

A photograph of a person in a graduation cap and gown, seen from the side, against a teal wall. A shadow of the person is cast onto the wall to the right. The text 'THE UNIVERSITY OF CHICAGO MAGAZINE' is overlaid in the top left corner.

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JULY-AUG 2015, VOLUME 107, NUMBER 6

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THE UNIVERSITY OF CHICAGO MAGAZINE

JULY–AUG 2015
VOLUME 107, NUMBER 6



For more than 3,000 graduates, the University's 523rd Convocation was the end of one adventure and the beginning of another. See "Of Joy in the Making," page 36. Photography by Jason Smith.

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As free expression comes under challenge on some campuses, the University's affirmation of a long-standing value may become a model for higher education. *By Laura Demanski, AM'94*

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Scientists are discovering how microbes not only make us sick but also keep our bodies working. *By Lydialyle Gibson*

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At convocation, one journey ended and another began for some 3,300 graduates. How did it feel? Their faces told the story. *By Lydialyle Gibson*

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80 LITE OF THE MIND

Famous first words: Match well-known books by UChicago alumni with their opening lines. *By Laura Adamczyk*



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Every year the Study Abroad Office invites College students who participated in any international work or study program to submit their best photographs to the Study Abroad Photo Contest. More than 350 photos were submitted to this year's contest. Among the recognized entries were "Amsterdam by Night" by Jeremy Pushkin, '16 (above), the first-place winner, and "A Reflection of Times Gone By" (below), taken in Bolivia by Enkhmend Gereltogtokh, '16, which received an honorable mention.





The quarter system

BY LAURA DEMANSKI, AM'94

Volume 107, Number 6, July–Aug 2015

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Ten weeks. Twelve books to read, three papers to write, and a class presentation. Is your heart beating a little faster yet?

Once you've attended the University of Chicago, you never quite get the quarter system out of your—well, your system. Following this issue, the print edition of the

University of Chicago Magazine will itself return to a quarterly publication schedule, arriving in your mailbox four times a year instead of six. The sentimental value of this change is to put all of us, readers and editors alike, back on the only academic calendar worth its salt, echoing the rhythm of life on the quads with an issue to read each fall, winter, spring, and summer, beginning this November.

In practical terms, the change will make us more responsive to the ways we increasingly see alumni keep in touch with the *Magazine* and each other, and it will make us better stewards of the University's resources. Though we will forgo a fraction of our print pages, we'll continue to offer you the same rich lineup of stories about alumni, faculty, and students as before. In features, alumni essays, *UChicago Journal*, *Course Work*, other occasional departments, and of course *Alumni News*, you can count on a plentiful reading list each quarter.

And not only then: some stories will now be published first online, and we'll be brainstorming even more ways of delivering the sounds, sights, and stories of Hyde Park and the worldwide University community to you. Please visit us at mag.uchicago.edu—and on Twitter, Facebook, Tumblr, Instagram, YouTube, and Goodreads.



More imminently, we are making changes to the *UChicago News for Alumni & Friends* e-newsletter that some of you receive every other week. Beginning July 28, those of you in that category will find a new e-newsletter in your in-box: *UChicago Short List*. If you haven't been receiving *UChicago News* but wish to get *UChicago Short List*, email us at uchicago-magazine@uchicago.edu and we'll add you to the mailing list. Along with news about the University and its alumni, selected by the *Magazine's* editors, you'll also hear about opportunities to engage with the University and other alumni: ways to volunteer, to network, and to extend your *UChicago* education at Harper lectures and other events.

Any of those activities count toward the 125,000 alumni that the University hopes to get involved to meet the engagement goal of the University of Chicago Campaign: Inquiry and Impact. Making a gift also counts, and so does writing a letter to the *Magazine* or sending alumni news (to your class correspondent if you're a College graduate, or to us at uchicago-magazine@uchicago.edu if you have a graduate or professional degree). There are many ways to engage—we hope you'll choose all of the above. ♦

LETTERS

Water matters

I not only enjoyed the cover story “Thirsty Planet” in the May–June/15 issue but found it very timely, especially as I live in one of the areas of California where the governor has mandated a 36 percent reduction in water use as part of a program to deal with the state’s drought.

Near the end of the article, there is mention of broadening the Water Research Initiative to include questions of law, economics, and public policy. They may want to include economists sooner rather than later. Pricing water correctly is a key component, perhaps the key component, of any effort to deal with water shortages. If water is too cheap because of government

subsidies, traditional property rights granted a very long time ago under very different conditions, and similar policies, it’s certain to be used inefficiently. California agriculture illustrates this in spades. Interesting research question: which would do more to enhance the availability of fresh water—1,000 new desalination plants or getting water correctly priced in every country?

Richard Blackhurst, PhD’68
PALM SPRINGS, CALIFORNIA

Populous planet

The money being spent on tracking and developing underground water resources would be much better spent on addressing overpopulation to reduce the demand for fresh water. By many ecologists’ estimates (e.g., David Pimentel at Cornell University), there are five billion too many people on this

planet. The current human enterprise is far too great to be sustainable and water shortages are just one of the many inconvenient truths that threaten a meaningful future for our children.

The late Garrett Hardin, SB’36, author of “The Tragedy of the Commons” (*Science*, 1968), “An Ecolate View of the Human Predicament”

(*Alternatives: Global, Local, Political*, 1981), and many other important books, articles, and ecological concepts, warned us decades ago about confusing shortages of resources with “longages” of population.

The University of Chicago should be part of the solutions and not waste money on efforts that in the last analysis may only end up aggravating our problems by furthering future growth.

Jane R., PhD’65, and Stefan P., AM’64, Shoup

MARION, WISCONSIN

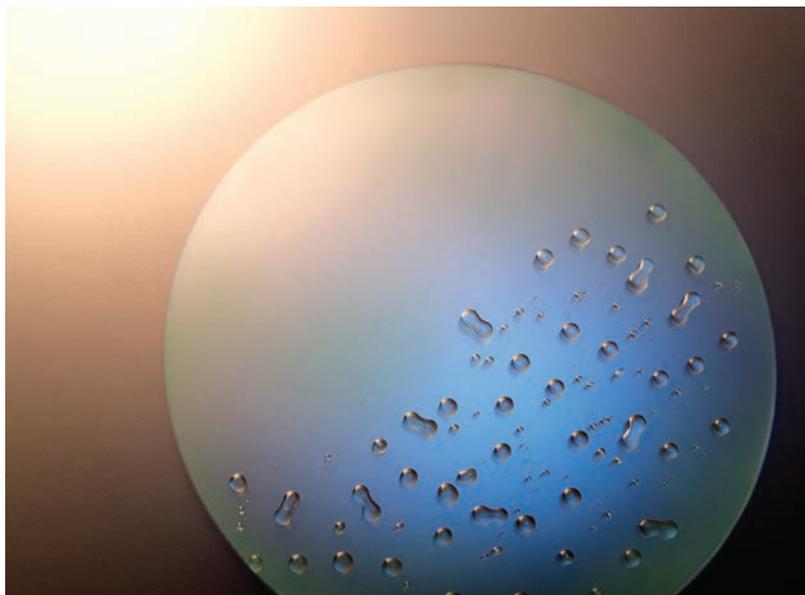
Patterson remembered

Thanks for the article on Clair C. Patterson, PhD’51 (Legacy, May–June/15). When I started my research, mentored by Professor Nathan Sugarman, SB’37, PhD’41, my lab was next to Clair and George Tilton’s (SM’49, PhD’51) lab in Kent Chemical Laboratory. I remember stopping early in the morning to ask what Clair was doing with the potassium permanganate solution in a large flask. “I must obtain very pure water by distillation of Chicago water,” he responded.

Later, after he moved to Caltech, he called one day and asked about clean room hoods to keep the lead-polluted Pasadena atmosphere from contaminating his experimental procedures. I am sure that the leaded environment in his smoggy city far surpassed that of Corvallis, Oregon, where I was at Oregon State University.

Someday someone should write a short book, “Meteorites to Unleaded Gasoline, a Worldwide Achievement by Clair C. Patterson.”

I also enjoyed the comments of Philip Glass, AB’56, in the previous issue (“The Great Escape,” Mar–Apr/15) and appreciated the enthusiasm that Harold C. Urey exuded to his undergraduate classes and to graduate students, faculty, and other persons in general. In 1952 Urey published his book *The Planets: Their Origin and Development* (Yale University Press), which influenced many UChicago graduate and postdoctoral students to enter the scientific fields of geochemistry, geophysics, mineralogy, etc., and, in their later careers, the study of meteorites, Earth, and lunar samples. These included scientists such as James Arnold; Samuel Epstein; Gordon Goles, PhD’61; George Reed



PHOTOGRAPH BY ANTHONY ARCIERO

Jr., PhD'52; John Reynolds, SM'48, PhD'50; myself; Gerald Wasserburg, SB'51, SM'52, PhD'54; George Wetherill, PhB'48, SB'49, SM'51, PhD'53; and many other faculty and scientists worldwide.

In my biased view, Urey was the foremost scientist who testified before the US Congress and convinced them and NASA to study lunar samples with all available techniques. His view complemented the political urgency proclaimed by President John F. Kennedy to land a man on the moon, which NASA accomplished with the Apollo 11 mission by Neil Armstrong, Edwin Aldrin Jr., and Michael Collins in 1969.

Roman A. Schmitt, SM'50, PhD'53
CORVALLIS, OREGON

Passing thoughts

The article about “passing,” describing the work of Allyson Hobbs, AM'02, PhD'09 (“Crossed Lines,” May–June/15), brought to mind experiences related to me when I was a graduate student in 1947–49 and living in Woodlawn. A number of blacks living on the South Side were able to pass and thus were able to hold down “white” jobs in the Loop and elsewhere. Since their actual address would be a dead giveaway to their employer, they would list the address and phone number of a white friend; should the boss call, the friend would use the “not at home, but I’ll give him/her the message” strategy.

Many years later, in teaching courses on “race relations” (the titles morphed over the years), I would tell my students about the Great Chicago Racial Transformation Machine: the Cottage Grove streetcar line! In the morning, on as black, off as white; after work, the process reversed.

Harold Lieberman, AM'49
ST. CLOUD, MINNESOTA

Your article on Allyson Hobbs and the excerpt from her recent book, *A Chosen Exile: A History of Racial Passing in American Life* (Harvard University Press, 2014), made me look forward to reading the entire book.

Given its theme of identities, I was struck by a passage in the excerpt describing “the German philanthropist Otto Kahn” who suggested to Fredi Washington that she change her name and pass as French. Ironic identity

abounds in Kahn, and there is no better way to unpack it than with a story that alumnus (and assistant to Robert Maynard Hutchins) Milton Mayer, EX'32, included in an article critiquing Jewish assimilation in the March 28, 1942, edition of the *Saturday Evening Post* titled “The Case against the Jew” (the title was not Mayer’s; the article is reprinted in Mayer’s book *What Can a Man Do* [University of Chicago Press, 1964]): Otto Kahn met a hunchback in front of an Episcopal church in Manhattan and said to the hunchback, “I belong to that church.”

“I know,” said the hunchback.

And Otto Kahn said, “I’m very active in the church; I’m one of the vestrymen,” and the hunchback said, “I know.”

And Otto Kahn said, “I used to be a Jew.” “I know,” said the hunchback. “I used to be a hunchback.”

Ironies multiply, in that prominent—and, highly unusually in those days, Jewish—advertising executive Albert Lasker took great exception to Mayer’s article, without actually having read it. Lasker demanded that Hutchins fire Mayer, which he declined to do since the article was written on Mayer’s own time. Lasker resigned from the University’s Board of Trustees.

Mayer adds a final part to the story in *Robert Maynard Hutchins: A Memoir* (University of California Press, 1993): “Some years after the war, the two old friends found themselves seated next to one another at a dinner party. The now elderly Lasker turned to Hutchins and said, ‘Do you remember an article about Jews in the *Saturday Evening Post* during the war?’ ‘Vaguely,’ said Hutchins. ‘You know,’ said Lasker, ‘my son-in-law gave it to me to read the other day. It wasn’t a bad article. But the title was unfortunate.’ ‘Wasn’t it,’ said Hutchins.”

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

Mayer had originally titled his article “The Wondering Jew,” according to Lasker’s biographer John Gunther, PhB'22, who also wrote that the *Post* changed the title “without his knowledge or consent.” In a footnote in Mayer’s memoir of Hutchins, editor John H. Hicks says he could find no evidence in Mayer’s papers confirming or denying this account,

but that Mayer “apparently refrained from public comment or disclaimer, and stoically assumed ... the consequences of the printed (and eventually reprinted) title appearing over his name.”—Ed.

I read with interest the article on “racial passing,” and it stimulated my thoughts along those same lines with regard to “religious passing.” I am observantly Jewish and it is common knowledge that many Jews passed out of their “inherited” religion, whether with a formal conversion or after physical movement from one geographical area to another. This happened especially in Europe under pressure from the church and often from civilian authorities, although it was not unknown in the United States.

Many of the problems described in the article applied in this case too: often those who left had to cut all ties to their families and communities and “disappeared” from the memories of their descendants. Hobbs’s observation that “once family members crossed over they were usually lost, essentially dead to their families” (page

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40) was acted out literally in Jewish families, where family members who remained Jews sat *shivah* (a ceremony to mourn the dead) for those who converted, as they would have for those relatives' physical deaths.

Similarly, the anecdote about Langston Hughes is reminiscent of experiences I've had while wearing my *kipah* (skullcap); I will pass someone in the street and they will say "Shalom" (a Hebrew greeting), clearly to identify themselves as Jewish and therefore sharing a commonality of identity with me although they are not wearing a *kipah* themselves. Some enterprising scholar in the Divinity School might follow up on this idea.

Morton Isaacs, AB'52
ROCHESTER, NEW YORK

What propitious timing for the two articles on the commonly understood meaning of "passing." I usually read the *Magazine* cover to cover even though I am challenged by anything scientific. Rachel Dolezal makes a mockery of "racial identity" by stating expressly that she can choose to identify with whichever race she prefers on a particular day. Reminds me of Senator Elizabeth Warren claiming to be Native American because she might be 1/64 Cherokee.

Although I was born in New York City in 1943, I spent my summers at the White Oak Campground outside of Thomson, Georgia, near Augusta, with my mother and most of her four sisters. Very boring place—Methodist revivalism, elderly women, and chain

gangs working on the surrounding red clay roads. One of the shotgun-toting guards showed me the buckshot holes in some of our unpainted wooden "tents" (cabins replaced tents around 1900). It was not uncommon for blacks on the chain gang to be shot for little or no reason. To blacks in Georgia back then, LSMFT was not a slogan for Lucky Strikes; it meant "Lord Save Me From Talmadge," meaning Herman Talmadge, a racist governor in the 1940s who later served in the US Senate.

Before the Civil War it was common knowledge throughout the South that masters and their male relatives could rape slaves with impunity. As "white blood" was added to African genes, the lighter-skinned slaves received increasingly less onerous tasks. After Reconstruction, there was less racial mixing in the South due to the abolition of slavery and the rise of the Ku Klux Klan.

My family moved from upstate New York to Tallahassee, Florida, in 1954 when I was 11. Even though I had spent multiple summers in Thomson, I was shocked by the official segregation of that time and place. I saw very few light-skinned Negroes, the word *du jour* then. As the miscegenation laws were done away with by federal court rulings, mixed marriages have been almost commonplace. Outside of the worst hellholes in the New South, I doubt that there is much incentive for African Americans to attempt to pass these days.

But, as the stories pointed out, it was seen as a necessity up North through the 1970s. Jews, Italians, and many other non-WASPs routinely anglicized their names in order to succeed in the professions as well as

Even though I had spent multiple summers in Thomson, Georgia, I was shocked by the official segregation of that time and place.

in the entertainment fields. What has been so radically different for African Americans is that their skin color—unless they have huge amounts of "white blood"—will always arouse bigotry in racists. It will take more centuries of mixed marriages to finally make most of us look like *café au lait*, as the late Mississippi senator John C. Stennis predicted.

W. Walton Jay, JD'68
THE VILLAGES, FLORIDA

Repeating history

I was amused to see the photo of the Students for Bush gathering in 1980 (*Alumni News*, May–June/15). I was the leader of that group, and I believe that was the day Barbara Bush came and spoke to us at a breakfast gathering. I am in the plaid shirt scribbling contact information from another student.

I am still active in the GOP, as an elected precinct chair, and might be supporting another Bush for president next year. We'll see.

Douglas Markham, JD'81
HOUSTON

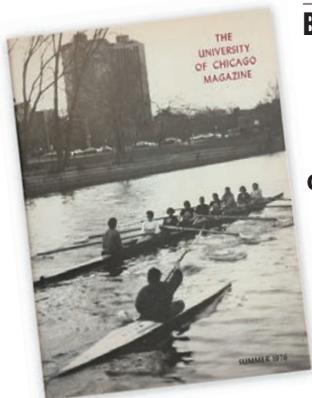
Great escapes

I enjoyed reading the excerpt of Philip Glass's memoirs ("The Great Escape," Mar–Apr/15) about his years as a student in the College under the old Hutchins program of comprehensive exams. I was a student there at the same time, but my experience was different. I was in my early 20s and was a reluctant student. I did not want to be in Chicago, and I did not want to attend classes. I took advantage of the Hutchins program that only required passing the 14 comprehensive exams and being on campus for nine months. I stayed on campus for those nine months but never went to any class or other U of C offering. At the end of the nine months I took off for Cuba to go snorkeling; the University sent

BLAST FROM THE PAST

A theme of your summer issue should not go without comment. It is true that Chicago is the freest, most creatively open intellectual climate that I have ever experienced. It is not true that Chicago is completely open, without an unexamined dogma. ... It is permissible, in the Chicago climate, to hold any position on condition that it be defended in debate. It is not permissible not to debate it. Is it permissible not to question whether debate, dialectic, is the authoritative mode of truth? What if Socrates was wrong?

—John W. Dixon Jr, PhD'53, Winter 1976



A woman in a white shirt and brown apron is looking at a tablet in a workshop setting. In the foreground, there is a white teapot with a wooden handle, a roll of paper, and a spool of thread.

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LETTERS

my comps to a University of Havana professor, who administered them on the same days that my fellow students took them in Chicago. Subsequently I took comps similarly in New York City at the NYU testing center, in the south of France in a professor's beautiful villa, and finally in Paris at the Sorbonne.

Although I did not have the on-campus experiences described by others, I did complete all the required reading and gained a comprehensive education for which I am eternally grateful. The Hutchins program gave me a broad base of knowledge and a way of seeing the world that has been with me ever since.

Postscript: After I graduated in 1956, I found out that women college graduates needed to learn typing and shorthand to get a job. I did, and worked as a secretary for a few years. Then I got a master's degree in city and regional planning from Illinois

Institute of Technology and worked as a planner in Algeria, New York City, and San Diego (20 years). Before retiring from San Diego County, I went to the University of San Diego School of Law and then enjoyed a retirement career as a California attorney. Now in my 80s I continue the learning that started with my U of C College experience.

Ann Tyler Fathy, AB'56
SAN DIEGO

Fan mail

I must congratulate you on once again producing a superior product. I graduated from the University of Chicago with a bachelor's degree in politics, economics, rhetoric, and law and went on to law school at Northwestern University. My wife graduated from the University of Washington. My sons attended Beloit College and Grinnell College. I read the magazines produced by all five schools, and the *University of Chicago Magazine* is always the best by a wide margin.

I routinely learn a great deal from the well-researched and well-written articles. The article by Philip Glass

At the end of the nine months I took off for Cuba to go snorkeling; the University sent my comps to a University of Havana professor.

provided wonderful insight into how such an unusual intellect related to the University of Chicago and the various disciplines learned there at a time of great academic freedom. He even attributes the inspiration for some of his pieces to science, literature, and sociology, all subjects he studied at the University.

The piece on Wendy Freedman (Glimpses, Mar-Apr/15) managed to explain Cepheid variable stars and parallax techniques for measuring the distance to stars, give credit to Henrietta Leavitt at Harvard for discovering the periodic cycles of Cepheid stars, and encourage young women to pursue the physical sciences.

I want to thank you for actually making me eager to receive my copy of the magazine each issue.

Martin L. Zientz, AB'76
SEATTLE

A fine 50th

I was at the reunion, where we celebrated 50 years of graduation from medical school. It was just a wonderful experience and I know that the University went overboard making this moment memorable. I had a great thrill seeing my roommates, some of whom I had not seen for 50 years. It was "just like riding a bike." Once I started talking to them I felt that I had seen them the day before. I am happy to realize that many of us are still active in the practice of medicine but sad to hear that 11 of us are no longer alive.

I realize at this point in my life how the training that I received at UChicago shaped my entire professional life and also my personal life, both of which run together. It has been a wonderful trip. I am still not done. I am in the private practice of general surgery and I love every moment that I am able to contribute to the surgical care of our patients. I still use the teachings that I received from my teachers, par-

In Memoriam



Donald Levine

1931–2015



The University of Chicago Press

ticularly Dr. George E. Block, who shaped my surgical training.

Fernando Ugarte, MD'65
MARYSVILLE, KANSAS

Research request

I am going to be cocurator of an exhibit on Cyrus Leroy Baldridge, PhD 1911, at the University's Special Collections Research Center in June 2016. Baldridge was a noted artist, illustrator, and traveler. He took part in World War I as an illustrator for the *Stars and Stripes* and, while living with his wife, writer Caroline Singer, in New York, he was prominent in the city's University of Chicago alumni club. In 1952 he retired to Santa Fe.

In preparation for the exhibit, I would like to talk with anyone who knew Baldridge, knew about him, or owns art works by him. I can be contacted at jaymulberry@gmail.com.

Jay Mulberry, AB'63, MAT'71
CHICAGO

Party time

Preparations are being made for a 70th birthday dinner for Anna Linchevskaya Linden, PhD'05, who taught in the Slavic Department from 1986 to 1996 and will turn 70 in April 2016. Students, faculty, and friends interested in attending the dinner, please contact me at lindvicjul@gmail.com or at 312.608.5827.

Julia Linchevskaya Linden
NEW YORK CITY

Corrections

In "For the Record," May–June/15, the name of University trustee Nassef Sawiris's (AB'82) father, Onsi Sawiris, was misspelled. Nassef Sawiris gave \$20 million to establish the Onsi Sawiris Scholars Program, a scholarship for Egyptian students, in his honor. We regret the error.

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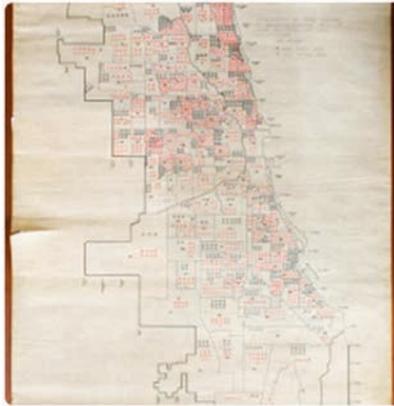
Samarth Bhaskar @samarthbhaskar • Jun 21
Anna Chlumsky (Amy Brookheimer from Veep) on child actors <http://mag.uchicago.edu/arts-humanities/second-act>



Chicago Booth @BoothEveWknd • Jun 18
Professor Deutsch brings theatrical and gaming influences to her teaching >> <http://chiboath.biz/1CzcPVx>



Raymond June @RaymondJune • Jun 17
New exhibit marking the 100th anniversary of "the Chicago School of Sociology" <http://mag.uchicago.edu/law-policy-society/go-out-there-and-meet-people>



Josh Labove @jlabove • Jun 17
An impressively (coincidentally) timely piece from @UChicagoMag on racial passing: <http://mag.uchicago.edu/law-policy-society/crossed-lines>



UChicago @UChicago • Jun 10
Happy Birthday to Nobel laureate novelist Saul Bellow, EX'39. He would have turned 100 today: <http://ow.ly/O8a8Q>



Michael E. Campana @WaterWired • Jun 7
"In an age of shrinking water supplies, a better understanding of groundwater is one critical front." bit.ly/1cFqcdc



UChicago @UChicago • Jun 10
The 2015 Alumni Award recipients have made their marks on the University of Chicago, their fields, or their causes. <http://mag.uchicago.edu/university-news/degrees-honor-0>



Chip Hardy @drchiphardy • May 29
The accidental entrepreneur: Launching Carrot.co in 48 hrs <http://thecore.uchicago.edu/Winter2015/departments/alumni-essay.shtml>



Social UChicago is a sampling of social media mentions of recent stories in the print and online editions of the *Magazine* and other University of Chicago publications. To join the Twitter conversation, follow us @UChicagoMag.

“SOMEWHERE,
SOMETHING
INCREDIBLE
IS WAITING
TO BE KNOWN.”

—CARL SAGAN, AB'54, SB'55, SM'56, PHD'60

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ALUMNI WEEKEND

Reunited

This June alumni from far and wide made themselves at home again in Hyde Park.

They came for the German-style pretzels—a popular (and going-gone) offering again this year at the Baderbraü Beer Garden on the main quad—but also for the art exhibits and open houses and

lectures on everything from ancient Egyptian beekeeping to DNA-based nanorobots. For four days in June, thousands of alumni and their families returned to attend class dinners and after-parties and to visit old friends, and old selves. To reunite. To reconnect.

On Friday a capacity crowd packed Saieh Hall for Economics for a conversation with faculty Nobelists **Lars Peter Hansen**, **James J. Heckman**, and **Robert E. Lucas Jr.**, AB'59, PhD'64. Others piled into a bus to UChicago's Arts Incubator in Washington Park, where projects include artist residencies and

an apprenticeship program.

There was an Architecture Foundation tour of newly sprouted campus buildings, and for alumni parents with prospective Maroons in tow, an admissions walking tour. On Saturday, the second annual Alumni Scav Hunt offered a (greatly abridged) chance for glory.

On Sunday, after brunches and a choral communion at Rockefeller Memorial Chapel, the Chicago Ensemble, led by pianist **Gerald Rizzer**, AB'62, capped the weekend with a chamber music concert at International House and a champagne toast.—*Lydia Lyle Gibson*

Bringing it home

The South Side of Chicago is selected as the future home of the Obama Presidential Center.

“The chance of a lifetime.” That’s how 96-year-old historian **Timuel Black**, AM’54, described the news that Barack Obama’s presidential library would be built on the South Side of Chicago. In an op-ed in the *Chicago Tribune*, Black, a lifelong South Sider, wrote that as he stood near the podium when the library’s location was announced, “I felt that a long journey was returning to its source.”

On May 12 the Barack Obama Foundation announced Chicago’s South Side as the future home of the Barack Obama Presidential Center, which will include the presidential library, a museum, and office and activity space for the Obama Foundation.

The center will be located at one of two possible sites: in Jackson Park or in the Washington Park area. The final choice will be made in the coming months, when the foundation enters into an agreement with the city to develop the site.

In choosing the South Side, the Barack Obama Foundation cited several factors: the opportunity to make a significant economic impact, community support for the project, the area’s rich history and connection with the Obamas, its proximity to the University, and easy access to transportation.

“With a library and a foundation on the South Side of Chicago, not only will we be able to encourage and effect change locally, but what we can also do is to attract the world to Chicago,” President Obama said in a video message announcing the decision. First Lady Michelle Obama, who grew up on the South Side, said, “I’m thrilled to be able to put this resource in the heart of the neighborhood that means the world to me.”

The University of Chicago will collaborate with the Barack Obama Foundation in establishing the Presi-

dential Center and will offer support for the center’s efforts in community engagement, including planning, development, and individual and institutional collaborations. University president **Robert J. Zimmer** said, “We are deeply appreciative that President Obama, Mrs. Obama, and the Barack Obama Foundation selected Chicago’s South Side as the home for the Obama Presidential Center, a decision that creates major opportunities for the South Side and the city of Chicago. This would not be possible without the support of groups and individuals across the city and state, especially the leadership and commitment of Chicago mayor Rahm Emanuel. We believe opening the Presidential Center will mark a watershed moment for the South Side and the city, serving as a catalyst for economic and cultural opportunities as well as community programming.”

Noting Chicago’s “deep connection” to the Obamas, Emanuel said, “We are thrilled that they have decided to bring their legacy home.” **Derek Douglas**, vice president for civic engagement at the University, added, “This is the beginning of a long-term commitment.”

Thousands of community members and groups contributed to the selection process, through individual meetings with University staff and city planners and by attending public hearings about potential sites. The Chicago City Council voted unanimously in March to make parkland available.

The foundation and Presidential Center will be independent from the University of Chicago. The Obama Foundation will be responsible for all aspects of the building, construction, design, and planning processes for the Obama Presidential Center. The National Archives and Records Administration and the Barack Obama Foundation will operate the future museum and library portion of the Presidential Center as a public-private partnership. The Obama Foundation will raise all of the funds needed for construction of the project; neither federal funds nor University funds will be used in the construction of the facilities.

The project has the potential to be an “economic boon” for surrounding neighborhoods and the city, according to a 2014 study by Anderson Economic Group. That report, commissioned by the University, estimated that the



An artist’s rendering of the view of Stony Island Avenue from a potential site for the Obama Presidential Center at Jackson Park ...

RENDERING COURTESY SKIDMORE, OWINGS & MERRILL

center would account for about 3,300 construction jobs and would spur the creation of 1,900 permanent new jobs in retail, dining, and other businesses, with \$220 million in annual impact for Chicago.

“This will be a truly global institution, but it’s also a once-in-a-lifetime opportunity for the South Side and our city,” said **Susan Sher**, senior adviser to President Zimmer. “We are inviting our community to continue developing the ideas and energy that will make this Presidential Center unique.”

Dozens of nonprofit organizations have worked with the University on ideas for collaborating with the Obama Foundation. The University has shared those ideas with the foundation and will help integrate the presidential library into the cultural and educational fabric of the South Side through initiatives such as Museum Campus South, a collection of institutions that includes the DuSable Museum of African American History and the Museum of Science and Industry near the University, and five others on campus: Frank Lloyd Wright’s Robie House, the Oriental Institute, the Reva and David Logan Center for the Arts, the Renaissance Society, and the Smart Museum of Art.

The Obama Foundation announced plans to open offices on the South Side by the end of the year. In the coming months the foundation will begin sketching out plans for the center. In line with President Obama’s priorities, the foundation will place a strong emphasis on community partnerships and opportunities for economic development. The University of Chicago was one of four finalists that sought the Presidential Center, and the Obama Foundation indicated that it will continue to collaborate with the other three finalist universities—Columbia University in New York, the University of Hawaii, and the University of Illinois at Chicago. The foundation said it will also work to identify additional academic institutions, thought leaders, community partners, and other organizations that can help advance its mission.

In his *Tribune* op-ed, Black reflected on his hopes that the center would lead to a blossoming on the South Side—“social, economic, racial, and religious.” When the center opens in several years, he wrote, “it will carry on for generations the hopes that have shaped my life and our community.”

He added: “I’m optimistic that I’ll be there to see it.”



... and of the view of Garfield Boulevard from a potential site for the center at Washington Park.

RENDERING COURTESY SKIDMORE, OWINGS & MERRILL

WILLIAM RAINEY HARPER'S INDEX

CAREER TREKKING

College students who took part in Career Advancement’s careers exploration treks during spring break 2015:

156

Number of treks:

10

Number of employers visited per trek:

6-9

Students who flew to New York for a trek including visits to the *Wall Street Journal*, the Guggenheim Museum, and *The Daily Show* with Jon Stewart:

16

Students who traveled to Seoul, South Korea, or São Paulo and Rio de Janeiro, Brazil, to explore careers in business and banking:

32

Students who have taken part in the quarterly treks since they began in 2008:

2,365



“A bridge maker, warm and sociable, and a magnet to students,” is how longtime colleague Salikoko Mufwene describes Wimsatt.

PHILOSOPHY

Evolution of thought

William Wimsatt follows ideas where they lead—and takes his students with him.

It’s less than two blocks from the philosophy department in Stuart Hall to the cafeteria in Chicago Booth’s Harper Center, but walking over, **William Wimsatt** exchanges nods and smiles with at least three students. While getting soup (a preferred lunch option), he takes a few minutes to chat with a colleague in the biology department.

It seems fitting, then, that over lunch Wimsatt, the Peter B. Ritzma Professor Emeritus of Philosophy, speaks extensively and fondly of his former students and the colleagues he’s worked with in his 44 years at the University. They feel the same about him. “He was always full of ideas and he was just as eager to explore my ideas as his own,” says **Jeffrey Schank**, AM’91, PhD’91, a psychology professor at the University of California, Davis. During Alumni Weekend this June, Wimsatt was presented with the Norman Maclean Faculty Award.

Wimsatt, a founder of the field of the philosophy of biology, started as

an engineering physics major at Cornell University. He completed three years of undergraduate work and a year out in industry before switching to philosophy and to the study of science itself. He was always fascinated, he says, by how the world seemed to be engineered, full of “designed, functionally organized systems and biological organisms.”

While a graduate student at the University of Pittsburgh, he was one of four scholars at the first meeting of the Philosophy of Science Association in 1968 to turn their attention from the physical sciences to the biological sciences (at a typical meeting today there are “probably a couple hundred of us” philosophers of biology, says Wimsatt). He received his PhD in 1971 and joined the UChicago faculty the same year.

Wimsatt’s philosophy of biology starts with recognition of the inherent complexity of the world we live in and our own human limitations. Science should be approached, he believes, using the minds we have and the tools we’ve built to extend them. “The existing philosophy of science acts as if we’re omnipotent, computational beings,” he says. “But if we’re not omnipotent beings, if we have our limitations, wouldn’t it then make more sense to have methods that are really designed with that in mind?”

For Wimsatt, the heuristics of science are fallible but efficient, with theories built on mechanical explana-

tions rather than all-encompassing laws. This supports an incremental approach to understanding the world: analyzing organisms, biological phenomena, or other complex systems through inherently flawed, human-made models; collecting the most consistent and detectable—in Wimsatt’s parlance, robust—evidence; and then iteratively adjusting to get a little closer. These ideas are brought together in his book *Re-Engineering Philosophy for Limited Beings: Piecewise Approximations to Reality* (Harvard University Press, 2007).

One of his most influential ideas is generative entrenchment. It theorizes that parts or aspects of a system on which other parts depend will be more evolutionary conservative, “because if you mess with them there’s a bigger chance of something going wrong and going seriously wrong,” says Wimsatt. Remaining relatively constant themselves, these parts can develop new dependent elements in evolution and become more entrenched and foundational to the system as a whole.

Because entrenchment does not rely on genetics to predict evolutionary rates, its applications extend beyond biology, he says. It helps to explain, for instance, why the most foundational scientific theories are more resilient to new discoveries and are only unseated through a true scientific revolution, and how long-standing cultural institutions and traditions become standardized and affect the way society evolves.

The latter has been Wimsatt’s main focus for the past decade as he’s applied his theories of evolution to the study of cultural and technological evolution. With **Salikoko S. Mufwene**, PhD’79, the Frank J. McLoraine Distinguished Service Professor of Linguistics, he teaches two long-running classes that explore the intersection of biological evolution and cultural evolution, and the globalization of language. Both men have learned from each other, says Wimsatt, and “we’ve clearly influenced one another and penetrated more into the intersection [of linguistics and evolution] than we would have otherwise.”

Their courses are part of the Big Problems program, a brainchild of Wimsatt’s. In 1997 he was a fellow at the Rockefeller Foundation’s center in Bellagio, Italy, where he was struck by the number of scholars working

on projects with tangible, humanitarian ends. “I thought [to myself], look, you’ve been, in effect, professionally free riding, doing your own stuff with no particular social value, for 25 years,” he recalls. “Don’t you think it’s time you did something with more social good?”

Back on campus, he pitched a series of College courses that would bring together faculty members from disparate divisions to teach on issues of social importance. They would focus on fostering collaborative and interdisciplinary approaches to real-world matters. The program currently includes classes on medical ethics, imperialism, loneliness, atheism, terrorism, space exploration, and energy policy.

Wimsatt’s vision for the Big Problems courses was to have faculty come together and collaborate but also to have faculty and students learning together, something that happens to him all the time. Teaching, he says, is

“the way I’ve learned as much as I have about as many areas” as he has. His students’ ideas and questions have helped him reshape his own theories, and he’s published many papers with a current or former graduate student, or with footnotes acknowledging their contributions. He says his father, a biology professor at Cornell, taught him that graduate students should become colleagues as soon as possible.

Those close relationships have enabled Wimsatt’s students to develop their own academic careers alongside him. He was “exactly the guy I needed to guide me from my initial interests in evolutionary biology to a more substantial and wide-ranging research program in history and philosophy of biology,” says former student and collaborator **James Griesemer**, SM’81, PhD’83, a philosophy professor at UC Davis.

That’s one of the main lessons Wimsatt wants his students to learn—the im-

portance of following where their own passions lead. “[Do] something that you are interested in, because you’re going to be better at it than anything else,” he says. It’s advice he’s followed himself, and that he says has kept his own work fresh and exciting. “By working in so many different areas you never get the chance to be bored with any of it.”

Early in Wimsatt’s career, social scientist Donald T. Campbell gave him a paper he’d written debunking the idea of a modern Renaissance man. It would take an unattainable level of genius to be an expert in many fields, argued Campbell, and there’d have to be a lot less knowledge in the world than there is now. “But scratch somebody who appears to be a Renaissance person, and you’ll find a specialist in an unrecognized specialty,” Wimsatt recalled of the paper that helped him see his place in the bigger academic picture. “That’s what I do.”—*Helen Gregg, AB’09*

ORIGINAL SOURCE INTO THE WILD



DUMMY OX

SOME OF THE AUTHOR'S AIDS TO BIRD PHOTOGRAPHY

The photographer was concealed in a hole under the sheep, and literally inside the ox with his camera.

On first glance, you might be fooled by this 1898 picture of a fake ox. Wild animals might too. In fact that’s what brothers Richard and Cherry Kearton, the ornithologist and photographer who made it, were hoping for. In the early days of wildlife photography, says art history PhD student Carl Fuldner,

to remain undetected by remotely triggering their cameras.

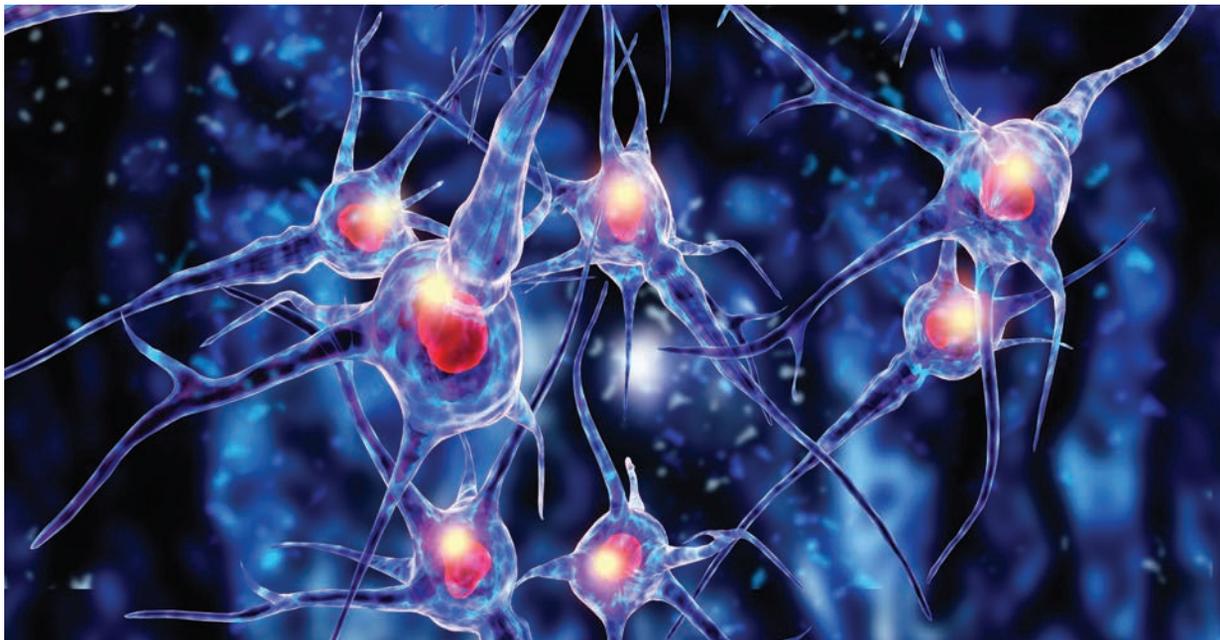
Fuldner curated *The Studio in the Field: Techniques of Early Wildlife Photography*, running through September 15 at the John Crerar Library. Gathering books, photographs, cameras, and other artifacts, the exhibit moves from

people used bizarre techniques to try to capture “authentic” nature photos. Dummy animals were one method that’s still used. Photographers placed them near a nesting site and then climbed inside and waited. Another common method, stalking, “is just what it sounds like,” says Fuldner. Later, photographers developed ways

the 1890s, when photographers first ventured out with cameras that could capture still photos of moving animals, through part of the 20th century. The image at left, from Richard Kearton’s 1926 *A Naturalist’s Pilgrimage*, is among the items on display. Offering early photos of birds, snakes, deer, worms, and other fauna, the exhibit examines how we perceive photographs and challenges the idea—always implied in wildlife photography—that the animals are unaffected by the humans behind the camera.

Photography is a bit like the Heisenberg uncertainty principle: the presence of the photographer and the act of taking the picture might change an animal’s behavior. “Wildlife photography is one of the places where we get our perception of untouched nature, a nature unsullied by human intervention,” Fuldner says. Yet techniques like dummy animals, netting to keep birds from flying away, and artificial tree trunks tell a different story.

—*Kathryn Vandervalk, ’16*



The human brain contains more than 100 billion nerve cells, which makes complicated work for neurologist James Mastrianni. His research aims to predict, and eventually prevent, the onset of dementia.

NEUROSCIENCE

Neural network

Grossman Institute scholars explore—and begin to explain—the brain’s vast complexities.

Even experts have a hard time getting their heads around the magnitude of the human brain. “Each of our brains contains more than a hundred billion neurons,” says neurobiologist **John Maunsell**, “and your hundred billion neurons are interconnected by more than a hundred thousand miles of cellular wiring.”

Maunsell directs the Grossman Institute for Neuroscience, Quantitative Biology, and Human Behavior, the University’s “intellectual home” for researchers navigating that vast landscape. The institute encompasses the work of faculty members in biology, chemistry, psychology, molecular engineering, computer science, mathematics, medicine, and many other fields.

There is no subject, in effect, that could not reveal something about the

brain. “Every sensation, every movement, every thought, every emotion we have arises from the brain,” Maunsell says. How it works “is still largely a mystery, but we’re beginning to get answers.”

At a UChicago Discovery Series event at the Logan Center this past spring, “Brain Teasers: Cracking the Mind’s Toughest Riddles,” Maunsell introduced four Grossman Institute scholars to share some of their answers. First **Sliman Bensmaia**, assistant professor of organismal biology and anatomy, explained how his lab is researching prosthetics that connect to the nervous system, recreating sensory experience for those who have lost it to injury or illness. Then **Sian Beilock**, professor of psychology, showed where in the brain the fear of math arises and how to prevent that anxiety from compromising test performance. And **Peggy Mason**, professor of neurobiology, reported the latest in her work with rats to understand the biological impulse that inspires mammals to help each other.

James Mastrianni, associate professor of neurology and director of the Center for Comprehensive Care and Research on Memory Disorders, discussed a particularly vexing challenge for brain researchers—dementia. Like

cancer, Mastrianni explained, dementia is a general term that encompasses many types of conditions. He’s an expert in exceedingly rare forms called prion diseases—transmissible neurodegenerative conditions, such as mad cow disease, that occur mostly in cattle, sheep, and cannibals. Although prion diseases affect only about 300 people per year in the United States, the pathological similarities to more common types of dementia extend the impact of Mastrianni’s clinical work and research.

Conditions such as Alzheimer’s, Parkinson’s, and ALS share a characteristic with prion diseases—they all progress through the spread of misfolded proteins. When a misfolded protein interacts with a healthy cell, it causes the normal protein to fold incorrectly, a process that perpetuates itself, Mastrianni said, “until it really encompasses the entire brain and causes severe neurological disease.”

Brain scans of patients with prion diseases reveal clumps of a protein called amyloid, the presence of which also marks Alzheimer’s disease. Mastrianni’s lab is testing treatments to break down accumulated amyloid, to stop the misfolding process, and to potentially prevent that process in people who have a genetic predisposition.

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The nature of the disorders, though, makes it difficult to diagnose patients early enough to make a difference. Many people have age-related memory problems that are a nuisance, but these are not necessarily a symptom of disease, and often never require treatment.

In that context, identifying people most likely to develop neurodegenerative diseases before they reach a clinical point of no return becomes a confounding but essential challenge. “If we wait too long,” Mastrianni said, “patients are not going to get better.”

Using brain imaging techniques and tracking subjects through neuropsychological evaluations, he has

gathered data that shows promise in predicting who will develop Alzheimer’s. Examining the “fiber bundles of neurons that lead into the hippocampus”—the pathways to the brain’s center for consolidating and storing memories—Mastrianni evaluated the likelihood of disease progression.

Scans from patients with mild impairment fell into two groups. One group had neural connections comparable to the brains of people with no memory problems, while the other showed atrophy that already resembled Alzheimer’s patients.

Over time people in the latter group developed the disease and those in the

first group did not, results that suggest a potential path to targeted treatment. The research offers a hopeful peek into a future where the most debilitating effects of neurodegenerative conditions can be mitigated or avoided with early therapies for those at the highest risk.

“This is a pilot study,” Mastrianni emphasized, “but so far we’ve been having 100 percent success in predicting who is going to develop Alzheimer’s disease.”

If not yet a definitive answer, those results go a long way toward unraveling one of the brain’s most stubborn mysteries.—*Jason Kelly*

CITATIONS

SLEEP WELL, BE WELL

The benefits of a sound night’s sleep may include a lowered risk of diabetes. A study coauthored by UChicago Medicine sleep researcher **Esra Tasali** and colleagues including **Kristen Wroblewski**, SB’00, SM’01; **Magdalena Stepien**, AB’10; and **Khalid Sharif-Sidi**, AB’10, focused on prediabetics, people whose blood sugar levels are above normal but not yet in the diabetes range. Prediabetics often suffer from sleep apnea, episodes where the upper airway closes during sleep. This may lead to a lowered ability to regulate blood sugar levels, which increases the risk of full-blown diabetes. The study, published online April 21 in the *American Journal of Respiratory and Critical Care Medicine*, followed two groups of patients with prediabetics,

one given an oral placebo before bed and the other sleeping eight hours a night with the aid of a continuous positive airway pressure (CPAP) device. Subjects who used the CPAP showed better blood sugar control, lower levels of the stress hormone norepinephrine, and lower blood pressure.

POP SCIENCE

Soda taxes have become a common but controversial public health policy in the United States, as sugary drinks have been increasingly linked to obesity, diabetes, heart disease, and gout. To find out whether those taxes lower consumption, Chicago Harris researcher **Jeffrey Grogger**, the Irving Harris Professor in Urban Policy, turned to Mexico, where a nationwide tax on all

drinks with added sugar went into effect in January 2014. In a National Bureau of Economic Research working paper this May, Grogger analyzed prices in 46 Mexican cities before and after the soda tax began. A tax of 9 percent led soda prices to rise even more, to a total of 12 percent higher. The prices of most untaxed drinks—bottled water, plain juices, and milk—remained largely unchanged. But diet sodas, untaxed because they are artificially rather than sugar sweetened, saw a jump in price, likely tied to increased demand. Grogger concludes that there is reason to believe that soda taxes can work over time to change consumption.

HITTING THE PITCH

For adults, it may not be too late to acquire perfect pitch, the rare ability to identify a note by hearing it. In a study of adults without perfect pitch, UChicago psychology professor **Howard Nusbaum**, LAB’72, found that subjects’ ability to pick up the skill was closely tied to their auditory working memory. The greater its capacity, the better their chances of reaching perfect pitch, long thought to be out of reach for those who did not pick it up in childhood. Nusbaum and his collaborators trained participants of varying musical experience to recognize individual notes and found unexpected

improvements in their ability. Retesting participants months later, the researchers found that their skills slipped slightly, but mostly held. Coauthors on the study, published in the July *Cognition*, include **Stephen C. Van Hedger**, AB’09, AM’12; **Shannon L. M. Heald**, AB’02, AM’05, PhD’12; and College student **Rachelle Koch**, ’16.

EXPENDING ENERGY

Investments in energy efficiency don’t always add up to savings. In a study evaluating the federal Weatherization Assistance Program, which provides low-income households with money for upgrades such as new furnaces, wall and attic insulation, and weather stripping, a research team including UChicago economist **Michael Greenstone**, LAB’87, director of the Energy Policy Institute at UChicago, found that upgrade costs were double the households’ energy savings. A randomized controlled trial of more than 30,000 Michigan households, a quarter of which received federal weatherization subsidies, showed that \$5,000 in upgrades reduced energy consumption by 10 to 20 percent per month, but that translated to only \$2,400 in savings over the lifetime of the upgrades. Researchers released their results in a June working paper.—*Minna Jaffery*, AB’15, and *Claire Zulkey*



Acquiring perfect pitch may be possible for adults.

PHOTO COURTESY KEITH BAN

FOR THE RECORD



NEW WOMEN'S BOARD LEADER
Priscilla Levine Kersten is the new chair of the University of Chicago Women's Board, effective July 1. A member of the board's Steering Committee since 2011 and a founding cochair of the Women's Board/UEI Partners Committee, Kersten is the president of Square One Foundation, a private family foundation, and serves on the governing board of the University of Chicago Charter School. Her husband, **Steven A. Kersten**, JD'80, is a University trustee. Established in 1960, the Women's Board furthers the University's mission through advocacy and philanthropy.



SEEING THE FUTURE
 Eleven international partners of the Giant Magellan Telescope Organization, including UChicago, have committed more than \$500 million to begin construction in Chile on what is poised to be the largest optical telescope in the world. The first in a new class of extremely large telescopes, the GMT will produce images up to 10 times sharper than those from the Hubble Space Telescope and

"will herald the beginning of a new era in astronomy," said University Professor of astronomy and astrophysics **Wendy Freedman**, who chairs the Giant Magellan Telescope Organization Board of Directors.



TOP MATHEMATICIAN
 This spring **Alex Eskin**, a leading geometer and the Arthur Holly Compton Distinguished Service Professor in Mathematics, was elected to membership in the National Academy of Sciences. A specialist in mathematical billiards and rational polygons, Eskin has made important contributions to geometric group theory, ergodic theory, and number theory. He joined UChicago in 1999.



INTERNATIONAL JUSTICE
 Launched in 2013, the Law School's International Human Rights Clinic works with non-governmental organizations to draw attention to human rights violations around the world, develop and implement practical remedies, and hold states accountable. The clinic's new director is **Claudia Flores**, AB'97, who previously served as a legal adviser for the United Nations in Zimbabwe and

East Timor and has worked with the American Civil Liberties Union Foundation and the AFL-CIO American Center for International Labor Solidarity in Indonesia.

GRADUATE SUPPORT

A new University office and program will centralize support services for graduate students and postdoctoral scholars, making these resources more accessible and effective. Working in coordination with the divisions and schools, UChicagoGRAD will provide training and programs focused on recruitment and enrollment; general student services such as teaching and dissertation writing support; career development; and alumni connections. The initiative will be led by professor of psychology **Sian Beilock**, vice provost for academic initiatives and a member of the Committee on Education.



HEART FOR HEALTH CARE

When his hometown hospital became one of the first to implement the American College of Cardiology's appropriate use criteria for coronary revascularization in 2012, **Pranav Puri**, '18, saw an opportunity. How would providing physicians with the new criteria affect the number of procedures performed and thus the overall cost of care? Working with two nurses at the hospital, Puri charted a 17 percent reduction in coronary revascularizations from 2011 to 2012 and a further 17 percent drop from 2012 to 2013. If the criteria were used nationally, he calculated, total savings could exceed \$2.3 billion,

findings he presented at ACC's Annual Scientific Session in March.



AMERICAN PHILOSOPHERS

The American Philosophical Society, the oldest learned society in the country, has three new UChicago faculty members. **Glenn W. Most** (above), a professor in the John U. Nef Committee on Social Thought, is a scholar of classical Greek poetry and philosophy. **Anne W. Robertson**, the Claire Dux Swift Distinguished Service Professor of Music and the Humanities in the College, specializes in music from the Middle Ages; and **Rosanna Warren**, the Hanna Holborn Gray Distinguished Service Professor in the John U. Nef Committee on Social Thought and the College, is an acclaimed poet who studies poetry in translation and the relationship between classical and modern literature.

CLIMATE SURVEY

In June the University released a preliminary summary of results from the Sexual Misconduct Survey: Attitudes, Knowledge, and Experience. The survey on campus climate was conducted in April by NORC at the University of Chicago. All undergraduate and graduate students aged 18 and older were invited to take part in the anonymous and confidential survey. NORC is further analyzing the data and will produce a full report. In the meantime, the preliminary report can be viewed at csl.uchicago.edu/sites/default/files/Climate_Survey_Spring_2015_preliminary_report.pdf.

Eating habits

A religion professor parses the moral language of modern diets.

This is how Americans talk about food: as sinful or guilt-free, decadent or wholesome, artificial or pure. Natural and unnatural. Good and bad. The modern American terminology around nutrition, says **Alan Levinovitz**, AM'07, PhD'12, is often more philosophical and religious than scientific. And our dietary credos—Atkins, paleo, gluten-free, low salt, no fat, macrobiotic, raw—can function like faiths, preaching dogma, promising redemption, requiring devotion.

Which explains how Levinovitz, a Divinity School alumnus who teaches philosophy and religion at James Madison University in Virginia, came to write a book on food. In *The Gluten Lie* (Regan Arts, 2015), he explores why so much fear and moralizing surrounds nutrition, why we tend to demonize certain foods and deify others. Combing through decades and centuries, he unearths the social, cultural, and scientific—or pseudo-scientific—histories of contemporary eating taboos.

In the United States, these taboos are partly the inheritance of our Puritan founding. For instance: sugar. “We eat too much sugar, period,” he says. “But is sugar uniquely evil? We’ve said so, shockingly, for the last 200, 300 years.” Long before obesity or diabetes entered the popular lexicon, refined sugar was already under suspicion. In the 1700s, it was guilty because pleasure was sinful. Later, temperance advocates argued that sugar would lead to alcoholism and sexual promiscuity. “They were afraid women and children would engage in what they called the ‘solitary vice’ if they ate too much sugar,” Levinovitz says.

Meanwhile, Levinovitz notes, honey and fruit have enjoyed a “halo” of healthfulness and natural simplicity—unprocessed, unrefined. In his 1852 *Comparative Physiology*, physi-



Long before today's obesity worries, refined sugar was a culinary taboo.

cian James Redfield labeled animals that eat honey as courageous and careful—the honeybee, the hummingbird, and the bear—while the fly and the ant, which eat sugar, were unvirtuous in Redfield's telling. That dichotomy remains ingrained to this day, Levinovitz writes, even though honey is higher in fructose than high-fructose corn syrup. And despite the fact that, as one endocrinologist and diabetes expert told Levinovitz, the only definitively established metabolic difference between fruit and candy is that “it's a lot easier to eat tons of candy than it is to eat tons of apples.”

A Stanford undergrad, Levinovitz went to college intending to become a bioethicist. “I realized what I was really interested in was ethics,” he says. “And then I realized that I was *really* interested in the way stories play a role in ethics.” In his philosophy classes, arguments rested on logic and evidence; in his religion classes, “you could use a story to make an argument.”

Levinovitz followed up with a PhD in the Divinity School's religion and literature program, focusing on Chi-

nese texts and studying the role that stories and narratives play in the formation of “beliefs that are sacred to human beings.” He found himself asking questions like: What's the difference between telling a story and making an argument? Or giving a command? “Those are different genres we use to make a public or a person believe something,” he says. “I'm fascinated by the ways those genres are mutually interdependent on a cultural level, and how we ought to think about them when we're communicating truths, scientific or otherwise.”

He stumbled on a concrete connection between his religion research and food while studying in China in the early 2000s. Back then many Americans were assiduously avoiding monosodium glutamate, believing it caused migraines, irritable bowel syndrome, joint pain, chronic disease, and a swarm of other maladies. Chinese restaurants in the United States posted signs promising “No MSG.” But in China, Levinovitz discovered, MSG—or *weijing* (“flavor essence”)—was everywhere, and the

locals weren't worried. Over there, he writes, MSG was "a sodium salt first extracted from seaweed by Japanese scientists in 1908, and a staple seasoning in the cuisine of long-lived East Asians."

In the book, Levinovitz traces the history of America's MSG scare: its origins in a 1968 letter in the *New England Journal of Medicine* titled "Chinese-Restaurant Syndrome," the ensuing decades of snowballing fear, the repeated debunkings, and finally the present-day consensus among food allergy experts that no such syndrome really exists. Yet the belief in MSG sensitivity lives on. Why? The answer is complicated, Levinovitz says, but partly it has to do with a "common and convincing myth" that helped popularize it in the first place: "The products of technology and modernity are inherently dangerous."

A version of that myth is what underlies food regimens like the paleolithic diet, which promise a return to a past human paradise—if not the Garden of Eden, then a prehistoric evolutionary Elysium. Another iteration of the myth, Levinovitz writes, is "the argument from antiquity," which romanticizes wisdom from the ancient past—often the ancient Far East—and mines it for modern-day truths. Yet

another version: the myth of the noble savage. The 1977 salt guidelines issued by the US Senate Select Committee were largely inspired, Levinovitz writes, by one scientist's belief that ancient peoples uncorrupted by civilization kept their hearts healthy with a low-salt diet.

But people need stories and myths. Narratives shape our existence and can't help but inform our decisions. "We tell ourselves stories in order to live," Joan Didion wrote, and Levinovitz has spent his academic career plumbing the reality of that statement. "We're very convinced that if we just show people the truth, if we just show people facts, they'll believe it," he says. "That's not true, right? Those facts end up getting conveyed in narrative form." And people tend to fit the evidence they're seeing to stories they already believe.

That's true when it comes to food. Science gets wrapped around preexisting beliefs and seen through the lens of long-standing religious and moral ideas. In contemporary fears about genetically modified foods (GMOs), Levinovitz sees a biblical story of good and evil, in which agribusiness behemoth Monsanto is the devil and those who fight it are righteous crusaders. "Why are people wary of

GMOs?" Levinovitz asks. "Why are people scared of vaccines? Why are people excited about artificial intelligence? All these questions I think can be nuanced by looking at the stories we tell."

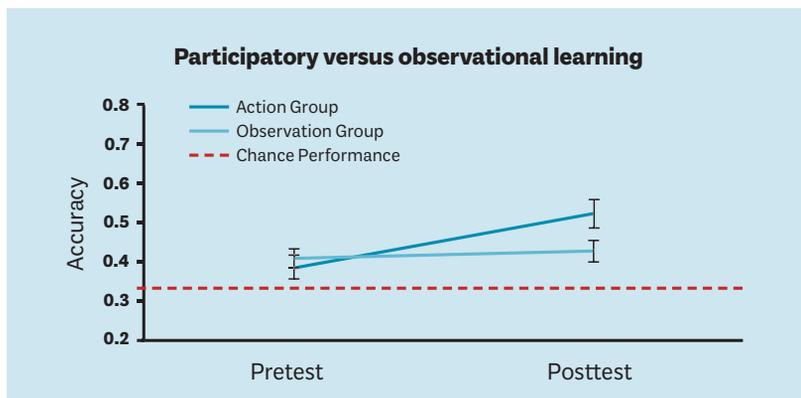
Biblical, puritanical thinking also explains the absolutist approach of many contemporary diets. The idea is, if something is unhealthy enough—impure enough—to be curtailed, then wouldn't it be even better to avoid it altogether? "The government will say, 'We never told people not to eat fat,'" Levinovitz says. "But any humanist, anyone who understands rhetoric, will say, 'Well, there's this danger: if you tell people to limit something, they'll think it's bad and unclean, and they'll cut it out.'"

As a solution, Levinovitz advocates an approach to reporting science that takes lessons from the humanities into account. "Scientists need to be able to point out when we're using a narrative to get away from science," he says. They need to be able to recontextualize and communicate information using equally compelling, and more accurate, narratives. "Science needs to recognize the importance of stories in communicating a truth to people. There's no such thing as a naked fact, really."—*Lydiaalye Gibson*

FIG. 1 FEEL THE LEARN

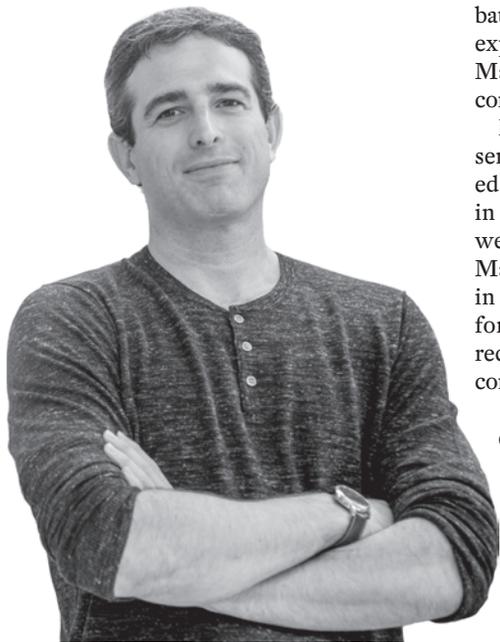
When students learn by doing they absorb information more deeply and durably than they do from a book or a lecture. UChicago psychologist Sian Beilock and coauthors monitored undergraduates learning the concepts of angular momentum and torque. Some received a hands-on lesson: two bicycle wheels spinning independently on a single axis, which the students held and tilted from horizontal to vertical while trying to keep a laser pointer steady at a target. Other students watched but didn't participate.

In follow-up tests, the students who'd held the spinning wheels scored higher (see graph), and brain imaging showed the



sensory and motor-related parts of their brains—important for understanding forces, angles, and trajectories—lit up as they recalled the concepts. Published online April 24 in *Psychological Science* and in Beilock's *How the Body Knows Its Mind* (Atria Books, 2015), the

study was coauthored by Carly Kontra, AM'14, PhD'14, and postdoc Daniel J. Lyons. "We need to rethink the role of the body in teaching math and science," Beilock says. That's perhaps especially true in an era of online classes and virtual laboratories.—*Lydiaalye Gibson*



INTERVIEW

Open review

When geneticist Yoav Gilad and a colleague detected errors in an influential study, Gilad took to Twitter with their findings.

Last December a study in the *Proceedings of the National Academy of Sciences* presented evidence for an extraordinary finding—that human and mouse tissues were genetically more different than previously thought. The authors, members of the Mouse ENCODE Consortium, concluded that gene expression in a mouse heart, for example, is more similar to a mouse kidney than to a human heart. Since mice are a near-ubiquitous tool in human genetics research, the result was field shaking. It also left many scientists puzzled.

Yoav Gilad, UChicago professor of human genetics, was one such puzzled scientist. Together with postdoctoral researcher **Orna Mizrahi-Man**, Gilad spent three months reanalyzing raw data from the original study. According to their analysis, the ENCODE authors did not account for “batch effects”—errors that arise from the way different

batches of samples are processed during experiments. When Gilad and Mizrahi-Man removed these batch effects, the conclusion of the study reversed.

Instead of a traditional route to disseminate these critiques, Gilad tweeted the main figures from the reanalysis in April. It caused a sensation. A few weeks later in May, he and Mizrahi-Man published their full results online in the open science publication platform *F1000Research*. The debate was recapped in *Nature* and the *Scientist* and continues in full public view.

However, another debate has emerged. Is Twitter the right forum for scientific critique? In an interview condensed and adapted here, the Medicine and Biological Sciences’ *ScienceLife* blog spoke with Gilad about his decision to take science to social media.

—Kevin Jiang

Why did you decide to put your results on Twitter?

The decision to go on Twitter was actually pretty impulsive. I’ve been involved in efforts to offer criticism or correction for papers through the typical channels—communicating with the original author, submitting the manuscript for review by the same journal, and submitting it to another journal if rejected. This process is very, very long, and in most cases the criticisms are either ignored or don’t receive nearly as much attention as the original report. What happens is people just go and read the paper, think about it, and then there’s usually not a lot of conversation after that. Often, years later, you find the original report still resonates more with people than the correction or criticism.

Orna and I were still working on the paper, and we had this result. I put out the main figures with a very neutral statement. The figures spoke for themselves.

What was the response like?

More than 30,000 people viewed the initial tweet. The vast majority were scientists, including students, postdocs, and faculty all over the world. Immediately people asked for more details. They tried to understand what we did and how, and started discussing the merit of our headline result. I answered that there’s a preprint on the

way and that it’s probably more useful to wait for that because it’s hard to communicate more than headlines over Twitter.

In the meantime, it was widely shared, probably because the figures were pretty self-explanatory. And also partially because there’s a measure of trust. If you tweet the headline, you believe in your result.

Were you happy with how your Tweets were received?

I think that this was an example of the great advantage of social media. It just immediately took off. When the paper was put online, it was viewed nearly 10,000 times in one week. That’s a number that you get in a couple of months, for my papers at least. Somebody described it as the carriage ahead of the horses. It’s kind of true. But if we did it the other way around, I don’t think it would have received the same response.

Were there criticisms to your approach?

There weren’t when we first tweeted the figures. When the paper came out and people could see more of the details, we retweeted again. The principal investigator on the *Proceedings of the National Academy of Sciences* paper made a comment about breaking social norms, but I have not seen anything else.

Do you think about possible reprisal?

No, and I don’t even understand why this question comes up. We are scientists and anything that gets us faster to the truth should be encouraged. Nobody doctored their data, nobody did anything misleading on purpose, nobody did anything that we’d consider unacceptable in science.

I certainly don’t expect all my papers are right, and I don’t expect in the future that when someone finds a mistake in my papers they’ll be afraid to put it forward. If you have 100 papers and no corrections, you’re not a scientist. Because either you don’t care to correct, or you don’t believe you’ve ever made a mistake.

To read more, visit sciencelife.uchospitals.edu/2015/06/10/breaking-social-norms-a-qa-with-yoav-gilad.

Mending the heart gender gap

BY ASHER KLEIN, AB'11

A man clutches his arm and keels over, agony etched into his face. He's having a heart attack, brought on by a clogged artery in a diseased heart. The symptoms are so familiar from movies and TV that cardiologist **C. Noel Bairey Merz, AB'77**, calls it the "Hollywood heart attack." There's just one problem with this scene, a bias shared by cardiac research and many Hollywood productions: men always seem to be the stars.

By the numbers, America's leading cause of death is at least as much a woman's disease as it is a man's. Since the mid-1980s, more women have died from cardiovascular disease—it killed about 65,000 more women than men in 2000. Yet their symptoms still routinely go undetected by tests designed to catch signs of heart disease common in men, says Bairey Merz, director of Cedars-Sinai Heart Institute's Barbra Streisand Women's Heart Center and scientific chair of the National Institutes of Health's women-specific heart disease study, the Women's Isch-

emia Syndrome Evaluation (WISE).

The man clutching his arm is having what we call a coronary, the male pattern of heart disease that doctors focused on for years, ignoring another pattern, whose prevalence in women Bairey Merz and WISE colleagues identified about 15 years ago: coronary microvascular disease. This heart disease afflicts smaller blood vessels in the heart rather than the large arteries and causes atypical symptoms that are easy to miss: overwhelming fatigue, indigestion, or pain in the jaw or the back, for example.

Medicine has made great strides since then. Today the American Heart Association clearly differentiates between coronary microvascular disease, which affects many more women than men, and coronary heart disease, which is predominant in male heart patients.

Warm and commanding, Bairey Merz talks about these breakthroughs on a May afternoon in her diploma-decked office at Cedars-Sinai in Los Angeles, a few miles from Hollywood. Her research has found that up to 40 percent of women with heart

disease, plus some men, have the coronary microvascular variety.

Also known as cardiac syndrome X, the disease narrows the small arteries of the heart, reducing blood flow to the heart muscle but not producing the telltale lumpy plaque deposits that coronary heart disease causes and that doctors look for. "Women are pretty good at putting the fatty plaque into the wall" of the coronary arteries, Bairey Merz says. While there isn't a strict split, it's roughly true that when it comes to heart disease, "women erode, men explode," as Bairey Merz puts it in a 2011 TEDxWomen talk that's been viewed online more than 600,000 times.

Doctors still turn away patients presenting with microvascular heart disease thinking there's nothing wrong, Bairey Merz says. They do so less frequently now, though, thanks to the pioneering work of another cardiologist, former NIH director Bernadine Healy.

In 1991, newly appointed as the first woman to head the medical research agency, Healy wrote a *New England Journal of Medicine* op-ed about gender bias in heart disease research and treatment. The article was titled "The Yentl Syndrome," after Isaac Bashevis Singer's fictional young woman who has to dress like a man in order to study a Jewish holy text.

Two studies published in the same issue showed that men were screened and treated for coronary heart disease more aggressively than women with similar symptoms. "Once a woman showed that she was just like a man, by having severe coronary artery disease or a myocardial infarction, then she was treated as a man would be," Healy wrote. But that usually came when she was lying in a hospital bed; women and doctors didn't seem to recognize that heart disease was the leading cause of death among women, "not a man's disease in disguise."

This call to action was a watershed moment in women's health care, and in Bairey Merz's own career. The editorial "really rang true," she says. In her own research as a young fellow and assistant clinical professor at Cedars-Sinai and UCLA, she had been finding unexplained differences between

MILESTONES

1973 Enrolls at UChicago on new Gertrude Dudley Scholarship for women scholar-athletes

1985 Joins Cedars-Sinai Department of Cardiology, following Harvard Medical School and residency at UCSF

1996 Begins the National Heart, Lung, and Blood Institute-sponsored Women's Ischemia Syndrome Evaluation as chair

2001 Named director of Cedars-Sinai's Women's Heart Center, later named for donor

Barbra Streisand
2008 Named the inaugural Dr. Carolyn McCue Woman Cardiologist of the Year
2014 Receives the Alumni Professional Achievement Award from the UChicago Alumni Association

cardiac disease in men and in women, with worse outcomes for women. She'd brought up these results with her mentors, but found little encouragement.

Healy's op-ed "consolidated what I had been seeing in my research and what I had been trying to explain" to those senior doctors—whom today she credits mainly with not getting in her way as she began to investigate gender bias in cardiac medicine.

Bairey Merz had been part of another women's equality movement as a teenager. A year after Title IX was passed, she received a full-ride academic-athletic scholarship for swimming to the University of Chicago—an achievement that landed her on the cover of *Parade Magazine* in September 1973. "If it hadn't been for the scholarship, I sincerely doubt I'd have been able to go to Chicago," she told *Parade*.

After college Bairey Merz attended Harvard Medical School and then completed an internal medicine residency at the University of California's San Francisco campus. While she studied and began her career, the percentage of US medical doctorate degrees awarded to women kept rising. When she began college, only one woman earned an MD, DDS, or similar degree for every 10 men, according to the Department of Education. By 1984, when Bairey Merz became chief resident at UCSF, women were earning nearly one-third of medical degrees (they overtook men in 2003). Bairey Merz credits the influx of women into the field for much of the progress in closing the heart health gender gap.

Bairey Merz has chaired the WISE study since 1996. The project has yielded more than 200 publications, including her team's groundbreaking work into coronary microvascular disease. "Everything that we do is like Christmas," she says, "because so little was done before."

With her TEDx talk and appearances on shows like *20/20* and *Good Morning America*, Bairey Merz hopes to draw the kind of attention and funding that earned breast cancer a whole month of pink-tinged NFL games to remind women to get screened. Current spending on research into heart disease and women amounts to less than 10 percent of what is spent on breast cancer, she says, "despite the



Above: With her mother at her UChicago graduation in 1977. Left: The NIH promotes wearing red as a symbol of women's heart disease awareness. Bairey Merz received the Red Dress Award for Leadership in Cardiovascular Research in Women from *Woman's Day Magazine* in 2005.

fact that heart disease kills 10 times more women than breast cancer every day." Meanwhile, in her day-to-day work at UCLA and Cedars-Sinai she spends about half her time on cardiac research and the rest teaching medical students and seeing patients. One of her patients, Danielle Burgener, is a case study in what more doctors can do for women's heart disease and what women need to learn.

When she awoke in the middle of the night, 25 years old, fit, and feeling terrible chest pain, Burgener waited for hours before going to a hospital, thinking a vitamin pill she swallowed was caught in her chest. "You are much too young to be having a heart attack," the on-call cardiologist scoffed." Luckily she was stuck in the hospital while

another doctor's tests were completed. They came back positive for heart disease, and the cardiologist returned to apologize, Burgener says.

She found a much more willing ear when she was referred to the Women's Heart Clinic, where Bairey Merz and her team put her on a treatment plan designed for coronary microvascular dysfunction. Burgener was relieved to find doctors who weren't bewildered by her symptoms. "I had a physician that listened to me and understood the impact that this disease would have on my life." Six years later, she's alive, fit, and so thankful for the treatment she received that she has become an educator and advocate herself, working to keep other women from waiting as long to get help as she did. ♦

OPENING INQUIRY

As free expression comes under challenge on some campuses, the University's affirmation of a long-standing value may become a model for higher education.

BY LAURA DEMANSKI, AM'94

In July 2014 President **Robert J. Zimmer** and Provost **Eric D. Isaacs** asked law professor and free speech expert **Geoffrey R. Stone**, JD'71, to lead a faculty committee on freedom of expression. Moved to act by "recent events nationwide that have tested institutional commitments to free and open discourse," they charged the group with drafting a statement articulating UChicago's "overarching commitment to free, robust, and uninhibited debate and deliberation among all members of the University's community."

Joining Stone on the committee were six senior faculty members representing the College, all four divisions, and three professional schools. "The University of Chicago has always been committed to creating an environment of open discussion and debate, and we believed that the University would benefit from a formal statement delineating our support of this principle," President Zimmer said. "This commitment is essential to scholarship at the highest levels."

The report has already made an impact on the national discussion of free expression on campuses. It was published, for instance, in the Spring 2015 *Bulletin* of the American Academy of Arts and Sciences. It opens by citing affirmations of freedom of expression by leaders throughout the University's history, from William Rainey Harper in 1902 to Robert Maynard Hutchins in the 1930s to Edward H. Levi, LAB'28, PhB'32, JD'35, in the 1960s to **Hanna Holborn Gray** in 2012. Though deeply grounded in the culture of this institution, the report (shorn of the UChicago particulars) has been adopted by other schools. In April the faculty at Princeton University voted to incorporate much of its language into the school's campus code of conduct. Purdue University followed suit in May, also using largely the same wording. "We didn't see how we could improve on the language," Purdue president Mitch Daniels told the *Huffington Post*. That article referred to the values articulated in the statement as the "Chicago Principles," a name that has since appeared in other media reports.



“I hope that more and more universities adopt the so-called Chicago Principles and abide by them in spite of the difficulties in securing open discourse when many oppose it,” committee member **Angela Olinto** said. The importance of free expression, Gray added, “needs to be reiterated over time” in academic communities. “The issue arises under new circumstances, new contexts, new problems that sometimes come into being.”

The process of drafting the report was harmonious. “We did a lot of editing of each other’s words,” Stone says, “but fundamentally it was a pretty strong and clear consensus from early on about the direction.” Meeting every few weeks, the committee analyzed a number of hypothetical situations to ensure the final language would take into account the many complexities involved and provide sound principles for navigating a wide range of cases.

They consulted widely with colleagues on and off campus: dean of students in the University **Michele Rasmussen**, other administrators who work closely with students, and staff in the legal counsel and College housing offices. Rasmussen arranged for the committee to meet with a few

dozen students, again drawn from across campus. The students voiced “very different perspectives,” Stone says—including concern about balancing freedom of expression with an inclusive and safe campus climate.

Although agreeing that universities should encourage civil discourse, Stone says that this should not cause “any sacrifice of the essential freedom to debate ideas, however offensive they may be to some members of the community.” The statement acknowledges “narrow exceptions to the general principle of freedom of expression,” including violations of the law and expression that constitutes a threat to others’ safety or harassment. On campus, as in US law, some limits are necessary, Stone says, but “in the context of public and academic discourse, our view is that the University should bend over very far backwards to defend the freedom of expression.”

So the University has done throughout its 125 years, making it a natural leader on this issue of national importance. “I think Chicago has been, over its history, extremely courageous about defending a culture that is aggressively protective of academic freedom and of freedom of expression,” Stone says. “It has defined itself in those terms.” ♦

REPORT OF THE COMMITTEE ON FREEDOM OF EXPRESSION

The Committee on Freedom of Expression at the University of Chicago was appointed in July 2014 by President Robert F. Zimmer and Provost Eric D. Isaacs “in light of recent events nationwide that have tested institutional commitments to free and open discourse.” The Committee’s charge was to draft a statement “articulating the University’s overarching commitment to free, robust, and uninhibited debate and deliberation among all members of the University’s community.”

The Committee has carefully reviewed the University’s history, examined events at other institutions, and consulted a broad range of individuals both inside and outside the University. This statement reflects the long-standing and distinctive values of the University of Chicago and affirms the importance of maintaining and, indeed, celebrating those values for the future.

From its very founding, the University of Chicago has dedicated itself to the preservation and celebration of the freedom of expression as an essential element of the University’s culture. In 1902, in his address marking the University’s decennial, President William Rainey Harper declared that “the principle of complete freedom of speech on all subjects has from the beginning been regarded as fundamental in the University of Chicago” and that “this principle can neither now nor at any future time be called in question.”

Thirty years later, a student organization invited William Z. Foster, the Communist Party’s candidate for President, to lecture on campus. This triggered a storm of protest from critics both on and off campus. To those who condemned

the University for allowing the event, President Robert M. Hutchins responded that “our students ... should have freedom to discuss any problem that presents itself.” He insisted that the “cure” for ideas we oppose “lies through open discussion rather than through inhibition.” On a later occasion, Hutchins added that “free inquiry is indispensable to the good life, that universities exist for the sake of such inquiry, [and] that without it they cease to be universities.”

In 1968, at another time of great turmoil in universities, President Edward H. Levi, in his inaugural address, celebrated “those virtues which from the beginning and until now have characterized our institution.” Central to the values of the University of Chicago, Levi explained, is a profound commitment to “freedom of inquiry.” This freedom, he proclaimed, “is our inheritance.”

More recently, President Hanna Holborn Gray observed that “education should not be intended to make people comfortable, it is meant to make them think. Universities should be expected to provide the conditions within which hard thought, and therefore strong disagreement, independent judgment, and the questioning of stubborn assumptions, can flourish in an environment of the greatest freedom.”

The words of Harper, Hutchins, Levi, and Gray capture both the spirit and the promise of the University of Chicago. Because the University is committed to free and open inquiry in all matters, it guarantees all members of the University community the broadest possible latitude to speak, write, listen, challenge, and learn. Except insofar as limi-

IN THE CONTEXT OF PUBLIC AND ACADEMIC DISCOURSE, OUR VIEW IS THAT THE UNIVERSITY SHOULD BEND OVER VERY FAR BACKWARDS TO DEFEND THE FREEDOM OF EXPRESSION.

tations on that freedom are necessary to the functioning of the University, the University of Chicago fully respects and supports the freedom of all members of the University community “to discuss any problem that presents itself.”

Of course, the ideas of different members of the University community will often and quite naturally conflict. But it is not the proper role of the University to attempt to shield individuals from ideas and opinions they find unwelcome, disagreeable, or even deeply offensive. Although the University greatly values civility, and although all members of the University community share in the responsibility for maintaining a climate of mutual respect, concerns about civility and mutual respect can never be used as a justification for closing off discussion of ideas, however offensive or disagreeable those ideas may be to some members of our community.

The freedom to debate and discuss the merits of competing ideas does not, of course, mean that individuals may say whatever they wish, wherever they wish. The University may restrict expression that violates the law, that falsely defames a specific individual, that constitutes a genuine threat or harassment, that unjustifiably invades substantial privacy or confidentiality interests, or that is otherwise directly incompatible with the functioning of the University. In addition, the University may reasonably regulate the time, place, and manner of expression to ensure that it does not disrupt the ordinary activities of the University. But these are narrow exceptions to the

general principle of freedom of expression, and it is vitally important that these exceptions never be used in a manner that is inconsistent with the University’s commitment to a completely free and open discussion of ideas.

In a word, the University’s fundamental commitment is to the principle that debate or deliberation may not be suppressed because the ideas put forth are thought by some or even by most members of the University community to be offensive, unwise, immoral, or wrong-headed. It is for the individual members of the University community, not for the University as an institution, to make those judgments for themselves, and to act on those judgments not by seeking to suppress speech, but by openly and vigorously contesting the ideas that they oppose. Indeed, fostering the ability of members of the University community to engage in such debate and deliberation in an effective and responsible manner is an essential part of the University’s educational mission.

As a corollary to the University’s commitment to protect and promote free expression, members of the University community must also act in conformity with the principle of free expression. Although members of the University community are free to criticize and contest the views expressed on campus, and to criticize and contest speakers who are invited to express their views on campus, they may not obstruct or otherwise interfere with the freedom of others to express views they reject or even loathe. To this end, the University has a solemn responsibility not only to promote a lively and fearless freedom of debate and deliberation, but also to protect that freedom when others attempt to restrict it.

As Robert M. Hutchins observed, without a vibrant commitment to free and open inquiry, a university ceases to be a university. The University of Chicago’s long-standing commitment to this principle lies at the very core of our University’s greatness. That is our inheritance, and it is our promise to the future.

Committee on Freedom of Expression

Geoffrey R. Stone, JD’71, Edward H. Levi Distinguished Service Professor of Law, Chair

Marianne Bertrand, Chris P. Dialynas Distinguished Service Professor of Economics, Chicago Booth

Angela Olinto, Homer J. Livingston Professor, Department of Astronomy and Astrophysics, Enrico Fermi Institute, and the College

Mark Siegler, MD’67, Lindy Bergman Distinguished Service Professor of Medicine and Surgery

David A. Strauss, Gerald Ratner Distinguished Service Professor of Law

Kenneth W. Warren, Fairfax M. Cone Distinguished Service Professor, Department of English and the College

Amanda Woodward, William S. Gray Professor, Department of Psychology and the College

human ecology

MICROBIAL ME

Scientists are deciphering how microbes not only make us sick but also keep our bodies working.

BY LYDIALYLE GIBSON

ILLUSTRATION BY GWEN KERAVAL



There's a story that **Jack Gilbert**, a microbial ecologist at UChicago and Argonne National Laboratory, likes to tell about a bacterium called *Enterococcus faecalis*. It's sort of a love story gone wrong. Squat and vaguely jellybean-like, measuring about three microns long, *E. faecalis* lives in the human gastrointestinal tract. Under normal circumstances, the relationship is friendly. It's close. It's what microbiologists call commensal, a term whose Latin etymology conjures up togetherness and a shared dinner table. "In its original state, just living inside your gut, this bug is totally harmless," Gilbert says. "In fact, it's beneficial. It helps train your immune system." Your body wants it there, needs it there, has evolved to live with it. "It's a natural part of your gut's flora, your ecosystem."

All that can change, though, when a person goes in for gastrointestinal surgery. Like, for instance, to remove part of the colon and stitch the remaining pieces back together, a routine treatment for colon cancer. Afterward, some patients develop what's called an anastomotic leak. The seam where the bowel has been rejoined breaks open, and fluids from the intestine begin seeping into the body. It's a rare complication, but it can be disastrous, sometimes fatal. Even after years of increasingly better materials—glues, staples, stronger stitches—and increasingly precise surgical techniques, anastomotic leak persists. Some surgeons opt to avoid the risk altogether by performing a colostomy that, unpleasantly, diverts fecal matter into an external bag.

The culprit, it turns out, is usually not the stitches or the surgeon; instead, it's a particular strain of the otherwise commensal *E. faecalis*. In a study published this past May, Gilbert and **John Alverdy**, the Sara and Harold Lincoln Thompson Professor of Surgery, found that the bacterium creates small holes in the intestine at the surgical site, degrading the tissue and weakening the connection. In rats with anastomotic leaks, the abundance of *E. faecalis* ballooned 500-fold. "It becomes like a swarm of locusts," Gilbert says of the microbe. "And it swarms directly to the site of damage in the cell wall, grabs hold of it, and starts to break down the collagen that the body is trying to use to repair the cell damage. It's like going to the scaffolding on a new building and just ripping it apart. And the building falls down."

But why? What makes this friendly bug turn against its host? The answer, Gilbert says, underlines an increasingly inescapable need to reimagine the way medicine is practiced. Not just surgery, but all medicine. And—now that he's talking about it—not just medicine, but modern life more broadly. The cities we build, the buildings we work

in, the food we eat, the homes we keep, the environments where we live our lives and raise our children. All these factors affect the microbes living inside us, which in turn, scientists are discovering, can influence everything from obesity to Alzheimer's to asthma.

So here's what that colorectal surgery looks like to the microbe. When the patient comes to the hospital, the first thing doctors do is blast the intestine with radiation, to kill as much bacteria as possible. Then they pump in intravenous antibiotics to try to get rid of whatever remains. "Again, it doesn't kill everything, but, again, it creates an incredibly hostile ecosystem," Gilbert says. Then the surgery. Doctors cut open the colon, flooding the normally anaerobic gut with oxygen. "The oxygen makes the surviving anaerobic organisms panic," Gilbert says. "It's like poison gas." Finally, doctors seal up the incision and the wound begins to heal itself, siphoning nutrients, namely phosphorus, from the intestine. Suddenly there's not enough food for the microbes.

Gilbert is excited now, waving his arms a bit, shaking the air in front of him. He's at a Starbucks down the street from his UChicago office, gulping down black tea before his next lecture. "Let's look at it from the bacterium's perspective," he says. "It's the last of its kind, right?" Having survived radiation, antibiotics, and oxygen exposure—and along the way having likely selected for a mutation that transforms it into a hardier strain of bug—*E. faecalis* now finds itself robbed of phosphorus and starving to death. "It's like, 'Oh my god, this is a horrible environment!' So this bacterium, he's normally your friend, right, but what do you think it does?" Gilbert asks. "It turns on mechanisms and pathways inside itself for nutrient acquisition." And the best place to find those nutrients? "This lovely, nicely available healing-up area where the body's sucking up all the phosphorus." So that's where the bug goes, and it attacks the wound. "And

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we call that an infection; we call that a pathogen. And we try to kill it off, without realizing what we did to make that pathogen appear.”

Humans are vastly outnumbered in their own bodies. For every human cell, there are 10 cells of bacteria. But until they’re born, babies are sterile. They leave the womb and pass through the birth canal, where they’re colonized by their mothers’ microbiota. After that, children pick up bacteria everywhere they go: from their parents and siblings and other people, from pets, food, clothes, floors, furniture, toys, plants, trees, dirt, and the air all around them. By the time children learn to walk, they’re enveloped, inside and out, by a massive, invisible kaleidoscope of microorganisms, 100 trillion or so. Those microbes—mostly bacteria but also some viruses and fungi—live in our mouths and blanket our skin; they congregate in our nasal passages and ear canals and on the surface of our eyes. More than anywhere else, they inhabit our digestive systems.

Taken together, these organisms are called the microbiome, and they are so pivotal to our health, both its function and dysfunction, that scientists have begun thinking of them as another organ. Indeed, about three pounds of every person’s biomass is microbial; that’s roughly the same weight as the human brain. Friendly microbes living happily in our bodies help train our immune system, help digest our food and absorb nutrients from it, and help keep pathogens at bay. But the role that *E. faecalis* plays in anastomotic leaks is only one example of what can happen when this complex and dynamic community of organisms falls out of balance.

UChicago scientists, including Gilbert, are researching the ways in which “dysbiosis,” a microbial imbalance inside the body, can lead to food allergies and inflammatory bowel disorders. Pathologist **Alexander Chervonsky** studies the link between an absence of certain microbes in the gut and the onset of type 1 diabetes and other autoimmune disorders. He’s also examining how the differing composition of male and female microbiomes may at least partly explain why autoimmune disorders strike women more often than men. Pediatrician **Stacy Kahn** has looked at how fecal transplants, which transfer gut microbes from one person to another, can be used to treat recurrent *Clostridium difficile* infections in children.

Geneticist **Carole Ober** is working to unravel the microbial influence on asthma. For decades, Ober has studied the

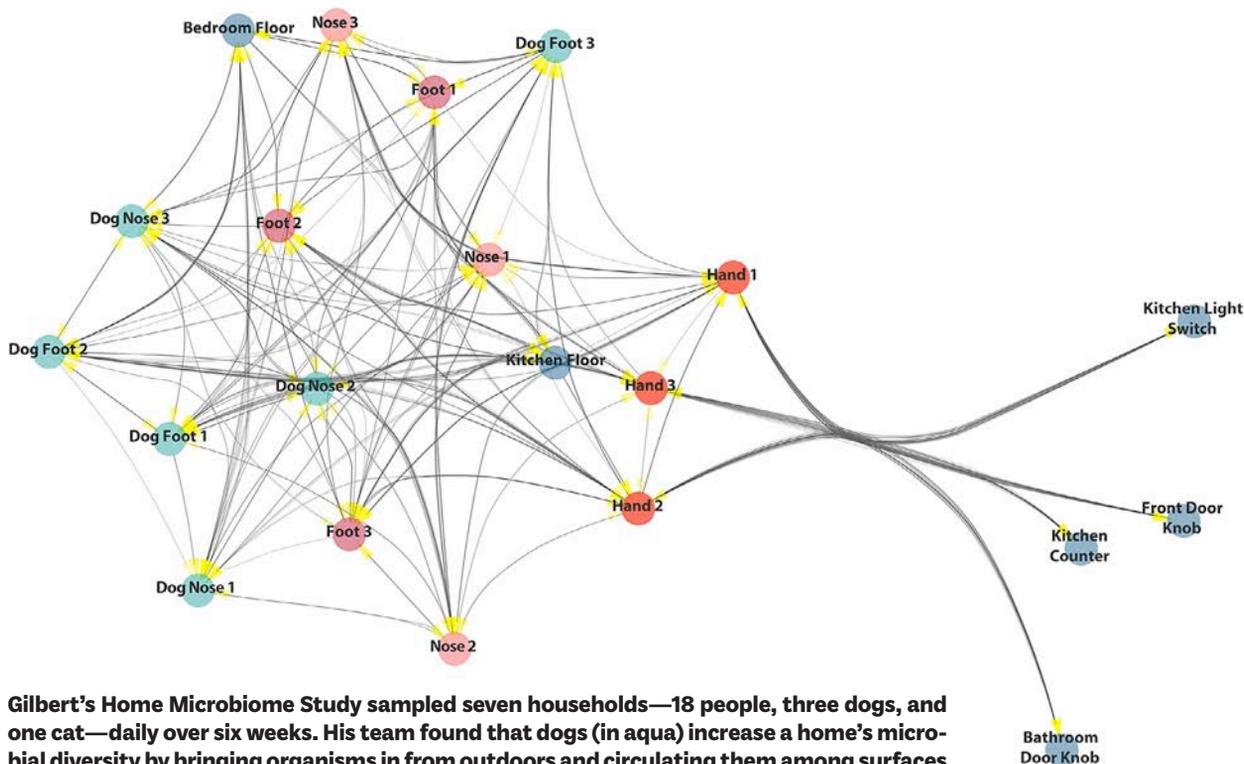


Swabbing faucets and floors and other surfaces gives Gilbert a picture of how microbes move in our environment.

Hutterites of South Dakota and the Amish of northern Indiana, two groups with nearly identical genetic ancestry—both are Anabaptists who live on communal farms—but strikingly divergent childhood asthma rates. At 15 percent, the Hutterites’ rate exceeds the national average, while the Amish Ober studies have almost no asthma at all. Her recent research points to the seemingly protective effects of dust, and the microbes within it, found in Amish homes. New research, not yet published, on which Gilbert is a collaborator, also points, he says, to differing traditional practices that have Amish children working out in the barns at a much earlier age than the Hutterite children.

These days news of the microbiome is everywhere, in scientific journals and newspaper accounts and scholarly symposia. Gilbert gives public talks on microbiome research constantly, sometimes two or three in a week, almost always to packed houses. At community colleges and in university classrooms, in auditoriums and at conferences and recently at a bar on Chicago’s North Side, where he balanced a beer in one hand and a microphone in the other while the Stanley Cup play-offs flickered across muted screens overhead and bartenders paused to listen in. People crowd in to his talks and stay late to ask question after question. How hard is it to change your microbiome with diet? (Pretty hard, but not impossible.) Are microbes involved in cancer? (Possibly—scientists are looking into it.) When will this stuff become part of regular doctor visits? (We’re working on it.) Do probiotics really work? (Sometimes; it’s complicated.)

Microbiome research is still in its early stages. A decade or more ago, genetics seemed like the key to understanding our biological fates. Find the gene and you’ll find the disease. But the picture turns out to be much more complicated. Genes are important, but not by themselves determinative. And the same DNA-sequencing technology that



Gilbert's Home Microbiome Study sampled seven households—18 people, three dogs, and one cat—daily over six weeks. His team found that dogs (in aqua) increase a home's microbial diversity by bringing organisms in from outdoors and circulating them among surfaces (blue) and people (red and pink). The yellow arrows indicate the direction of transfer.

made possible the map of the human genome also made it possible to sequence and analyze the microbes in the human body. A whole new universe sprang into view. “When you think about where medicine has been for 100 years,” Gilbert told a classroom of Northwestern University public health students this past spring, “we know the 40 organisms that make us sick.” Those are the ones whose names are so familiar: tuberculosis, cholera, plague, smallpox, whooping cough. But there are millions of other microbes that scientists are only starting to identify, whose relationships to their human hosts we have yet to decipher.

In his talks, Gilbert blazes through a litany of recent studies demonstrating microbes’ powerful influence. How scientists took a particular organism from the gut of one fruit fly—animals all have their own microbiomes too, as do plants and soil and oceans and every other kind of environment, even man-made ones—and transferred that microbe to the gut of another fruit fly, thereby altering the type of mate the second fly preferred. How scientists working in China isolated a bacterium, *Enterobacter cloacae*, in a 385-pound man, and when they put it into the body of a normal-sized mouse, the mouse gained more than twice as much weight as a mouse on the same high-fat diet without the bacterium. How a study in Italy, which Gilbert coauthored, found that the microbial composition of obese subjects’ saliva seems to suppress wine (and food) aromas, leading them to consume more.

Gilbert tells his audiences that a mouse pup engineered to be sterile, with no microbiome at all, grows up strange, not only physiologically—with an enlarged intestine—but neurologically too. Place a germ-free mouse inside a little

box on a raised platform, and it won’t stay there and hunker down the way mice typically do, hiding from the owls and eagles; instead, it runs to the edge of the platform and quite often jumps off. “It becomes a little crazy,” Gilbert says. But when scientists implanted a microbiome in that same mouse, it reverted to normal, timid behavior.

Sometimes Gilbert opens up about his eight-year-old son Dylan, diagnosed a few years ago with autism, and how Gilbert, almost that very day, called up colleagues across the country to ask for their help, and to offer his, in studying the connection between microbes and autism, which is now a major focus of his lab. He and his colleagues, some of whom were already studying that connection, formed the Autism Microbiome Consortium. In December 2013 they published a companion paper to a study by scientists at the California Institute of Technology identifying a microbe, *Bacteroides fragilis*, that when administered to a mouse with an autism-like syndrome, reversed its symptoms.

“We’re able to essentially cure autism in this mouse model by changing the bacterial flora in the gut lining,” Gilbert told an astonished audience during a 2014 talk on campus. On the strength of that finding, and his own study demonstrating that a dog can exponentially increase the microbial diversity of a home—“they bring the outside inside”—Gilbert adopted a collie–golden retriever mix, which his children named Captain Beau Diggely. “We were primarily interested in what the dog could do for my son’s microbiome and how that could influence his behavior,” Gilbert said. “And it’s had a significant impact—over time.” He paused, adding, “And scientifically significant, not just parent significant.”

IMAGE COURTESY JACQ GILBERT

It's easy to get carried away with all this. The promise seems so limitless. At a panel discussion on the microbiome during Alumni Weekend, Gilbert cautioned people not to get ahead of the science. "We can't go in thinking this is the answer to everything." So little is known, and the complexity is almost unimaginably vast. Mouse models are a long way from human clinical trials.

Still, Alverdy, who collaborated with Gilbert on the *E. faecalis* study and has spent more than 20 years analyzing the behavior of intestinal bacteria, says this research is perhaps the most significant happening now. "I believe that understanding the microbes is how we're going to save the earth," he says. "Really. Truly. They're that important."

For patients who undergo gastrointestinal surgery, and other procedures like bone marrow and organ transplants, recovery depends significantly on how fully their microbiome "reblooms" afterward: how many of their normal gut bacteria, which regulate their immune systems and keep pathogens at bay (remember, Alverdy says, in the wilderness of the body, bacteria are spitting antibiotics at each other all the time), manage to recolonize after the trauma and disruption of surgery. "When you come into the hospital and you have your tooth done or your eye, they whack you with antibiotics, and your bugs go, 'What?!'" Alverdy says. "And they get wiped out for a while." Usually, a few remain, from which the colony can regrow. But the bigger the surgery and the longer the hospital stay, the greater the chances that damage to the microbiome can become permanent.

"The people whose normal microbiome erodes are the ones that do the worst," he says. "When their own normal good guys start to deplete, if they don't come back, you're going to have a real high incidence of not only your cancer coming back but also dying." One solution might be for

patients to "bank" some of their stool, containing a full array of their normal microbes, to be reintroduced to the gastrointestinal tract afterward, the same way patients used to bank their own blood before surgery. Another idea Gilbert and Alverdy are working on is to find a way to deliver a phosphate compound to the surgical site, so that nutrient levels stay high enough to keep the microbes fed while the wound heals. "To stop the bacteria from going pathogenic," Gilbert says. "You wouldn't say that's a healthy microbiome exactly, but you'd say that microbiome is significantly less likely to go rogue and become virulent."

In Alverdy's research of postsurgical patients—both those who develop infections or other complications and those who don't—he looks at which bacteria appear in the body after an operation, but also, he says, "who's missing." He sees the same scenario emerge again and again. "We do liver transplants and we give people immunosuppressant drugs and then they have temperatures after surgery and we give them more antibiotics and kill all the bad bugs," he says. "And then more resistant bugs develop and we give antibiotics to kill all those resistant bugs." The cycle continues: resistant bugs becoming more-resistant bugs. "And then the patient might reject their organ, and then we've got to give them more immunosuppression."

He draws a breath. "I mean, think of what we're doing to the tropical rainforest of our bodies."

Antibiotics have saved millions upon millions of lives. During the 19th century, it was not unusual for a family to lose a child or two to infection. Life expectancy for an American born in 1930 was about 60 years. For a child born today it's 79, and antibiotics have had no small part in that transformation. But scientists are also beginning to understand the toll those life-saving drugs take on the microbial organ. "What we like in infectious disease is, 'Here it is! Here's the bug! Kill it all the time and you'll never have a problem,'" Alverdy says. "But we're realizing that's not how the microbiome works. The paradigm has to change. Because we've been killing things for a long time, and now we have a lot of new problems: multiple sclerosis, neurologic disease, Alzheimer's, autism, inflammatory bowel disease, anastomotic leaks."

UChicago gastroenterologist **Eugene Chang**, MD'76, the Martin Boyer Professor of Medicine, studies inflammatory bowel disease, a term that encompasses several conditions but primarily Crohn's disease and ulcerative colitis. Fifteen years ago, Chang pivoted unexpectedly into microbial research and retooled his whole laboratory to pursue it. Studying a group of genes called heat-shock proteins, which protect the gut against injury like that caused by inflammatory bowel disease, he discovered that microbes provide the signals that regulate

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those genes. “They’re absolutely required for maintenance of this particular set of genes in our body. And without these genes, we’re susceptible to disease,” Chang says.

Recently Chang and postdoc **Vanessa Leone** found that gut microbes influence circadian rhythms, the sleep-wake cycle that plays a role in metabolism and tells the body when to burn energy and when to store it. “Vanessa found that over 1,000 genes in the liver”—which helps regulate the circadian clock—“are controlled by gut microbes. Think about how profound that is. This has got to be at least 10 percent of your genes in your liver.”

Those microbes, Chang and Leone found, are in turn influenced by what we eat. Modern Western diets—high in fat and carbohydrates, low in fiber and whole grains—alter the microbes involved in circadian rhythms, Chang says. “It ablates that rhythm, and that creates an imbalance that changes the metabolic set point of individuals,” the baseline rate at which the body burns calories. “We think it’s a mechanism that promotes obesity and metabolic syndrome.”

Meanwhile, working with researchers at Argonne and the University-affiliated Marine Biological Laboratory in Woods Hole, Massachusetts—the computational tools developed at MBL and Argonne’s high-through-put genome sequencing technology make possible much of the microbiome research at UChicago—Chang is learning that some patients aren’t “wired correctly” to react to pathogens in the gut. And those pathogens are associated with ulcerative colitis. “There’s almost certainly some kind of miswiring of their circuitry that leads them to respond inappropriately to microbes in general, but in particular maybe to these types of pathogens,” Chang says. The bad bugs seem to have genes that can generate a “cloaking device” that allows them to elude the immune system. This research is early and ongoing. “We need to get more patients,” Chang says, “but it’s very exciting.”

Some of the most promising discoveries have come in the realm of allergies. Particularly food allergies—peanuts, tree nuts, fish, shellfish, milk, eggs, wheat, and soy are the big ones—which have risen dramatically, and somewhat mysteriously, over the past two decades. Last year, UChicago immunologist **Cathryn Nagler**, the Bunning Food Allergy Professor, identified a particular class of gut bacteria, *Clostridia*, that seems to protect the body against allergies by preventing allergens from getting into the bloodstream.

Like her colleagues, Nagler blames, in part, the overuse of antibiotics, with its practice of wiping out the good bacteria with the bad. But for allergies, and perhaps other maladies as well, the trouble may begin much sooner, at the moment a person is born. Humans are evolved to get their

starter microbial culture, their “sourdough bread,” as Gilbert calls it, from their mothers’ birth canals. But that only happens if they’re delivered vaginally. When children enter the world, they’re colonized by whatever microbial community they first touch. For those born by cesarean section, that initial contact is not with the mother’s birth canal but with her skin—or with the doctor’s. Both have very different sets of microbes. *Clostridia* typically aren’t among those bacteria that babies acquire in the birth canal—they arrive later, picked up from the outside world—but they rely on the founding microbes to establish a climate in the gut where they can grow. Says Nagler, “Cesarean section is a major environmental factor associated with allergic disease.”

A second blow to an infant’s microbiome may come in the form of sterile formula. “There’s this beautiful interplay between the microbiota and breast milk,” Nagler says. Gilbert, a collaborator of Nagler’s, often describes it in his talks. “Evolutionary transcendence,” he calls it. “A perfect probiotic.” The mother’s body “recruits” bacteria from the gastrointestinal tract, the vagina, the mouth and deposits them, intact and alive, in the breast duct. “So the breast milk comes out with a complex microbiome and a probiotic,” Gilbert says. “It’s not sterile. *So* not sterile. It’s designed to elicit an immune response in the baby’s gut, causing an improvement, a training of that baby’s immune system.”

But like antibiotics, C-sections have saved many lives. And some babies cannot be breast-fed. Nagler and her collaborators—biotechnologists, nanotechnologists, and pharmacologists among them—are working toward a probiotic that might protect children against food allergies. “The best chance of this working,” she says, “is to introduce it early in life.” During a child’s first two years, the microbiome is plastic; it’s still forming and changing and would be more receptive to the bacteria in a probiotic. “And that can shift its course.” In adults with a firmly established community of microbes, it’s harder for new bacteria to gain a foothold.

Probiotic is kind of a conjuring word these days. When Gilbert speaks in public, people almost always ask him about them. Does he recommend taking probiotics? Does he think they really work? Is that where all this research is headed? The answer is, essentially, yes and no. For specific disorders, like food allergies—or, perhaps, autism—probiotics carrying specific microbes might offer an effective solution, a good stopgap, he says, to strengthen or suppress the immune system as needed. But simply for maintaining robust everyday microbial health? There’ll probably never be any one pill or probiotic, or cup of yogurt, for that.

That’s because there’s really no such thing as a single, specific healthy human microbiome. Microbiomes vary widely, based on genetics, geography, diet, and lifestyle. Everyone has their own, and tending to it will require precision medi-

cine, Gilbert says, therapies tailored to the individual. One of his far-off schemes involves a toilet that samples its user's stool and monitors it for microbial changes. Every morning the toilet could calculate what kind of food would rebalance the bugs in a person's gut that day. "I like that idea a bit more," he says, "that we can treat the microbiome not by swapping out individual members"—in other words, giving probiotics to engineer a specific population of microbes for everyone—"but by treating the bacteria themselves as components that need to be kept happy." He pauses. "So, a happy microbiome might actually be a real thing."

Gilbert keeps talking. ("I'm a tangential human being," he likes to say.) It turns out he does have ideas for other, broader improvements for our population-wide microbial well-being. Mostly those ideas revolve around a single imperative: more microbes, everywhere. Our lives are too sterile, he says, and counter-intuitively, that leaves us more vulnerable. A study called the Hospital Microbiome Project demonstrates that idea. Starting in early 2013 Gilbert and a small army of grad students, postdocs, and research assistants spent a year taking a microbial census of the University's new hospital pavilion, the Center for Care and Discovery. They arrived before the doors opened to patients, and with cotton swabs they took samples from floors, beds, linens, sinks, computers, nurses' stations, and air vents, and, after the facility opened in February 2013, staff, patients, and doctors too. They repeated this several times every day for 365 days and watched as the hospital's ecosystem of microorganisms changed over time. They'll be analyzing the data until probably 2016, Gilbert says, but some early results are in.

"As soon as the hospital opened," he said during one talk, "the human microbiome crept in, and it made it much more

diverse than it was before, more microbial organisms, but a lot more human pathogens." No surprise there, but Gilbert's been thinking since then about how to reduce those pathogens—how to create a hospital ecosystem that's less hazardous to the people inside it. More microbes, he thinks. "If I throw a pathogenic organism onto the floor and the floor's perfectly sterile, it might die. But it will be viable for a period of time, and while it's viable, it's likely to be transmissible. But if I throw it onto the floor and the floor's covered in a rich microbial ecosystem, it's got nowhere to go. There's not real estate for it to take up home."

Humans evolved living in places covered with microbes. Only in the last century or so have we come so completely indoors. Today, most Americans spend 90 percent of their time inside; for babies that number is even higher. "We built these buildings to make them as biologically horrible as possible," he says. "These environments are designed to kill bacteria and fungi. They're dry. They're full of nonporous surfaces. The temperature is controlled." But it hasn't fully worked: pathogens still get in, and if the environment is otherwise microbially dead, there's plenty of real estate for them to cause havoc. "What if I could change that?" Gilbert said recently to a group of UChicago undergraduates. "What if I could create wood structures or carpets or buildings that were microbiologically active instead of being deauperate like they are now? What if we could change HVAC systems so we were all being constantly bombarded by a rich, diverse, healthy microbiome? That's where we want to push the research."

In December 2014 Gilbert and Canadian biologist Josh Neufeld published a short paper in *PLoS Biology* called "Life in a World without Microbes." Humans have been trying to eradicate germs from their bodies and their environments ever since microscopes made it possible to detect them. What if they all just disappeared? At first, we might not notice, the authors write. But pretty quickly, things would start to go wrong. Gilbert and Neufeld describe rapidly accumulating organic waste, stagnating oceans and soils, a swift uptick in global warming. The biogeochemical cycles that circulate nitrogen, carbon, oxygen, and water throughout the planet would come to a halt. So would photosynthesis. Humans and animals would be born with shrunken hearts and lungs and neurological problems. Small pockets of people might survive for a while, but in the end we'd all be doomed.

Without our microbes, we're just not ourselves. ♦

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To read more about Jack Gilbert's research on microbes in animals and environments beyond the human body, see mag.uchicago.edu/microbial.





At convocation, one journey ended and another began for some 3,300 graduates. How did it feel? Their faces told the story.

convocation

OF JOY IN THE MAKING

BY LYDIALYLE GIBSON
PHOTOGRAPHY BY DAN DRY

ater in the day there would be thunder and rain, but at 9 a.m. on June 13, there was a bright sky and a light breeze, and a giddy, fidgeting line of College almost-graduates—1,228 black caps and black gowns and beaming, slightly stunned faces—stretching out along two blocks of Ellis Avenue, from Levi Hall to Mansueto Library. Waiting.

Then the bagpipes skirled into song and the procession to the main quad began, marching toward the University of Chicago's 523rd Convocation. Graduate degree recipients flowed in from adjacent quads, at Hull Gate and Harper Library, and the College students entered from the back. Stretching for the best views, waiting parents and loved ones waved and shouted and raised their cameras.

It took just over 30 minutes for the last students to file in and find their seats. As they walked past in a steady parade, it was hard not to think of the hours and years that had led each of them to this day: the time spent in class, in the library, in the laboratory, in the labor of their own minds. The midterms and finals weeks and weekend nights and all-nighters. How many times must these students have traced this same path, backpacks laden with books and notebooks and half-written papers? Now here they were again, anew.

"There is an essential human need to make things, and to communicate them to others," composer **Shulamit Ran** told the graduates a few minutes later during her convocation address. "If we can engage in the pursuit of the beautiful, then we have wealth of the kind that sustains our spirits and uplifts our souls." The Andrew MacLeish Distinguished Service Professor of Music and artistic director of UChicago's Contempo music collective, Ran titled her speech "Why We Make Art."

"We are all ennobled by the active pursuit of beauty," she said. But neither the pursuit nor the beauty is easy. "Are you with us for the duration, or do you tune out, thinking that the function of art is to soothe and entertain you?" she asked. Making art—in whatever field or discipline—requires toil and rigor. The agony is often disproportionate to the flashes of ecstasy it



Above: The main quad, all dressed up in black. Below, clockwise from top left: "Set your goals far and high and be willing to go to the end of the earth to achieve them," composer Shulamit Ran advised in her convocation address, "and may you always find joy in the sheer act of doing"; President Zimmer and Dean Boyer award a diploma to one of the College's 1,228 graduates; stacks of diplomas await their owners; celebrations and cell phones were ubiquitous throughout the day.





Clockwise from top left: A face above the crowd; every kind of camera was pressed into service, sometimes more than one at the same time; among the varieties of pride and joy on display, parental pride may have been the most joyful; students pass through Hull Gate once more, this time as University of Chicago graduates.

We seek understanding that is complex, expandable, and fluid, rather than simple and rigid, an understanding that reflects an analysis rather than ideology.

yields. “The road is arduous, sometimes humbling,” Ran said, “which is why at the core of it all, there must be joy in the making itself.”

Afterward the morning turned to the business at hand: the conferring of degrees. One by one the deans of the divisions and professional schools stood up, called their students to their feet, and asked President **Robert J. Zimmer** to declare them new holders of master’s degrees and PhDs, JDs, and MDs. One by one Zimmer welcomed each group into “the ancient and honorable company of scholars.”

Then **John W. Boyer**, AM’69, PhD’75, dean of the College, stepped to the microphone, to an eruption of cheers. He smiled, waited, gently waved the students quiet. From the front of the stage, he said: “May I ask candidates for the degree of bachelor of arts or bachelor of science in the great Class of 2015 to stand and be recognized.” They did. And they cheered again, louder, longer. Some snapped selfies; some waved to Boyer. Zimmer, smiling too, declared them all College graduates.

In his closing remarks, before students and their families broke for lunch and the afternoon diploma ceremonies, the president described the kind of education the University instills. “We seek understanding that is complex, expandable, and fluid, rather than simple and rigid,” Zimmer said, “an understanding that reflects analysis rather than ideology.” The University and its culture, he added, “are renewed every day by the work of its faculty, students, and staff.” Congratulating all 3,272 newly minted graduates, he said: “I wish you all good fortune and happiness in the years ahead. Enjoy your coming adventures, wherever they may lead you.” ♦



glimpses

HOWARD S. BECKER

BY CARRIE GOLUS, AB'91, AM'93

In 1948, 19-year-old **Howard S. Becker** was playing piano in a bar on West 63rd Street six nights a week. He was also a graduate student in sociology: "I thought, well, if I write down what happens there, those are field notes." Becker's (PhB'46, AM'49, PhD'51) early observations about jazz musicians eventually grew into the groundbreaking *Outsiders: Studies in the Sociology of Deviance* (Free Press of Glencoe, 1963), one of the first books to establish "labeling theory." Deviance, that theory held, was not an innate quality of someone's actions, but an interaction between the so-called deviants and those who labeled them that way. Becker argued that deviants are not simply breaking rules set down by mainstream society ("squares," in jazz musicians' argot). Instead, musicians and other deviants follow different, but often equally strict, rules of their own. In July the University of Chicago Press will reissue the *Outsiders* chapter "Becoming a Marijuana User" (originally published in 1953 in the *American Journal of Sociology*) as an 88-page book.

During his long, multifaceted career Becker has written more than two dozen books—about education, art, and sociology itself. His most recent book, *What About Mozart? What About Murder? Reasoning from Cases* (University of Chicago Press, 2014), takes apart what he calls "killer questions" aimed at his work on art and deviance.

Becker, who lives in San Francisco but spends autumns in Paris, is especially well regarded in France. In June he was named a Chevalier de L'ordre des Arts et des Lettres, one of France's highest cultural honors: "Isn't that cute?"

In an interview with the *Magazine*, edited and adapted below, Becker reflected on his life and career.

All that jazz

I started playing the piano when I was maybe 14 years old. I played with a bunch of kids who didn't play any better than I did, for people our age who couldn't afford real musicians.

Then at some point I bumped into some guys—by this point I was about 15, maybe even 16—who were working at a strip club, McGovern's Liberty Inn, at Clark and Erie. The band was four pieces: two saxophone players, a piano player—that was me—and a drummer. And the two saxophone players, one played piano and one played drums, so

there were three people on the stand at any one time. We just rotated all night, from nine to four. My father had a fit.

The reason I could get a job was that everybody who was over 18 was in the Army. The rest of the band were 4-F.

I worked with some very wonderful bands. Jimmy Dale, the band that rocks. It was racially mixed, which meant effectively that we only played black dances. I got to be very familiar with the bright light area of the South Side. I was quite at home on 47th and South Parkway [now Martin Luther King Drive].

The academic side of College life

I came [to the College] in my third year of high school. Do they do that anymore? It was wonderful. I felt like I'd been released from prison.

In humanities we read Virginia Woolf, George Eliot, I think. I got a real introduction to great literature. My father was a great reader. Sometimes he used to refer to himself as a "wordsmith."

I don't think anyone thought [playing jazz] was that unusual. The College, everything was unusual. You'd be walking across the quadrangle and you'd walk by some kid who looked like he was 11 years old and maybe was as old as 12, and he was conducting a learned discussion about Sigmund Freud with somebody. That kind of thing. People did all sorts of things.

So there I was, 18, and I have a bachelor's degree. Of course my father would not hear of me quitting school. I

IT ALWAYS ASTOUNDS ME WHAT PEOPLE READ INTO WHAT I WRITE. THERE ARE ALL KINDS OF GOOFY INTERPRETATIONS.



Howie Becker playing piano with the Bobby Laine Trio at the 504 Club on West 63rd Street, circa 1950. Dominic Jacometti is on the drums and Bobby Laine on the tenor saxophone.

was all set to go full-time into playing in bars. So I thought, well, I better go to graduate school.

Marijuana use and social control

Anybody who ever knew a junkie knows that being a junkie is no solution to any problem. It just creates a barrel of new problems. Marijuana, if you knew the people who used it, it was just patently obvious that that wasn't true. It wasn't nutty people who were suffering and have to assuage their difficulties with drugs. They're having fun.

I was the first person to write a scientific article about marijuana that spoke not of marijuana *abuse* but of marijuana *use*. And everybody who read it saw that immediately as a very daring thing to do.

L'École de Chicago

I had started to work on *Art Worlds* (University of California Press, 1982) around 1970. A good friend gave me Raymonde Moulin's book on the art market (*Le Marché de la peinture en France*, 1967). I didn't know French, but I knew how to do it, because I'd done it with Portuguese. You look up every word on the first page, then 98 percent on the second page, and you get to the end of the chapter, you're reading.

Eventually [Moulin] invited me to spend a month at her research center in Paris. At the same time another group, who called themselves the "Chicago School of Paris," had translated *Outsiders*. So those were two of the connections I had to France.

If you read the language, people give you things to read.

And if you read them, they're very pleased and you have something to talk about. Generally when French sociologists deal with Americans, they have to learn English and they read what the Americans write, and the Americans never get around to reading what they write.

Books in progress

Well, yes. It's a bad habit. There are two different projects.

One of them is concerned with errors in sociological data. Obvious things, like the interviewers for large survey organizations, a certain number of them cheat. I'm just going to start a big chapter on the census, because the census is wonderful as a source of problems. How do you measure race? That's a well-known one. The census solution is very straightforward: whatever they say. Anyway, that's the one project.

I have a good friend in Paris named Daniel Cefaï, a sociologist. He's interested in the sociology department at the University of Chicago when I was a graduate student, which sometimes is given the name of the "second Chicago school." It's me and Erving Goffman [AM'49, PhD'53]; Eliot Freidson [PhB'47, AM'50, PhD'52]; and Joseph Gusfield [PhB'46, AM'49, PhD'54]. I was the living witness. So we decided we needed to write a book about that.

What readers misunderstand about his work

I'm tempted to say everything and nothing. It always astounds me what people read into what I write. There are all kinds of goofy interpretations. He says this, therefore he must mean that. It's particularly terrible in France. ♦

law

CRIMINAL INJUSTICE

Jonathan Rapping, AB'88, inspires attorneys who represent indigent clients to fight a system stacked against them.

BY JASON KELLY

Jonathan Rapping met the boy in his jail cell. He was 15 years old, awaiting trial on a murder charge that carried a sentence of “juvenile life,” imprisonment until age 21 at Washington, DC’s notorious Oak Hill Youth Center.

In their first meeting, Rapping, AB’88, then a young lawyer with the Public Defender Service for the District of Columbia, encountered shattered fragments of a person. The boy was quiet, “almost comatose” with grief and remorse for what he had done. Playing with a gun, he had fired it accidentally, killing his best friend.

That tragic instant snuffed out one young life and threatened to ensnare another in the flytrap of crime and punishment. Rapping and a colleague, assigned to represent the youth, were his protection against that fate.

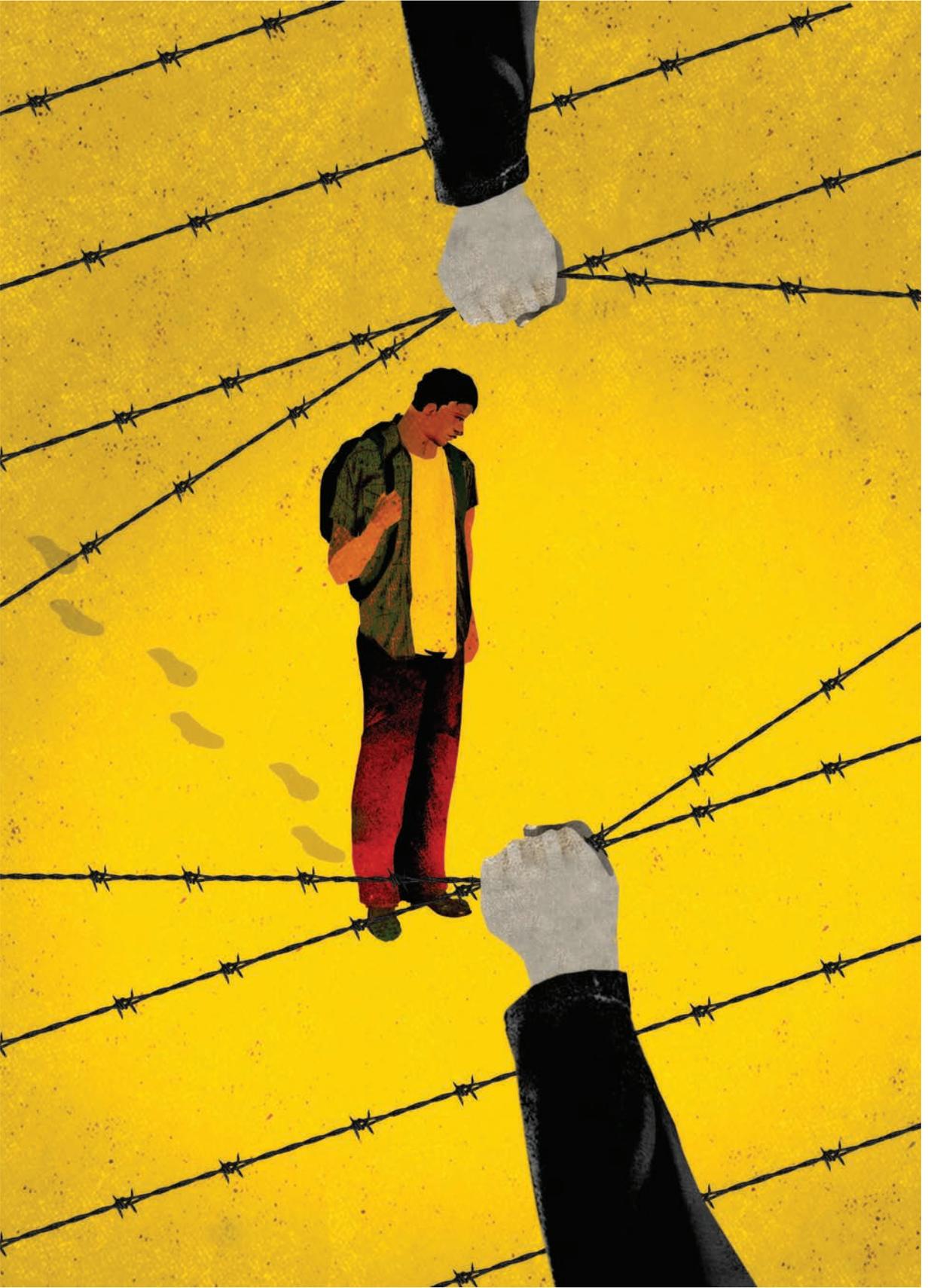
Five months into his job, Rapping stood where he’d always wanted to be—between the full weight of the state and the people most likely to suffer its brunt. Rapping’s sense of himself had always revolved around a vision of preventing injustice.

His activist mother, Elayne Rapping, had taken him to protests—opposing the Vietnam War, supporting women’s rights, among others—since he was small. One of his earliest and most formative memories happened at his mother’s side in a courtroom where she had taken him to support demonstrators who were facing charges.

Rapping tells that story now, in the third person with the emotional register of a closing argument, to a group of Maryland public defenders he’s training through his foundation, Gideon’s Promise. “She taught her son to have a healthy dose of skepticism about authority,” he says, “and that six-year-old boy took his water gun and he put it in his waistband and he went to the courthouse.”

As he speaks, Rapping moves with deliberate intent, assuming a sturdy posture and making eye contact with the colleagues occupying a semicircle of chairs around him. “As they sat in that courthouse and those three friends of the family sat up at the defendants’ table, he noticed that there were police officers surrounding the courtroom.”

The choreography and body language are as much a part of what Rapping wants to convey as the details of the story. He’s communicating emotion, not just information. “And all of a sudden the lights went out. There was scuffling and



there was noise and he could feel himself being bumped. And when the lights went back on, he looked over and saw his mother's sleeve had been pulled out of her shirt."

All 16 lawyers in the room will have to do this in turn, reach into their pasts and relate a story about how they decided to become public defenders. "At that moment," Rapping continues, "he knew that whatever he did with his life, he would be on the side of those men who were accused and not the people who would turn out lights and beat citizens for supporting protesters."

Much of Rapping's legal training came at the District of Columbia's Public Defender Service, where he initially worked as a law student at George Washington University. He haunted the office from the summer after his first year until he graduated in 1995 and became one of its staff attorneys. In the dogged and idealistic public defenders he assisted, Rapping saw what he wanted to become.

And that's exactly what he became, first in the courtroom, and now as a trainer. With Gideon's Promise, which Rapping founded in 2007 with his wife, teacher Ilham Askia, he seeks nothing less than to transform a judicial culture that often overburdens the lawyers he most admires and belittles their clients. Last year he received a \$625,000 MacArthur Foundation Fellowship for his work.

During a dark moment two decades earlier he wondered whether he could continue doing the work at all.

The mitigating circumstances in the 15-year-old's case offered a textbook opportunity for judicial compassion. The killing was an accident. The boy expressed the deepest regret. At his age, years locked away in Oak Hill's dangerous warrens would threaten his future far beyond any risk he posed to others on the outside.

As the boy opened up to his lawyers, he showed not only remorse and fear but intelligence, compassion, ambition, and gratitude for their help. "He never meant to hurt anyone," Rapping wrote in a 2012 article, "and would almost certainly have nothing to do with guns again."

One boy was dead at the hand of another who was clearly suffering. Rapping considered it his responsibility to prevent the criminal justice system from compounding the damage with a disproportionate punishment.

His arguments were unpersuasive in court. A judge found the boy guilty and sentenced him to detention at Oak Hill until he turned 21. After his client was led away, Rapping went back to his office, shut the door, turned off the lights, and sobbed.

"That was the first person I felt personally responsible for who was locked up, and his life would be altered for-

ever," he says. Rapping figured he was finished as a public defender. The emotional toll was too great, the capacity to help too small. No matter how hard he fought for his clients, he could not protect them from the system.

Rapping's devastating first defeat as a public defender has become an important chapter in the narrative of his crusading legal career. Over time he came to learn, from his fellow attorneys and from the realities of a tough-on-crime judicial atmosphere, that winning and losing could not be the measure of a public defender's success. "What's important is that our clients know they had someone there fighting for them," Rapping says now. The verdict notwithstanding, his more experienced colleagues insisted, the boy "was really lucky to have lawyers who cared so much."

Rapping didn't realize how unusual that was—not having public defenders who care, but having public defenders with the time and ability to express the depth of their concern for their clients. Washington was an exception to the working conditions of many state and local public defender systems, where cases accumulate until the time available for each can be measured in minutes.

A 2013 *Mother Jones* story reported some numbers: public defenders spend an average of 59 minutes per case in Atlanta. In Detroit, 32 minutes. New Orleans? Seven.

Such conditions thwart lawyers from fulfilling their most basic ethical responsibilities to clients, but many lawyers can't refuse cases without putting funding for indigent defense, or their own jobs, at risk. Among other structural advantages in Washington, a statute ensures that the Public Defender Service handles no more than 60 percent of the jurisdiction's eligible cases. The rest are assigned to private defense attorneys.

In a 2011 book, Norman Lefstein, professor of law and dean emeritus at the Indiana University School of Law, Indianapolis, cited Washington as a model, but one that few others follow. The 1963 Supreme Court case *Gideon v. Wainwright* enshrined the constitutional right to an attorney (to mark the case's 50th anniversary, Rapping changed his foundation's name in 2013 from the Southern Public Defender Training Center to Gideon's Promise). Lefstein details the ways that right has been effectively denied in the majority of US jurisdictions. As former FBI director William S. Sessions puts it in the foreword: "Widespread resistance to the clear mandate of the Constitution ... created one of our legal system's most shameful deficiencies."

Trying cases in Washington, and later directing the office's training program, Rapping experienced few of those deficiencies. It wasn't until 2004, when the State of Georgia recruited him to train its public defenders as part of a reform process, that Rapping discovered how pernicious they could be.



In Rapping's 2014 fellowship citation, the MacArthur Foundation said his "effective and replicable model of teaching, mentorship, and professional networking is an innovative prescription for equitable legal defense."

In Georgia, Rapping instructed his first training group on the basics of filing suppression motions—excluding evidence from illegal searches or confessions—a routine trial tactic. When he finished, one of the state's new chief public defenders, put in place to implement change, said he appreciated the presentation, "but we can't do that where I come from."

Rapping reassured him that he could, and made a joke about the federal Constitution applying in Georgia, only to discover that, in effect, it didn't. "No, no, we can't do that where I come from," the public defender said, "because when we file motions our judges get mad."

This, Rapping says, from "one of these leaders who was handed the mantle to reform indigent defense in Georgia." The scale of the job he had taken on expanded before his eyes. He realized he wouldn't be just training attorneys. He would be trying to change a culture that treated public defenders as an impediment to the system's efficiency.

WHAT'S IMPORTANT IS THAT OUR CLIENTS KNOW THEY HAD SOMEONE THERE FIGHTING FOR THEM.

Defendants often find themselves under pressure to enter guilty pleas—accepting a criminal record that could compromise their parental or employment rights forever—for the sake of avoiding a trial. Paying bail might be impossible, and waiting in jail for a trial could have the same consequences for family and work. Entering a plea can offer a faster route out of the system.

Attorneys with minimal time to make a case, however winnable it might seem, face the same perverse incentives. There's a phrase for the lowest common denominator of legal defense that emerges in those circumstances: "meet 'em and plead 'em."

Systemic problems like these were so widespread that, to even begin addressing them, he felt an umbrella organization was needed to establish a network of support. With funding from a Soros Justice Fellowship, Rapping formed the Southern Public Defender Training Center.

Today the foundation has partnerships with more than 40 public defender offices in 15 states. Maryland is its first statewide partner, an undertaking that required Rapping to take a leave during this past academic year from teaching at John Marshall Law School in Atlanta, where he's a professor.

Rapping's training sessions run the gamut of client representation, courtroom presentation, legal strategy, and ethical responsibility, but they're rooted in a larger mission. "I think what we really started to focus on was this cultural challenge," he says, "a culture that didn't respect poor people and didn't respect the people who represent them."

To open the March training session in Towson, Maryland, he asks the assembled public defenders for an airing of grievances. Everybody offers at least one.



At a June trainer development conference in Decatur, Georgia, Rapping worked with lawyers and clinical professors of law who themselves teach and mentor public defenders.

“Caseloads.”

“Resources. Like social workers, investigators, people to help prepare our cases.”

“Judges that act like state’s attorneys.”

“The judges who treat the public defenders different from the private attorneys.” Another lawyer expands the point: “And they treat the indigent clients different than the private attorney clients.”

“When the politics of prosecution bleeds into the courtroom.”

“When judges will harm your client based on zealous advocacy.”

Rapping tells them that their first step in the face of those challenges is to refuse to burn out or succumb to the client-processing assembly line. Drawing on a support network, beginning with the nodding heads around them and spreading as far as Gideon’s Promise can reach, will help them endure the inevitable dark days on the job.

If Rapping still has those days, you’d never know it.

Shaved bald with a salt-and-pepper goatee, wearing jeans and an untucked shirt or a hoodie, Rapping looks and talks like a high school football coach. He addresses groups of lawyers with the motivational demeanor of a locker room speech.

As the Maryland public defenders blearily settle into their seats early on a frigid Sunday morning in March, Rapping greets them with rhythmic clapping of the “everybody now” variety. Soon they’re all applauding in unison.

Rapping acknowledges that he’s probably the only one in the room who can think of no place he’d rather be at 8:30 on a Sunday morning. “He does not sleep,” his wife says. “He sleeps five hours a day, maybe. Six is like the best. He’s up at one in the morning and he’s working. A lot of us get emails at 3:30 a.m.”

His enthusiasm is boundless—and infectious. A couple of the Maryland public defenders admit to him that they were skeptical about the training and dreaded sacrificing precious days off, but Rapping convinced them of its value. “He’s a rock star,” says Maryland’s chief public defender, Paul DeWolfe, gesturing toward a clutch of attorneys clustered around Rapping after one of the sessions.

It’s not so much Rapping’s commitment to the ideals of public defense work, or his commiseration with these like-minded lawyers, that attracts them. It’s his commitment to the people they work for: the clients.

At its core, Gideon’s Promise exists to give public defenders the strength to put their clients first. Rapping’s training techniques revolve around the idea that the lawyers should always be reminding judges and juries that their clients are human beings, not just numbers to be crossed off a docket.

To that end, amid discussions of legal strategy and professional ethics, his sessions include lessons in how to respect the humanity of the accused and convey it to the court. He quotes poet Maya Angelou and death-penalty opponent Sister Helen Prejean.

Each of the trainees tells their own story, as Rapping did, of how they became public defenders. Not the bullet points on their résumés, but the story. The moment that set them

on their journey to this professionally frustrating and often personally wrenching job.

For some the story is searing, for others humorous or mundane. Most of the 16 attorneys, convened from offices around the state, don't know each other well, if at all. They receive only understanding from the group, but this exercise is more than a rhetorical trust fall to build camaraderie. It's about making an otherwise dispassionate audience—with judges and juries in mind—feel for the subject of the story.

Rapping applauds all the lawyers when they finish, praising their candor. Then he critiques. Maybe the presentation needs work, or the structure. How they present themselves in word and deed—diluting their impact by meandering to the point, weakening their body language by shifting from foot to foot—comes under close scrutiny.

Later Rapping puts them into pairs. He instructs them to interview each other about a major moment in their lives unrelated to their legal careers. Unbeknownst to them when they scatter to talk privately, each will have to relate the other's story in the form of an argument before a judge at a mock bail hearing.

With less than 30 minutes to interview the other person before alternating roles, the information the lawyers can gather is necessarily limited. This simulates the time constraints public defenders often face before an initial court appearance.

They are the ER doctors of the legal profession, forced to perform triage. “You get a hundred gunshot victims,” Rapping says, “and you've basically got a tweezers and some thread, some Band-Aids, and some Bactine.” If they can save a handful of lives under those conditions, it's a triumph. Teaching them how to improve that success rate with the limitations imposed on them is at the heart of Gideon's Promise.

**YOU GET A HUNDRED
GUNSHOT VICTIMS,
AND YOU'VE BASICALLY
GOT A TWEEZERS
AND SOME THREAD,
SOME BAND-AIDS,
AND SOME BACTINE.**

Rapping also wants them to overcome the self-condemnation many feel for not being able to help the vast majority of clients, which even the most diligent public defender often feels powerless to do. “Because that's what drives you out of the game,” Rapping says, and then none of the clients get help. “So how do you forgive yourself for things beyond your control and continue to do what you can?”

When they met, Rapping gave Askia his business card. “Oh god, he's a public defender,” she remembers thinking. “I'm not going to like this guy.”

In Askia's experience growing up in Buffalo, New York, public defenders were not advocates in any sense of the term. Her perception of them back then was that “they just want to put poor black people away.”

The bitter memory of what happened to her father forged that impression. One day a police officer recognized his distinctive gait and, recalling a years-old warrant for armed robbery, stopped him on the street.

After answering a few questions to confirm his identity, Askia says, he was arrested and “given a public defender who didn't tell my father's story at all, didn't represent him well.” That was the story of a man who had grown up with an abusive father, had escaped a checkered past, converted to Islam, married, had three children with another on the way, and who now operated a local fish market.

Askia was 5, the oldest of the kids, when her father was sent to Attica for 10 years. From her perspective, the family never recovered.

Other male family members have had their own encounters with the justice system, and her younger brother is in prison today. She avoided trouble, graduating from Cornell University, earning her master's at Trinity Washington University, and becoming a schoolteacher in Washington, DC. But she carried a disdain for the justice system, even those representing the most destitute of the accused.

Rapping changed her mind. As she got to know him and his colleagues in DC's Public Defender Service, Askia saw a depth of caring that she never imagined.

They shared outrage at the system's dehumanizing effects on the poor and people of color, at the pressure to accept bad plea deals, at the disproportionate sentencing, at the separation of families and the loss of jobs over nonviolent offenses. Public defenders, Askia came to understand, were fighting to protect clients from the stigma that her father bore into and out of prison, and that became a perilous inheritance for his family.

Rapping absorbs the injustice of stories like Askia's into his bones, fortifying him for the fight. Now that they're married, the parents of two children, and partners in running Gideon's

Promise, Askia marvels at how little his business card told her about the man. “Jon is the realest person I know,” Askia says. “That’s why I love him, he’s so real and honest—sometimes too real and honest—but he’s doing it for the right reasons.”

Now, as the foundation’s executive director, Askia is a fierce champion of the public defenders she used to distrust. When he received the funding to make Gideon’s Promise possible, Rapping asked Askia to take a year off from teaching to help him start it. “One year,” she says. “I think I just finished year eight.”

Alison Siegler, LAB’91, calls Rapping a visionary, but she still thinks of him, first and foremost, as a lawyer. That’s how she got to know him, through shared experience deep in the criminal defense trenches.

Siegler, who directs the University of Chicago Law School’s Federal Criminal Justice Clinic, spent the summer after graduating from Yale Law School at the DC Public Defender Service before a federal district court clerkship. As other lawyers had done for him, Rapping took Siegler under his wing and put her to work.

In court, Siegler recalls Rapping standing firm before judges, conveying that, whatever the consequences to him, “I’m going to press what’s in the interest of my client, and I’m not going to be intimidated by your power.” As she sees it, that’s what he’s still doing, but on a much wider scale.

One of the ways Rapping does that is to make public defense a more viable career path for law students. UChicago is one of 19 participants in the Gideon’s Promise Law School Partnership Project, which funds yearlong fellowships for graduates to work in public defender offices that need an infusion of idealistic and dedicated legal talent. After the fellowship, the program guarantees them a job in that office as a public defender.

**I’M GOING TO PRESS
WHAT’S IN THE
INTEREST OF MY CLIENT,
AND I’M NOT GOING
TO BE INTIMIDATED
BY YOUR POWER.**

Like the young attorneys Rapping trains through Gideon’s Promise, these students represent what he considers the leading edge of a modern civil rights movement. Reforming the criminal justice system is not a cause that spurs people to the streets like the outrage over the police killings of Michael Brown or Freddie Gray. But the comparative invisibility of the problem makes it especially insidious. “For every Michael Brown, there are tens of thousands,” Rapping says—“tens of thousands,” he repeats for emphasis—who are arrested, have their rights denied and their lives altered, for relatively minor offenses, if they have committed a crime at all.

“The incarcerated population is almost exclusively poor, disproportionately of color,” Rapping says. “These are populations that, through media, through political campaigns, we have successfully painted as subhuman, and we’ve all bought into that criminal justice narrative. And so no one is demanding justice for these folks, they’re saying just lock them away. And that’s a really hard narrative to change.”

He tells the Maryland attorneys that their generation will have to struggle, standing up to judges who threaten them with contempt of court and advocating for resources in an unsupportive political environment. “You all are going to build a culture, you’re going to build a set of expectations,” he says. “It’s going to be hard for you.”

However far-reaching the vision Rapping brings to Gideon’s Promise, he describes the process of achieving it with a litigator’s realism: “Incrementally, with patience, step by step.”

The problems in the criminal justice system require adaptive solutions, he says, using a management term he has taken to heart. A technical solution would be a new law or rule. Those are necessary—the Voting Rights Act, for example—but not sufficient. Such a step offered a legal tool to advance civil rights in the 1960s, but real change required ongoing moral persuasion to alter the entrenched cultural belief that African Americans should not vote. An adaptive solution.

“The great success would be, down the road, that our lawyers have been at the front line of a larger movement to really change a criminal justice narrative that developed over the last 40 years that is all about demonizing certain communities in an effort to promote tough-on-crime policies,” Rapping says. “Not just changing policies, but changing the story that drove those policies in the first place.”

The constitutional right to an attorney is long settled law, but until society amends the expectation to include the highest quality representation, Rapping believes, the spirit of *Gideon v. Wainwright* goes unfulfilled. And until the system incorporates respect for the humanity of the accused, regardless of their means, he will challenge its conception of justice. ♦

peer review

Snell Hall resident Jacob Frank Scudder, SB 1910, and Kelly Hall resident Winifred W. Conkling, SB 1912, SM 1914, ready to swim in Lake Michigan in 1910.



UCHICAGO PHOTOGRAPHIC ARCHIVE, APP4-02886, UNIVERSITY OF CHICAGO LIBRARY

An accidental curator

BY HARVEY CHOLDIN, AB'60, AM'63, PHD'65

A few years ago I was at an opening of one of the Special Collections Research Center's fascinating exhibitions with my wife, **Marianna Tax Choldin**, LAB'59, AB'62, AM'67, PhD'79, when it struck me: why not have an exhibit on the Chicago school of sociology? I'm a Chicagoan, an urban sociologist, and a UChicago alumnus, so my fascination with the Chicago school comes naturally. When I mentioned the idea to the director of Special Collections, **Dan Meyer**, AM'75, PhD'94, that evening, he thought others would be fascinated too.

A couple of weeks later Dan and I met to discuss the idea further. After a lifetime in academia, I expected Dan to appoint a faculty committee of sociologists, including me if I was lucky. Instead he said, to my surprise, that I would be curating the exhibit.

What was the Chicago school? Over three decades teaching urban sociology I was always aware of the work of University of Chicago scholars in the pre-World War II era. An influential 1915 essay by one of the school's founders, Robert E. Park, conveys the nature of their contributions. In "The City: Suggestions for the Investigation of Human Behavior in the City Environment," Park argued that sociologists had to get out of the library and conduct empirical research, studying the city firsthand. The city, he wrote, should be their laboratory. We planned the exhibition to celebrate the centennial of Park's essay.

Ernest Burgess, PhD 1913, also held this view. His landmark 1925 publication, "The Growth of the City: An Introduction to a Research Project," introduced his concentric zones model of urban growth. Diagrammed in a sort of bull's-eye pattern, the model was reprinted for decades in book after book about cities.

I was particularly inspired by Louis Wirth's (PhB'19, AM'25, PhD'26) paper "Urbanism as a Way of Life," published in the *American Journal of Sociology* in 1938. Wirth joined the faculty after earning his doctorate. His ambitious paper attempts to define the city and explain why city life is as it is. The essay was broad in scope and fearlessly bold. I always started my urban courses and seminars with it and emphasized it in the urban sociology textbook I wrote.

Park and Burgess sent hundreds of students—two of whom became my professors, Everett Hughes, PhD'28, and Philip Hauser, PhB'29, AM'33, PhD'38—into the city to do research. Using the city as their laboratory, they one by one completed theses and dissertations that became classics of sociology. The titles were evocative: "The Taxi-Dance Hall," "The Ghetto," "The Hobo," "The Gang." The University of Chicago Press established a series in sociology and published these along with many other dissertations.

My unexpected task now was to delve into the archives and see what remained from this seminal time and place in sociology. There were disappointments. Park's archive had very little, and Wirth's retained items

mostly from later in his life, after the number of students dwindled at the advent of World War II and the Chicago school drew to a close.

But there were delightful discoveries too. Harvey Zorbaugh's project *The Gold Coast and the Slum* (1929), for example, had a file at the University of Chicago Press. In it were black-and-white snapshots taken in the "slum" of the book's title, Little Sicily on the Near North Side, during his fieldwork. Another press file, for *The Gang* (1927) by Frederic M. Thrasher, AM 1918, PhD'26, held a sociologist's or historian's treasure: a large map of "Chicago's gangland" with hundreds of red dots and triangles showing the locations of the city's boy gangs. Some of the larger ones were the Dukies, Shielders, and West Siders.

A wonderful little archive was that of **James Carey**, PhD'58, who in the 1970s wrote a book on the Chicago school, tracking down its living members, men and women who had been students then or their surviving spouses. Carey got them talking candidly and informally about their peers and professors and the texture of life during the Chicago school, and later donated transcripts of his interviews to the archive.

Ruth Shonle Cavan, PhB'21, AM'23, PhD'26, the author of *Suicide*, recalled that "we didn't have any money to have any paid commercial recreation. So most of our free time was either spent in the library or little groups discussing everything under the sun. ... It came as near to a community of scholars as I have ever experienced." Norman Hayner, AM'21,

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NOTES

MEMBERS OF THE ACADEMY

The American Academy of Arts and Sciences' newest class includes seven alumni: legal scholar **Jane C. Ginsburg**, AB'76 (Class of 1977), AM'77; **Richard Kurin**, AM'74, PhD'81, the undersecretary of history, art, and culture at the Smithsonian Institution; philanthropist and chair of the University's board of trustees **Joseph Neubauer**, MBA'65; **Teresa A. Sullivan**, AM'72, PhD'75, the president of the University of Virginia; US district court of appeals judge **David S. Tatel**, JD'66; marine biologist **Peter C. Wainwright**, PhD'88; and economist **Iván Werning**, AM'99, PhD'02.

SCI-FI FANTASY

In May science fiction author **John Scalzi**, AB'91, signed a \$3.4 million, 10-year, 13-book deal with his longtime publisher, Tor Books. The books, 10 adult novels and three for young adults, will include sequels to Scalzi's Old Man's War series and his recent *Lock In* (Tor Books, 2014), as well as a new "space opera" series set in the far future.

A GAGGLE OF GUGGENHEIMS

In 2015 seven alumni were named Guggenheim Fellows, including art historian **Matthew P. Canepa**, AM'98, AM'99, PhD'04; religious historian **Anthony Cerulli**, PhD'07; American studies scholar **Steven D. Lubar**, AM'77, PhD'83; sociologist **Monica Prasad**, AM'95, PhD'00; architect **Michael Sorkin**, AB'69; religions scholar **John S. Strong**, PhD'77; and historian **Michael Willrich**, AM'92, PhD'97. Since 1925 the John Simon Guggenheim Memorial Foundation has annually awarded fellowships to artists and scholars to help them pursue projects "under the freest possible conditions."

MEMOIR TO THE SMALL SCREEN

Paramount Television and Anonymous Content are creating a pilot episode for a potential TV series based on mortician **Caitlin Doughty's**



WHITE HOUSE HOPEFUL

In April **Bernie Sanders**, AB'64, the junior senator from Vermont, announced that he is running for president. An independent, he caucuses with Democrats and is seeking the Democratic nomination. His agenda includes more financial regulation, higher taxes on wealthy individuals and corporations, and free tuition at public colleges and universities. "People should not underestimate me," Sanders told the AP. "I've run outside of the two-party system, defeating Democrats and Republicans, taking on big-money candidates and, you know, I think the message that has resonated in Vermont is a message that can resonate all over this country." (For more, see "A Political Education," Jan-Feb/15.)

(AB'12 [Class of 2006]) memoir, *Smoke Gets in Your Eyes: And Other Lessons from the Crematory* (W. W. Norton, 2014). The darkly humorous memoir chronicles Doughty's first job, in a San Francisco crematorium, and advocates for greater acceptance of death in Western culture.

INDUSTRIOUS SCHOLARSHIP

Three alumni are in the inaugural class of Andrew Carnegie Fellows, begun by the Carnegie Corporation of New York to support the social sciences and humanities. The fellows, including City University of New York anthropologist **Leith Mullings**, AM'70, PhD'75; Harvard anthropologist **Laurence Ralph**, AM'06, PhD'10; and political scientist **Keir A. Lieber**, AM'96, PhD'00, will each receive up to \$200,000 so they can devote one to two years to researching and writing.

ENGINEERING CHANGE

The World Economic Forum named **Andrea Armani**, AB'01, a 2015 Young Global Leader. The award recognizes under-40 pioneers in all fields who are "bold, brave, action-oriented, and entrepreneurial." A chemical engineer at the University of Southern California Viterbi School

of Engineering, she is known for developing new optical devices and sensors and for mentoring the next generation of scientists.

A SURVIVOR

Spencer Bledsoe, AB'14, has a fresh shot at winning the reality show *Survivor*. After finishing fourth in last year's *Survivor: Cagayan*, he was selected by fans to be a contestant on this fall's *Survivor Cambodia: Second Chance* and take on other fan-picked former contestants.

THE DISSENTER

The American Foreign Service Association has recognized **Samuel Kotis**, AB'85, with its William R. Rivkin Award for Constructive Dissent, given each year to foreign service employees who have challenged the system from within to enact positive change. Kotis, the deputy minister counselor for economic, environment, science, and technology affairs at the US embassy in New Delhi, was recognized for his commitment to raising awareness about air pollution in India and making the issue part of US diplomacy in the region despite resistance from his superiors.

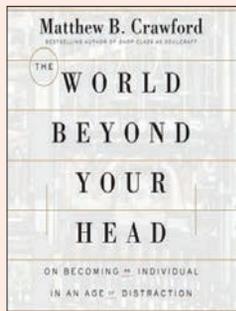
—Helen Gregg, AB'09

RELEASES

The Magazine lists a selection of general interest books, films, and albums by alumni. For additional alumni releases, use the link to the Magazine's Goodreads bookshelf at mag.uchicago.edu/alumni-books.

UTOPIA, LIMITED: ROMANTICISM AND ADJUSTMENT

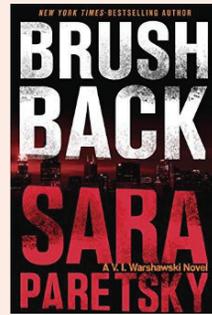
By Anahid Nersessian, AM'06, PhD'11; Harvard University Press, 2015
Poets of the Romantic era did not seek to destroy formal poetic conventions or styles, but rather embraced these limitations as a tool to free their words. **Anahid Nersessian**, an assistant professor of English at UCLA, argues for a similar approach to life—accepting the world's limitations in order to unlock human potential. Her utopia is not one of uncompromising perfection but of a more perfect use of what's available on Earth, setting boundaries as a way to thrive in a world of dwindling resources.



THE WORLD BEYOND YOUR HEAD: ON BECOMING AN INDIVIDUAL IN AN AGE OF DISTRACTION

By Matthew B. Crawford, AM'92, PhD'00; Farrar, Straus, and Giroux, 2015
Ever since the Enlightenment, Westerners have increasingly dismissed traditional sources of intellectual and cultural authority, equating freedom with the ability to choose where to direct their attention, explains cultural thinker **Matthew B. Crawford**. However, advertisers and other private interests have become very good at capturing that wandering focus. Drawing on sources ranging from Immanuel Kant to gambling addicts,

Crawford explores the modern “crisis of attention” and argues that true concentration—and freedom—only happens through engagement with our physical environment and cultural history.



BRUSH BACK

By Sara Paretsky, AM'69, MBA'77, PhD'77; G. P. Putnam's Sons, 2015
In **Sara Paretsky's** 17th V. I. Warshawski mystery, an old high school flame comes to V. I. to ask for help in exonerating his mother, who just served 25 years for murdering his sister, Annie. Despite long-standing animosity between their families, V. I. takes the case. Returning to the South Side, she learns that Annie may not have been the earnest, zestful girl she remembers, and that Annie's disappearance is more than a family matter. As more violence begins to threaten her own kin, V. I. finds herself facing off against powerful Chicago political bosses.

WHY YOU CAN'T TEACH UNITED STATES HISTORY WITHOUT AMERICAN INDIANS

Edited by Susan Sleeper-Smith; Juliana Barr; Jean M. O'Brien, AM'82, PhD'90; Nancy Shoemaker; and Scott Manning Stevens; University of North Carolina Press, 2015

In many US history classes, discussion of American Indians tends to be limited to lessons on pre-revolutionary America or westward expansion. In this collection of 19 essays, American Indian scholars show how native history influenced, and was influenced by, all the major epochs of US history. The first 16 essays, organized chronologically, reassess major concepts and events in US history through the lens of native history, and the last three aim to help teachers conceptualize their courses to better incorporate American Indian history.

FREEDOM AS MARRONAGE

By Neil Roberts, AM'03, PhD'07; University of Chicago Press, 2015
From the sixteenth to nineteenth centuries, *marronage*, or organized escape from slavery, created small colonies of former slaves throughout the Americas. Focusing on this oft-overlooked phenomenon, Williams College associate professor **Neil Roberts** argues that true freedom is not a fixed state but rather a form of perpetual flight. Incorporating the writing of Hannah Arendt, W. E. B. Du Bois, Angela Davis, Frederick Douglass, Samuel Taylor Coleridge, and the Rastafari, Roberts uses the specter of slavery to redefine what freedom means in the modern world.

THE THIN GREEN LINE: THE MONEY SECRETS OF THE SUPER WEALTHY

By Paul Sullivan, AM'96; Simon & Schuster, 2015
In relating many of the personal finance strategies that he has learned during his years writing the *Wealth Matters* column for the *New York Times*, **Paul Sullivan** stresses the difference between being rich, or having a large but arbitrary amount of money, and being wealthy, or having enough to live comfortably and fully. The distinction between the two, the “thin green line,” is incorporated throughout the book's advice on investing, spending, and charitable giving, as well as in tales of money decisions gone right—and very wrong.



GREETINGS FROM GREASELAND

John “Rockin’ Johnny” Burgin, AB'92; West Tone Records, 2015
Blues musician **Rockin’ Johnny Burgin's** latest album takes its name from the California studio where it was recorded. Backed by several Bay Area blues musicians, Burgin offers a mix of his takes on blues classics and original songs.

—Helen Gregg, AB'09

One pilgrim's promise

BY LAURA GRUEN, AB'67, AM'68

From April to June of this year, **Laura Gruen, AB'67, AM'68**, walked the Camino de Santiago, a traditional pilgrimage route from Saint Jean Pied de Port, France, to Santiago de Compostela cathedral in Spain. The church, where the apostle Saint James is said to be buried, has been a pilgrims' destination since the Middle Ages. Following are selections from the electronic journal Gruen kept of her 500-mile journey, sending entries to friends as she made her way across Spain.

April 2

I began planning this pilgrimage last spring, when I realized that my 70th year would be the time to contemplate some unresolved parts of my past and get ready for the future. For the last 10 months, I've been reading, planning, and walking. It's been good to have this dream at the center of my life. Now we'll just see how well I can actually step out alone on pilgrimage. Mother Teresa said, "God did not call me to be successful; He called me to be faithful." Those of you who are of the praying persuasion might ask that I find the strength to be faithful, wherever my path leads.

April 15

It took two days and three buses to get from Madrid to Pamplona and then from Pamplona to Saint Jean Pied de Port to start my *camino*. Even though I stopped at an *albergue* (hostel) half way up, the walk was the hardest phys-

ical thing I've had to do in many years. The second day was trudging through snow and mud and snowmelt streams and then a steep descent into Roncesvalles. I was so stripped down, all the pleasant distractions that mask reality in daily life were gone, and there was just the trail and effort and the beauty I was moving through. Very uncomfortable, but also wonderful.

April 21

The walking is resolving itself from a misery into a rhythm. I don't trip over my poles anymore and my pack is coming to seem a necessary extension of myself, which it is.

Today I walked on a section of Roman road and crossed a Roman-built bridge around Lorca. I tried to avoid wading a scummy patch of trail by going up and over but fell coming down and got heaved out by a cheerful French couple. I walked through a half mile of newly hatched gnats that were impossible not to breathe in. I saw lots of scarlet poppies—met the first ones yesterday—and chewed on wild fennel.

All the pleasant distractions that mask reality in daily life were gone, and there was just the trail and effort and the beauty I was moving through.

April 27

I am sitting in the kitchen area of a massive and very clean and modern albergue run by a Spanish confraternity in Santo Domingo de la Calzada. Saint Dominic (b. 1019) was a humble man who wanted to be a monk, but the nearby monastery wouldn't take him so he decided to help pilgrims. He built a pilgrim hospital and a bridge and a church that is now a cathedral. One of his miracles is commemorated by having a cage of live chickens hung in the cathedral. It is said that if the rooster crows as you walk in, you will make it to Santiago. Once I get rested I'll be off to the church to see what the chickens think about my prospects.

It rained off and on yesterday and walking in my poncho felt like I was sharing a tent with someone hot and fat and sweaty. Today was windy, cold, and full of mud. The Rioja dirt produces the best wine grapes in Spain and is also famous for sucking the boots right off your feet. I came in muddy to the knees with half a pound of extra weight on each foot.

May 4

Tomorrow I will climb yet another hill and arrive on the true Meseta, the flat land of wheat and wind and birdsong and not much else. This will suit me fine.

Already the landscape is changing. Before I would see a church steeple on a distant hill and know that it signaled a chair and a cold drink and a toilet and also that there wasn't anything I could do to get there except put one foot in front of the other. Now I walk along and don't see anything on the horizon except more wheat. The towns are tucked into dips in the landscape, and I just have to have faith that they are actually there.

May 12

The food offered for a pilgrim budget gets pretty repetitious. First course is a choice of mixed salad with iceberg lettuce and tuna or white bean soup or pasta; second course is some kind of fish,



Clockwise from top: Gruen pauses for a picture near the outset of her journey across Spain; a cairn marks the climb up onto the Meseta, the central tableland of wide skies and wheat; stones and mementos that travelers carried from home to be placed with a prayer at the Cruz de Ferro; Gruen's pilgrim credentials with the daily stamps from hostels, churches, and cafés that prove the traveler has passed through.

PHOTOS COURTESY LAURAGRUEN, '07, '07, AM '08



A happy arrival at the Santiago cathedral.

some kind of baked chicken, or pork cutlets—always with French fries. It will be a long time before I relish French fries again. Dessert is custard or flan from a plastic cup or ice cream or a piece of fruit. Sometimes there is a welcome variation (paella!) or the food is prepared beautifully and is a treat. The wine is automatic, red, and universally good.

May 14

This morning was cold and the wind was blowing, and I made it to the highest point on the camino in record time (for me). At the peak was the Cruz de Ferro, where pilgrims bring the stones they have carried from home to represent the emotional or spiritual burdens they hope to shed. There were just a few other early risers around. Standing with my stone and thinking what it represented for me, reading the traditional prayer, and then climbing the mound to place the stone were all very moving. I walked away feeling much lighter.

Here's the prayer:

Oh, Lord, may the stone that I bring to this holy place be a symbol of my pilgrimage to Santiago. When I reach my final judgment, tip the balance of my life in favor of my good deeds. I lay down this token which I carry from home. Please forgive my sins and help me carry my burdens in life. Amen.

May 21

Here I am in Sarria, 100 kilometers or 60 miles from Santiago. This is the closest place to Santiago you can walk and get a *compostela* (the certificate that proves your pilgrimage). From here on I need to get two *sellos* (stamps) per day in my pilgrim's credential to prove that I am walking.

May 27

This morning I arrived at Santiago cathedral, so grateful and relieved I hardly knew what to do with myself.

Luckily I ran into a friend who had arrived yesterday and knew her way around. She took the obligatory photo in front of the church, covered in scaffolding, and then showed me the way to the Pilgrim's Office, where I presented my credentials, filled with stamps for each walking day, and received my *compostela*, with my name in Latin. I was in time for the noon mass but not in time to get a seat so I leaned against a column. I am always astounded when someone notices I'm old, but I was very grateful when a man got up and insisted I take his seat.

Now I am clean and resting. I think I could sleep for a week.

I'm so glad to be here!

June 4

Thought you'd heard the last of me when I raised triumphant poles in front of Santiago cathedral, didn't you? Wrong. After a couple days I got tired of being in a city and took a bus to Finisterre, the "end of the earth" where pilgrims collected the scallop shells that symbolized their journey. The place I'm staying is on the shore beside the walking path into town, and from early morning to late evening pilgrims stream by below my window. Some are skipping, some are dragging, some are weeping, and a few are transported.

I set myself down here for a week because it's quiet and beautiful and because I needed time to sort out my experience. In no particular order, here's what the camino has given me:

Faith in my endurance. I now know that I can walk day after day in heat, cold, rain, mud and keep going day after day because I made a promise, no matter how discouraged or pissed off at myself I am.

Gratitude. A mouthful of water, a warm shower, a place to sit down, an albergue that has a bed for me, all take the dimensions of enormous gifts, as indeed they are. Plus the beauty of the landscape (how can a country be so glorious across its whole width?) and the kindness of the local people who day after day cheerfully help clueless pilgrims like me.

Perspective. Early on my guidebook advised, "worrying is praying for what you don't want." I tried to take that to heart and stop obsessing about whether I'd make it up the next hill or get lost in Pamplona or find an open albergue at day's end. Life without obsession is very restful.

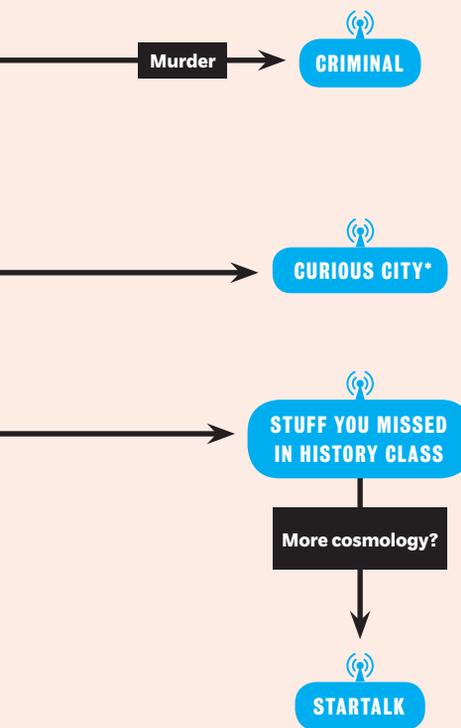
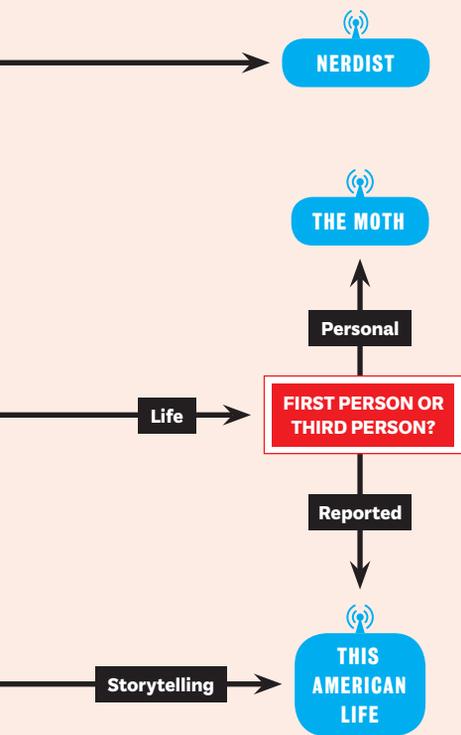
The luxury of simplicity. Living for two months with only what I could carry on my back, washing clothes under the cold water tap and hoping they'd dry by morning, having my entire beauty regimen consist of putting hand cream on my nose so it wouldn't peel: this has been an immensely freeing lifestyle.

Peace with my past. My long life has been full of mistakes, some I could hardly bear to think about. The camino gave me time and space and courage to come to terms with them, and the rituals at the Cruz de Ferro and the cathedral in Santiago brought me peace, as they have for millions of pilgrims before me. ♦

After many years working in the UChicago Alumni Association, Laura Gruen, AB'67, AM'68, retired to Pennsylvania, where she teaches English to immigrant women, plays with her grandchildren, reads, and walks.

ALUMNI NEWS

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GRAPHIC BY LAURA LORENZ

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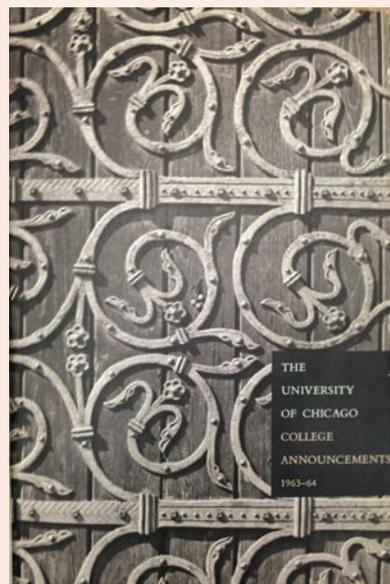
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Opening doors: Phil Lankford, AB'67, AM'68, PhD'71; Ken Webb, AB'67, AM'68; and Robert Beekman, AB'67, AM'71, said the 1963-64 *College Announcements* "transformed our lives in ways we still explore."

The University of Chicago, in accord with federal regulations, is seeking public comments about the University in preparation for its decennial evaluation by the Higher Learning Commission of the North Central Association of Colleges and Schools, its regional accrediting agency. A team representing the Commission will conduct a comprehensive evaluation visit in October 2015 to review the institution's ongoing ability to meet the Commission's Criteria for Accreditation. The University of Chicago has been accredited by the Commission since 1913.

THE PUBLIC IS INVITED TO SUBMIT COMMENTS REGARDING THE UNIVERSITY TO THE COMMISSION.

ELECTRONIC COMMENTS:

<http://ncahlc.org/HLC-Institutions/third-party-comment.html>

WRITTEN COMMENTS:

Third-Party Comment on the University of Chicago
 The Higher Learning Commission
 230 South LaSalle Street, Suite 7-500
 Chicago, IL 60604-1411

Comments must address substantive matters related to the quality of the institution or its programs. Comments must be in writing and signed; comments cannot be treated as confidential.

ALL COMMENTS MUST BE RECEIVED BY **SEPTEMBER 1, 2015.**



THE UNIVERSITY OF CHICAGO | Alumni Association

DEATHS

FACULTY AND STAFF

Donald Levine, AB'50, AM'54, PhD'57, the Peter B. Ritzma Professor Emeritus of Sociology and onetime dean of the College, died April 4. He was 83. His work as a sociologist spanned a wide spectrum, from the intellectual genealogy of the social sciences to Ethiopian culture and history to academic pedagogy. During his almost five-decade career at UChicago, Levine added many new programs and classes, including an African civilization sequence and a popular course that incorporated Aikido martial arts, in which he held a fourth-degree black belt. As dean of the College from 1982 to 1987, he expanded the Core curriculum and enriched the non-academic aspects of campus life, strengthening the house system and helping to start the annual Kuviasungnerk/Kangeiko winter festival. He is survived by his wife, **Ruth Levine**, AM'66; a daughter, **Rachel S. Levine**, LAB'90; two sons; and three grandchildren.

Norman H. Nie died April 2 in Sun Valley, ID. He was 72. Known for his scholarship on political participation and public opinion, Nie was one of the graduate student creators of the Statistical Package for the Social Sciences (SPSS), the data analysis software that fundamentally changed how social scientists use large data sets, becoming president and CEO of the resulting company, SPSS, which was sold to IBM in 2009. Nie joined the UChicago faculty in 1968, becoming a full professor in 1977 and serving twice as chair of the political science department. He retired in 1998 with emeritus status. He is survived by his wife, **Carol Phyllis Nie**, MBA'80; two daughters, **Anne Nie**, LAB'86, AM'96, and **Lara Slotwiner-Nie**, LAB'85; and two granddaughters.

Charlene Sennett, associate professor of radiology at the University of Chicago Medicine, died in Chicago on March 23 while awaiting a heart transplant. She was 62. A breast imaging specialist, Sennett completed her residency at UChicago Medicine and returned in 2002 as assistant professor, later becoming associate professor and interim section chief of breast imaging from 2011 to 2014. She was an author or investigator on many studies on new imaging techniques and computer-aided analysis of diagnostic images. She is survived by her husband, H. Rodney Holmes; a daughter; and a son.

Tsuen-Hsui Tsien, AM'52, PhD'57, professor emeritus of East Asian languages and civilizations and curator emeritus of the East Asian Collection of the Joseph Regenstein Library, died April 9 in Chicago. He was 105. Tsien's devotion to the books and culture of his native China was

evident early in his career as a librarian, when he smuggled 30,000 rare books out of Japanese-occupied Shanghai. He was invited to the University of Chicago as an exchange scholar in 1947 to pursue graduate work and catalog the University's Chinese book collection, launching a decades-long career with the University. He is the author of many works on Chinese bibliography and literature, and continued to research and write long after his retirement in 1978. He is survived by two daughters, including **Mary Tsien Dunkel**, AB'65, MAT'67.

Anthony C. Yu, PhD'69, the Carl Darling Buck Distinguished Service Professor Emeritus in the Humanities and the Divinity School, died May 12. He was 76. Yu's work on religion and literature drew on both Eastern and Western traditions, and he made scholarly contributions on figures as diverse as Aeschylus, Dante, and William Faulkner. He is best known for his translation of *The Journey to the West* (1983), a complex 16th-century Chinese epic novel. The four-volume work took Yu more than 15 years to translate. A 2009 Norman Maclean Faculty Award recipient, Yu taught at the University for 46 years and was known for inviting students over for dinner or to the symphony. He is survived by his wife, Priscilla Yu, former director of the University's special gifts office, and his son.

1930s

Selmer M. Loken, MD'38, of Shoreview, MN, died May 8. He was 102. Loken was on staff at Bethesda Hospital in St. Paul, MN, from 1938 to 1978, serving as chief of medicine from 1955 to 1966. In 1978 the hospital recognized his service by inaugurating the S. M. Loken Humanitarian Medicine Award, and in retirement he continued to provide care to medically underserved populations at local clinics. He is survived by five daughters, eight grandchildren, and 10 great-grandchildren.

Gus S. Kass, SB'38, of Northbrook, IL, died April 6. He was 99. A cosmetic chemist, he developed a cold permanent hair waving process still in use, and helped develop permanent shampoo-in hair color, aerosol hairspray, and aerosol powder antiperspirants. Director of research and development at Alberto-Culver Company from 1960 to 1974, he later began a consulting firm. He is survived by two daughters, three granddaughters, two grandsons, and eight great-grandchildren.

Irving Sheffel, AB'39, died May 18 in Topeka, KS. He was 98. A US Army veteran during WW II, Sheffel worked for the federal government in Washington, DC, before moving to Topeka and becoming an administrator at the Menninger Clinic, a mental health facility. He worked at the clinic for 40 years and was an active philanthropist in Topeka. His first wife, Bernice Sheffel, AB'38, AM'45, died in 1995; his second wife, Peggy, died in 2012.

1940s

Peter P. Dzubyay, MBA'40, died May 24 in Middletown, CT. He was 99. Dzubyay spent most of his career with Northeast Utilities in Berlin, CT. He was also in the US Naval Reserves, serving on active duty during World War II and retiring as a commander in 1975. He is survived by five sons; his sister, **Marsha D. Tillson**, SB'44; three granddaughters; and two grandsons.

Clarence C. Jamison, EX'41, of Cleveland died March 6, 2014. He was 96. During World War II, Jamison served as a Tuskegee Airman in the then-segregated US military, participating in 67 combat missions. After the war, he remained in the Air Force for 22 years as an accounting and finance officer, retiring as a lieutenant colonel, before returning to his native Cleveland and working for the Social Security Administration. His wife, Phyllis Piersaw Jamison, SB'41, died in 1995. He is survived by a daughter, a son, a sister, a brother, four grandchildren, and six great-grandchildren.

Richard Perry Matthews, AB'42, of Ewing, NJ, died February 1. He was 94. A World War II veteran who served in the Army Air Corps in the Philippines, Matthews spent most of his career as a librarian at Trenton State College. He enjoyed sports, particularly football and baseball. He is survived by his wife, Priscilla Smith-Matthews; a daughter; a son; two grandchildren; two stepdaughters; and several step-grandchildren.

Anthony Pizzo, SB'43, MD'45, of Bloomington, IN, died January 14. He was 93. Pizzo was a pathologist and educator at Indiana University Health as well as a civic leader, serving as county coroner, city council member, and state representative. His medical background inspired him to propose and help enact one of Indiana's first smoke-free laws in Bloomington. He received the Alumni Association's Public Service Award in 1983, and in 2005 he was inducted into the Monroe County Hall of Fame. He is survived by his wife, **Patricia Pizzo**, EX'48; three daughters, **Sarah P. Press**, AB'75, **Julie Pier Pizzo**, AB'77, and **Fiora G. Pizzo**, AB'88; four sons; a sister; sixteen grandchildren; and two great-grandchildren.

George C. Beattie, MD'43, of San Mateo, CA, died May 16. He was 95. Beattie served in the US Navy during World War II and the Korean War, earning a Bronze Star, and continued his service at two US naval hospitals. In 1956 he joined a private orthopedic surgery practice in Burlingame, CA, retiring in 2000. He was the president of the Western Orthopaedic Association and of the Northern California Easter Seals Society. He is survived by his wife, Nancy; a daughter; two sons; five granddaughters; one grandson; and two great-grandchildren.

Janet Halliday Ervin, PhB'46, died December 30 in Franklin, WI. She was 91. In 1946

Ervin won *Vogue* magazine's prestigious Prix de Paris essay contest, but turned down the prize of working in *Vogue's* New York and Paris offices. She instead married and raised a family but continued to write, including newspaper and magazine articles and three books. She had a talent for winning jingle-writing contests, once bringing home a new Chevrolet. She is survived by three sons, including **Howard G. Ervin III**, JD'72; two granddaughters; two grandsons; and one great-grandson.

Anna Strizhak Kaufman, AM'47, died March 21 in Anaheim, CA. She was 89. Kaufman worked for Chicago Jewish Family Services before moving in 1959 to Southern California, where she later worked in the developing field of geriatric social work. A founder of the Jewish Home for the Aged and a senior learning community center in Orange County, she was on the founding board of the University of Southern California School of Gerontology. In 1992 she received the Koshland Award as California's Social Worker of the Year. Her husband, Clarence Kaufman, AM'52, died in 2007. She is survived by four daughters, including **Ellen Kaufman Dosick**, AB'75, AM'76, and three grandchildren.

Brunhilde Metlay Goodman, AM'48, died April 1 in Yonkers, NY. She was 90. A social worker, she spent 45 years in public and private agencies helping children and the poor, first in New Jersey and then in Westchester County, NY. She is survived by two daughters; a son, **David A. Goodman**, AB'84; three granddaughters; and a grandson, **Jacob S. Goodman**, Class of 2019.

Richard Thomas Selden, AB'48, PhD'54, of Charlottesville, VA, died April 2. He was 93. A student of Milton Friedman, AM'33, Selden contributed a chapter to Friedman's *Studies in the Quantity Theory of Money* (1956). After teaching at Vanderbilt, Columbia, Cornell, Dartmouth, and Stanford Universities, he joined the University of Virginia in 1969. He held the Carter Glass Professorship in Money and Banking and served for many years as the chair of the economics department. He is survived by his wife, Sue; a daughter; a son; a brother; six grandchildren; a stepdaughter; and a stepson.

Franz J. Berlacher, SB'49, MD'51, died April 29 in Sylvania, OH. He was 86. Berlacher completed his residency in Detroit and was stationed briefly in Honolulu with the US Army before becoming chief of cardiology at Mercy Hospital in Toledo, OH, a position he held for 30 years. He was an avid Notre Dame football fan and enjoyed traveling to California wine country. He is survived by his wife, Audrey; three daughters; four sons; 19 grandchildren; and 10 great-grandchildren.

David Clagett, AB'49, of Columbia, MD, died March 29. He was 86. A second lieutenant in the US Army during World War II, Clagett spent most of his career at the Social Security Administration. He enjoyed hiking, picnicking, and travel. He

is survived by his wife, Maxine Kell; two daughters; three granddaughters; one grandson; a stepdaughter; and a stepson.

Harlan Millard Smith, PhD'49, died February 22 in Fanwood, NJ. He was 93. A US Air Force veteran and Bronze Star recipient, Smith was a research chemist with Exxon, retiring in 1985. He was active in his church, serving on the vestry and singing in the choir, and belonged to the American Chemical Society, the Westfield Glee Club, and the English-Speaking Union. He is survived by three sons, a sister, a brother, and four granddaughters.

1950s

Harry Eshleman, AB'50, died May 10 in Kutztown, PA. He was 85. A US Army veteran, Eshleman taught communications and journalism at Kutztown University for 25 years. He both wrote poetry and worked to promote the art, serving as a board member and onetime president of the Wallace Stevens Poetry Society and hosting *Poet's Pause* on BCTV. He is survived by his wife, Barbara Nelson Peters; four daughters; one son; 13 grandchildren; and two great-grandchildren.

Esther (Millman) Sparks Sprague, AB'51, died April 3 in Tupelo, MS. She was 82. One of 12 Hutchins scholars in her class, Sprague earned a PhD in art history from Northwestern and became a curator at the Art Institute of Chicago and later the director of a Chicago art gallery. She was the author of several books and lectured at institutions around the country. Since 1996, she had been an adjunct professor at the University of Mississippi. Her first husband, Morton J. Sparks, AB'52, died in 1984. She is survived by two daughters, a granddaughter, a grandson, and two stepdaughters.

Otto Leroy Karlstrom, PhD'52, of La Conner, WA, died April 30. He was 93. A US Navy veteran, Karlstrom spent his civilian career as an analyst and liaison between several NATO countries and the US State and Defense Departments and the CIA. He enjoyed home repair projects and traveling. He is survived by his wife, Esther; two daughters; two sons; a brother; two granddaughters; three grandsons; and three great-grandchildren.

John "Jack" Lynch Jr., AB'55, SB'56, died April 30 in Seattle. He was 80. A Hutchins scholar, Lynch served in the US Navy before beginning his pediatric practice. He also donated his time to young people, volunteering on the local school board and coaching soccer. In retirement, he played the clarinet in several orchestras around Seattle. He is survived by his wife, Ingrid; two daughters, including **Maureen Anne Healy**, AM'94, PhD'00; two sons; a sister; and seven grandchildren.

Blanca Cordova Anderson, AM'57, died February 6 in Tallahassee, FL. She was 86. Anderson was a native of Puerto Rico who taught history and the social sciences

at the University of Puerto Rico for three decades. After retiring in 1997, she tutored schoolchildren in Florida, Louisiana, and Indiana. Her husband, Robert Anderson, AM'48, died in 1999. She is survived by three daughters, a son, two sisters, four granddaughters, and three grandsons.

Alfred Carter Jefferson, PhD'59, of Boston died February 28. He was 87. A US Navy veteran, Jefferson taught history at several universities, including the University of Massachusetts Boston, where he also taught writing. More recently, he was a family therapist and a founding editor of the *Internet Review of Books*. He is survived by his wife, **Lucy B. Jefferson**, AB'54, AB'55, AM'57; a daughter; a sister; a granddaughter; a grandson; and a great-grandson.

1960s

Arthur Thompson, MBA'60, died May 9 in Danvers, MA. He was 96. A US Army veteran, Thompson was an engineer who spent most of his career in higher education, retiring as professor emeritus of engineering from Boston University and as provost emeritus from the Wentworth Institute of Technology. A trustee emeritus at two universities, he was a recipient of the Society of Manufacturing Engineers' Education Award and the US Army's Outstanding Civilian Service Medal. He is survived by two daughters, one granddaughter, and one great-grandson.

Dennis J. Weidenaar, AM'61, of West Lafayette, IN, died May 16. He was 78. An economist, Weidenaar started teaching at Purdue University in 1966, becoming a full professor in 1978. He was dean of Purdue's School of Management and Krannert Graduate School of Management from 1990 to 1999 and then returned to teaching, retiring with emeritus status in 2005. He is survived by his wife, Kristin; a daughter; a son; a brother; two granddaughters; and two grandsons.

William B. Kelley, EX'63, died May 17 in Chicago. He was 72. A lawyer, historian, and advocate for LGBTQ rights, in 1966 Kelley helped to organize the first national gay and lesbian conference and attended the first meeting of gay rights activists at the White House in 1977. He was involved with many LGBTQ groups and task forces during his almost 50 years of activism and edited several publications and books on LGBTQ history. He is survived by his partner, Chen Ooi.

Frederick L. Pipin, MBA'64, died March 3 in Farragut, TN. He was 77. Pipin was a competitive sports car racer before beginning his business career. In the late 1970s, he bought a steel door business, the Kewanee Corp, which he ran until 2006, and was active in the steel door industry's trade group. He was also a frequent entrant in sailing races. He is survived by his brother, **David E. Leach**, AB'66, of Berkeley, CA, died March 13, 2010. He was 66. A profes-

sional photographer, Leach specialized in human nature and culture, and his work took him to Mexico, Nepal, and Bali. He also imported clothes from Bali designed by his wife, Jean Cacicedo. He is survived by his wife and many friends.

Jerry Gerasimo, AM'54, PhD'66, of Menomonie, WI, died on April 4. He was 84. A US Army veteran, Gerasimo was a longtime sociology professor at Augsburg College in Minneapolis, retiring in 1996. He also taught classes at two local prisons and at the Mayo Clinic. He enjoyed movies, books, martial arts, current events, and the outdoors. He is survived by three daughters, a sister, and two grandchildren.

Marshall Morgan, MD'68, died April 16 in Los Angeles. He was 73. Trained as a cardiologist, Morgan gravitated to the emerging specialty of emergency medicine and in 1974 was appointed assistant professor and acting codirector of the emergency medical center at the University of California, Los Angeles. Later chief of UCLA's emergency medicine division and chief of staff of the UCLA Medical Center, he was honored with UCLA's most prestigious faculty award in 2007 and served as president of the Los Angeles County Medical Association in 2013–14. He is survived by his wife, Jean Marie; two daughters; three sons; 10 grandchildren; and two great-grandchildren.

Raymond Cooper, AM'69, died March 2 in Rockford, IL. He was 79. A US Army veteran, Cooper was the director of social services for the city of Richmond, VA. He was active in his church and was a member of other organizations including Phi Beta Sigma, the National Association of Black Social Workers, and the Freemasons. He is survived by his wife, Virginia, and three brothers, including **Walter Ronald Cooper**, JD'74.

Phil Harrington, MBA'69, of Scottsdale, AZ, died May 23. He was 75. Harrington worked for GTE Automatic Electric for 21 years, retiring as vice president of research and development at age 48. He then founded ICM Document Solutions, growing the company from a handful of employees to more than 150. He is survived by his wife, Carol; a daughter; a son; and four grandchildren.

John Makin, AM'69, PhD'70, an economist and resident scholar at the American Enterprise Institute, died March 30 in New York City. He was 71. A student of Milton Friedman, AM'33, and Gary Becker, AM'53, PhD'55, Makin taught economics at several universities and later worked as a principal at a hedge fund. He was an adviser to the Congressional Budget Office and the US Treasury Department for more than a decade, and was the author of many books and articles as well as the AEI's monthly *Economic Outlook*. He is survived by his wife, Gwendolyn van Paaschen; a daughter, **Jane V. Makin**, AB'14; and a sister.

1970s

Robin M. Smith, MAT'70, died May 23 in Syracuse, NY. She was 69. An advocate for people with special needs, Smith taught at the Chicago Public High School for Metropolitan Studies before becoming an associate professor of special education at the State University of New York at New Paltz. She is survived by two brothers, two nieces, two nephews, and seven great-nieces and nephews.

Wojciech Komornicki, AB'71, of Roseville, MN, died of cancer on May 17. He was 65. Komornicki taught math at Hamline University for 38 years. A lifelong learner, he attended classes at the University of Minnesota until a week before his death. He used his abilities as a computer program designer to help fellow faculty members and local nonprofits, and enjoyed sailing, hiking, and other outdoor activities. He is survived by his wife, **Mary Louise Hammond**, AB'72; a daughter; and a brother.

Nazar Hayat Tiwana, AM'71, died June 17 in Glenview, IL. He was 87. Born in undivided Punjab, Tiwana served as a Pakistani diplomat before moving to the United States. He worked at the Newberry Library while completing his master's in library science at UChicago, and later held positions at Encyclopaedia Britannica and the Chicago Public Library, where he conceived and directed the American Ethnic Heritage Program. In retirement he worked to promote religious tolerance and peace in Southeast Asia. He is survived by his wife, Sarware; a daughter; and a son, **Omar Tiwana**, AB'75.

John Culver Wooley, PhD'75, died of cancer on April 20. He was 69. Known for his work in computational biology, Wooley was a professor at Princeton University before becoming a program officer at the National Science Foundation, where he helped to establish some of the first federal programs in genomics and bioinformatics. In 1999 he joined the University of California, San Diego, as associate vice chancellor of research and in 2006 became a professor of pharmacology as well. He is survived by his wife, **Su-Yun Chung**, PhD'74, and a son.

Byron L. Sherwin, PhD'78, died of kidney cancer on May 22 in Chicago. He was 69. A Jewish theologian, Sherwin was on the faculty of the Spertus Institute for Jewish Learning and Leadership in Chicago for 45 years. He was the author of more than 30 books and 150 articles, and in 1995 the Polish government awarded him its presidential medal for his work improving Jewish-Polish and Jewish-Catholic relations. He is survived by his wife, **Judith Sherwin**, MLA'05, AM'11; his son, **Jason S. Sherwin**, AB'05; his mother; and his brother.

1980s

Irene A. Bierman-McKinney, PhD'80, of Los Angeles, died March 8. She was 72. A scholar of Islamic art and architecture,

Bierman-McKinney curated exhibitions and participated in a television series on Islamic art before joining UCLA's art history department in 1982. She was the interim director of the American Research Center in Cairo and served with other international research organizations in the Middle East, retiring from UCLA as professor emerita in 2012. She is survived by her husband, Carlton McKinney, and her brother.

Donald Link, AB'82, died of a heart attack on March 15 in Princeton, NJ. He was 54. Fluent in Chinese, Japanese, and Korean, Link served as an Asian language specialist and cryptographer in the US Navy. As an interpreter of Asian language financial documents for Bloomberg, he earned a promotion to the company's New York City headquarters. Link also interviewed prospective College students with the Alumni Schools Committee. He is survived by his wife, June "Sunny" Link, and a daughter.

Jon Iric "Jack" Roberts, AB'84, of New York City, died April 15, 2012. He was 51. A poet and novelist, Roberts was a professor of English literature at St. Thomas Aquinas College for 18 years, and had been a Fulbright Scholar and a lecturer in American Studies at the University of Szeged, Hungary. He translated many Hungarian poems into English and was published in *The Best American Poetry 1991*. He is survived by his parents and a sister. [*This notice corrects information in the May–June/15 issue.*—Ed.]

2000s

Vinh Truong, MBA'06, died in an avalanche on Mount Everest following the April earthquake in Nepal. He was 48. A resident of Sunnyvale, CA, Truong worked as an IT consultant for health system Kaiser Permanente. He enjoyed all outdoor activities, especially hiking; Mount Everest was his dream trip. He is survived by several family members.

2010s

Michael E. Lanter, MBA'13, died May 16 in Indianapolis. He was 31. Lanter was an investment bank analyst in San Francisco and a trader with Goldman Sachs in New York before enrolling at Chicago Booth in 2011. After graduation he returned to New York, working as a hedge fund consultant and later starting his own consulting company. He enjoyed sports and spending time with friends and family. He is survived by his parents, his stepparents, a sister, two brothers, and his grandparents.

Chace L. Johnson, Chicago Booth Class of 2018, a native of Edina, MN, died after a three-year battle with stage IV colon cancer on January 5. He was 28. A University of Wisconsin–Madison graduate, Johnson was enrolled in Booth's Weekend Program while working full time at Piper Jaffray. He was a sports fan and devout Christian. Johnson is survived by his parents, two sisters, a brother, and his grandparents.

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HOMECOMING 2015 (OCTOBER 19–24)

PHOTOGRAPHY BY DAN DRY



Famous first words

*It was the best of times; it was the worst of times.
April is the cruellest month. 124 was spiteful.
Mrs. Dalloway said she would buy the flowers herself.*

The first line of a work of literature—of a novel, a memoir, a poem, of any literary text—might be the most important. More important than even the last sentence that pulls everything together. (Readers might very well never get to that last line if the first doesn't pique their interest.)

The best first lines not only hook readers but also tell them what to expect from the rest of the book—its plot, subject, style. A great opening teaches readers how to interpret what follows.

We present to you, in quiz form, five memorable opening lines from alumni authors **Susan Sontag**, AB'51; **Kurt Vonnegut Jr.**, AM'71; **Philip Roth**, AM'55; **Norman Maclean**, PhD'40; and **Saul Bellow**, EX'39. These sentences, we submit, stand up against any openers in English literature.

Can you match each line with the UChicagoan who penned it and his or her well-known work?

—Laura Adamczyk



Visit mag.uchicago.edu/first-words and let us know how you did and what your own favorite first lines are—Maroon penned or otherwise.

- 1 "She was so deeply embedded in my consciousness that for the first year of school I seem to have believed that each of my teachers was my mother in disguise."
- 2 "I am an American, Chicago born—Chicago, that somber city—and go at things as I have taught myself, free-style, and will make the record in my own way: first to knock, first admitted; sometimes an innocent knock, sometimes a not so innocent."
- 3 "In our family, there was no clear line between religion and fly fishing."
- 4 "Illness is the night-side of life, a more onerous citizenship."
- 5 "All this happened, more or less."

A Illness as Metaphor | Susan Sontag

B SLAUGHTERHOUSE-FIVE | KURT VONNEGUT, JR.

C *Portnoy's Complaint* Philip Roth

D Norman Maclean | A RIVER RUNS THROUGH IT

E SAUL BELLOW
The Adventures of Augie March

ANSWERS: 1-C, 2-E, 3-D, 4-A, 5-B

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A History

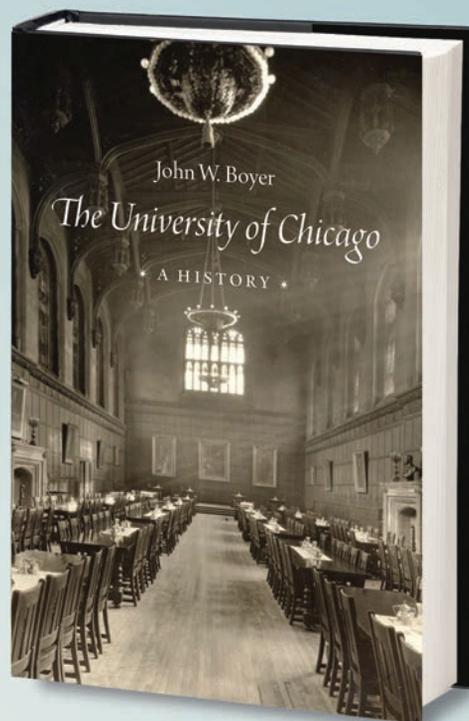
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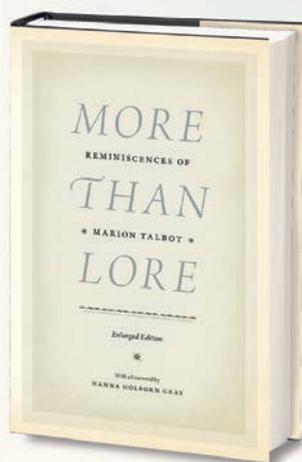
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