been studying the lymphatic system and its role in metastasis.

Photo courtesy John D. and Catherine T. MacArthur Foundation

drug molecule an affinity for the extracellular matrix of the tumor. The molecule binds to the matrix, and the drug leaks into the tumor, not into healthy tissues.

“We use the tumor as a depot for the drugs,” he says. “We can target it and keep [the drug] around for a long time. So an extremely simple idea: The tumor is leaky. That exposes matrix. I can bind to that matrix. That’s it. Very simple.”

Not really simple, of course. The University has patented the intellectual property that goes into reengineering the drugs to add the binding characteristic. It’s one of 77 patents on which Hubbell’s an inventor.

His group is also “trying to take a known molecule that wasn’t druggable and turn it into a drug” that might draw an immune response to cold tumors. They look at biological molecules with a known mechanism of action such as cytokines—small proteins involved in the interactions and communications between immune cells—and chemokines, which direct immune cells to sites of inflammation. Hubbell’s group is now at work on a tumor-targeting cytokine, as well as classes of chemokines, which only works as a drug “if you can localize them to the tumor,” he says. “If you deliver the chemokine in the blood you just induce inflammation everywhere, as opposed to [only] in the tumor.”

Working with known drugs and molecules significantly shortens the time from conception to clinical testing, Hubbell says, compared to that of a new drug, which is close to a decade. He estimates it takes three to four years “from conception to company founding” for a known drug, then an additional two years to a phase 1 clinical trial. From there to approval “is a long path,” he says. “But if it were a totally new target then it might be longer, because there’s a lot more toxicology” to do.

Hubbell is all about translation, unabashed about his focus on “applied” work in an institution that, for much of its history, proudly stuck to basic science. Over at the Polsky Center, Tennant thinks of Hubbell as “a type of serial innovator that we love to help support and grow more of at the University.”

Tennant, who was the very first PhD student in UChicago’s Committee on Cancer Biology, recalls a faculty

member saying, “You’re that kid in cancer biology. I don’t understand why you’re studying a disease rather than basic mechanisms of biology.” Her reply was that no other disease was as “relevant to biology” as cancer, so in effect, she was doing exactly that.

“I’ve seen this place go from, ‘I can’t believe you’re studying something so applied as a disease,’ to faculty starting their own companies,” she says. “It’s a huge cultural shift.”

Indeed, Hubbell is quick to support students heading out of academia and into industry.

“I try to disabuse my group from the idea that the academic path is the high path, and the industry path is the low path. I think that’s a backwards way of thinking,” he says. “There’s a great deal of glory that comes with implementing. And even in industry there is a tremendous amount of innovation and invention that precedes implementation. I’m just as proud of the trainees who are going into industry as those who are at academic centers.”

Tennant agrees. “Discovery for the sake of discovery is important but so is discovery for the sake of translation,” she says, an effort aimed squarely at enriching human life, as the University motto would have it. “We have to remember that part of our goal is to make discoveries useful in everyday life.”

Crescat scientia; vita excolatur, the motto reads. Let knowledge grow from more to more; and so be human life enriched.

Let knowledge grow from more to more; and so be human life enriched.

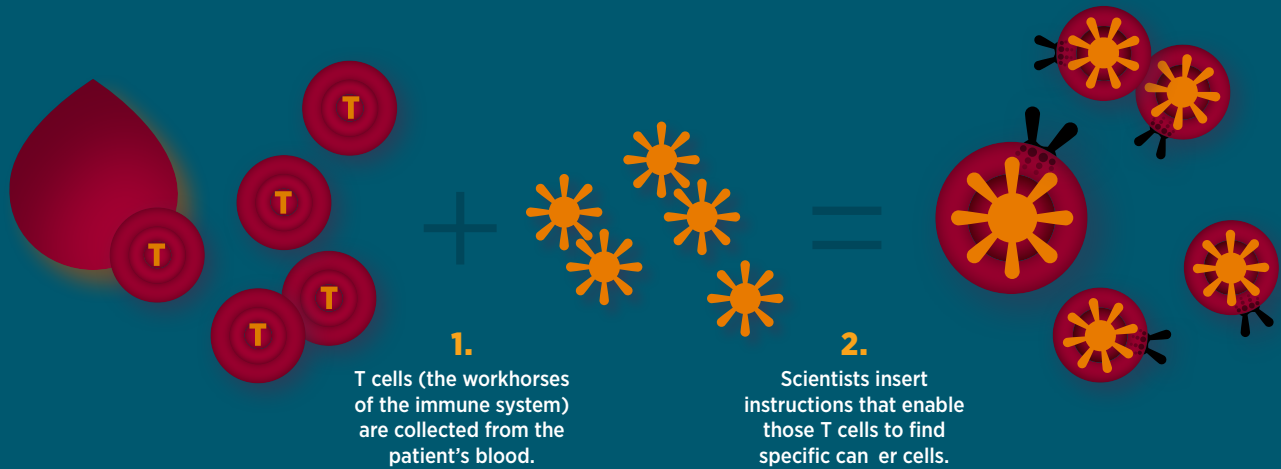
At her IME lab Swartz is at work in the tumor micro-environment. Hot or cold and potentially leaky, for better or worse, the tumor is linked to the rest of the body via the lymphatic system.

The lymphatic system, which Swartz has studied for a decade, is a part of circulation within the body, draining fluid and other items from the body’s interstitial space and returning the “cleaned” fluid back to the blood. It is a critical component of the immune system. Immune cells travel through lymphatic vessels and reside in lymph nodes, where they communicate with each other and can become activated.

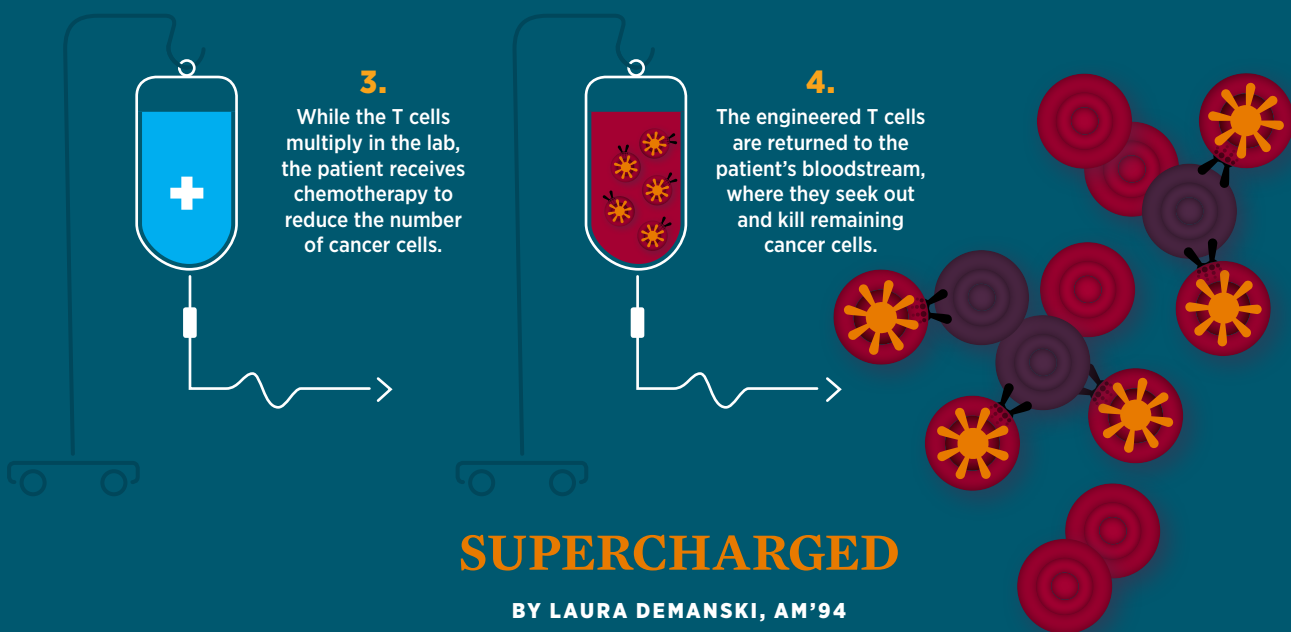
For most of cancer research history, the lymphatic system has been considered one major means of metastasis—a



Jeffrey Hubbell’s lab reengineers cancer drugs to work better and more safely, and develops new drugs from known molecules.



CHIMERIC ANTIGEN RECEPTOR (CAR) T-CELL THERAPY



SUPERCHARGED

BY LAURA DEMANSKI, AM'94

In 2017 UChicago Medicine became the first site in Illinois to offer chimeric antigen receptor (CAR) T-cell therapy, and the first in the United States to treat specific blood cancers with the therapy in both adults and children. The adult cellular therapy program is headed by **Michael Bishop**, professor of medicine, and the pediatric program by **John Cunningham**, the George M. Eisenberg Professor of Pediatrics and chair of the Department of Pediatrics.

In this form of immunotherapy, T cells are extracted from the blood of patients with acute lymphoblastic leukemia or certain types of non-

Hodgkin lymphoma. In a laboratory they are then converted to CAR T cells by adding special receptors created (also in a lab) to bind to certain proteins on cancer cells—effectively supercharging the T cells.

When the therapy works, the patient's T cells, reinfused into that individual's bloodstream, search out and destroy cancerous cells that have the targeted proteins.

Early results are heartening, with patients responding at higher rates than to other forms of cancer immunotherapy. For patients with acute lymphoblastic leukemia, the remission rate after CAR T-cell therapy is 70 to 90 percent, and for those with

non-Hodgkin lymphoma the remission rate is 40 to 50 percent. Those who show no evidence of disease for three months after treatment are considered unlikely to have a recurrence.

"CAR T-cell therapy has provided a potentially curative option for patients with blood cancers who had run out of options," says Bishop.

Cunningham adds, "CAR T is the first truly effective immune therapy for a human cancer. We've been looking for a treatment like this for 30 years. Now we're beginning to see the reality. And I believe more treatments like this will come in the next five to 10 years." ♦

Illustration courtesy UChicago Medicine, adapted by Guido Mendez

THE ADAPTIVE DENDRITIC CELLS CAN TEACH THE T CELLS TO RESPOND IN KIND, IN EFFECT LEARNING FROM THE CANCER HOW TO FIGHT THE CANCER.

superhighway by which tumors spread to distant sites throughout the body, likely via interstitial flow. “Despite its importance, the regulatory biology of lymphatic function is poorly understood,” Swartz’s research profile reads. In particular, Swartz wants to understand tumor-associated lymphangiogenesis—the process by which lymphatics expand around and into a tumor. In 2017 she published a surprising twist on the role that the genesis of new lymphatic vessels plays in cancer immunology.

“What we realized is not that we were wrong before, but that it’s more complex,” she says.

Initially, Swartz’s group set out on a series of mouse studies to understand why lymphangiogenesis promotes immune suppression and allows tumor spreading. But along the way, her group noticed that tumors where lymphangiogenesis occurs were full of T cells.

It turns out that lymphatic vessels play on both teams, Swartz says, enabling both damaging metastasis and helpful T-cell infiltration. So lymphangiogenesis is yet another biomarker that may predict immunotherapy success. Circling back to Luke and Gajewski’s first subset of patients, whose tumor microenvironments are hot with T-cell infiltration, these are the patients most likely to respond to immunotherapy. Yet these therapies still have problems, says Swartz, who talks quickly, interrupting herself frequently to expand on a previous point and then jump to the next, painting a landscape with a lot going on all at once.

Sitting at a round table in her second-floor office, where the high walls of windows show blue sky, Swartz begins reeling off statistics and rapidly working her way through a cartoon—the name researchers give to their schematics of what’s happening inside tumors. But she pauses now, and tells about a family friend who lives in Arizona and came to stay with her for three months last fall while participating in a clinical trial. It’s an all-too-familiar story, and yet every time it’s told, its gravity can dim even the most light-filled room.

“At first it looked like it was really great,” Swartz says. “She thought she was cured, and then a few months later ... tumors everywhere.”

And then Swartz’s lab technician’s son, who was only 25 and was receiving checkpoint inhibitor therapy, died of liver toxicity.

“This all happened a few months ago. So it’s really raw,” she says. “There’s a lot that’s been done, and there’s so much

promise, and it’s so exciting, but there’s still so much that doesn’t work.”

This is where engineering can partner with biomedical research, Swartz says, “because we can try to identify where are these problems and

make immunotherapies better.”

Swartz’s group is now undertaking studies using Hubbell’s matrix-binding structure, where a leaky tumor allows itself to become a drug depot. They load Hubbell’s nanoplateform with a high dose of drug molecules—much higher than would be possible with a systemic dose—and target the tumor-draining lymph node. Swartz believes the tumor-draining lymph node is the most “interesting and important” place to target immunotherapies because “it already has information from the tumor.”

And she sees even another layer of possibility in the lymph node: it is the training ground for T cells, the very place where T cells learn to fight specific antigens, taught by a specialized group of dendritic cells that have the capacity to prime a tailored T-cell response.

Returning to her cartoon, she maps out the process her group is modeling in the lab with mice: Start with a strong dose of current immunotherapy drugs, reengineered, loaded onto a nanoplateform, and delivered directly to the tumor. The drug wakes up the immune system, and T cells go on attack. But just when the cancer cells begin mutating and fooling the immune system again—which is exactly what happened with Swartz’s friend—the adaptive dendritic cells can teach the T cells to respond in kind, in effect learning from the cancer how to fight the cancer. It’s executed not in a test tube, but in the body’s own lymph nodes.

Swartz looks up from her drawing, eyes flashing with anticipation. By training the T cells to adapt to the battle at hand, the body really might be able to heal itself.

Swartz sits in silence for a moment, savoring the thought. Truly, it is both the best and worst of times in cancer research. At UChicago Medicine, Gajewski, Luke, and their colleagues will go about caring for patients in the most recent round of clinical trials, watchful, hopeful, adding valuable samples to their bIObank to feed into future research. And at IME, the mice will play their roles, the research will be framed toward translation into its own clinical trials with humans. And then we will see about the times to come. ♦

Sharla A. Paul is a writer and editor in Hyde Park.

HISTORY

ART AND ARTIFICE

Matinee idol and Oscar nominee Sessue Hayakawa is widely remembered as a UChicago alumnus. But was he?

We tried to separate fact and myth in the storied actor's biography.

BY AMY MONAGHAN, AM'93



A giant of the silent screen whose career stretched into the sound era, Sessue Hayakawa starred in more than 100 movies. Perhaps best remembered today for his Oscar-nominated 1957 performance as Colonel Saito, the Japanese commandant of the prison camp in *The Bridge on the River Kwai*, Hayakawa was the only Asian actor to play romantic leads in American silent pictures—although because of anti-miscegenation laws he always had to relinquish the girl in the final reel.

Hayakawa's place in motion picture history is well documented. Harder to know is the man behind the legend. Even harder to untangle is the star's status as a UChicago alumnus.

Born Hayakawa Kintaro in 1886, the son of a wealthy fisherman in Japan's Chiba Prefecture, he came to the United States in 1907 to join his brother, who was fishing for abalone in California. The following November he enrolled in two Principles of Political Economy correspondence courses offered by the University's Home Study Program. The registrar's office has no record of his enrollment in any courses held in Hyde Park.

In his 1960 memoir, *Zen Showed Me the Way ... to Peace, Happiness, and Tranquillity*, Hayakawa tells a very different story. He details his life on campus, including two seasons as a 132-pound tackle for the football team under coach Amos Alonzo Stagg. After using illegal jujitsu maneuvers too many times, he writes, he was kicked off the team. But Hayakawa appears on no team rosters—or any-

where else—in the *Cap and Gown* yearbooks of the day.

Hayakawa seems to have inflated and elaborated the University connections he wove into his life story, and his version of that story has stuck—leading the actor's narrative to become embedded in the University's as well. His myth making offers a lens on American and Hollywood culture during his lifetime.

Hayakawa claims to have left Chicago for California in 1913, intending to return to Japan. But, he wrote, after seeing a play at a Japanese theater in Los Angeles's Little Tokyo district, he canceled his ticket and joined the company, despite having no acting experience. Dropping the name Kintaro for Sessue, he staged an English-language play with an all-Japanese cast.

The play caught the eye of producer Thomas Ince, who turned it into a silent film. By 1914, Hayakawa writes, he earned \$1,000 a week making movies, an amount he deemed sufficient to allow him to marry Tsuru Aoki, an American-raised Japanese stage and screen actress.

According to Daisuke Miyao, professor of Japanese language and literature at UC San Diego and author of *Sessue Hayakawa: Silent Cinema and Transnational Stardom* (Duke University Press, 2007), Hayakawa's turn to acting was in reality less dramatic. It followed a series of odd jobs in California: dishwasher, waiter, ice cream vendor, and factory worker. His theatrical appearances seemed like another temporary pursuit. Both memoir and Miyao agree that the movies Hayakawa first appeared in were Ince's.

From this magazine in the 1920s to the *New York Times* when he died in 1973 to current accounts, Hayakawa's UChicago bona fides have been widely accepted.

In those short films, the actor portrayed Native American and Japanese characters, but never in a starring role. In 1915 he left Ince for the Jesse L. Lasky Feature Play Company—later Paramount. There Cecil B. DeMille cast Hayakawa in *The Cheat* (1915), and a matinee idol was born.

In contrast to the broad pantomime then common in Hollywood, Hayakawa played to the camera instead of the balcony. His acting stood out for its restraint; audiences knew how he felt because of the subtle play of emotion across his features in close-ups.

In *The Cheat*, Hayakawa's coolly wicked Japanese ivory merchant lends money to an American socialite who has gambled away Red Cross funds entrusted to her. When she attempts to repay him in cash instead of the more personal compensation she'd promised, Hayakawa's lecherous villain brands her bare shoulder with the mark he uses to identify all his possessions.

The scene elicited screams of ecstasy from the audience; some women fainted. Hayakawa's effect was said to be even more electric than that of Rudolph Valentino in *The Sheik* six years later.

Following *The Cheat*, Hayakawa's silent film roles hewed closely to Western stereotypes about Asians. The late film historian Robert Sklar once quipped, "He was a valet; he was a valet who was also a spy; he was a spy who was also a diplomat. (He does not seem to have played a University of Chicago graduate.)"

Hayakawa saw his roles as an opportunity to dispel stereotypes of the "Oriental" as sinister and mysterious. He also played other ethnicities: a Mexican bandit, a Spanish matador, a Persian author. From 1916 to 1918—a period of growing US nativism—he became an unlikely leading star and the industry's go-to exotic. Theaters advertising *Hidden Pearls* (1918), in which he plays the son of a Hawaiian princess and an American trader, were encouraged by a trade journal to use the phrase "Sessue Hayakawa adopts another nationality."

In March 1918, when his contract with Lasky expired, Hayakawa formed Haworth Pictures Corporation, Hollywood's first Asian-owned production company. His strategy at Haworth, Miyao writes, "was a simultaneous campaign of winning the hearts of American audiences by clinging to his already established star image and convincing Japanese American communities of his more authentic depiction of Japanese characters."

Around this time Hayakawa went full Hollywood, according to fan magazines and his memoir. He purchased a mansion, took up golf, threw parties with bootleg liquor he'd

Hayakawa played to the camera instead of the balcony.

wisely laid in before Prohibition began, and bought two Cadillacs, a Ford, and a gold-plated Pierce Arrow. The magazines reported breathlessly about the actor and his wife, who were active in Liberty bond drives during the First World War.

The showy lifestyle was in part a response to rising postwar anti-Japanese sentiment in California, intended to show Americans he could live up to their lavish standards. But however Hayakawa tried to demonstrate his Americanness, his popularity couldn't survive increasing nativist sentiment in the United States. By the time he left Hollywood in March 1922, he had lost control of both his star narrative and his company.

Now a "free agent," Hayakawa wrote, he visited Japan, acted in French and British movies, and gave a 1923 royal command performance before King George V and Queen Mary of England.

Returning to the United States in 1926 to appear on Broadway—and later in vaudeville and his first talkie—Hayakawa opened a Zen temple and study hall on New York's Upper West Side. He then lived in Japan before finding himself trapped in Paris during World War II, where he'd gone to shoot a movie. As a Japanese national with a long career in the United States, Hayakawa was suspected by both sides.

Even so, Hollywood came calling once more when Humphrey Bogart, a fan, cabled him to offer a part in *Tokyo Joe* (1949). He took the role but would spend most of the rest of his life in Japan. There, he writes in his memoir, his long study and practice of Zen, and particularly his work on its behalf in the United States, prompted Tokyo's Zen masters to choose him to enter the priesthood.

Miyao isn't so sure. Like his University of Chicago education, Hayakawa's Zen priesthood seems well tailored to fit a persona he wanted to promote. "I think the life of Hayakawa as a star was always a process of creating his own myth," says Miyao.

When invited to join the cast of *The Bridge on the River Kwai*, Hayakawa was living largely out of the public eye. The role of Colonel Saito appealed to him: not a sympathetic character but a decent man. The performance thrust the actor back into the spotlight, and he made seven more films, the last released in 1967. He died six years later at the age of 83. Hayakawa's own account of his early years in the United States, buttressed by decades of publicity, proved convincing enough that his *New York Times* obituary noted that—as recorded in his memoir—he graduated from the University of Chicago in 1913. ♦

Amy Monaghan, AM'93, teaches film at Clemson University.





When Horenstein photographed Dolly Parton and Porter Wagoner in 1972, he asked Parton about her bold fashion choices. “People don’t come out to see me looking like everybody else,” she told him.

PHOTOGRAPHY

HISTORIAN WITH A CAMERA

Henry Horenstein, EX'69, captured the end of a country music era.

BY SUSIE ALLEN, AB'09

PHOTOGRAPHY BY HENRY HORENSTEIN, EX'69

enry Horenstein, EX'69, is explaining why documentary photography is like studying history when he pauses. “Hmm, interesting,” he says. We’re talking by phone as he drives through Pennsylvania on a photographic road trip. An unusual house has caught his eye. He decides to double back. “This is the photographic process, right here,” he says.

Horenstein likes what he sees. “No kidding, I really have to,” he says. “Can you hold on one second?”

A few minutes later he returns, satisfied. “It’s actually pretty good,” he says. “A little *Let Us Now Praise Famous Men*”—Walker Evans’s famous book of Depression-era photography.

Horenstein, a professor at the Rhode Island School of Design (RISD), believes in following his instincts. He’s spent his career heeding the advice of his RISD teacher Harry Callahan, who once asked Horenstein what he loved. “I said, ‘Music and horse racing,’ and he said, ‘Shoot those things. ... Even if you get a bad picture, you’ll have a good time,’” Horenstein says. “I’ve kind of taken that for my goal in life.”

Callahan probably didn’t intend for Horenstein to take him so seriously (“I think he just said it as a blow-off line—he was trying to go out for a cigarette and a student was bugging him”), but the advice worked out. Horenstein is the author of more than 30 books, including several widely used photography textbooks.

He photographed plenty of musicians and horse races before moving on to wildlife, burlesque performers, and drag kings. “The subject really rules, in my opinion,” he says. “Some people don’t agree with that, but that’s how I look at it. And if you have a really great subject, things can be forgiven.”

Take his 1980 portrait of Emmylou Harris. “It’s a good picture in a lot of ways, but it’s not that it’s a good picture that you remember it,” he argues. “It’s because it’s Em-

mylou Harris.” Still, Emmylou or no, the image grabs you: the singer’s gaze is fixed on something or someone unseen, her expression inscrutable.

His 2012 book *Honky Tonk: Portraits of Country Music* (W. W. Norton) includes that image of Harris alongside shots of Dolly Parton, Porter Wagoner, and Jerry Lee Lewis. But much of the collection, which was compiled over 40 years, is devoted to fans and honky tonks, backwater bars with jukeboxes and occasionally live music. These dives are disappearing, and Horenstein wanted to capture them before they were all gone.

Horenstein’s urge to document history goes back to his days at UChicago, where he took classes from Jesse Lemisch, then an assistant professor of history. Lemisch was part of a movement that advocated studying the history of ordinary people—“history from the bottom up,” as he described it. On Lemisch’s advice, Horenstein spent several months in England studying under E. P. Thompson, author of *The Making of the English Working Class* (Pantheon Books, 1963).

THE SUBJECT REALLY RULES, IN MY OPINION. SOME PEOPLE DON’T AGREE WITH THAT, BUT THAT’S HOW I LOOK AT IT. AND IF YOU HAVE A REALLY GREAT SUBJECT, THINGS CAN BE FORGIVEN.

“He was writing about the workers during the Industrial Revolution, but he was singing my song,” Horenstein recalled in his memoir. Thompson’s work “offered me an entry into photography. I had no art background, but I did know a thing or two about his-tory. Maybe I could be a historian with a camera.”

That plan got unexpected encouragement in 1969, when Horenstein was expelled for participating in a sit-in protesting the denial of tenure to Marlene Dixon, a leftist sociologist. He left Chicago and enrolled at RISD to begin his formal photographic training.

After art school, Horenstein took on a motley assortment of freelance assignments. He worked on and off for the Americana label Rounder Records, which played to his strengths. He also worked on a title called *Drugs and You, Too*, which didn’t. The book was intended to convince kids to steer clear of drugs, but “I doubt [my pictures] convinced anyone not to do anything except maybe never to become a photographer,” he jokes. In between he took photos for himself, gathering the images that would be included in collections such as *Honky Tonk*.

Today Horenstein’s work from the ’60s and ’70s looks rough and unfinished to him—“I didn’t know what I was doing”—but there’s a purity to it. He could take the same photos again today, and they’d be better, technically, but not so much from the heart.

His skills have improved with time, but his approach hasn’t changed; nearly 50 years after hearing the advice, Horenstein continues to shoot what he loves. “I like to be alone and I like driving. I like to see different parts of the country,” he says. So from time to time he leaves his home in Boston and takes trips like the one he’s on now.

“I’ve never really been through the Alleghenies,” he says. So far, at least, “it’s kind of boring for pictures.” But suddenly—again—his fortunes change. “I just saw another picture I want,” he says. He decides our call is bringing him good photographic luck. “Would you stay on the line for my whole trip?” ♦



In 1980 Horenstein assisted the legendary photographer Elliott Erwitt with Emmylou Harris's *Country Music* magazine cover shoot. He couldn't resist sneaking a few candid shots of his own (left). Jerry Lee Lewis (above) had his own ideas when Horenstein photographed him in 1975, Horenstein recalls. "He'd do poses and say, 'Take this one,' 'take this one,' 'take this one.'"



Horenstein's love of country music and horse racing guided his early photography career. Above: Tootsie's Orchid Lounge in Nashville, 1975. Right: A racetrack in Northampton, Massachusetts.

When Horenstein was starting out, he was too nervous to ask strangers to pose for him. He turned to friends and family, including his parents (below), "because I knew they'd agree to be subjects." By the 2000s, his shyness a thing of the past, Horenstein began to photograph burlesque performers and drag kings (left).



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Nota q^d p^r prolentis uariante^r quatuor accidētia
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bene. & alⁱ male. **P**ersona. ut nos legim⁹
ego. salustius & tu lucanus. **C**ausa. ut aquilaz
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ORIGINAL SOURCE

SMEAR TACTIC

Rubbed-out doodles in the pages of a medieval manuscript show that the human impulse to censor plays out on scales large and small.

BY LAURA DEMANSKI, AM'94

In the margins of an introductory Latin grammar manuscript, someone scribbled ribald, sometimes explicit, little line drawings. Then the dirty bits were smudged out. Who and why? Renaissance scholar **Ada Palmer**, associate professor of history and in the College, can't say for sure.

But this micro battle between artist and censor illustrates a point explored in *Censorship and Information Control: A Global History from the Inquisition to the Internet*, an exhibition Palmer curated at the library's Special Collections Research Center: to help viewers think about what counts as censorship. The exhibit, she says, "is organized around George Orwell's 1984, which is such a powerful tool for teaching vigilance against authoritarianism and for the way we think about

censorship. But it describes a very particular kind of censorship, which is very atypical for real history."

The specifics of this instance of sort-of censorship are lost to us, but Palmer can make some educated guesses. It likely happened between the mid-1400s and the 1520s, when printed textbooks had largely supplanted manuscripts like this one.

And the student was probably just setting out on his or her studies. "Anybody who's going to go to university to study any subject, whether it's medicine or law or theology, Latin grammar is the 101-level thing you do first," Palmer says. That included sons of the aristocracy but also of the "ambitious upper-middle class."

Some men and women from wealthier families studied Latin with tutors in the home. Manuscripts owned by schools or rental services typically bear many notes

in many hands, so this one was likely owned privately rather than shared.

The erasure of a medieval vandal's drawings may not be Orwellian, but it represents a subtler and more pervasive kind of suppression. Censorship often occurs on the fly, Palmer point out, with governments "improvising new forms in response to a perceived crisis" or commercial interests shaping, for instance, publishing practices that affect the limits of expression in unintended ways. The exhibition asks, "how does censorship operate in reality as opposed to how we imagine it?"

It is open through December 14. A related series of dialogues, *Censorship and Information Control During Information Revolutions*, takes place fall quarter and will be available at voices.uchicago.edu/censorship/dialogueseries. ♦

THE ACE

BY SUSIE ALLEN, AB'09

When **Kim Ng**, AB'90, started working for the Chicago White Sox in 1990, entering statistical information about players into a computer was a labor-intensive process and “still a bit of a novelty,” she says. She knew analytics would be a part of baseball’s future, “but I didn’t quite understand how the smallest piece of data was going to factor into decisions at game time and on the talent-evaluation level.”

Ng was both a witness to and participant in the game’s data revolution, using analytics to inform scouting and contract negotiations as she rose from White Sox intern to assistant general manager of the Yankees and the Dodgers.

Her career has been quietly revolutionary in other ways too. As senior vice president for baseball operations, Ng is the highest-ranking woman in Major League Baseball. She’s been in contention for several general manager positions and would, if hired, be the first female GM in baseball history.

Ng isn’t holding her breath. With only 30 available positions and scant openings each year, any one person has a low chance of becoming a GM. “Those odds are not real good, are they?” she says.

Though she’s ambivalent about the first woman GM speculation that shadows her, Ng is open about discussing her experience as a woman in sports. A softball standout and public policy major at UChicago, she wrote her senior thesis on Title IX, the law protecting people from discrimination based on sex in federally funded education programs. “I wanted to do it on a topic that I was passionate about,” she says. That piece of legislation, and the women’s movement in general, “explained why I had a lot of the opportunities that I did, and how much work we still had to do.”

In comments edited and condensed below, Ng told the *Magazine* about the downsides of being a GM, her approach to scouting, and how watching baseball changes when you work in the industry.

What made you first fall in love with baseball?

My dad was a big sports nut, so I grew up playing and watching a lot of different sports. I lived in Queens until I was 12. The Mets were right there, but I was actually a big Yankees

fan, because in the late '70s, the Yankees were such a great team. I grew up with all the greats—Thurman Munson, Ron Guidry, Reggie Jackson. I think the pace of the game and the nuance of the game were the things that really drew me to it.

Are you able to relax and enjoy watching a game, or does it always feel like work?

Now that I’m with MLB, I can relax a bit. When you’re with a club, you are so focused on what your team needs to do, what your division rivals are doing, who’s on the trading block, and who’s going to be a free agent, that you’re locked in.

It was fun when the team was winning. That’s always fun.

What happens to your childhood fandom when you work in the industry?

We all grew up with our favorite teams. I think it does dissipate. As I’ve been in this industry longer and longer, I tend to root for people—the friends, the colleagues. You root for great players or up-and-coming players, a player you saw something in or a player you might have scouted. Your love is not necessarily tied to your childhood team as much as it is to the people you grew up with in the industry.

You’ve worked in scouting and player development. How do you balance statistics and an intuitive sense of the player?

It’s an interesting time in our game. I think you’re seeing that decisions that have been made leaning way heavily toward numbers don’t always work out either.

I really try to look at both. I think it depends on what area you’re looking at. Game decisions are very different than signing free agents. With game decisions, you have a lot more data that you can go on because of sample size. How many pitches does a player see over the course of a season? A ton.

So am I just looking at numbers in a season? No. You need to dive deeper. You have advance scouts who sit and watch the teams that you’re going to face. They know exactly how these players respond in certain situations that you might not



Numbers should guide you and hopefully they'll prevent you from making big mistakes.

In March, Kim Ng, AB'90, met fellow trailblazer Maybelle Blair, who pitched for the All-American Girls Professional Baseball League's Peoria Redwings in 1948. Ng has said "nothing should hold women back" from working in the professional sports world.

have cataloged into your system. There are things that [advance scouts] pick up that you might not have thought about.

I've always taken the approach that numbers should guide you and hopefully they'll prevent you from making big mistakes. They should always make you question the decision you arrived at or the decision that you're close to arriving at. Same with scouts—scouts should always make you question the numbers.

Does the speculation about whether you will be the first female GM bother you?

Yeah. I'm not sure if anybody asks the guys that. The idea that this is all sitting on my shoulders—it's a lot of pressure. It's hard. But I think someone's going to have to do it.

At the end of the day, if this doesn't happen, I'm not going to see it as, "My career was a failure." That might be other peoples' take, but that's not mine. I know how hard it is. I know about all the guys who didn't even get an interview who probably should have had an interview. I've been very fortunate. I've worked extraordinarily hard to get where I am. If I don't end up becoming a general manager, that's just the luck of the draw. I've had a great career regardless.

Leaving aside the question of gender, do you want to be a general manager? Does the job itself appeal to you?

It does. It does. In becoming a general manager, I think the one thing that you have to know, though, is that you're never walking into a great situation. Either they finished last, or they

made it to the playoffs and it just wasn't far enough, or their payroll is through the roof and their farm system is depleted, or there are lots of difficulties surrounding their personnel. The issues go on and on. It is the ultimate challenge in this industry.

Everything else in your life gets put on hold for the length of your contract. It's all-consuming, especially now. The job has changed so much, with the internet and the information available to you. Social media has changed it quite a bit. Everyone has their opinions about the job you're doing.

I just gave a speech to some kids, and I was trying to explain to them the concept of a general manager. I said, "When your team loses the World Series, that's the first person you're going to blame." But it would be a great honor and a tremendous challenge.

Major league fields are notorious for their lack of uniformity. Do you feel there should be greater uniformity in ballparks, or do you like the quirkiness we have now?

I do like the quirkiness. That's my own personal opinion. It's fun when you're thinking about constructing a team, how to build a team around your park's quirkiness—but knowing full well the market may dictate that you can't build your team the way you want and you're going to have to live with it.

Do you have any opinions about the eternal debate over pace of play?

[laughs] I do have opinions about that, but they'd have to be off the record. ♦

FILM

THE NEW ROMANTICS

How Claire Scanlon, AB'93, made a romantic comedy for the modern era.

BY SUSIE ALLEN, AB'09

At first blush, the Netflix romantic comedy *Set It Up* feels familiar. Its two protagonists follow a well-worn cinematic path: they bicker, then they bond. Will they or won't they? Of course they will.

But, like the unassuming bookstore owner or the hard-charging attorney who's given up on love (pick your trope), there's more to *Set It Up* than meets the eye. The film earned praise for its diverse casting and portrayal of an interracial romance, as well as its subtle subversion of romantic comedy expectations: the gay best friend has a sex life, and the promiscuous female sidekick is never reduced to a punchline.

Behind the scenes, *Set It Up* was even more radical. At a time when women hold a fraction of key movie production roles, *Set It Up* was written, produced, cast, and edited by women. The film's production designer, costume designer, set decorator, and composer were women too—along with its direc-

tor, **Claire Scanlon**, AB'93. (As if to underscore the point, Scanlon was eight months pregnant when filming concluded. She jokes that anytime anyone complained on set, "I'd just gently turn and show them my profile, my very big belly, like, 'Yeah, how's it going?'")

For her first film, Scanlon was determined to make something that felt different. Before *Set It Up* landed at Netflix, studios questioned the casting choices the creative team had in mind. Scanlon told them it was a nonnegotiable point for her. The film is set in New York, and she wanted it to look that way. "When I open my door in Manhattan, I see diversity. ... That was really important to me, to portray the world as it is," she says. If executives wanted a white-washed film, "I'm not your person."

At 46, Scanlon has arrived at an enviable point in her career—the point where she doesn't have to compromise about the things that are important to her. "I'm not a young hot-shot 20-year-old who's desperate for their first break," she says. "I'm someone who can walk away from a project because I'll be just fine."



Here's looking at you, kid: Boy meets girl meets pizza in Claire Scanlon's (AB'93) romantic comedy *Set It Up*.



Still, you get the sense that she wouldn't have taken guff at any point in her career. In talking to Scanlon, it's obvious why she became a successful director: she is direct, and knows what she likes and doesn't. She's honed those instincts for decades, first as a moviegoer and fan (she's got a deep knowledge of classic Hollywood and popular film), then as an editor, and ultimately as a director for shows including *Black-ish*, *Fresh Off the Boat*, and *Brooklyn Nine-Nine*. They're good instincts, judging by the enthusiastic response to *Set It Up*. Netflix is famously secretive about releasing viewership data, but they've told Scanlon the movie has done "quite well."

Set It Up follows the travails of Harper and Charlie, two overworked personal assistants who attempt to, in their words, "parent trap" their bosses into falling in love. Along the way, Harper and Charlie catch feelings too. It's a tried-and-true formula that led

some critics to compare *Set It Up* to mainstays like *You've Got Mail* (1998).

But Scanlon says that she thinks *Set It Up* hearkens back even further, to the romantic comedies of the '30s and '40s. "For me, it was *His Girl Friday*," she says. "There's a certain cadence and a rhythm to the way they speak." She instructed actor Zoey Deutch, who plays Harper, to emulate Rosalind Russell's rat-a-tat style. "Zoey really ran with that."

In those classics, "women were on equal footing with men, if not one step

"THERE'S A JOKE THAT ALL EDITORS HAVE TO BE GOOD DANCERS," BECAUSE YOU HAVE TO HAVE RHYTHM.

ahead." In *His Girl Friday*, Russell's Hildy is well aware that Cary Grant's Walter is trying to win her back. "She knows what he's doing. She calls him out on it all the time," Scanlon says. The fun comes from watching the back-and-forth. Will they or won't they? Of course they will.

There's a good reason Scanlon knows *His Girl Friday* so well—she edited the 2004 *American Masters* special "Cary Grant: A Class Apart." It was one of several *American Masters* documentaries Scanlon worked on, several years after finishing film school at the University of Southern California. While cutting "Bob Newhart: Unbuttoned" and "Carol Burnett: A Woman of Character," Scanlon got an inadvertent education in comedy. "I watched everything they ever did."

Her mentor, documentarian Arnold Glassman, always emphasized the need for a laugh or two. It didn't matter what

Courtesy Netflix

Director Claire Scanlon, AB'93, says she tries to make her sets inclusive and democratic. "If I'm a jerk on set—throwing out commands, yelling and hollering—how on earth are you supposed to be funny in that scenario?"

the movie was about. "You cannot have two hours with no jokes," she says.

Editing PBS documentaries was creatively satisfying but not lucrative. To pay the bills, Scanlon cut reality shows including *Last Comic Standing*, *Top Chef*, and *The Apprentice*. (She knows what you're wondering, and the answer is, no. Although she's no fan of the current president, she never saw any footage of Donald Trump saying anything particularly incriminating.)

Between her documentary, reality show, and comedy experience, Scanlon inadvertently crafted a perfect résumé for *The Office*, the mockumentary about a fictional paper company in Scranton, Pennsylvania. Scanlon was hired as one of *The Office's* editors and got some of her first directing experience on the show.

Editing is a delicate art. It requires balancing the artistic priorities of directors and actors with the attentional limitations of the audience. In comedy, an editor's timing can matter as much as an actor's. "There's a joke that all editors have to be good dancers," she says—because you have to have rhythm.

The Office was an editor's heaven. Showrunners Greg Daniels and Paul Lieberstein "really respect the art of editing," Scanlon says. Although the script's language was sacrosanct, Daniels and Lieberstein trusted their editors to tinker with structure, for instance moving the episode's "talking-head" interviews to play up a particular joke or story point.

Toward the end of her time on *The Office*, Scanlon was ready for the next challenge. Other editors from the show had directed episodes, so Scanlon felt comfortable asking if she could try too. She got her chance with season eight's "Angry Andy" and season nine's Halloween episode, "Here Comes Treble."

That led to a "massive break"—a directing opportunity on the first season

Scanlon didn't intentionally choose a mostly female creative team for *Set It Up*. They were "the best people for the job and just happened to be available," she told *Variety*. Still, it set the film apart. According to the Center for the Study of Women in Television and Film at San Diego State University, women hold a minority of key behind-the-camera roles.

Of the top 500 domestic grossing films of 2017, women made up:



28% OF PRODUCERS
21% OF EXECUTIVE PRODUCERS
18% OF DIRECTORS
16% OF WRITERS
6% OF CINEMATOGRAPHERS

But these numbers look different when women direct. For instance, on male-directed films, women made up 8 percent of writers. On films with at least one female director, women made up 68 percent of writers.

Women don't fare much better in broadcast television, the center found. In the 2017–18 season, women made up:



40% OF PRODUCERS
26% OF EXECUTIVE PRODUCERS
17% OF DIRECTORS
25% OF WRITERS
24% OF EDITORS

The lack of gender diversity behind the scenes affects what happens on screen. On TV shows with no women executive producers, women made up 33 percent of major characters. Add just one woman executive producer and that figure jumps to 42 percent.

of Mindy Kaling's *The Mindy Project*. Like *Set It Up*, *The Mindy Project* didn't fit the Hollywood mold. At the time, "to have someone that was the romantic lead of a network show that was not white, blonde-haired, blue-eyed, and a size two was unusual," Scanlon says. "That was a big, groundbreaking show."

Before long, Scanlon had a hefty list of directing credits, many of them on shows created or cocreated by women, including Tina Fey's *Unbreakable Kimmy Schmidt* and Liz Flahive and Carly Mensch's *GLOW*.

"I'm rooting hard for all women," Scanlon says. "I was so glad when *Wonder Woman* did well." She names several female-directed comedies—*The Spy Who Dumped Me*, *Like Father*—that she hopes will succeed, "not only because I want all comedies to do well, because I think we need more comedies out there, but in the sense that I want women-directed comedies to do well. I want women-directed everything to do well." Otherwise, she fears, the opportunities will disappear. Men get lots of chances to make a successful movie, but for women, "it's still that thing of, 'We gave her a shot and it didn't work out.'"

If editors have to be good dancers, directors have to be good at a little of everything. The job is at once intuitive and logistical. A typical day can include both counseling an actor through an emotionally complex scene and figuring out how to get permission to shoot at Yankee Stadium, as Scanlon did for *Set It Up*. At one point in our conversation, I offhandedly compare the work of a director to being the general of an army. Scanlon immediately pushes back. "I can't think of an analogy less like a set I work on than the military," she says. "Because you can't be funny when you're afraid."

Scanlon's sets are democratic. If a production assistant has a good idea, great. She also tries to protect her team

by resisting the tendency to "hose a scene down"—that is, shooting it from every angle to give yourself more options. "You think that could be a good idea, but it's folly," Scanlon says. "Because what you end up doing is burning out your actors, burning out your crew, and then your editor gets all this mish-mash with no real vision or insight into how to tell the story."

Scanlon is, in general, skeptical of auteur theory. She tells a (possibly apocryphal) story about the director Frank Capra, who argued for the "one man, one film" approach. Capra's fre-

I WANT WOMEN-DIRECTED EVERYTHING TO DO WELL.

quent collaborator, the screenwriter Robert Riskin, who knew Capra wasn't much of a writer, "was so fed up with hearing it, he threw a ream of white paper at Capra, and said, 'Hey, let's see the Frank Capra touch on this.'"

When Scanlon got the script for *Set It Up*, it "popped off the page immediately. It was just such a no-brainer." In making the movie she fulfilled nearly all of her aspirations, with one exception: Scanlon, who grew up in Chicago, pitched for the movie to be set in her hometown.

It wasn't in the cards. One of the film's stars, Lucy Liu, lives in New York, and Chicago's tax incentives weren't competitive. "Which is too bad. Because of course I'm dying to go back to Chicago, desperate," Scanlon says. *Set It Up* was intended as a love letter to Manhattan, but "I want to do a love letter to my town." ♦

Scanlon grew up in Boystown in the '70s and '80s, then a more rough-and-tumble neighborhood than it is today. Sex work was out in the open, and street crime was commonplace. She once got jumped at the corner of Broadway and Aldine.

Still, she remembers her Chicago upbringing fondly. "I would jump on the 151 or the 146, ... and I would go to a movie at Water Tower Place and then I'd hit Burger King, and then I'd go to the Esquire movie theater." She loved John Hughes's teen-focused comedies, which were released at a steady clip throughout her own adolescence.

Scanlon spent her first two years of college at the University of Iowa, then transferred to the University of Chicago, where the classes were smaller and gave her the academic challenge she wanted. While at UChicago she got her first job in TV, transcribing the PBS series *The New Explorers*, hosted by legendary television journalist Bill Kurtis. Kurtis told the *Chicago Tribune* he remembered Scanlon as "bright, industrious, with a great future in this business, and apparently that is true."

For the moment, Scanlon's future involves directing the pilot and season finale of *American Princess*, a show about a young woman who joins a Renaissance fair, cocreated by Jenji Kohan of *Weeds* and *Orange Is the New Black* fame.

She's also navigating fans' calls for a sequel to *Set It Up*. If there were to be one, Scanlon says she'd want to follow Lucy Liu's character, who doesn't fully get her happy ending. "We opened a door for her, but she didn't quite yet walk through," Scanlon says. "So it would be interesting to see." But Scanlon isn't convinced there needs to be a sequel at all. "Don't you think you should always leave people wanting more?" She's still mulling. It's a real will-they-or-won't-they. ♦

INQUIRY

NEWS FROM THE PHYSICAL SCIENCES DIVISION 2018

Hubble's Wide Field Camera 3 captured light from distant galaxies bent into arcs, a distortion caused by a cosmic phenomenon called strong gravitational lensing.

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Thermochemist
Reatha King

60

Artificial
humanity

64

Cyber
(in)security

67

Shifting
sands

Network building



Artificial intelligence is increasingly valuable in data-dependent research. AI can be used to simulate, and thereby defend against, malicious hacking (see “Data Mind,” page 64). It can help scan images of an expanding universe, searching for hints about dark matter and dark energy (see “Distortion,” page 60). Neural network-aided research extends far beyond the physical sciences, informing and illuminating fields of medicine, economics, and social sciences.

As a result, the Department of Computer Science and its growing focus on data science and machine learning finds itself in an influential position to offer new technology, techniques, and theory applicable to nearly every research field.

I begin my tenure as dean of the Physical Sciences Division during an exciting time for the Department of Computer Science, with the addition of eight new faculty members for the 2018–19 academic year and a new home in the renovated Crerar Library. The library is also housing a computer science partner, the newly launched Center for Data and Applied Computing.

The center will support and encourage ambitious research and provide a collaborative space to apply

new computation insights to projects across campus and the full spectrum of science. The work that emerges will exemplify UChicago’s commitment to both fundamental and applied science.

On a June episode of TechCentral.ie’s *Tech Radio* podcast,* Michael Franklin, the Liew Family Chair of Computer Science, emphasized that data science is not dispassionate, and that data should not and cannot be separated from the people who provide, collect, analyze, and technologize that information. “As we’re building data science as a field” he said, “we need to make sure that the human component is front and center in what we’re doing.”

In the pursuit of artificial intelligence, where we’re attempting to create thinking machines in our own image, that human component is even more crucial, a reminder that the work done in the Physical Sciences Division is part of and informed by the far larger human network.

All the best,

Angela V. Olinto
Dean of the Physical
Sciences Division

* Listen to the podcast at mag.uchicago.edu/techradio.

Cluster and synthesize

Whether finding neutrinos, improving solar energy storage, or programming quantum computers, the Physical Sciences Division’s Eckhardt Scholars collaborate, create, and communicate.

BY MAUREEN SEARCY

Launched in 2016, the Physical Sciences Division’s Eckhardt Graduate Scholars Program forms a collaborative environment among doctoral students and faculty to help the students prepare for careers creating and conducting the science of the future.

For the professional-development part of the program, organized by PSD associate dean of students **Emily Easton**, in 2017–18 the cohort focused on science communication: learning to address audiences, presenting research to nonscientists, and maintaining an online presence. In 2018–19 the students will practice mentorship. Through such professional training, says Easton, “we hope the Eckhardt Scholars will be better prepared to take on the responsibilities of scientific leadership.”

Inquiry spoke with three of the 27 Eckhardt Graduate Scholars. Interviews have been edited and adapted.

Name: **Kaeli Hughes, SM’18**

Department: **Physics**

What’s your current research project?

We are searching for ultra-high-energy particles called neutrinos. These UHE neutrinos are produced from interactions between cosmic rays and the cosmic microwave background or directly from distant sources, such as supernovae—though no group has detected these yet. Neutrinos are interesting because they travel much farther than other particles do before interacting, potentially giving us information about what’s going on in some of the most distant corners of the universe.

One of the best places to detect neutrinos is in the ice in Antarctica. When neutrinos interact in matter, they produce a coherent radio wave, and because ice is radio clear, Antarctica is an ideal place to set up our detectors.



Part of the Askaryan Radio Array near the South Pole, the phased array detector makes finding possible neutrino-creating events easier. Here the detector's antenna extends above ground.

What is one recent exciting development?

This past December and January, we successfully deployed the first phased array detector as part of the Askaryan Radio Array near the South Pole. The phased array takes into account time delays across multiple antennas and adds each signal together. We expect signal events to add coherently while random noise will not. This will make it easier to detect potential events, and we are excited to start taking data with the new system.

Why is science communication important?

Progress in science requires support from the public, which means it's our responsibility as scientists to communicate why our research matters.

Name: **Pranav Gokhale**

Department: **Computer Science**

What are you studying?

I study quantum computation, a promising new technology that harnesses principles of quantum mechanics to solve certain problems exponentially faster than traditional computers. Specifically, my work focuses on translating mathematical algorithms into physical instructions that can be run on quantum computers in the next three to five years.

What is one promising development?

We found that clustering—a technique for breaking up a big computation into a number of smaller computations—can be effective for solving problems in chemistry, such as finding the ground state energy of a molecule. With clustering, we can use several small quantum computers, which are available in the near term, instead of a massive quantum supercomputer, which is

more than 10 years away, with only a negligible extra resource cost.

How have the science communications workshops helped you?

One of the workshops was taught by professional improv actors. A major thematic takeaway was that research talks and presentations don't need scripts to be polished and effective.

Name: **McKenna Goetz, SM'17**

Department: **Chemistry**

What are you working on?

I'm working on synthesizing and characterizing a series of cobalt complexes that resemble some of the intermediate compounds thought to be involved in the function of various synthetic water oxidation catalysts.

Why is it important to understand water oxidation catalysis?

Water oxidation is a promising method to store solar energy as chemical fuel so it can be used on a large scale. With increased understanding of how water oxidation catalysts function, better and cheaper ones can be designed to make this a viable source of energy.

What's one lesson you've learned from the science communications programming?

I have realized that words and phrases that I think are simple are not necessarily accessible to the wider public—as may be evident from my responses. It's easy to get lost in the vernacular that one hears every day and forget that the rest of the world does not think and speak using those terms the same way. ♦



PROFILE

Burning ambition

*Reatha Clark King, SM'60, PhD'63,
was one of the less hidden figures in the space race.*

BY JEANIE CHUNG

In the 1960s, the race to get a man on the moon was all consuming. While there was never a doubt that the astronaut would be a white man, points out **Reatha Clark King**, behind the scenes scientists “were so focused on that mission, they didn’t care whose brains helped—black women, white, whoever. If you had the brains, they would find you.

“You saw that movie *Hidden Figures*?” says King, SM’60, PhD’63. “There were a lot of hidden figures back then.”

King was slightly less hidden. Her invention of a coiled tube that allowed fuel to cool instead of exploding was a crucial advance in the space race, and she is the lead author of a 1967 paper, “Constant Pressure Flame Calorimetry with Fluorine II. The Heat of Formation of Oxygen Difluoride,” written while she worked for the National Bureau of Standards, now known as the National Institute of Standards and Technology. At the time, oxygen difluoride was being considered as a key component of

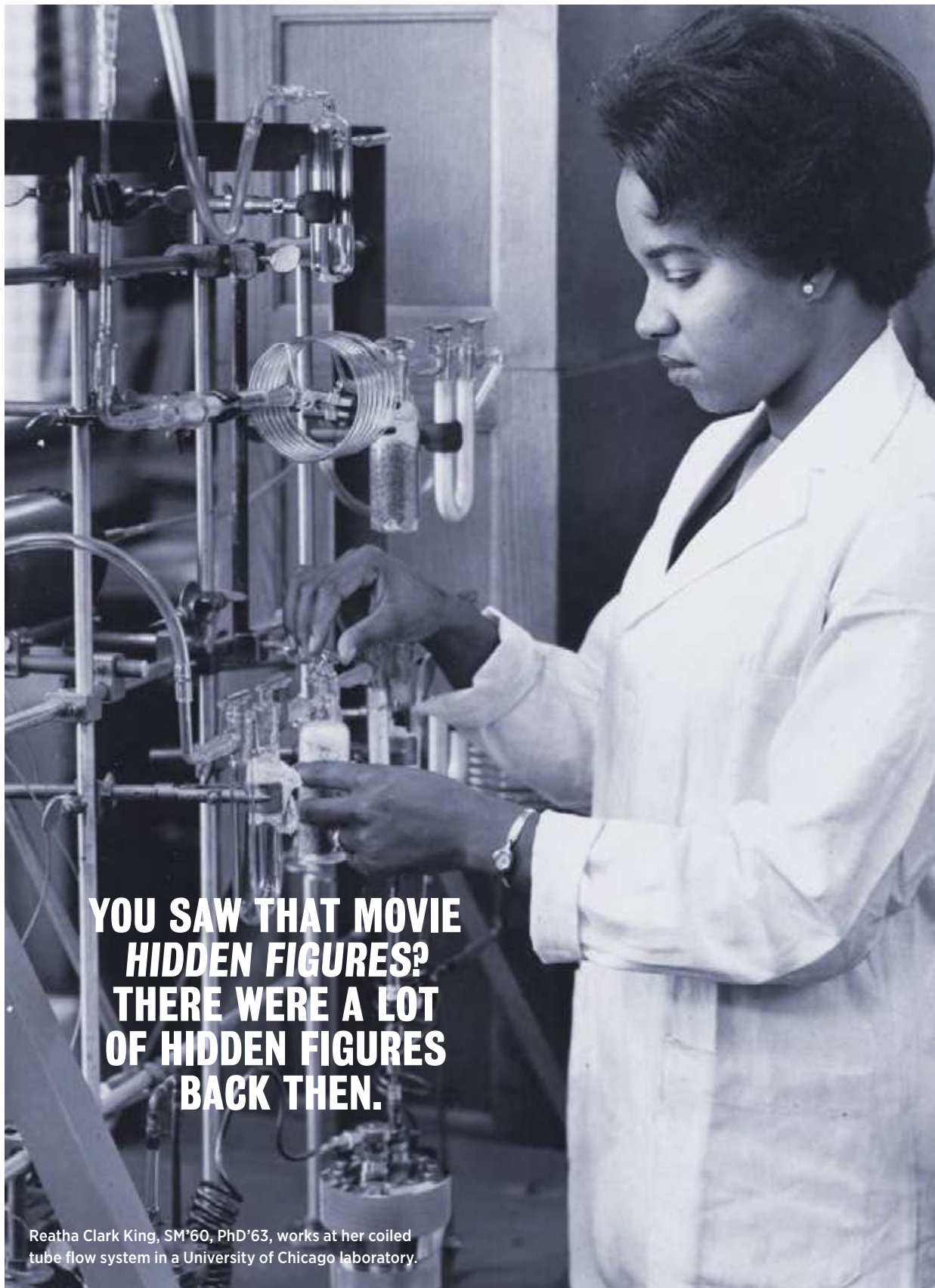
rocket fuel and has since become a standard ingredient.

Early in her life and career, King faced many of the same obstacles as the African American women scientists depicted in *Hidden Figures*. But she had factors working in her favor—a crucial one being her University of Chicago degree.

At the time she finished her PhD, societal doubt “because of your race and gender was very strong.” But her degree helped ease those doubts and “soften the hearts of those who would close doors,” she says.

“The world accepted the University of Chicago as second to none,” she says, borrowing a phrase often associated with her undergraduate alma mater, now Clark Atlanta University. Attending these two institutions back to back, King says, helped shape her life goal “to aim to be second to none in all of my endeavors.” She adds, “For me to have that experience caused others to doubt me less than they would have otherwise.”

King appreciates her success all the more because of the



**YOU SAW THAT MOVIE
HIDDEN FIGURES?
THERE WERE A LOT
OF HIDDEN FIGURES
BACK THEN.**

Reatha Clark King, SM'60, PhD'63, works at her coiled tube flow system in a University of Chicago laboratory.

All photos courtesy Reatha Clark King, SM'60, PhD'63



YOU ASK ME WHAT IS MOST PRECIOUS NOW, LOOKING BACK: IT'S THE LOVE AND CARE I'VE GOTTEN FROM ALL THE INSTITUTIONS I'VE BEEN AFFILIATED WITH.

King planned to major in home economics but fell in love with chemistry at Clark College, now Clark Atlanta University, where she graduated as valedictorian.

way she earned it. By 1954, the year the Supreme Court ruled in *Brown v. Board of Education* that segregated schools were illegal, she had already graduated high school. She and other sharecroppers' children in her hometown of Moultrie, Georgia, had gone to grammar school at the local Baptist church, where they were encouraged to get an education, she says, "so we could work out of the hot sun."

During Black History Week, her class had learned about African American role models, including George Washington Carver. If they studied hard, their teacher said, they could be like him.

Despite those early lessons, King planned to major in home economics at Clark Atlanta and then return to Moultrie to teach at the local high school. After all, George Washington Carver was a man, and in those days, she says, "there were certain fields of study that were appropriate for girls." To fulfill her major requirements, she needed to take a year of chemistry—where she fell in love with the laboratory work. When the chair of the chemistry department told her she could be successful in the field, she thought back to George Washington Carver and decided to become a research chemist. The chair told her she would need to go to grad school.

King attended UChicago on a Woodrow Wilson Fellowship, which at the time supported graduate students pursuing doctoral degrees. "You cannot imagine what a confidence builder this is for us country boys and girls in the rural South," she says, "to have champions like [the fellowship foundation]."

She was interested in physical chemistry, specifically calorimetry: the study of the changes in energy in a system based on heat transfer. (She was also learning about heat—or lack thereof—during the Chicago winters. In her first letter home, she asked her mother to send long underwear.) King worked under O. J. Kleppa at the University's Institute for the Study of Metals, now known as the James Franck Institute.

In addition to the course work and the cold, King had to adjust to what she calls "the gap between what you're experiencing and your family back home." King says she gets her intelligence from her father, Willie B. Clark, who designed his own tools for farm work. His friends called him "Preacher," both for his religious faith and his intellect, his ability to "figure anything out." But growing up in the early 20th-century South as one of 13 children, Willie Clark never learned to read and thus had few opportunities.

All photos courtesy Reatha Clark King



In 1961 Reatha Clark married N. Judge King Jr. in a ceremony officiated by minister and civil rights leader Benjamin Mays, AM'25, PhD'35, then president of her husband's alma mater, Morehouse College (left). King graduated from the University of Chicago in 1963 with a PhD in chemistry.

While at UChicago, she met N. Judge King Jr., a Morehouse College alumnus who was teaching science at Englewood High School (and also driving a cab). After they married, she took the National Bureau of Standards job when he went to Washington, DC, to get his doctorate in organic chemistry at Howard. Among her many assignments was a project for the Advanced Research Projects Agency, now known as the Defense Advanced Research Projects Agency (commonly known as DARPA), to find a material that could effectively work as a container for the extremely corrosive compound oxygen difluoride.

She learned that oxygen difluoride ignites in an atmosphere of hydrogen. "I only had one explosion," she says, adding that at least it was contained under a hood.

King balanced her job with raising two sons, but when her husband became chair of the chemistry department at Nassau Community College on Long Island, New York, her career at National Bureau of Standards came to an end. She became an assistant professor of chemistry at City University of New York's newly established York College in Queens and found that at a new institution, "if you're willing to work hard, you can move up the ranks pretty fast."

She ultimately became associate dean for the Division of

Natural Science and Mathematics and then associate dean for academic affairs. Along the way she spent a sabbatical year earning an MBA at Columbia University. In 1977 she became president of Metropolitan State University in Minneapolis-St. Paul. Eleven years later, General Mills tapped her to direct its foundation.

"As a university president," King says, "you become very familiar with the range of resources needed to lead your organization."

Much of her work at General Mills drew on her experience in higher education—but from the opposite side of the grant. One area that didn't, which she found especially rewarding, was disaster relief assistance. Corporate foundations excel at it, she says, "because they can move quickly."

King retired from General Mills in 2002. Today, along with her involvement in other organizations, she is an emeritus trustee at UChicago and serves on the board of overseers of the Malcolm Baldrige National Quality Award. She's thinking about writing her autobiography and is taking writing classes.

"I'm a lifelong learner," she says, "and I don't apologize for that. Frankly, I think it is one of the wonderful habits I learned at the University of Chicago." ♦

A portrait of Brian Nord, a man with curly dark hair, a beard, and glasses, wearing a brown corduroy jacket over a plaid shirt. He is sitting at a table with his hands clasped. The background is a dark, starry space scene with some light flares.

OBSERVATIONS

Distortion

*UChicago astrophysicist Brian Nord looks
for lenses through AI eyes.*

BY BRIAN NORD

AS TOLD TO MAUREN SEARCY

There have been two artificial intelligence winters—seasons of disappointment following a spell of hype where AI was touted as the solution to any number of problems but failed to deliver. We think we’re approaching another winter, but we hope it’ll be mild. The problem is that AI algorithms can do amazing things, but the how is not well understood. So I try to find simple questions within a complex problem that might help us better understand what AI can do.

One of the grandest mysteries of the universe is the dark sector. What’s the nature of dark energy (the hypothetical energy that pushes the universe apart)? What’s the nature of dark matter (the invisible matter inferred by its gravitational effects that holds the universe together)? Then there’s the related questions of how galaxies form and evolve. Solving any of those questions would lead to a better understanding of the others. One of my smaller, more focused efforts that helps investigate both the dark sector and the black box of artificial intelligence is improving the search for gravitational lenses.

There are regions of space that act like optical lenses. General relativity states that anything with mass—visible and dark matter—warps space-time. The fabric of space-time curving around an object explains gravity; this curvature also deflects light. So if one of these massive objects (anything as small as a planet to as huge as a galaxy cluster) is between an observer and a light source, the light will look distorted: maybe appearing multiple times (strong lensing), maybe looking stretched and magnified (weak lens-

ing), maybe appearing just a little bit brighter (microlensing).

Historically, searching for strong gravitational lenses was done by manually looking at pictures. It worked because images weren’t that big. But as technology evolved, we got enormous images with hundreds of galaxies, and you’d scan and zoom, scan and zoom. It felt like our eyes were being misused. There’s got to be a better way. Starting in

THERE ARE REGIONS OF SPACE THAT ACT LIKE OPTICAL LENSES.

the 1990s, scientists began looking at the way digital pixels were connected, building image-based algorithms to help.

Then in 2016 scientists began using artificial intelligence neural networks to automatically scan images to find lenses. There’s still the challenge of training the networks, which means sometimes it’s still faster for humans to do the work.

And even with the networks doing the heavy lifting, we still use our eyes to double-check the results.

Another challenge is that we need far more lens images than are currently available to train the neural networks, so we have to create convincing simulations. This is one reason physics is a great place to experiment with AI. We have already modeled much of the universe: You can write down the motion equations of a photon getting lensed. You can model what the lens and source look like and then add telescope noise. There are a small, distinct number of components to create a simulation, and we can fabricate images that can fool astronomers who have been looking at strong lens images for decades.

There’s a gotcha: Why not use AI to also make the simulations? I hope that my research will close that loop, creating advanced algorithms that can generate these images more quickly and intelligently.

Why do we want to identify so many lenses anyway? Each lens offers a little bit of information. You want to model as much as you can—to measure how intrinsically bright the object is, how much mass is in the dark halo (the inferred halo of dark matter that sur-

rounds galaxies and galaxy clusters), and the distance between you and the object. These answers help map the mass distribution in the lens and, when combined with other lens models, how mass distribution has changed over time, helping determine how much dark matter and dark energy are there. With hundreds of lenses to model, you have statistical power that can help cosmologists understand how fast the universe is expanding.

The neural networks that seek out gravitational lenses—or create fake Yelp reviews or drive cars—are considered artificial narrow intelligence, or ANI, which is good at doing a single task. When people feel anxiety over AI—that fear of robot overlords or the rise of machines—it’s at least partially in reference to artificial generalized intelligence, or AGI: a machine that can understand its environment and reason the way humans do. Think *2001: A Space Odyssey’s* Hal 9000 or *Westworld’s* android hosts. Whether consciousness is required for true AGI is up for debate.



“We’re creating these things, these ever-evolving human facsimiles, in our own image,” says Nord, “but what do we still not know about our own humanity?”

I DON'T THINK IMMEDIATE ALARM IS WARRANTED THAT AGI WILL ENSLAVE US IN A MATRIX-TYPE SCENARIO.

I don't think immediate alarm is warranted that AGI will enslave us in a *Matrix*-type scenario. But we should be paying attention because AGI could happen quickly or in a way we weren't expecting, and there could be real repercussions for society. It's not a stretch to compare the AI era we're in

now to the first half of the 20th century, when we were developing nuclear weapons. These are two highly disruptive technologies that, when wielded with sufficient power, will change large swaths of lives.

The fact that I'm trying to make these algorithms better means that

I'm contributing in some way. I take that very seriously, so I hope to learn more about the ethics of AI and be a conduit for voices that prioritize those considerations.

There's a confluence of science, ethics, and humanity—biases that seep into science conduct and design, perpetuation of those biases through purported objective research, effects on society that arise from technological advancement. They're all connected.

We're creating these things, these ever-evolving human facsimiles, in our own image, but what do we still not know about our own humanity? Suppose we do achieve AGI, and in

Illustration by Tom Gaudi



EDUCATION AND EMPOWERMENT

BY BRIAN NORD

AS TOLD TO MAUREEN SEARCY

truly human form. How will we treat them? Will we enslave *them*? James Baldwin talks about what oppression does to the oppressed, the oppressors, and the witnesses—the terror it unleashes on your soul.

We will have a better wrangle on the ethics of AI if we are better to each other as humans—pay better attention to how we view and treat one another. If we're not paying attention to inclusion and how equitable our research spaces are, are we causing folly in the technical aspects of our research?

Diversity and inclusion were important considerations during the founding of Deep Skies, a collaborative community that brings together astronomy and AI experts to explore mutual benefits of large-scale data analysis. I cofounded it about a year ago with UChicago postdoc **Camille Avestruz** and Space Telescope Science Institute astrophysicist Joshua Peek.

Deep Skies started as a journal club, but we realized that it could be an environment for real work to be done, for research to happen in a new way. We develop partnerships with institutions across the world, learning from each other without having to reinvent the wheel. And we encourage open-source methodologies and accurate attribution for ideas and contributions while engaging in best practices to improve diversity in STEM (science, technology, engineering, and math) fields. We want to make sure that different voices are in the room.

We're scientists. We're physicists. We want to break things down to their fundamental causes and constituents, and fundamentally science is about humans. It's about the people who do science and the people whom it serves. Emotional intelligence makes for better artificial intelligence. And being more human makes for better science. ♦

I don't know what it means to do science without communicating it back to people. It feels inauthentic or insufficiently expressive for me to do one without the other. But my mission isn't to make scientists. What I want to do is help people recognize their own power and agency to see that science is a tool for them, not just the purview of some special group.

When I was in high school planning to pursue physics, people would say, you'll be able to do anything! Teachers and counselors make STEM out to be this magical Swiss Army knife that will set you up for the future, and I think that's a bait and switch. It marginalizes the importance of art and language and literature—all those things that are also central to our humanity.

Space Explorers, a high school science enrichment program through the Kavli Institute for Cosmological Physics, could exist in any field, as long as it involves self-discovery, learning about the world and the student's place in it.

But as it is a science program, we focus on projects that have practical and gaming elements. We've done mystery games to help students make hypotheses and test them out. We also do engineering projects, asking students to improve instrument or architectural concepts, learning about accuracy and precision and iterative design.

Public outreach is an important part of my career. I've given Ask-a-Scientist lectures, spoken at the Fermilab Family Open House, performed in the Fermilab Physics Slam, and given tours for Saturday Morning Physics.

But I'd like to find a better word than *outreach*—it creates a divide between those who do (science in this case) and those who don't. This thing that we love, that we do to make the world a better place, gets distorted by putting ourselves in the center of it. ♦



RESEARCH

Data mind

Computer scientists mine data to study behavior and expose security flaws.

BY MAUREEN SEARCY

ILLUSTRATION BY MARIA CORTE

Our technology-dominated society generates a massive amount of data about us, collected in a variety of contexts, with and without our informed consent. Social media, security footage, genomic databases: these data streams and our increasing awareness of them are contributing to a growing anxiety over privacy and the need for security. But this information also helps researchers understand how humans interact with technology, build better systems to serve that interaction, and ultimately protect us—both in cyberspace and in the real world.

Mining data to model and predict human behavior can affect our lives on individual and institutional levels. This type of modeling is one focus of the Systems, Algorithms, Networks, and Data (SAND) Laboratory, jointly run by **Ben Zhao** and **Heather Zheng**, a married team who joined UChicago in 2017 as Neubauer Professors of Computer Science.

On a small scale, models can help predict how users will behave on apps like Whisper, an anonymous social network, or penny auction sites like DealDash—predictions that can help developers create software better suited to how real people use it.



Larger-scale projects include Zheng and Zhao's collaboration with UChicago Medicine, analyzing data from vital sensors to study the behavior of patients and caregivers, as well as collecting information about their environment, such as temperature and noise levels. The team aims to improve both the modes of information capture and the interpretation of that data, the combination of which can "improve the health care system," says Zheng, "making it more efficient and predictable."

Scaling up even further, SAND Lab is working with the Array of Things project, capturing information around the city of Chicago. "A hospital is like a little city," says Zheng, and much of what they learn at UChicago Medicine can be applied to a smart city, such as how to analyze anomaly events or the movement of populations. Their goal is to develop sensors that can capture information, which can be analyzed and then influence further action—like traffic moderation—in real time.

Data-driven analysis can be performed in a number of fields, notes Zhao. For instance, one day he'd like to use data "to reverse engineer the legal profession," he says, "trying to understand how predictable people are in the courtroom and whether we can produce a model for how court cases will go."

Advances in data science, a field that has become a focus of the Department of Computer Science, don't happen in a vacuum. Researchers discover patterns and glean insights from data, but such mining puts scientists in a precarious position. What if the population who provided that data doesn't want their information used in certain ways? What if they weren't even aware it was being collected?

To guard against these dilemmas, data scientists also scrutinize how to use data sets ethically and safely. "We're looking at how to access sensitive material, like large databases of genomic or body sensor data, in a secure way that guarantees patient privacy while still allowing researchers to gain useful information," says Zhao.

"When we do our work, we use anonymization," adds Zheng. The models they build don't reflect identifiable information. The data from which they glean patterns never leave their servers, and they never share it—"unlike Facebook," she says, which had information on some 50 million users provided to voter-profiling firm Cambridge Analytica by a third party.

Facebook's data scandal epitomizes the dangers of collecting data on a massive scale and why it's so important to safeguard that information, says Zhao. While the scandal wasn't a breach in the sense that a malicious party broke in,

FACEBOOK'S DATA SCANDAL EPITOMIZES THE DANGERS OF COLLECTING DATA ON A MASSIVE SCALE AND WHY IT'S SO IMPORTANT TO SAFEGUARD THAT INFORMATION.

Facebook had a design weakness that was exploited. "They should have had better protection mechanisms to verify and validate when data was being shared. I think their model for allowing that much data to be collected was problematic in the first place, so what happened is not terribly surprising."

Data breaches are one area of focus for another researcher, **Blase Ur**, a Neubauer Family Assistant Professor in Computer Science who also joined UChicago in 2017. Ur takes a human-centered approach to studying computer security and privacy, including analyzing how vulnerable an individual's other accounts are after one account has been compromised. "Lots of people have a major coping mechanism of reusing the same or similar passwords," says Ur—passwords and other means of authentication being one focus area of his SUPERgroup (Security, Usability, & Privacy Education & Research) collective at UChicago.

So, what *is* a better password, how is its strength measured, and what will real people be able to remember?

Ultimately a strong password is one that is unpredictable to attackers. "Hackers are basically data scientists," says Ur. They look at credentials that have been leaked online, usually by other hackers, and build statistical models for typical passwords. Posting the spoils of their attacks in forums is a hacker point of pride—and information useful to computer scientists like Ur. (He doesn't interact with them, just studies their tactics.) By evaluating how obvious a particular password would be, based on those models, he can use the hackers' posts to understand how vulnerable the average person is.

Yet knowing a password's strength isn't enough; users need to know why and how to strengthen it while maintaining manageability. So, in 2016, Ur and a Carnegie Mellon team built a meter that tells users how prevalent a certain typographic substitution is and offers suggestions to avoid vulnerabilities. The meter's artificial neural network—a brain-inspired system that mimics how humans process information—learned by scanning millions of passwords and identified trends attackers might exploit.

Zheng and Zhao also use artificial intelligence neural networks to expose vulnerabilities. In 2017 they trained a network using thousands of Yelp restaurant reviews, which was then able to write fake reviews that were indistinguishable from real ones. The reviews were rated not just believable but useful, demonstrating that such technology could be used maliciously to influence human opinion.

As far as we know, attackers are not yet using AI-powered technology to create fake reviews. Bad actors are still largely using on-demand crowd-turfing systems, where a large pool of human workers are paid to complete malicious tasks. But Zheng and Zhao believe that the threat is real and imminent for companies like Yelp and Amazon, and so they are using what they learned from creating fake reviews to develop countermeasure algorithms to detect them.

Using AI-powered detection to fight AI-powered generation is crucial, Zhao says, because undermining commerce is just the beginning. Artificially created content can shake society's confidence in what is and isn't real. In Zheng and Zhao's 2017 paper describing their work on reviews, they note that AI can help detect fake news—a problem that has skyrocketed, particularly since the 2016 election cycle. This defense is especially important because AI could one day generate convincing fake news too.

Zheng and Zhao have a long history of alerting companies of security weaknesses. In 2016 they received media attention when they discovered a security flaw in the crowdsourced navigation app Waze that allowed fake “ghost riders” to report false accidents, reroute traffic, and secretly track users' locations. They've also identified security flaws at LinkedIn and live video streaming apps Periscope and Meerkat. They even notified Facebook of security concerns in 2009, but privacy was less of a public concern then, says Zhao.

The notion of privacy has since evolved. When companies realized that privacy norms were shifting, they closed off a lot of access, but by then data had already been collected—by Cambridge Analytica, for instance. “You can't unopen a box,” Zhao notes.

When news of the Facebook scandal broke widely in March 2018, the public outcry brought to the fore issues of online tracking, profiling (whether for advertising or voter influencing), knowledge, and consent.

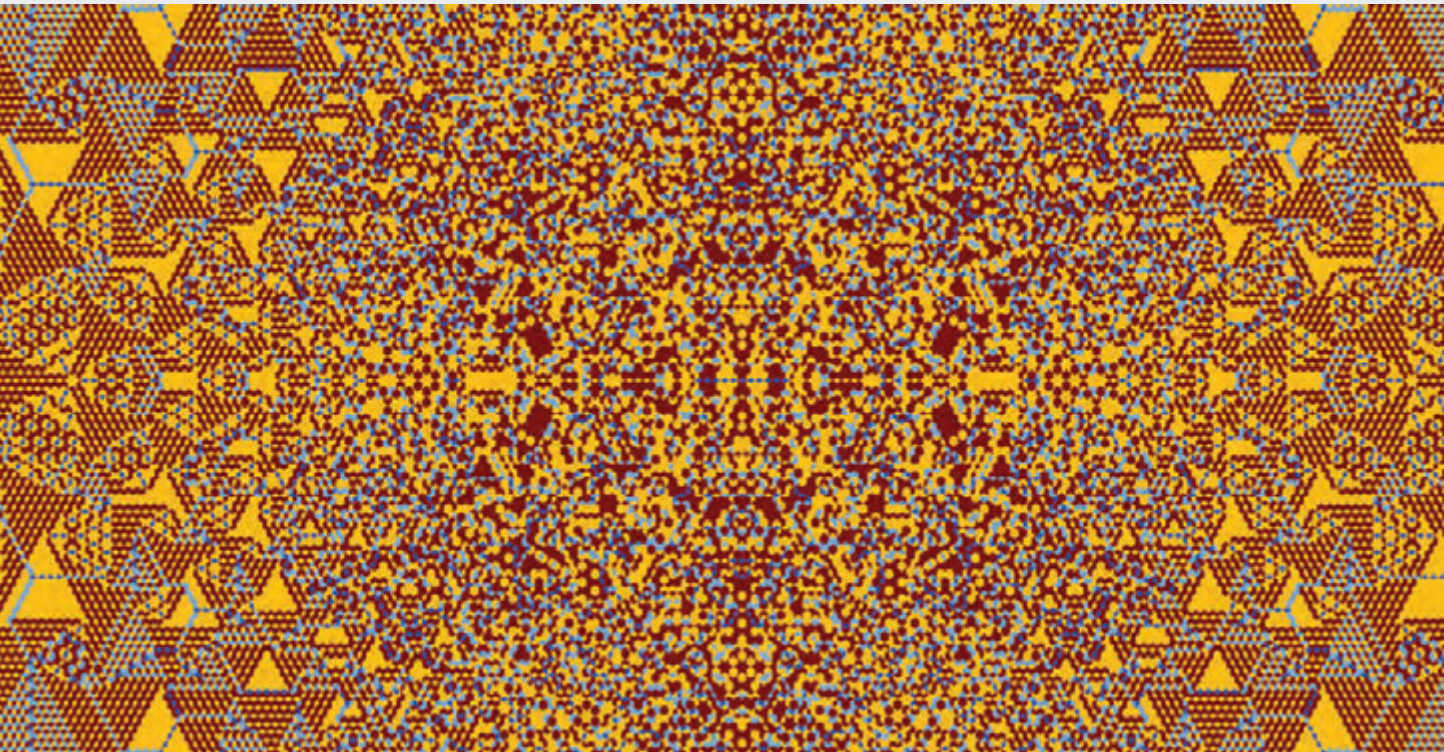
Ur thinks transparency could help ease public concerns. “Everyone using the internet shouldn't have to be an expert in data science to know about these things,” he says, so he's building a privacy tool—an open-source browser extension that, in essence, tracks the trackers. It would tell you if a site you're visiting is collecting your data. According to a research survey Ur and collaborators published in April, there is a widespread belief that using a browser's incognito or private mode will keep sites from gathering your data—it won't. It keeps information from being stored locally, so your roommate or spouse can't see what sites you've visited. Your internet provider and government agencies, however, can.

In May 2018 the EU General Data Protection Regulation went into effect, replacing a directive drafted in 1995, when the world was far less digitized. The scope of its protections, which in practice extend beyond Europe, includes consent, notification of compromise, and the “right to be forgotten” by removing previously collected data. The law also addresses data portability, enabling users to easily “move 14 years of social media history to another platform, making meaningful competition possible,” notes Ur.

It's hard to predict how such legally enforced protections might change privacy expectations—or anxieties—in the United States, should we adopt them beyond what's required to continue business relations with Europe. American and European citizens have different ideas about which data sharing practices are acceptable. (In June California signed into law the similar but much more limited California Consumer Privacy Act, but it won't take effect until January 2020.)

But increased transparency of those activities—whether provided by government enforcement or the types of technology SAND Lab and the SUPERgroup are developing—can only strengthen the “informed” part of informed consent. ♦

ARTIFICIALLY CREATED CONTENT CAN SHAKE SOCIETY'S CONFIDENCE IN WHAT IS AND ISN'T REAL.



When a box has four or more grains of sand, it sends one to each neighbor until the box stabilizes with less than four. When each number is assigned a color, visual patterns emerge: the more grains dropped, the more intricate the pattern. See it in action at mag.uchicago.edu/sandpile.



MATHEMATICS

Shifting sands

Associate professor Charles Smart
summits the Abelian sandpile.

BY MAUREEN SEARCY

For a long time, scientists and mathematicians have tried to formulate theories that explain vastly different phenomena using a few simple rules. One such unifying theory is self-organized criticality, proposed to explain how complexity emerges, as in natural occurrences like forest fires, earthquakes, and species extinctions. Self-organization refers to how nonequilibrium systems naturally develop

structures and patterns. Criticality references phase transitions and the border between stability and chaos.

The Abelian sandpile model, developed by statistical physicists in 1987, shows what happens when a pile of sand falls—a seemingly chaotic process that turns out to be quite orderly.

UChicago mathematician **Charles Smart**, Lionel Levine (Cornell), and **Wesley Pegden**, AB'04 (Carnegie Mellon) combined their expertise in different fields to develop a precise explanation for the emergence of these patterns. They showed that no matter how many grains you start with, you end up with the same overall picture.

The mathematicians' complete classification of the sandpile patterns appears in the May 2017 *Annals of Mathematics*. Their deeper understanding of how these models work could help predict and manage our seemingly—perhaps deceptively—chaotic world. ♦

Origins

Angela Olinto brings high energy to the dean's office.

BY MAUREEN SEARCY



This past July, **Angela V. Olinto**, the Albert A. Michelson Distinguished Service Professor in Astronomy and Astrophysics, the Kavli Institute for Cosmological Physics, the Enrico Fermi Institute, and the College, began her appointment as dean of the Physical Sciences Division.

Previously chair of Astronomy and Astrophysics (2003–06 and 2012–17), Olinto is best known for her contributions to the study of quark stars, primordial inflation, cosmic magnetic fields, and the origin of the high-energy cosmic rays and neutrinos arriving on Earth from distant galaxies.

What are your current research projects?

I am the principal investigator of two related efforts: the EUSO-SPB2, the second super-pressure balloon carrying the Extreme Universe Space Observatory telescope, and the conceptual design of a NASA space mission named PO-EMMA: Probe of Extreme Multi-Messenger Astrophysics. Both are designed to discover the origin of the highest-energy particles and to study their sources and interactions.

Once you track ultra-high-energy cosmic rays back to their source, what can you learn?

There are two complementary questions that we'd like to answer. One is in astrophysics: What are the scientific underpinnings of the highest-energy events in the observable universe? The second is in fundamental physics: How do particles with energies 10 million times larger than those we can create in the laboratory behave?

How do basic and applied science fit into the PSD?

The PSD's mission is to discover, apply, and disseminate the fundamental laws of nature and reason. That includes both fundamental research and applied sciences, which are interconnected and crucial for the future of humankind.

An example is the Parker Solar Probe, launched in August with a mission to study the origin and evolution of so-

lar wind. The study started by [professor emeritus] **Gene Parker** in 1958 created the field of heliophysics, essential for space missions and civilization on Earth. For instance, heliophysics helps us understand the effect of solar wind on our power grid and satellite communications.

How will you balance your roles as dean and researcher?

The two roles inform each other, as my research now consists of leading large groups of scientists around the world toward common scientific goals. Keeping up with my research involves a time-management challenge, given the attention I like to dedicate to our dynamic and inspiring Physical Sciences Division. I'm lucky to have a brilliant team in place at the dean's office that has been incredibly helpful and insightful as I learn more about the other departments and their objectives.

Finally, how did you become interested in astrophysics?

As a teenager, I was first fascinated by the power of physics—in particular by its simplicity in describing the natural world. Just four forces plus matter particles can explain all that we observe on Earth? I wished human behavior could be that simple!

As I studied these forces and the complexity of our universe, the idea that observations of *out there* can inform the physics of *down here* became even more intriguing. ♦

To learn more about the Physical Sciences Division's academic and research priorities—and how you can help—contact the associate director of development Erin Biebuyck at 773.702.4508, ebiebuyck@uchicago.edu, or William Eckhardt Research Center, 5640 South Ellis Avenue, Suite 319, Chicago, IL 60637.

Email Inquiry at: psd-inquiry@uchicago.edu

Editor: Maureen Searcy

Editorial Director: Amy Braverman Puma

Design: Guido Mendez

PEER REVIEW

WHAT ALUMNI ARE THINKING AND DOING

GRIDIRON CLASSIC

Amos Alonzo Stagg, athletic director, head football coach, and professor of physical culture and athletics from 1892 to 1932, celebrates his 90th birthday at a 1952 reunion. This academic year, UChicago celebrates the 50th anniversary of the football program's return to campus.

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A SELECTION OF ALUMNI WHOSE NAMES ARE IN THE NEWS

TWICE-TOLD TALE

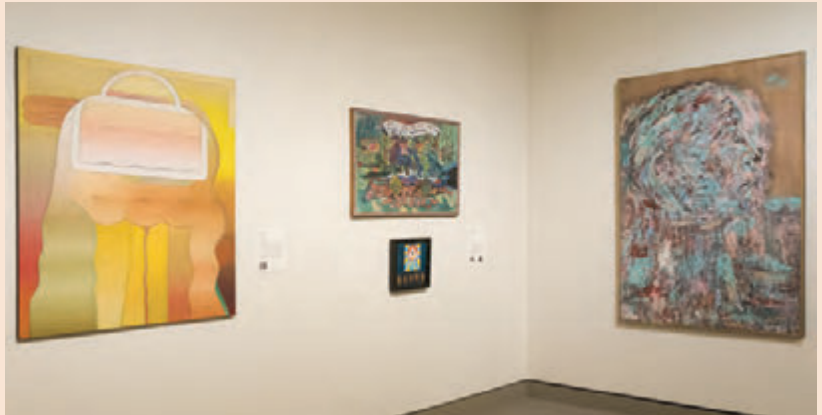
The House with a Clock in Its Walls, a new film released in the United States by Universal Pictures in September, is based on John Bellairs's (AM'60) young adult novel of the same name. Published in 1973, the novel is the tale of Lewis Barnavelt, an orphan sent to live with his uncle in small-town Michigan. Lewis discovers his uncle is a wizard, their neighbor is a witch, and the mysterious clock ticking in the mansion's walls is an occult device set to induce the end of the world. Screenwriter Eric Kripke's adaptation is a children's fantasy film starring Owen Vaccaro as Lewis, Jack Black as his uncle, and Cate Blanchett as the neighbor. Bellairs, who died in 1991, wrote erudite works of fantasy and satirical fiction in addition to his 15 young adult novels.

HONORS FOR NAHMOD

In July **Sheldon H. Nahmod**, AB'62, AM'96, received the Abner J. Mikva Award from the American Constitution Society's Chicago Lawyer Chapter. Named for US Court of Appeals judge Abner J. Mikva, JD'51, the award recognizes individuals who advance the society's progressive mission. For Nahmod, a professor emeritus at the Illinois Institute of Technology's Chicago-Kent College of Law, it was earned "for doing what I love to do: promoting civil rights and liberties by teaching, writing, and lecturing to students, lawyers, judges, and the general public."

STATE OF THE ART

At a ceremony held in Boise, Idaho, in November, **Kristin Poole**, AM'90, will receive a 2018 Idaho Governor's Award for Excellence in the Arts. Poole is the artistic director of the Sun Valley Center for the Arts, a multidisciplinary arts organization in Idaho's Wood River Valley. Under her leadership, the center has been accredited by the American Alliance of Museums for exemplifying the highest standards in its operations and programming. Now Poole is officially recognized among the "stewards of Idaho culture and artistic expression."



IN WITH THE ART CROWD

An exhibition of recent gifts to the Minneapolis Institute of Art includes major works by alumni associated with postwar Chicago's leading avant-garde art groups. **New to Mia: Art from Chicago**, which runs until January 6, aims to elevate Chicago artists' place in art historical narratives. On display are works by **Leon Golub**, AB'42, and **Seymour Rosofsky**, EX'50, who were part of the group known as the Monster Roster, as well as work by **Philip Hanson**, AB'65, a Chicago Imagist. A number of the gifts are from the collections of **Richard Born**, AM'75, the Smart Museum of Art's consulting curator for special projects, and the late art critic **Dennis Adrian**, AB'57 (see *Deaths*, page 93).

PRO ECONOMIST'S LITTLE SECRET

In September **John Cawley**, AM'98, PhD'99, professor of policy analysis and management and of economics at Cornell University, released a new edition of his popular handbook *A Guide and Advice for Economists on the U.S. Junior Academic Job Market*. First published in 2002, the handbook is updated and published biennially through the American Economic Association's online network Job Openings for Economists, or JOE. It is read widely by new PhD economists for its practical tips, data, and job-search resources. But its popularity may be even larger: Cawley says he's been told "it's the most read and least-cited paper in economics."

CHANGE AT CITY HALL

This summer **Kathleen "Katie" Hill**, JD'07, was named first assistant corporation counsel at Chicago City Hall, where she now oversees all 15 divisions of the city's law department. Holding the department's number-two job, Hill

will help guide the city through the legal process of reforming its police department, offering counsel on how to implement the Chicago police consent decree pending enactment.

STORYTELLING SOCIOLOGIST

Comic book hero Riri Williams, codename Ironheart, is young, gifted, and black. In 2016 the teenage MIT engineering student debuted as a character in the Marvel Comics series *The Invincible Iron Man*, eventually stepping into the title character's role. Now Ironheart is headlining a series of her own, written by **Eve L. Ewing**, AB'08, assistant professor in the School of Social Service Administration. Ironheart, a Chicago teen who has lost loved ones to street violence, "symbolizes what happens when you combine incredible strength and might with a sense of love, care, and a true desire for justice," says Ewing. The first issue of *Ironheart* hits newsstands in November.

—Andrew Peart, AM'16, PhD'18

Photo courtesy of the Minneapolis Institute of Art; (top center) Seymour Rosofsky, EX'50, *Daley Machine*, 1958; (right) Leon Golub, AB'42, *Head IV*, 1965

RELEASES

ALUMNI BOOKS, FILMS, AND RECORDINGS

THE DESERT MOTHERS

By **Nathaniel Tarn, AM'52, PhD'56;**
Shearsman Books, 2018

The title sequence and three accompanying poems of *The Desert Mothers* were first published as a chapbook in 1984 by a small press in Grenada, Mississippi. This expanded edition combines them with two long poems and another sequence, *Weekends in Mexico*, all of which appeared in the 1980s in the United Kingdom. It's part of a reissue project on that side of the Atlantic for poet, translator, and anthropologist **Nathaniel Tarn**. This edition of *The Desert Mothers* brings together poems concerned with visionary experience, ethnographic discovery, and historical witness.

LITERARY LIBATIONS: WHAT TO DRINK WITH WHAT YOU READ

By **Amira K. Makansi, AB'10;** Skyhorse Publishing, 2018

If drinking a Bloody Mary while reading Bram Stoker's *Dracula* sounds a little rich for your blood, just turn the page. This guide to lush reading from wine industry professional **Amira K. Makansi** includes more than 160 suggested pairings of wine, beer, and cocktails and works of literary fiction. With watercolor illustrations by the author's sister, Elena Makansi, *Literary Libations* builds out its drink pairings with accounts of each beverage and book and an explanation of why the two should be imbibed together.

THINKING THE GREEKS: A VOLUME IN HONOR OF JAMES M. REDFIELD

Edited by **Bruce M. King, AB'85, AM'87, PhD'97,** and **Lillian Doherty, AM'77, PhD'82;** Routledge, 2018

This tribute to **James M. Redfield**, LAB'50, AB'54, PhD'61, the Edward Olson Distinguished Service Professor Emeritus of Classical Languages and Literatures and of Social Thought, includes essays on Homer, Plato, and the transmission and reception of archaic and ancient Greek literature by **Ian Desai**, AB'04, visiting

assistant professor of English and the humanities; **Katherine Kretler**, PhD'11; **Paul Ludwig**, AM'95, PhD'97; **James McGlew**, AB'77, AM'83, PhD'86; **Stephanie Nelson**, AM'90, PhD'92; and **Kendall Sharp**, AB'91, PhD'06; as well as **Wendy Doniger**, the Mircea Eliade Distinguished Service Professor of the History of Religions; **Glenn Most**, visiting professor of social thought and classics; **Sarah Nooter**, associate professor of classics; **Wendy Olmsted**, AM'66, PhD'74, professor emerita in the New Collegiate Division; and **Laura Slatkin**, visiting professor in the John U. Nef Committee on Social Thought.

MAY WE SUGGEST: RESTAURANT MENUS AND THE ART OF PERSUASION

By **Alison Pearlman, AM'91, PhD'97;** Agate Publishing, 2018

Every restaurant menu has its own rhetoric. It draws on a system of verbal and visual signs to influence us, argues **Alison Pearlman**, professor of art at California State Polytechnic University, Pomona. At Los Angeles's Nozawa Bar, where only a single Japanese tasting menu is served, and on Taco Bell's ordering app, where sequential screens encourage customization, the menu's function is the same: to facilitate an experience consistent with the customer's wants and the restaurant's needs.

55 STEPS

Screenplay by **Mark Bruce Rosin, AB'68;** Sony Pictures, 2018

In 1985 Eleanor Riese (Helena Bonham Carter) is a patient in the psychiatric unit of St. Mary's Hospital in San Francisco when she meets Colette Hughes (Hilary Swank), an attorney who joins her in a legal battle to strengthen mental patients' rights in the state of California. Based on the true story of a landmark civil rights case, the film, written by **Mark Bruce Rosin**, is available for cable, satellite, and digital viewing and opens in select theaters November 16. (See "The Steps to 55 Steps," page 72.)



DOUBLE NEGATIVE: THE BLACK IMAGE AND POPULAR CULTURE

By **Racquel J. Gates, AM'03;** Duke University Press, 2018

The so-called minstrelized performances of rap artist and reality-television star Flavor Flav have earned criticisms from black cultural elites for "negative representation." In this study of black popular media, however, **Racquel J. Gates**, assistant professor of media culture at the College of Staten Island, City University of New York, challenges the assumption that images of black figures need to subvert stereotypes, or be "positive," in order to subvert racism. She also takes aim at something larger: the belief that media images in general can do the work of counteracting racist oppression.

SEVERANCE

By **Ling Ma, AB'05;** Farrar, Straus and Giroux, 2018

In **Ling Ma**'s debut novel, an epidemic called Shen Fever has hit New York City, and Candace Chen, a coordinator for a company that produces specialty Bibles, becomes the newest member of a group heading west to survive the apocalyptic event they call the End. But Candace carries with her a secret that makes her vulnerable to the rest of the group when they arrive at their destination, an abandoned shopping mall in the Chicagoland suburbs.

—*Andrew Peart, AM'16, PhD'18*

THE STEPS TO 55 STEPS

BY MARK BRUCE ROSIN, AB'68

Early in my freshman year in 1964, a student in my Soc II class, **Heather Tobis Booth**, AB'67, AM'70, told me about a student organization, VISA, that visited patients at a psychiatric institution. The next Saturday, I joined her and other VISA members on the bus to Chicago State Hospital, where I was assigned to visit patients in the closed women's ward.

I'd never been to a mental hospital before, nor, to the best of my knowledge, had I met anyone who had ever been a patient in one.

I remember stepping off the bus and following other students to the building that contained the closed women's ward. I remember the unpleasant smell of the building and doors being unlocked and relocked by the hospital staff as we proceeded from one corridor to another. I remember walking past a room where, I inferred from the multiple showerheads, several patients showered at the same time. Some of the tiles were cracked, and the room was dingy and decrepit.

We were led to a large high-ceilinged, linoleum-tiled room, where women patients sat in chairs, mostly doing nothing. I don't remember if there was a television, but there might have been.

A few memories are particularly vivid. The most intense are of a woman I used to talk with every Saturday, starting the first day I was there, and of a teenage girl who was admitted to the ward later in the year.

The woman was in her 60s. She had an Eastern European accent. She told me she was from Lithuania and that she had been a meat packer. She also said she had been married. She felt extremely isolated in the hospital, and I had the impression that her husband had divorced her or perhaps was still married to her but had abandoned her to the institution. I never asked her to clarify this because her former life was clearly a painful subject for her, and I didn't want to cause her any more suffering. We student visitors were never told what the patients' lives were like before entering the hospital or what their diagnoses were, so I had no idea why she was there. What I noticed about her was that she was always sad. Perhaps she had been institutionalized for depression.

The teenage girl who came into the closed ward that spring was 16 years old. She was outgoing, impulsive, and very energetic. I believe she might

have had a mild intellectual disability. I gathered from her conversation with me and other VISA members that her parents had institutionalized her because she had allowed boys to become intimate with her, and they were afraid she would get pregnant. On subsequent Saturdays, I watched her deteriorate in hygiene, dress, and spirit. I felt that she did not belong there, that whatever her diagnosis, she should not be in a ward where she was at least 20 years younger than any other patient. I spoke to a nurse about it, but she said there was nothing she could do.

I also vividly remember the hospital staff going around with a tray of medication in tiny pleated paper cups, dispensing one to each patient. We student visitors never knew what kinds of pills were in the cups or how the nurses knew which cup to give to each patient. But many of the residents were so medicated that they seemed to be sleeping while awake.

When I returned to college for sophomore year, I didn't resume my weekly visits to the hospital. I also gave up my former goal of becoming a psychiatrist. I changed my major from biology to that most practical of majors, English. I loved the literature courses I was taking, and reading was far more pleasant to me than inorganic chemistry—a requirement for premed.

It was a time of social activism on campus. I became involved in demonstrations opposing the Vietnam War. Instead of attending the official graduation ceremony in 1968, I participated

I remember the unpleasant smell of the building and doors being unlocked and relocked by the hospital staff as we proceeded from one corridor to another.



Illustration by Brian Stauffer/theispot

in the anti-Vietnam War graduation ceremony in another building on campus, where we students wore black arm bands and Noam Chomsky gave the address. I graduated with the conviction that social activism on behalf of justice and human rights can help improve the world.

Twenty-four years later, in 1992, I was living in Los Angeles and working as a screenwriter. One day, listening to public radio while driving in LA's endless traffic, I heard an interview with Jim Preis, executive director of Mental Health Advocacy Services in Los Angeles. He was telling the in-

terviewer how fulfilling his job was. He'd started doing it while he was in law school, and was still working at the same organization years later because the work meant so much to him.

As I listened, I found myself immersed in memories of the closed women's ward at Chicago State Hospital. I remembered

the elderly woman from Lithuania and the teenage girl. I remembered patients sitting in the visiting room in a medicated stupor. Through the radio station, I got a phone number for Jim and arranged to meet him. When we got together, I asked him if there was a case he'd worked on for people with mental disabilities that might be the basis for an inspiring film.

Jim told me about Eleanor Riese, a woman diagnosed with chronic paranoid schizophrenia, who became the plaintiff in a lawsuit to improve the treatment of patients in psychiatric hospitals. He told me about her lawyers, Colette Hughes and Mort Cohen, who, like Eleanor, lived in the Bay Area. Jim had filed an amicus brief in the case. As he talked about the lawsuit, I knew I had to write a film about Eleanor, the remarkable woman at the center of it.

So began the process that led to my writing *55 Steps*, which stars Hilary Swank as Colette, Helena Bonham Carter as Eleanor, and Jeffrey Tambor as Mort, and is directed by Bille August. My wife, Cynthia Hoppenfeld, has a featured role as Eleanor's best friend, an older nun who shares Eleanor's devout Catholic faith. When Cynthia read my completed screenplay all those years ago, she loved the role

but was too young to play it; when the film was finally made, almost 25 years later, she was just the right age.

Eleanor Riese is a born protagonist, a woman whose life demands to be written about. In 1985, when she initiated her landmark human rights case to give involuntary, competent mental patients in nonemergency situations in California hospitals the right to informed consent to medication, she was 41 and had been on antipsychotic medications for years. Most of the time she lived on her own in an apartment where, following the tenets of her faith, she devoted herself to making rosa-

ries for prisoners of conscience and to caring for homeless people in her neighborhood, providing them with toothbrushes, toothpaste, and the use of a bathroom. At times, she said, she would become overwhelmingly afraid and anxious, and would admit herself to a hospital. The experience that made her file the lawsuit occurred when, after one such occasion, the hospital staff wouldn't listen when she told them that they were overmedicating her. Suffering many severe side effects of these medications, she wanted the hospital to respect her desire not to be given the drugs that she knew would hurt her and didn't always help her. In her statements for the case, her insight into this is impressive; her eloquence is powerful.

Ultimately, what kept me working for so many years to get *55 Steps* made was my respect for Eleanor and for her lawyers, Colette and Mort. I wanted to make the film to honor them and this important civil rights case.

The impetus to work all these years to tell this story began with my visits to Chicago State Hospital with the other students in VISA. It is an experience that never left me. Other experiences in the College, too, were indispensable. The ability to do the necessary research and to write the screenplay owe much to my time writing and editing at the *Maroon* and studying English lit. Four years of Doc Films screenings deepened my engagement with film and my desire to tell stories through film. And directing plays for University Theatre honed my sense of what makes characters come alive on the page and what brings them to life in performance. One of those plays, presciently, was Middleton and Rowley's Jacobean tragedy *The Changeling*, in which aristocrats indulge in the demeaning practice of going to a mental hospital to watch patients as an entertainment.

It was a thrilling day when, a week before starting to film in San Francisco, we had our first table reading of the script.

It was a thrilling day when, a week before starting to film in San Francisco, we had our first table reading of the script for Hilary and Helena. Hilary, Helena, Bille, and I sat at a table in a hotel room in Los Angeles, our scripts in front of us, pencils in hand, a pitcher of water, and four glasses. I'd never heard the lines I'd written for Eleanor and Colette read aloud, although I'd lived with them for so many years. Even in this reading, which was casual and meant to give the actresses an opportunity to discuss any lines they'd like me to polish, it was moving to see and hear them breathing life into their characters, interpreting lines in ways I hadn't imagined, in ways that I loved. It was also moving to see the rapport they already seemed to be developing as collaborators. Everything I felt that day I've continued to feel since.

At the first prerelease screening of the film, the audience of 1,900 gave *55 Steps* a standing ovation. As I rose from my seat to stand with them, I couldn't stop smiling—all these people standing and applauding to pay tribute to Eleanor, Colette, and Mort.

After the screening, one woman thanked me for writing it. Several people told me they were excited about the theme of social activism for human rights, because it is so important in today's world. I was especially moved by audience members who told me that through meeting Eleanor in the film, they realized that their past views of people with mental disabilities were far too limited and that Eleanor had opened their eyes.

Just as Cynthia and I were about to leave the theater, a woman came up to us to say that she had had psychiatric problems over the years and had been in institutions several times. She told us that Eleanor's story was her story, and that she was so glad it had been told. ♦

Mark Bruce Rosin, AB'68, is an author, editor, screenwriter, and producer. He dedicates this essay to the memory of Jim Preis, executive director of Mental Health Advocacy Services in Los Angeles, who died October 12, 2018.

To protect the privacy of our alumni, the Alumni News section has been removed from this PDF.

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DEATHS

FACULTY AND STAFF

Robert B. Uretz, SB'47, PhD'54, Ralph W. Gerard Professor Emeritus of Biochemistry and Molecular Biology, died September 14 in Chicago. He was 94. A World War II US Army Air Force veteran, Uretz joined the UChicago faculty in 1954 and remained there until his retirement four decades later. He worked on the development of microbeams in the Department of Biophysics, which he chaired from 1966 to 1969. After holding deputy and associate administrative positions, he served from 1977 to 1983 as dean of the Biological Sciences Division and the Pritzker School of Medicine and as vice president of the medical center. He is survived by a daughter, three grandchildren, and two great-grandchildren. His wife, Violet Fogel Uretz, SB'39, died in 2007.

Janice B. Spofford, PhB'44, SB'46, PhD'55, associate professor emerita of ecology and evolution, of Chicago, died in late March. She was 92. Spofford was the youngest faculty member at UChicago when she began teaching in the Department of Biology at age 23 in 1949. A geneticist and evolutionary biologist, she focused her research on fruit fly genetics and studied the phenomenon of heterosis, or hybrid vigor, among other topics. She was an associate member of both the Committee on Evolutionary Biology and the Committee on Genetics, Genomics, and Systems Biology. Her husband, Richardson L. Spofford, MBA'50, died in early July (see page 93). She is survived by two sons, **John Spofford**, LAB'78, and **George B. Spofford**, LAB'83, and four grandchildren.

Edward Wasiolek, the Avalon Foundation Distinguished Service Professor Emeritus of Slavic Languages and Literatures, Comparative Literature, and the College, died May 3. He was 92. Wasiolek joined the faculty in 1955 and taught for more than four decades. An expert on Fyodor Dostoevsky, he wrote *Dostoevsky: The Major Fiction* (1964) and edited five volumes of Dostoevsky's notebooks for his novels (1967–71). A decade after publishing *Tolstoy's Major Fiction* (1978), he delivered an address on Tolstoy to the United Nations. Among his many honors were the Quantrell Award for Excellence in Undergraduate Teaching and fellowships from the National Endowment for the Humanities and the Guggenheim Foundation. His wife, Emma J. Wasiolek, AB'57, AM'67, died in January (see page 93). He is survived by a daughter and a son.

Heshmat Moayyad, professor emeritus of Persian, of Chicago, died June 25. He was 90. When he joined the UChicago faculty in 1966, Moayyad established the Persian literature program in the Department of Near Eastern Languages and Civilizations, where he taught until his retirement in 2010. A translator of modern Persian literature into English and German, he edited *Short Stories*

from Iran: A Chicago Anthology, 1921–1991 (1992), featuring translations of Iranian prose fiction by his students and colleagues, and published numerous scholarly works in English, German, and Persian on writers from the 12th to the 20th centuries. He is survived by his wife, Ruth; two daughters, **Leyla M. Dias**, LAB'77, and **Shirin Moayyad**, LAB'80; and a grandson.

June Pachuta Farris, bibliographer for Slavic and East European studies and general linguistics at the Joseph Regenstein Library, of Chicago, died July 27. She was 70. Farris was the Slavic bibliographer and later the Slavic reference librarian at the University of Illinois at Urbana-Champaign before joining the Regenstein Library in 1986, where she built a world-class archive and reference collection that supported UChicago's Center for East European and Russian/Eurasian Studies. She coauthored *Women and Gender in Central and Eastern Europe, Russia, and Eurasia: A Comprehensive Bibliography* (2007) and in 2012 received the Outstanding Achievement Award from the Association for Women in Slavic Studies. She is survived by her husband, David, and a daughter, **Margaret Farris**, LAB'04.

Kirk T. Spencer, MD'89, professor of medicine, of Homewood, IL, died September 4. He was 56. A clinician, researcher, and teacher at UChicago Medicine for more than two decades, Spencer was a cardiologist who specialized in the field of echocardiography. He served as associate director of UChicago Medicine's cardiac imaging laboratories, director of echocardiography laboratories, and physician administrator of the inpatient cardiology service. In addition to mentoring medical fellows in echocardiography, he taught in the residency program and the medical school. He was also involved in mission work with Solutions Church in Matteson, IL. He is survived by his wife, Jacque; two daughters; five sons; and two grandchildren.

1940s

Eunice Killen Lyman, EX'40, died May 4 in Farmington, CT. She was 98. For three decades Lyman was director of budgets and grants for the University of Connecticut Health Center's human genetics laboratory. The longtime assistant treasurer for Grace Episcopal Church in Hartford, CT, she also worked into her 90s as bookkeeper for her daughter's dental practice. She is survived by two daughters; a son; two stepdaughters; and a granddaughter.

Stuart Bernstein, AB'42, JD'47, died July 31 in Chicago. He was 98. A World War II US Army Air Corps veteran, Bernstein spent his legal career with the firm now known as Mayer Brown, where his clients included United Airlines, the Chicago Symphony Orchestra, and Oscar Mayer. He helped found

Congregation Solel in Highland Park, IL, and served on the boards of the Jewish Council on Urban Affairs, the ACLU of Illinois, and WTTW Chicago. He is survived by his wife, **Doris (Golding) Bernstein**, AB'43; a daughter, **Barbara Bernstein**, AB'70; three sons; eight grandchildren; and a great-granddaughter.

Chloe (Roth) Zerwick, LAB'39, AB'43, died June 13 in Hudson, NY. She was 95. A writers bureau staffer for the Democratic Party's 1956 and 1960 presidential nominees and a consulting writer for the Institute for World Order and the Center for the Study of Democratic Institutions, Zerwick coauthored the science fiction novel *The Cassiopeia Affair* (1968) and, while working in publicity for Steuben Glass, wrote *A Short History of Glass* (1980). She retired as Steuben's director of public relations in 1989 and pursued her work as an artist through numerous exhibitions. She is survived by a daughter, **Phoebe Zerwick**, AB'82, and a son.

Betty M. (Bunes) Wolfson, PhB'45, died July 12 in New York City. She was 91. After majoring in anthropology at UChicago, Wolfson studied at the Martha Graham School of Contemporary Dance in the early 1950s, and in 1966 settled with her family in Syracuse, NY. She and her husband, **Robert J. Wolfson**, SB'47, AM'50, PhD'56, moved to New York City in 2002 to enjoy retirement close to family and the arts. She is survived by her husband; two daughters; a son, **Paul J. Wolfson**, AB'78; three grandchildren; and a great-grandson.

Riley Schaeffer, SB'46, PhD'49, of Port Orchard, WA, died April 15. An inorganic chemist who researched boron hydride and carborane compounds, Schaeffer taught chemistry at Iowa State University, Indiana University, the University of Wyoming, and the University of New Mexico. Coauthor of the Harper & Row textbook *Chemistry* (1973) and the recipient of a Guggenheim Fellowship, he was both a fellow of the American Association for the Advancement of Science and an honorary fellow of the Royal Society of Britain. He is survived by a daughter, five grandchildren, and five great-grandchildren.

Beatrice "Buddy" Cummings Mayer, EX'47, died September 15 in Chicago. She was 97. During World War II, Mayer volunteered with the Red Cross in Chicago, where she worked with the families of service members struggling with illness, poverty, and stress, and later trained in psychiatric social work at the School of Social Service Administration. In the mid-1950s she became an original member of the SSA Council, a committee on which she served for more than five decades. She and her husband, Robert B. Mayer, LAB'27, PhB'31, were cofounders of the Museum of Contemporary Art Chicago and helped create its Mayer Education Center. Her husband died in 1974. Her son, Robert N. Mayer, MBA'73, died in 2015. She is survived by a daughter and five grandchildren.

Jane Pugh, AB'47, of Downers Grove, IL, died August 8. She was 90. A retired administrative services officer with the City of Chicago, Pugh was also director emeritus of the Downers Grove Historical Society. She served on the boards of the Hyde Park–Kenwood Community Conference, the Renaissance Society, and Friends Against AIDS, an auxiliary group of UChicago's Comer Children's Hospital. Survivors include extended family and many friends.

Monroe Ackerman, AB'49, JD'52, of Wellington, FL, died August 15, 2017. He was 92. A World War II US Army Air Corps veteran, Ackerman practiced family law in New Jersey until his retirement. He published historical research on the US Civil War, including journal articles on the life and presidency of Abraham Lincoln. He is survived by his daughter, **Allison Ackerman**, AB'80; a brother; and two grandchildren.

Jay C. Chapin, PhB'49, SM'51, of Salem, MA, died May 25. He was 93. A World War II US Navy veteran, Chapin was a laboratory chemist whose patents included a fire retardant for fabrics and a fungicide for fabrics in tropical climates. Working into his late 80s, he received the Distinguished Chemist Award from the New England Institute of Chemists in 2008. He and his former wife, Cynthia S. Hendry-Phillips, LAB'45, PhB'50, met at UChicago and raised their three children in Hyde Park (see below). He is survived by two daughters, a son, six grandchildren, and three great-grandchildren.

1950s

Cynthia S. Hendry-Phillips, LAB'45, PhB'50, of Marblehead, MA, died December 17. She was 88. In addition to stints as a newspaper editor for the *Hyde Park Herald* and the *Marblehead Messenger*, Hendry-Phillips wrote and cowrote children's books in the 1960s and '70s, including *What Will the Weather Be?* (1965), *Squad Car 55* (1966), and *Healthy Is Happy* (1971). She was later a textbook editor at Little, Brown and Company. She and her former husband, Jay C. Chapin, PhB'49, SM'51, met at UChicago and raised their three children in Hyde Park (see above). She is survived by her husband, Charles; two daughters; a son; six grandchildren; and three great-grandchildren.

Richardson L. Spofford, MBA'50, of Chicago, died in early July. He was 98. A World War II US Army veteran, Spofford worked as a tax accountant and was a longtime Hyde Park–Kenwood community member. He collected antiques and rugs, had a passion for historical research and scholarship, and was active in the Chicago Literary Club and the Caxton Club. His wife, Janice B. Spofford, PhB'44, SB'46, PhD'55, associate professor emerita of ecology and evolution, died in late March (see page 92). He is survived by two sons, **John Spofford**, LAB'78, and **George B. Spofford**, LAB'83, and four grandchildren. **Theodore "Ted" A. Snyder Jr.**, AB'52, died June 29 in Walhalla, SC. He was 85. After

serving as a US Army JAG Corps lawyer in Korea, Snyder practiced law in Greenville, SC, with US and South Carolina senator Thomas A. Wofford, later running his own law office in Walhalla until retiring in 1999. A dedicated conservationist, he was the first chair of the Sierra Club's North and South Carolina chapter, served as Sierra Club president for two years in the late 1970s, and received the National Parks Conservation Association's Marjorie Stoneman Douglas Award in 2002 for his work to protect the Great Smoky Mountains. He is survived by a son and two brothers.

Thomas L. Harris, AM'56, died March 26 in Highland Park, IL. He was 86. In the early 1970s Harris founded a public relations division for the Chicago-based advertising agency Foote, Cone & Belding, and later that decade became coexecutive of Golin/Harris Communications, a public relations firm whose clients included McDonald's, Campbell Soup Company, Frito-Lay, and Keebler. Uniting public relations and marketing, he authored such books as *The Marketer's Guide to Public Relations: How Today's Top Companies Are Using the New PR to Gain a Competitive Edge* (1991). He is survived by two sons and two grandchildren.

Robert W. Huff, SM'56, PhD'61, died July 26 in Los Angeles. He was 84. An expert in particle, high-energy, and plasma physics, Huff worked as a research scientist at institutions including Carnegie Mellon University, the International Centre for Theoretical Physics, the RAND Corporation, Nagoya University, and the University of California, Los Angeles, from which he retired in 1992. He is survived by his wife, Kumiko; a daughter; and a brother.

Dennis O. Adrian, AB'57, of Chicago, died in late February. He was 80. The former assistant curator of prints and drawings at the Art Institute of Chicago, he was an authority on the city's contemporary art scene. Through his criticism, collecting, and curatorial projects, Adrian helped establish an international reputation for Chicago, and for the artists known as the Chicago Imagists in particular, in the post-World War II art world. Selections from his art criticism were published in *Sight Out of Mind: Essays and Criticism on Art* (1985). He is survived by his partner, **Richard A. Born**, AM'75, consulting curator for special projects at the Smart Museum of Art.

Emma J. Wasiolek, AB'57, AM'67, died January 25 in Naples, FL. She was 88. Wasiolek taught English at Prairie State College for two decades beginning in the early 1970s. Her husband, Edward Wasiolek, died May 3 (see page 92). She is survived by a daughter and a son.

Richard F. Muth, PhD'58, of Atlanta, died April 10. He was 90. Muth taught economics at UChicago; Vanderbilt University; the University of California, Berkeley; and Stanford University before moving to Emory University in 1983, where he chaired the economics department, helped launch its doctoral program, and after more than a quarter century retired as Fuller E. Calla-

way Professor Emeritus of Economics. His book *Cities and Housing: The Spatial Pattern of Urban Residential Land Use* (1969) is a foundational text in urban economics. He is survived by his wife, Helene; two daughters; and a granddaughter.

1960s

David Handel, SM'60, PhD'65, of Farmington Hills, MI, died March 14. He was 79. Handel was professor emeritus of mathematics at Wayne State University, where he taught since 1972. He previously taught at the University of California, Berkeley, and at the University of Washington. An expert in algebraic topology, he was a member of the American Mathematical Society and the Mathematical Association of America. He is survived by his wife, Julie; two sons; a sibling; and two grandchildren.

James L. Klemm, SB'61, of Frankfort, IN, died January 29. He was 78. Klemm taught mathematics and engineering at Indiana University of Pennsylvania and the University of Cincinnati before joining the information technology company NCR Corporation, where he worked until 1993. He was later a systems analyst and programmer for a small consulting firm. He is survived by his wife, Martha; a daughter; a son; two grandchildren; and two great-grandchildren.

Eric P. Unander, SB'63, of Houston, died October 17, 2017. He was 79. Unander worked as a systems analyst for the steel manufacturer Armco, now AK Steel, for more than two decades before joining the natural gas and electric utility company CenterPoint Energy, formerly Houston Lighting & Power. He is survived by his wife, Katherine; a sister; two brothers; and a grandchild.

Rachel Cowan, AM'65, died August 31 in New York City. She was 77. A convert to Judaism and a prominent rabbi in the Reform tradition, Cowan served as program director of Jewish life at the Nathan Cummings Foundation and later as executive director of the Institute for Jewish Spirituality. She helped found and lead the contemporary Jewish healing movement, promoted a revival of contemplative practice in Jewish religious life, and raised awareness about the needs and challenges of interfaith families. In addition to the memoir *Growing Up Yanqui* (1975), her books included *Mixed Blessings: Overcoming the Stumbling Blocks in an Interfaith Marriage* (1988), coauthored with her late husband, Paul. She is survived by a daughter; a son; two sisters; a brother; and four grandchildren.

Raymond W. Nackoney, SM'65, PhD'72, of Lake Villa, IL, died April 19. He was 74. Nackoney earned his doctorate in astrophysics at UChicago and taught for more than three decades at Loyola University, retiring as associate professor of environmental science in 2011. He is survived by his wife, Patricia; two daughters; two sons; a sister; and a brother.

Joseph "Jay" A. Nigro, AB'65, of Libertyville, IL, died May 19. He was 75. A business lawyer, Nigro practiced with the Kansas City–based firm Popham, Thompson, Popham, Trustey

& Conway before joining American Hospital Supply Corporation, later Baxter International; Voluntary Hospitals of America, later VHA; and Dade Behring, later Siemens Healthcare Diagnostics. He cofounded the Evanston Bar Association and served as commissioner of the Evanston Human Relations Commission. He is survived by his wife, Linda; six children; a sister; two brothers; and seven grandchildren.

Dean E. Grant, MBA'67, died May 10 in McHenry, IL. He was 74. Grant served as a hospital administrator at Alexian Brothers Medical Center in Elk Grove Village, IL, before becoming president and CEO of Alexian Brothers Health System, now AMITA Health. During more than three decades with Alexian Brothers, he oversaw its growth as a hospital network in Chicago's northwest suburbs. In 1979 he published the book *How to Negotiate Physicians' Contracts*. He is survived by his wife, Jeanne; a daughter; a son; and five grandchildren.

Robert D. Rugg, AM'67, of Richmond, VA, died June 25. He was 75. After a stint teaching at Chicago State University, Rugg joined the faculty of Virginia Commonwealth University, where he taught in the Department of Urban Studies and Planning for nearly three decades. A geographer who combined mapping and computer science, he advised the US Geological Survey on the development of the Spatial Data Transfer Standard and served as a US delegate to the International Organization for Standardization Technical Committee on Geographic Information/Geomatics. He is survived by his wife, Sallie; a daughter; three sons; a sister; and six grandchildren.

Lynn Urwitz Drew, AM'68, died November 21, 2017, in Chicago. She was 76. A clinical social worker, Drew worked for more than three decades in child and adolescent psychiatry at UChicago, in addition to teaching and supervising students in their fieldwork at the School of Social Service Administration. An advocate for family-building issues, she founded a local chapter of RESOLVE: The National Infertility Association. She is survived by her husband, **James B. Drew**, AM'64, and two daughters, **Leah Tova Drew**, LAB'99, and **Anya Drew**, LAB'05.

Evan P. Galen, BFA'68, died of cancer May 6, 2017, in New York City. He was 69. For four decades Galen practiced architecture and interior design in New York City; Beverly Hills, CA; and Maine. He was president of his own firm, Evan Galen Architecture/Design. Survivors include his husband, Stephen Novick.

Robert B. McOsker, AM'68, died June 17 in Vienna, VA. He was 73. A decorated Vietnam War US Army veteran, McOsker worked for more than four decades in the federal government, primarily with the Nuclear Regulatory Commission, where he became the Office of the Chairman's special assistant for administration and communications and received Special Act Awards recognizing his service. He is survived by his wife, Hue Thi; a daughter; a sister; and a grandchild.

Alan R. McNeil, LAB'69, of Kalispell, MT, died of a heart attack December 29, 2017.

He was 66. After working at a Chicago trading firm, McNeil joined a subsidiary of the game manufacturing company Stern Electronics, where he designed the 1980 arcade and home video game *Berzerk*. A longtime resident of Flathead County, MT, he served on the board of the North Fork Preservation Association and was a member of other area organizations. He is survived by a daughter; a son; his mother, **Cecily R. McNeil**, AM'77; and a brother, **Bruce B. McNeil**, LAB'71.

1970s

Thomas W. Graber, AB'70, died February 28 in Chicago. He was 69. An emergency medicine physician who practiced, directed programs, and taught at hospitals in northeast Ohio, Graber served as clinical assistant professor of emergency medicine at Case Western Reserve University, where he founded the Center for Advanced Medical Learning. He also cofounded the Northeast Ohio Society of Emergency Medicine and directed the TeamHealth Institute for Education and Patient Safety. He is survived by his wife, Ellen; three daughters, including **Emily E. Graber**, AB'11; a sister; three brothers; and three grandchildren.

Joshua M. Wiener, AB'71, of Washington, DC, died January 9. He was 68. After working as a policy analyst and researcher at the Urban Institute, the Brookings Institution, the Congressional Budget Office, and other organizations and agencies, Wiener became a fellow in RTI International's Social, Scientific, and Environmental Sciences group, serving as director of the Aging, Disability, and Long-Term Care Program. Survivors include his wife, Susan F. Klinger; three sons; and a sister (see *Alumni News*, Summer/18, pages 64–65).

Barry N. Eigen, MBA'73, of Cedar Park, TX, died May 16. He was 77. For nearly 25 years, Eigen was president and CEO of the Milwaukee-based home health care company Sickroom Services, later HealthCall Corporation. In 1990 he published *How to Think Like a Boss and Get Ahead at Work*, launching a career as a keynote and motivational speaker and in business consulting. In retirement he was an artist based in the Austin, TX, area. He is survived by his wife, Chris; three daughters; a son; a stepdaughter; a stepson; two sisters; two brothers; and three grandchildren.

Michelle R. Howard-Vital, AB'74, MAT'75, of Durham, NC, died of cancer August 21. She was 65. Howard-Vital worked in higher education as a teacher and administrator for more than three decades. After holding academic leadership positions at institutions including Chicago State University, Edinboro University, and the University of North Carolina at Wilmington, she served as president of Cheyney University of Pennsylvania (2007–14) and later became provost of Florida Memorial University. She is survived by her husband, Geri Vital; a daughter; a stepson; a sister; and a brother.

Gary D. Cady, EX'75, of Sioux Falls, SD, died July 23, 2017. He was 64. Cady was the founder and co-owner, with his wife, Kevin,

of the Sioux Falls bicycle shop Bike Masters until 2007, when they sold the business and retired. In retirement, they devoted time to road trips and other travels. Survivors include two daughters; a sister; a brother; and a granddaughter.

James W. Yood, AM'76, died of a heart attack April 20 in Chicago. He was 65. After teaching at several Chicago-area universities, Yood joined the School of the Art Institute of Chicago, where he was associate professor of art history, theory, and criticism and director of the New Arts Journalism Program. He served for a time as managing editor of *New Art Examiner* and contributed to *Spirited Visions: Portraits of Chicago Artists* (1991) and *Second Sight: Printmaking in Chicago, 1935–1995* (1996), among other books. He is survived by his wife, Lorraine Peltz; a daughter; a sister; and a brother.

1980s

Fidel L. Lopez, MBA'85, of Venice, FL, died January 17. He was 80. After working for Skidmore, Owings, and Merrill, Lopez joined architectural firm Bornebusch, Bruel, and Selchau in Copenhagen, where he studied town planning. Returning to the states, he founded Dearborn Associates of Chicago, an architectural and planning firm, and the Chicago Rehab Network, a free consultancy for housing and community development organizations. He later became vice president of Broadacre Consulting Company, and from 2009 until his retirement in 2013 he was project director for the Dobbins Group. He is survived by his wife, Joyce; three daughters; a sister; a brother; and four grandchildren.

1990s

Ramón Santiago Arcena, AM'92, of Arlington, VA, died December 8, 2017. He was 59. Arcena was chief economist for Latin America at the Institute of International Finance in Washington, DC. A native of Chile, he led studies on policy outlook and country risk for investments in Latin America. He is survived by his daughter, **Katherine A. Arcena**, a graduate student in the Biological Sciences Division; a sister; and two brothers.

2000s

Brett E. Norman, AB'06, of Washington, DC, died of pancreatic cancer April 21. He was 43. A journalist who wrote about health care, policy, and politics, Norman started his career at Florida's *Pensacola News Journal*, where he reported on crime, court proceedings, and local government. After working as a science writer at Rockefeller University, he joined *Político* as a health care reporter in 2011, covering the Affordable Care Act, bioethical issues, and policy surrounding the pharmaceutical industry. He is survived by his wife, Kate Dailey; two sons; his mother; and a brother.

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A stylized, painterly illustration of Bonnie Jo Campbell. She has long, wavy, light brown hair and is smiling warmly. She is wearing a light-colored, possibly yellow or orange, top. The background is a soft, warm yellow-orange gradient.

THE UCHICAGOAN

Bonnie Jo Campbell

AB'84

Questions for the award-winning novelist and short story writer.

What surprising job have you had in the past?

One summer I traveled with the circus. I sold snow cones and lived on the Ringling Bros. and Barnum & Bailey Circus train. If I recall correctly, work was profitable through September, so I was late getting to my fall classes in my junior year. The job involved running up and down stadium stairs for six hours a day with a heavy tray over my head, so I was in great shape, and I made quite a bit of money. My voice has never quite recovered in these 36 years from yelling above the noise of the crowd and the show music, “Get your snow cones, red hot snow cones,” and “There’s no balls like snowballs.”

What was the last book you finished?

Jeanette Winterson’s memoir *Why Be Happy When You Could Be Normal?* Before that it was *The Underground Rail-*

road by Colson Whitehead. Loved both. Since I started this questionnaire, I just finished *Train Dreams* by Denis Johnson. Picking up three brilliant books in a row thrills me!

What book changed your life?

I took a class that I believe we called “Trashy Fiction of the ’30s,” in which we read Faulkner, Fitzgerald, Steinbeck, Caldwell, etc. When we read *The Grapes of Wrath*, I was blown away by how compassionately an author, Steinbeck, could treat poor, struggling people. This gave me an idea that I might have something to write about.

Tell us the best piece of advice you’ve received—or the worst.

When I was a kid, my mom told me to take every opportunity. For a while that was great advice. I grew up poor but traveled the country by hitchhiking. I led bicycle tours in Eastern Europe

when I was 17—seems unreal, now that I think about it. Turns out that if you’re not trying to play it safe lots of opportunities arise. Now I have so many opportunities I have to turn them down all the time, and it makes me a little melancholy, thinking about what I might have passed up, what my world might have been like if I’d said yes.

What’s your most vivid UChicago memory in two sentences or less?

My first fiction-writing class ever was with Richard Stern, and it was a workshop situation, providing very little instruction but just reading one another’s work. When it was my turn, Stern said, authoritatively, “This work epitomizes all that is wrong with fiction-writing today.”



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Illustration by Nigel Buchanan



CONGRATULATIONS TO THE 2018 ALUMNI AWARD RECIPIENTS



ALUMNI MEDAL RECIPIENT

The Alumni Medal recognizes achievement of an exceptional nature in any field, vocational or voluntary, covering an entire career.

William A. Douglass, AM'66, PhD'67

Professor Emeritus of Basque Studies, University of Nevada, Reno

ALUMNI SERVICE MEDAL

John McGinn, AB'90, MBA'93

ALUMNI SERVICE AWARD

Martina Keller, AB'87

Carol Trautschold, AB'61, AND Jerry Trautschold, MBA'61

Weidong "Paul" Wang, LLM'94, JSD'99

YOUNG ALUMNI SERVICE AWARD

Daniel Arking, AB'05

Candace Wang, AB'07

PROFESSIONAL ACHIEVEMENT AWARD

Samer Attar, SB'98, MD'02

Sarah Koenig, AB'90

Mady Wechsler Segal, AM'67, PhD'73, AND David R. Segal, AM'63, PhD'67

EARLY CAREER ACHIEVEMENT AWARD

Sarah Fornace, AB'07, AND Drew Dir, AB'07

Yuval Levin, AM'02, PhD'10

NORMAN MACLEAN FACULTY AWARD

Doyal "Al" Harper, *Professor of Astronomy and Astrophysics*

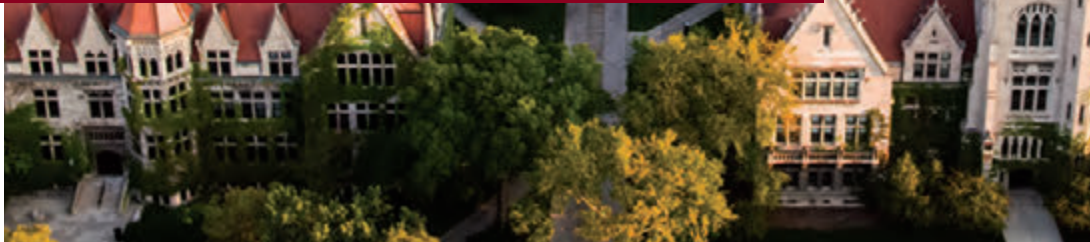
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