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THE UNIVERSITY OF CHICAGO MAGAZINE

MAR-APR 2014
VOLUME 106, NUMBER 4

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In **Michael LaBarbera’s** lab, jellyfish, cuttlefish, crabs, clams, sea urchins, and octopuses are only a few of the creatures you might encounter. See “A Life Aquatic,” page 28. Illustration by **Jen Lobo**.



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In a photo on display in a current Crerar Library exhibit about his career, zoology professor Charles O. Whitman tends to the pigeons whose development, heredity, and behavior he studied for decades, keeping the birds in cotes near his South Woodlawn Avenue home. The exhibit is open through March 21, but an online version will remain available at lib.uchicago.edu/e/webexhibits/charleswhitman.





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In any language

BY LAURA DEMANSKI, AM'94

*“And the riverbank talks of the waters of March,
It’s the promise of life, it’s the joy in your heart.”*

More than any other pairing of months in the *Magazine’s* production cycle, March–April contains a turn, and the possibility of extremes. March, the month of lions and lambs, itself a fickle changeling; April, the month (we hope) of sweet showers heralding, if not bringing, spring blooms. As a March baby, I’ve always had a soft spot for this most mercurial time of the year, and an extra measure of patience with it. The day I was born, the vernal equinox arrived as the season’s biggest snowstorm closed in.

What will this March bring? A few things we can count on: basketball, Irish pride, *paczki* for us Polish Americans. Also, the last couple of weeks of winter quarter, exams, spring break, and, at the very tail end, a fresh, clean page: the first day of spring quarter on the last day of the month. “In like a lion, out like a lamb” maps neatly onto the academic calendar. The stress won’t kick in again until at least April, right?

In the opening lines of *The Canterbury Tales*, Chaucer mentions the drought of March in passing, less concerned with it than with the more reliably springlike April that redeems it. But as far as I’m concerned, March is the only month that comes with a ready-made soundtrack, one that turns Chaucer’s description on its head: the most wonderful of all bossa nova songs, Antonio Carlos Jobim’s “Águas de Março” or “Waters of March.”

March is a chameleon, so it’s fitting that perhaps the best-known popular

song about it should have both spring and fall versions. Originally written in Portuguese, “Waters of March” pays tribute to the rainy season in Brazil by cataloging a long eclectic list of things, manmade and natural, concrete and abstract: a shard of glass, the knot in the wood, a drop dripping, a beautiful horizon. This time of year, maybe we notice more things, or maybe they’re made newly visible by cleansing rains. The song pays homage to the richness of both the natural world and our sensual experience.

In the southern hemisphere, of course, March and its rains come at the outset of fall and bring also a hint of winter. Despite the song’s poppy, airy, syncopated tune, it’s hard not to notice how Jobim’s Portuguese lyrics never stray too far from sharp things and other forms of danger, and keep coming back to endings: the end of the road, of the slope, of the struggle, of the trail. A “small bird in the hand” leads straight into “a slingshot stone,” “a bird in the sky” into “a bird on the ground.” The world is renewed, but that doesn’t mean it’s forever.

That March isn’t springtime where Jobim lived is a point that was lost on me for many years of adoring “Waters of March.” I came to it through its English version, which Jobim wrote later to fit the North American seasons—a version distinct from the literal translation of the Portuguese. In that version, “closing the summer” becomes “the promise of spring,” and the rain is easily taken for a thaw, even more so with the music’s drip-drop rhythm. Whichever language it’s sung in, the song will always, to me, ooze spring. If you haven’t heard it, now is the time. ♦

LETTERS

True GRITS

I find the Letters section the best part of your magazine, and I always read it first. In your Jan–Feb/14 issue, page 8, reader Kelly Kleiman, AB'75, JD'79, complains that students from rural areas and inner cities cannot compete with those from the

A top 2 percent IQ is the same whether the kid is from Winnetka or Washington, Illinois.

rich suburbs for admission to the top schools. A possible remedy may be the University's 1960s Grass Roots Illinois Talent Search program, described in Muriel Beadle's *These Ruins Are Inhabited* (Robert Hale Ltd., 1963). In this program, recruiters went to the rural areas and inner cities to talk with the students, the promising ones were encouraged to apply, and their applications were tagged to receive special consideration like alumni children. These GRITS kids did just as well as those from the rich suburbs by their junior and senior years, after an initial period of catching up during their freshman and sophomore years. After all, a top 2 percent IQ is the same whether the kid is from Winnetka or Washington, Illinois (flattened by a recent tornado).

As an aside, it is interesting to note that UChicago recruited George Beadle from Caltech in 1960 to be its new president, and now Caltech has recruited Thomas Rosenbaum from Chicago to be its new president.

Gerald Fong, SM'61
EL MONTE, CALIFORNIA

The big reveal

I was struck by the resemblance of your undated photo of an unnamed U of C student (Jan–Feb/14). I believe the photo is of my mother, Natalie Merriam Johnson, PhB'33. I am including photos of her at a somewhat older age to show the resemblance. If this is

her photo, it would be the second time she appeared in a University publication. In 1958 a three-generation Chicago family appeared, my grandmother (Harriet Estabrook Merriam, PhB'08), my mother, graduating a quarter cen-

tury later, and me, Keith Roberts Johnson, AB'58, a half century later, there on campus for my graduation.

The attached photo of the couple includes Natalie's husband, Leslie Emil Johnson, X'33, who worked in the physics department and went on to become an Argonne Lab Pioneer during WW II.

Keith Johnson, AB'58, AM'64
EVANSTON, ILLINOIS

In the game

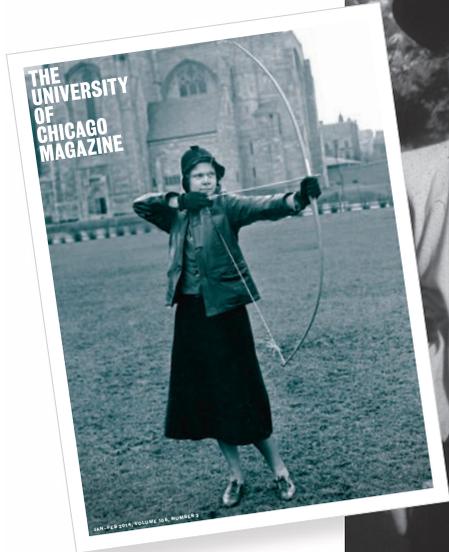
I enjoyed "Game Changers" (Jan–Feb/14). As a graduate of the Divinity School and as the chief executive officer of the South African Football Association, I would have loved to contribute to the conversation.

We are presently undertaking the largest youth development through football program in our history, with the goal of creating sustainable winning national teams.

Robin Petersen, PhD'95
JOHANNESBURG, SOUTH AFRICA

In defense of race

Despite abundant evidence to the contrary, Russell Tuttle ("Only Human," Jan–Feb/14) asserts that "race does not exist." Nevertheless, among the true believers in the dogma that race is a social construct or a fiction, there has never been an adequate explanation why human population groups (or races, which are, in the words of the late Vincent Sarich, "fuzzy sets"), separated for tens of thousands of years without interbreeding and subjected to widely varying environmental conditions and



Our cover model, nameless no more, is Natalie Merriam Johnson, PhB'33.

PHOTOS COURTESY KEITH JOHNSON, AB'58, AM'64

pressures, should not have developed significant differences through the processes of natural and sexual selection.

Those who, in the cause of a misguided genetic egalitarianism, dismiss the idea of race as a biological reality would do well to consider the arguments of *New York Times* science writer Nicholas Wade, either in *Before the Dawn* (Penguin, 2006) or in *A Troublesome Inheritance* (Penguin), forthcoming this May.

Jonathan Ekman, AM'81
LONG BEACH, CALIFORNIA

Evidence, please

I just finished reading the article about anthropology professor Russell Tuttle, and I confess to being confused. The article asserts that, as the editor in chief of the *International Journal of Primatology* from 1988 to 2010, Tuttle “stood at the barricades, trying to prevent misused language and exaggerated interpretations from inflating facts.” The article quotes the professor in several ways encouraging his students and others to strive for critical thinking and the scientific underpinning of ideas. However, the article also contains several quotes from Tuttle indicating that he has reached strong conclusions regarding the differences between humans and other animals, without also providing evidence to substantiate his conclusions. This apparent contradiction, at least as presented in the article, leaves me wondering if the book provides the evidence in support of Tuttle’s bold conclusions that was not provided in the article.

For example, the *Magazine* article summarizes one of the major conclusions of Tuttle’s new book, *Apes and Human Evolution* (Harvard University Press, 2014), that symbolic language unique to the human species allows us to share ideas and beliefs as the basis of our culture. Tuttle contrasts human abilities with apes when he states, “No one has shown that chimpanzees in nature have pervasive shared symbolically mediated ideas, beliefs, and values.” Unfortunately, the *Magazine* article fails to provide any evidence indicating that morality, symbolically mediated beliefs, and values are absent from apes or other animals and their social lives.

Similarly, the article quotes Tuttle as stating that humans have culturally prescribed limits on behavior and the cog-

nitive capacity to recognize the effects of their actions on others. This implies that he believes apes and other animals do not have prescribed limits on their behavior or the ability to understand the effects of their actions on others. Again, no evidence is presented in the article supporting this conclusion, or Tuttle’s statement that only humans are capable of “thinking, knowing, perceiving, or feeling what others are thinking, knowing, perceiving, or feeling.”

Tuttle also says in the article that only humans have kinship and long-lasting love relationships. Again, no evidence is presented to support this conclusion.

I have to agree with professor Tuttle’s statement in his book that “Questions of human evolution and our place among the organisms are excellent challenges to one’s ability to think critically.” I hope, for the sake of science and the professor’s students, that the evidence underlying Tuttle’s conclusions are elucidated and substantiated more in the book than they are in the *Magazine* article.

Jeff Bloom, AM'86
ALEXANDRIA, VIRGINIA

Miltonic wisdom

As an economist, I would like to draw attention to “After the Disaster” (UChicago Journal, Jan–Feb/14), which discusses the financial crisis of 2008 and its duration. It features the opinions of Henry Paulson; David Axelrod, AB’76; Austen Goolsbee; and other participants who purportedly represent the Democratic and Republican programs prominent during the past five years. Paulson now chairs the Paulson Institute, “an independent think tank housed at the University.” In 2007 he was appointed by George W. Bush to be Treasury secretary. He remarked at the conference that “one of the things I’m most grateful for is that Republicans and Democrats came together to avert disaster.” Goolsbee, who chaired the Council of Economic Advisers under President Obama, thought the stimulus spending program, including the TARP spending and quantitative easing programs initiated by the Treasury and Federal Reserve, were essential, effective, and needed to be continued. According to the story, none of the 18 speakers disagreed or criticized the spending programs as such.

I, and I think many other economists who received their economic training at Chicago, thoroughly disagree with the views of the event’s speakers on both sides. We think longingly of what Milton Friedman, AM’33, would have said to this panel: He would have condemned the accelerated spending policy objectively, scientifically, and very positively. He would have argued that the problem was not spending deficiencies in the private sector to be countered by government spending that had no constitutional authority nor economic evidence to support it. Rather he would have argued, as I do here, that the *government should have backed off, spent less, reduced taxes on the private sector, and abolished incentive-killing regulations on private enterprise.* He might also have argued that all the government spending programs, including the Federal Reserve’s tsunami of bank credit creation, constituted a *negative multiplier effect* on the private sector. He would have deplored further policies in that direction and argued for government policies that would encourage private incentives in the real sector of the economy.

What we are witnessing now is the proof of that spending pudding: a weak and unpromising “recovery” that reflects a stagnant economy, and one that has little promise of any real growth in the future. Mr. Paulson began the program with the remark, “None of us ever want[s] to have our nation go through another crisis like the 2008 crisis.” Of course we don’t. But as Friedman might have stated the case, the “cure” of government spending since 2008 has been worse than the disease of earlier government spending and has featured the wrong analytic approach to the problems of the time. So what are our chances of avoiding repetition of such an event when both political views of the issue are so clearly wrong?

Where are you, Milton, when we need you most?

Richard Timberlake, PhD’59
BOGART, GEORGIA

Paradise stalled

I enjoyed “Vision of Health” (UChicago Journal, Jan–Feb/14), which discussed William Nickell and his long experience in Sochi, Russia. It reminded me of a visit to Yalta, Ukraine, that my wife and I made while aboard the

LETTERS

old *Island Princess* in October 1995. Located on the Crimean Peninsula about 300 miles west of Sochi, Yalta also enjoys a mild climate. It too has year-long southern exposure to the sun with protective topography to the north that keeps out cold winter winds. As expected, we visited the room where Roosevelt, Churchill, and Stalin held their conference in February 1945. All the furniture from that time was still in the meeting room. But we also saw some things in Yalta that were news to us. Churches were undergoing major fixing up and redecorating, needed after 78 years of neglect since the Bolshevik Revolution of 1917. They were becoming beautiful buildings again.

Also, like Sochi, Yalta had numerous sanitoriums for different trade unions and political groups. However, many of these had an interesting feature. Namely, it appeared they were intending to expand and had built reinforced concrete skeletons for these improvements. By the time of our visit, those additions were just sitting there, unfinished, standing out like a sore thumb. We assumed that these additions were halted due to the collapse of the Soviet Union in 1991. I suspect their decline may have started like the decline of those in Sochi as described in the story. A couple of days later, we visited Varna, Bulgaria. Some unfinished office buildings there were being worked on. I am sure they are long finished by now.

James A. Lessly, PhD '50
O'FALLON, MISSOURI

Educational value

When I started at UChicago in 1956, the tuition was \$690 for the year. My

father, a high school teacher, was not sure he could afford it. But then I received a half-tuition scholarship. Great universities are more expensive now than they were then, but it is not tuition that pays for them. The University could pay for all its undergraduates who maintain good standing. But that would hardly put a dent in the deprivations of poverty, as you know.

I have taught philosophy at York College, CUNY, since 1969. Although tuition ceased to be free not long after I began, it is pretty inexpensive compared to private institutions, such as the University of Chicago, which can take credit for providing inexpensive higher ed to the not so rich by having educated me and many others who went on to teach at CUNY and elsewhere.

Howard Ruttenberg, AB '60, PhD '73
NEW YORK CITY

A closer look

When an image is worth more than words, please make the image large enough to see. For the note on Christopher Dingwall's (AM '06) research on racial imagery ("Slow Dance," Jan-Feb/14) I had to take out a magnifying glass to see "stark racist caricatures" on the first sheet music cover for "The Darktown Strutters' Ball." I hope readers will be encouraged to do the same. With the magnifying glass in hand I did not find the second cover "neutral." Its dancers are not caricatures, but except for their light grey skin they also do not seem to be different from whites at all. On offer in the pair of 1917 images: racist stereotypes on the one hand, or the rigid codes of assimilation.

David Curley, AB '68, AM '73, PhD '80
BELLINGHAM, WASHINGTON

We appreciate the suggestion and encourage readers to view the images larger online at magazine.uchicago.edu/slowdance.—Ed.

And the beat goes on

It certainly brought back memories seeing Campbell McGrath, AB '84, in the Q&A at the back of the Winter 2014 issue of the *Core*. I remember Campbell as the lead singer and drummer (one snare drum, one drumstick) of the Men from the Manly Planet, who used to play in the basement of Alpha Delta Phi back in the early '80s. They actually had quite a cult following, probably because they were unyielding in their dedication to never rehearse (at least that was the legend—I'm sure Campbell could verify). I wonder if the MacArthur folks knew about that?

David Kiefer, AB '85
NORCROSS, GEORGIA

Going up?

I have just finished reading, with great pleasure, the letters, articles, notes, et al., in the Jan-Feb/14 issue. In "The Informed Life," Edward Tenner, AM '67, PhD '72, quotes Edwin Diamond's paraphrase of Tom Lehrer's "Wernher von Braun." I did not hear Mr. Lehrer myself, but my mother did, and—whenever she could make an occasion to do so—would chant: "Just so it goes up, who cares where it comes down? That's not my department, says Wernher von Braun."

The rather plodding printed variant conveys Mr. Lehrer's sense, but I feel that Mama's version must be nearer his original rhythm and insouciance.

Julia White Rogers, AM '47
RESTON, VIRGINIA

It is indeed nearer. In a video available on YouTube's Tom Lehrer Wisdom Channel, Lehrer sings, "Once the rockets are up, who cares where they come down?"—Ed.

Brush with fame

I attended the University from 1967 to 1974, receiving an AM and PhD in history in 1969 and 1973 ("A Little Bite of the Fame Machine," the *Core*, Winter 2014). I was waiting outside medieval history professor Karl Morrison's office on the third floor of the Social Science Research Building when Saul Bellow (X'39) walked into his office next to Morrison's. He glanced at me but initially said nothing. A few seconds later he opened his door and asked if I was waiting for him. I said no, and he said "Good" and shut his door again.

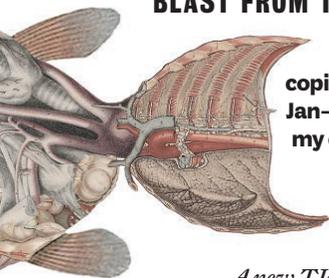
After finishing my dissertation I was invited to lunch at the faculty club by

BLAST FROM THE PAST

Wow, one of the more interesting reads. I'm ordering copies of *Your Inner Fish* by Neil Shubin ("Fish Out of Water," Jan-Feb/08) to send to my internist, my gastroenterologist, my orthopedic surgeon, my neurologist, my dermatologist, and my psychiatrist—all of whom I am sure will reply by telling me to go soak in a sea of salt water.

—Ron Tarrson, MBA '72, Mar-Apr/08

A new TV series based on Shubin's book airs this spring on PBS.—Ed.



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LETTERS

professor Arnaldo Momigliano. Joining us were visiting professor Franco Venturi and a UChicago scholar of Welsh, whose four-letter last name escapes me. When the professor of Welsh found I was of Welsh descent, he became excited and asked if I could speak Welsh. I said no, and he was quite disappointed.

Robert Edbrooke, AM'69, PhD'73
CAMBRIDGE, MASSACHUSETTS

Funny page

I clipped every single Grant Snider cartoon that appeared in the *Kansas City Star* when he was here studying dentistry. Thanks for adding him to the *Core*. I always thought his humor was very U of C.

Vern Bernet, X'70
KANSAS CITY, MISSOURI

Friend of a feline

I just read the article about Rachel Wiseman, AB'12, and her organization in the *Core* ("Non-crazy Cat Lady," Winter 2014). I graduated from UChicago in 1994, and in 1992 I was presented with a little kitten that the local eight-year-old boy I babysat for found in a Hyde Park alley. She was tiny, hungry, and scraggly, but I took her in. I named her Chloe, and she lived with me for 19 and a half years through six states, nine apartments, and one house, welcoming

roommates, a husband, two babies, and two dogs into her life. Her grandmother was a veterinarian, and we talked often about how she was the luckiest cat in Chicago. I am so moved and happy that Wiseman's organization is giving other cats a life as good as Chloe's turned out. Thank you.

Carrie Essex, AB'94
NORFOLK, MASSACHUSETTS

Not ready for prime time

The flyer reproduced in the Jan–Feb/14 Letters section reminded me of another event on the day of the football protest. The University administration staged a tug-of-war across Botany Pond to convince the media that UChicago students were normal. To add insult to injury, around the same time, a folk music concert was being taped on campus. Students were removed from the front rows of the audience and replaced with extras because the telecasters decided that the U of C students were way too scruffy. At 75, my wife still considers me scruffy!

John Agria, PhD'66
TEMPE, ARIZONA

Continental bias

In re "Administrivia" (the *Core*, Winter 2014): The Class of 2017 has not a single student from either Alaska or Hawaii? Even if that's true, it doesn't justify dropping two states from the map of the USA. (Just ask our POTUS, the ex-UChicago faculty member and Kenwood homeowner.) Hawaii has been the 50th state for over 50 years, Alaska the 49th for longer than that. Aloha!

John Sevick
KAILUA-KONA, HAWAII

We apologize for the omission. The Class of 2017 includes one student from Alaska and one student from Hawaii.—Ed.

Truth in advertising?

As I sat with my morning coffee my eyes went to the *University of Chicago Magazine* on the coffee table. The back page advertisement boldly announced: "The key to an extraordinary life is quite literally a key" to an automobile. As my mind tends to quibble, I had to immediately insert "automobile" in place of "life." I somewhat wondered if any who read our magazine believe that an automobile provides *the* key to an extraordinary life.

Next my mind went to whimsy as I wondered if the editorial board had standards for accepting advertisements. Isn't it more than a bit preposterous for an ad to state that an automobile was the key to an extraordinary life? Is this offering really "truth in advertising"? Hmmm.

Next my mind turned serious, which is its most natural mode. Keys to an extraordinary life: greater intelligence; a very good education; a strongly felt purpose for creativity; loving and sensitively compassionate family and friends; born into a good place, at a good time in history; healthy and energetic genes; and ... Well, it seems that it is a U of C trait to not be able to stop thinking. As this whimsy ends let me sincerely thank you for a most provocative and stimulating *advertisement*. Only in the *U of C Mag!*

Robert W. Jais, DB'65
OAKBROOK TERRACE, ILLINOIS

Correcting the record

There is a factual error in "Student Aid" in the *Core* (Winter 2014): The University of Chicago First Responder Corps was founded in 2007 to respond to medical emergencies within the UCPD patrol area, not to provide first aid at campus events or train students in first aid, as the article erroneously states. The impetus was the shooting death of graduate student Amadou Cisse, SM'02, PhD'07, in 2007. The plan initially was to operate as a student-run ambulance service, but this idea was replaced with the idea of responding on bicycles to garner more support from the administration. The bicycle proposal was then replaced with a campus event stand-by model, which ultimately failed, initially, for the reasons cited in the article.

There were several alumni involved in the initial start-up in 2007 who would recognize this as a significant error that downplays the significance of their endeavor at the time. Otherwise, this was an excellent article that explained a highly technical student organization rather well.

Jonathan Warczak, AB'12, AM'12
SCHENECTADY, NEW YORK

Congratulations to President Zimmer on his selection as president of the Board of Trustees of the Marine Biological Laboratory (MBL) in Woods Hole, Massachusetts (For the Record,



Wiseman holds foster cat CCK (Court Case Kitty).

Jan–Feb/14). It’s a lovely place to be in the summer.

To the *University of Chicago Magazine*, not so much. While, as you report, this may be a reestablishment of historic ties to the MBL, they don’t “date to the Woods Hole, Massachusetts, founding in 1888.” As you should know, the University wasn’t around in 1888.

The MBL’s first scientific director was Charles O. Whitman, then director of the Allis Lake Laboratory in Milwaukee. Whitman had been the first American to do research at Anton Dohrn’s Stazione Zoologica at Naples (still in existence) and had recently (1887) founded the *Journal of Morphology*.

In 1889 Whitman was appointed professor of animal morphology and head of the biology department at the newly opened all-graduate Clark University. During his three years there, biology faculty and students migrated to the MBL each summer. Only with Whitman’s appointment as head of the department of zoology at Chicago in 1892 would the University’s connection with MBL begin—in the summer of 1893, five years after the date of your claim. President Harper also recruited 14 Clark faculty members, including A. A. Michelson, to staff his newer university’s scientific departments. In the lore of American higher education, this has been mythologized as the “Harper Raid.”

William A. Koelsch, PhD’66
SAN DIEGO

We regret the errors. For more about Whitman, see the University of Chicago Library’s web exhibition Charles Otis Whitman: His Science, His Special Birds, and the Marine Biological Laboratory at lib.uchicago.edu/webexhibits/charleswhitman.—Ed.

The University of Chicago Magazine welcomes letters about its contents or about the life of the University. Letters for publication must be signed and may be edited for space, clarity, and civility. To provide a range of views and voices, we encourage letter writers to limit themselves to 300 words or fewer. Write: Editor, The University of Chicago Magazine, 5235 South Harper Court, Suite 500, Chicago, IL 60615. Or e-mail: uchicago-magazine@uchicago.edu.

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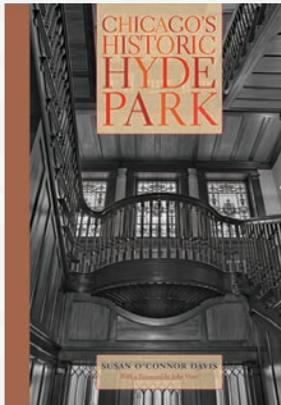


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Architecture

FROM CHICAGO



Chicago's Historic Hyde Park

Susan O'Connor Davis

With a Foreword by John Vinci

"Davis has created an extraordinary guide to a remarkable place. *Chicago's Historic Hyde Park* is a compelling visual account that introduces the reader not only to a complex local history, but also to one grounded firmly in the larger currents of both architectural change and urban development."—Dominic A. Pacyga, author of *Chicago: A Biography*
Cloth \$60.00

From Park Books



Chicagoisms

The City as Catalyst for Architectural Speculation

**Edited by Alexander Eisenschmidt
and Jonathan Mekinda**

More than simply an architectural biography of the city, *Chicagoisms* shows Chicago to have an important role as a catalyst for international development and pinpoints its remarkable influence around the world.

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Building Ideas

An Architectural Guide to the University of Chicago

Jay Pridmore

With Photographs by Tom Rossiter

Building Ideas explores the stunning built environment that has supported more than a century of exceptional thinkers at the University of Chicago. This photographic guide traces the evolution of campus architecture from the university's founding in 1890 to its plans for the twenty-first century. To see sample images, go to <http://bit.ly/UCPHOTOS>.

Paper \$25.00

From Columbia College Chicago Press

Stray Light

David Hartt

Columbia | PRESS
COLLEGE CHICAGO

When the Johnson Publishing Company, best known for *Jet* and *Ebony*, moved into its iconic building on Michigan Avenue, the structure symbolized a bold entry into both the Chicago skyline and the city's cultural environment. David Hartt was given unprecedented access to the building, much of which retains its '70s design, from bright gold accents to vintage see-through furniture. His resulting photographs take viewers on a rich and revealing tour.

Cloth \$60.00

A laboratory for humanists

BY MARTHA T. ROTH, DEAN OF THE HUMANITIES DIVISION AND CHAUNCEY S. BOUCHER DISTINGUISHED SERVICE PROFESSOR OF ASSYRIOLOGY, AND MARIO LUIS SMALL, DEAN OF THE SOCIAL SCIENCES DIVISION AND PROFESSOR OF SOCIOLOGY

In 2012 the Divisions of Humanities and Social Sciences established the Neubauer Collegium for Culture and Society, an innovative model for interdisciplinary research setting a new standard in the academy. Certainly scholarship that extends past disciplinary boundaries is not new to the University of Chicago: our institution is renowned for its variety of research centers and cross-disciplinary discussions among our faculty. But the Neubauer Collegium does more than just add to the conversation on campus. It reshapes how we approach, encourage, and support interdisciplinary work, offering the space, resources, and global institutional reach that can help faculty turn their most ambitious ideas and aspirations into sustained collaboration. We see the Neubauer Collegium as a laboratory for the humanities and humanistic social sciences—a gathering space where scholars from around the world can join with UChicago faculty to learn from one another and experiment collaboratively with new methods and ideas to address complex questions beyond the scope of any discipline.

Under the leadership of **David Nirenberg**, the Deborah R. and Edgar D. Jannotta professor of medieval history and social thought, the first year of the collegium has been a remarkable success. With the support of a founding \$26.5 million gift from **Joseph Neubauer**, MBA'65, and Jeanette Lerman-Neubauer, and the selection of 5701 South Woodlawn as its future home, the Neubauer Collegium is poised to become a major



Roth began teaching at the University in 1980; Small joined the UChicago faculty in 2006.

intellectual and physical destination on campus. In October 2013 we were pleased to announce a major gift from **Emmanuel Roman**, MBA'87, to support a named directorship for the collegium. That same month, hundreds of campus and community members packed Mandel Hall for a public lecture delivered by internationally renowned artist William Kentridge, marking the official launch of the Neubauer Collegium.

The first cohort of faculty research projects—the centerpiece of the collegium's work on campus—engages widely with big questions and broad topics. A group of classicists, archaeologists, and economists are using comparative economics, from ancient societies to the present, to create new forms of analysis and debate. This group is also interested in using new ways to collaborate and publish by

hosting a series of public workshops and publishing their results in an electronic format for easier access. Another research team focuses on a different audience: teenagers. Crossing the fields of literature, technology, and public health, the Game Changer Chicago Design Lab works with game designers and adolescents from neighboring communities to cocreate digital and nondigital games that positively impact social learning and health choices. And a group of faculty from linguistics, human development, and psychology are examining how physical actions, gestures, and sign language shape learning and creativity. In all, the Neubauer Collegium sponsored 18 collaborative projects in its first operational year, each offering new directions for continued research.

The 2014–15 cohort of Neubauer Collegium faculty research projects will continue the success of our first year, exploring topics from migration and material culture to humanism and the classics. Where else but in the collaborative structure of the Neubauer Collegium can one find anthropologists working together with scholars from economics, law, and business on the problems of health insurance in India? Where else could an interdisciplinary research team boldly aim to create a new Chicago school on the state, violence, and social control? And how would scholars from medicine, classics, and comparative literature investigate issues of end-of-life care if not for the Neubauer Collegium's support? The 11 research projects funded for the coming year display an exceptionally curious faculty, and the topics they cover demonstrate the Neubauer Collegium's flexibility to accommodate scholars and methodologies from disciplines across campus.

There is no better home for the Neubauer Collegium for Culture and Society than the University of Chicago, and there is no university better suited to accommodate the Neubauer Collegium's goals of experimentation on complex questions and interdisciplinary innovation. This campus-wide venture pushes the limits of inquiry beyond disciplinary boundaries and methodologies and in doing so places the University of Chicago at the forefront of humanistic research. ♦



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PHOTO COURTESY TIANJIN PEKING OPERA COMPANY

ART

Operatic range

A campus festival explores the influence of Chinese opera.

For centuries Chinese opera has sparked artistic creativity far beyond

the stage. Paintings, prints, books, ceramics, and textiles depict characters and stories. Composers, playwrights, and filmmakers have drawn on imagery from the opera to produce new works.

Envisioning China: A Festival of Arts and Culture, a campus-wide exhibition running through June 15, will showcase the wide influence of opera. Among the events, *A Night at the Peking Opera*, April 12 at the Logan Center, will feature rising star Ling

Ke and members of the Tianjin Peking Opera Company.

Two Smart Museum exhibitions—*Performing Images: Opera in Chinese Visual Culture* and *Inspired by the Opera: Contemporary Chinese Photography and Video*—will illustrate the impact of opera on other media.

Elsewhere during the festival, Court Theatre will stage a production of *M. Butterfly* and musical performances will include the Shanghai Quartet and Chinese lute virtuoso Zhou Long. ♦

Modeling change

Plus-size model Amanda Tice, AB'06, believes her work can have a positive effect on women's lives.

Amanda Tice, AB'06, is a plus-size model, but this past fall she did not wear her usual size 12. "Right now, I'm actually the smallest I've ever been. I'm smaller than I should be," Tice says, explaining in a November interview that she had gotten married a week earlier and wanted to look a bit more "svelte" for the wedding.

I met Tice on a Thursday, at the tail end of the fashion industry's underwear market week, when buyers from major retail outlets like Macy's and Kohl's come to view the next season's designs and decide which products to stock. "I am pretty much locked in a closet waiting until someone comes in and says 'We need you to show *this* bra.'" Over the course of an eight-hour day, she might work anywhere from 40 minutes to two hours, depending on the number of showings required of her.

Tice has been modeling with the

Wilhelmina agency in New York for five years. The agency connects her with designers, retail stores, and other clients in print and online advertising, and she's responsible for showing up at the job, maintaining the client relationship, and hopefully getting asked back for more work. "You really act as your own business person."

She has appeared in magazines, in online catalogs, on bra tags. A few weeks after our meeting, I walked into Target and saw Tice on a poster, wearing a white blazer with a black splatter print.

At Wilhelmina, Tice is one of some 65 models on the agency's plus-size board, called Curve. The majority of Tice's business—she estimates about 80 percent—is modeling swimwear and lingerie. And since swimwear looks best on the beach, Tice gets to travel. "I just had a job a couple weeks ago where they wanted me to feed flamingos on the beach," she says. "In Aruba."

Plus-size work has its own unique upside. In contrast to the image of a "straight size" model squeezing into a runway gown, Tice says many long-time clients have confidence in her ability to sell their products and aren't all that concerned with her exact size. "If I lose the weight then they'll pin the clothes more, if I gain the weight then they'll cut the back."

Tice never considered modeling until after the economic crash in 2008.

After graduating from the College, where she studied comparative human development, she worked as an anchor for a Fox News affiliate based in Little Rock, Arkansas.

A training program called the Pombo Project, run by News 12 The Bronx, brought her to New York. After three weeks of chasing stories—driving to the scene, filming, writing, editing video—Tice received a job offer. She turned it down. "On the last day I get called to a shooting. When I get there, [the police] can't find the shooter," she recalls. "So I'm at a shooting in progress. ... I knew emotionally I was not cut out for that."

Tice found other work as a host for TV and online outlets like MSNBC.com, producing segments on "lighthearted, lifestyle sorts of things": the surf report in the Hamptons, the top electronics this holiday season.

A photographer she had met at a previous TV job encouraged her to attend an open casting call at Wilhelmina, which set her on a new path. Now 30, Tice figures she could model for another decade or so. She still finds the work exciting, but doubts she'll be in the industry that long. It lacks the "intellectual stimulus" she craves, although the travel and the variety of people she meets feed the same interest as her major. "It's almost like doing field work for me," she says. "It's anthropological in this sense."



Tice sees signs of positive change in the fashion industry.

Tice believes that the plus-size modeling industry serves as a much-needed counterpoint for the disregard that designers and marketers have long shown to curvier bodies. Last October the Associated Press reported that “the average American woman is about 25 pounds heavier than she was in 1960. Yet women’s plus-size clothing, generally defined as size 14 and up, still makes up only about 9 percent of the \$190 billion spent annually on clothes.”

But Tice sees the demand every day. “It’s really only a matter of time before the [fashion] industry will shift its ideology and start to realize that there’s a market for real bodies, for real people.”

This past July, Ford New York, a Wilhelmina competitor, closed its plus-size board. The reaction within the industry, Tice says, was shock. After the announcement, two former Ford model agents opened Jag Models, which bills itself as “the first agency in New York that’s dedicated solely to women of all sizes.”

Still, Tice admits that her work isn’t always put to encouraging use. Consider her first print job, for *O, the Oprah Magazine*. In the photo, Tice is surrounded by plain white T-shirts hanging in the air, each identifying a diet: South Beach, Weight Watchers, Atkins, and so on. Tice is standing in the middle with her hands in the air—her shirt reads “Overeaters Anonymous.”

She also often models bras that promise to smooth back fat or reduce underarm bulge. “In the plus industry in general, the majority of what you’re shooting is how to fix problems.”

There are signs, though, that retailers are realizing a woman’s size doesn’t dictate her interest in fashion. Robyn Lawley, another Wilhelmina Curve model, made waves in 2012 as the first plus-size model to appear in a Ralph Lauren campaign, and recently posed for Chantelle lingerie wearing items from the brand’s line not specifically marked as plus-size.

“The industry is on the verge of making substantial changes,” Tice says. “I feel like you’ll be hearing more often, ‘This is the first-ever plus model used for X or Y or Z.’” Last year, for example, Tice became one of the first plus-size models for Frederick’s of Hollywood lingerie.—*Mitchell Kohles, AB ’12*



For Frohardt-Lane, this San Francisco 49ers field goal was very, very good.

GAMBLING

Best bettor

Chicago trader David Frohardt-Lane, SM’00, put his statistics education to lucrative use.

The best sports bettors have a success rate of about 54 percent, says **David Frohardt-Lane**, SM’00, and anything higher is luck. He should know; the Chicago trader won \$557,850 last December in Las Vegas’s largest handicapping contest by nailing a record 67.9 percent of his picks.

Every week during football season, the 1,028 entrants in the Las Vegas Hotel and Casino SuperContest picked five NFL games against the point spread. In Week 17, for example, Frohardt-Lane picked San Francisco (1), meaning he thought San Francisco would beat Arizona by more than one point. The whole contest came down to that game. With two seconds left and the score tied, the 49ers’ Phil Dawson nailed a 40-yard field goal, winning the game for San Francisco and the SuperContest for Frohardt-Lane.

After spending all day checking the score on his iPhone at his brother-in-law’s wedding reception, Frohardt-Lane got in front of a television for the final kick. “Just looking at my iPhone, I felt helpless,” he told the Associated Press. “But just seeing the game, I started to regain my confidence.”

Frohardt-Lane started watching sports in 1984, when his hometown Detroit Tigers won the World Series after an MLB-record 35–5 start. He was seven years old. “I had no idea that it would not be this easy,” he says. “Like, I could live a full life and die without ever seeing the Tigers win another World Series. It’s incredible.”

To celebrate, a relative gave him Bill James’s 1985 *Baseball Abstract*—the pioneering sports statistician’s take on the year in baseball—and a couple years later, he was hooked. “My dad was a math professor, so I’ve always been interested in numbers,” explains Frohardt-Lane. “I love just playing pickup football, basketball, whatever, but I was terrible. I never played on a team or anything.”

He kept up with advanced sports statistics but didn’t think seriously about handicapping until his second year as a math major at Carleton College, when he made a model to predict the results of NFL games.

“Until that point I just assumed that markets are totally efficient,” including Vegas, and that trying to beat the oddsmakers is futile, Frohardt-Lane says. His “simple” model would have beaten the line on over 60 percent of games over the previous five years. “That kind of just changed my whole thinking.”

So he enrolled in the PhD statistics program at UChicago, leaving after a year with a master’s. “It ended up being a naïve idea,” he says. “I just like numbers, and I didn’t appreciate that at the graduate school level statistics ceases to be about numbers and starts to be more like analysis.”

Frohardt-Lane headed to Califor-

nia, taking “frankly unambitious” jobs at Wells Fargo and the now-defunct NextCard to focus his energy on betting baseball. After hundreds of hours spent looking for factors with predictive value, he built a model in the stats program R with individual projections for every player based on past performances. A second model, built in C, simulates each game thousands of times and identifies the probability of every discrete outcome for each batter’s appearance at the plate: walk, strikeout, hit, out, and homer. Another model he designed for football predicts final scores.

By the end of 2003, Frohardt-Lane had worked his bankroll from \$10,000 to almost \$100,000, betting \$1,000 to \$2,000 per game. “I love having some skin in the game,” he says. He still considers himself a sports fan—“When the Tigers had their runs in ’06 and ’12, I was really into it,” he says—but

gambling comes first. And in fact, he says, the experience of having money on the line is similar to that of being a fan. “You have something you’re rooting for, and you just root for that,” even if it means cheering against his hometown teams. “If the model says bet Detroit or fade Detroit”—meaning, bet against—“that’s what I’ll do.”

In 2004 Frohardt-Lane moved to Chicago and took a job at trading firm Getco (now KCG Holdings), which left less time for gambling. Increasingly restrictive sports betting laws also made it harder. But in the fall of 2011, looking for a way to bet more often than his annual trips to Vegas, Frohardt-Lane jumped at the chance to compete in high-stakes handicapping contests. That year he won the Cantor Football Contest, beating out 14 other entries for \$75,000.

The sports world took notice; since last summer, Frohardt-Lane has been

consulting for a major league sports team, although they’ve asked him to keep mum. Sports teams “are a lot smarter than you think,” says Frohardt-Lane. “I think ten years ago they were far behind the public even, and I just don’t think they are anymore.”

Frohardt-Lane’s trust in data even extends to what he does with his winnings; he donated half of his contest windfall to GiveWell, a nonprofit that evaluates other charities. “They think in terms of probabilities and expected values,” he says. “They talk about expected return on dollar invested.”

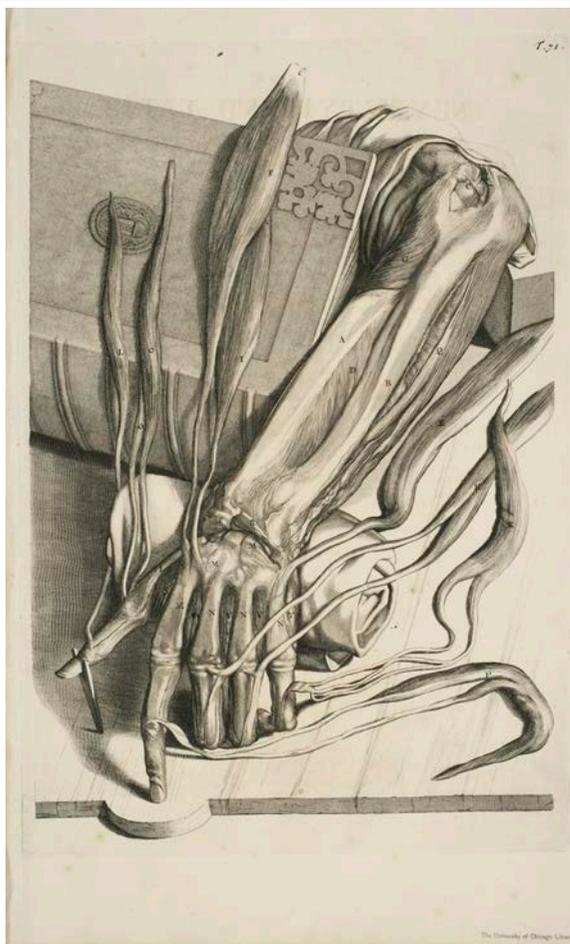
Frohardt-Lane does play fantasy football to keep up with old friends—model-free—and his wife of five months doesn’t mind his sports betting. “She just kind of writes it off as the one quirky thing, maybe not the one, but one quirky thing she has to deal with.”—Derek Tsang, ’15

ORIGINAL SOURCE OLD HAND

Modern anatomical images treat the human body as abstraction, says Mindy Schwartz, one of two UChicago physicians curating *Imaging/Imagining: The Body as Art*, an upcoming Smart Museum exhibit on representations of the body in art and in science. No such abstraction exists in William Cowper’s 1698 *Anatomy of Humane Bodies*. Dutch artist Gérard de Laireesse’s engravings fill *Anatomy* with flies, flayed skin, nooses, and rigid faces. “Most anatomists don’t really bring you into their world, because they’re trying to portray something from a pedagogical or an educational standpoint,” says Schwartz, who studies the history of medicine. De Laireesse “wants you to never forget that you’re seeing something that was hacked up.”

Cowper acquired (exactly how is a source of historical controversy) the printing plates for *Anatomy* from Dutch anatomist Govard Bidloo, whose own tract didn’t sell nearly as well. This engraving shows the muscles of the lower arm and hand spread across a book and dissection table. “It’s almost as if it’s alive,” says Schwartz.

Cocurated by UChicago physician Brian Callender, AB’97, AM’98, MD’04, *Imaging/Imagining* opens March 25, along with related exhibits at the Special Collections Research Center and the John Crerar Library. The exhibit compares hand-drawn anatomies to modern medical images—like Wilhelm Röntgen’s 1895 X-ray of his wife’s hand, which prompted her to say, “I have seen my death.” The drawings actually measure up, says Schwartz. Cowper’s *Anatomy* reflects a very different world, in which medical students “lived with death in a way that we don’t.”—Derek Tsang, ’15



SPECIAL COLLECTIONS RESEARCH CENTER, UNIVERSITY OF CHICAGO LIBRARY

EDUCATION

American studies

Leon and Amy Kass develop an online curriculum that inspires insight into the national soul.

For decades **Leon and Amy Kass** were loved and lauded teachers, but finding that out firsthand wasn't easy. "We taught in small classes, maximum 25 students. We liked to see the faces of the people," says Leon Kass, U-High'54, SB'58, MD'62. "We didn't lecture in Chicago." What they offered was "a way of taking the great books seriously, not as sources of answers, but as sources of questions," says their former student **Yuval Levin**, AM'02, PhD'10, editor of the journal *National Affairs*.

Now countless students can explore the big questions with the Kasses' help without having to come to Chicago or even go to college. The Kasses launched a website last year, *What So Proudly We Hail*, that offers high school teachers curricula designed to get students thinking about what it means to be an American. The project—which includes free lesson plans, discussion guides, video conversations, and e-books—follows their 2011 anthology, *What So Proudly We Hail: The American Soul in Story, Speech, and Song* (Intercollegiate Studies Institute). But the enterprise was really born just a year after the pair began their long careers at the University.

"In 1977 we started the Human Being and Citizen course, which asks the question: what is the excellence of the human being, what is the excellence of the citizen, and are they in tension with one another?" says Amy Kass, AB'62. The couple taught the Common Core course for



more than a quarter century, but over time—especially after the terrorist attacks of September 11, 2001—it became "more urgent," as Amy puts it, to place that debate in the specific context of the United States.

"We think, notwithstanding the political differences between left and right, the fate of this country is important to everybody," Leon says. "The principles and ideals of this country are important to everybody, even if different groups will emphasize different ones amongst them."

The Kasses moved to Washington in 2001 after George W. Bush appointed Leon chair of the newly formed President's Council on Bioethics, a position he held until 2005. He had council members read and discuss the Nathaniel Hawthorne story "The Birth-Mark," about the quest for human perfection.

Hawthorne can be found on the new website—along with George Washington, Mark Twain, Willa Cather, Cornel West, John Updike, Barack Obama, and more. Francis Scott Key and Irving Berlin are joined by Johnny Cash ("Ragged Old Flag") and Stevie Wonder ("Happy Birthday"). The emphasis on imaginative literature in a curriculum like this is "indispensable," Leon says, "because developing citizens is a matter of both the heart and the head. ... It's the poets that shape

WILLIAM RAINEY HARPER'S INDEX

PROMISING STATISTICS

Percentage increase in Chicago-area high school students applying to the College in the first year of UChicago Promise, which waives admission fees and replaces loans with grants for accepted students:

48.8

Total amount in application fees that the program waived for Chicago families:

\$89,475

Number of students and families who participated in workshops on admissions essays, interviews, and financial aid:

1,100

Number of Chicago high school students who enrolled in the Class of 2017:

73

Value of grants, in millions, to those students, who will graduate debt-free as part of a UChicago Promise pledge:

\$2.2

the souls and form the community.”

The Kasses retired from the University in 2010, but this project allows them to reach more students each year than they ever could have in their small seminars at Chicago—which is why they overcame their initial reservations about it. “We are not virtual people. We like real life, living, and synchronous conversation,” Leon says. “But we were encouraged to think we had this material and ought to find some way of joining the new age and try our hands at a digital learning project.” Technology wasn’t their only challenge: “We were obliged to write study guides for the stories we used on the meaning of America. We’d never done that before,” Amy says.

To help in that task, Leon says, “we put together an advisory council of outstanding teachers from

around the country, including several of our former students from the University.” Some of these high school teachers have written lesson plans and study guides, using feedback from their own students to shape the material. **Laura Gallinari**, AB’98, an English teacher at Fenwick High School in Oak Park, Illinois, wrote the lesson on Benjamin Franklin’s “Project for Moral Perfection.” Her students kept journals, as Franklin did, tracking their progress at making habits out of their own chosen virtues, with surprising candor.

Gallinari uses strategies straight from the Kasses’ Chicago classrooms to get students engaged enough to “conduct their own serious examination of the material and struggle to develop their own connections and conclusions.”

The Kasses care about the great books, but they care about the people reading them even more. “They’re just deeply interested in the souls of young people,” says Levin, the author of *The Great Debate: Edmund Burke, Thomas Paine, and the Birth of Right and Left* (Basic Books, 2013). The site includes a video conversation with his old mentors about Hawthorne. “They have a very high opinion of their students—often a higher opinion than the students themselves do,” he says. That inspires pupils to try to prove them right.

“I think it’s very straightforward,” affirms Leon. “Put the best materials you can in front of people, ask genuine questions that promote real thoughtfulness, believe that people, if you treat them as better than they think they are, will rise to the invitation.”—*Kelly Jane Torrance*

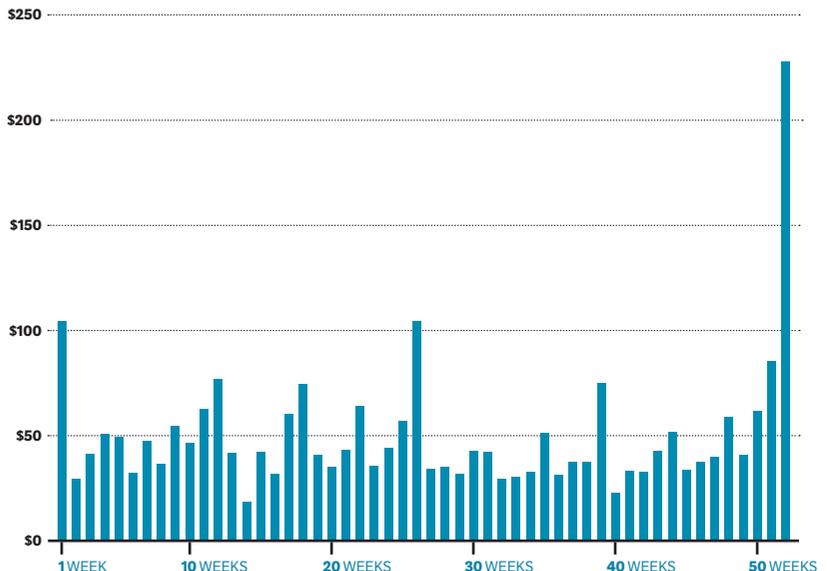
FIG. 1 SURGE PROTECTION

Much of the federal government’s wasteful spending happens at the very end of the fiscal year, and a recent study by UChicago economist Neale Mahoney and Harvard’s Jeffrey B. Liebman demonstrates how. In a National Bureau of Economic Research paper, the researchers report that 2013 spending skyrocketed in the final week of the fiscal year, to roughly five times the weekly average. Most federal agencies must either spend their entire budgets before the fiscal year ends or return the unused amount to the Treasury and risk a budget cut the following year. Mahoney and Liebman refer to this as a flawed “use it or lose it” approach, forcing many agencies to commit to lower-quality projects. Using the government’s own data, the researchers gauged quality based on cost, schedule, and performance.

The economists advocate allowing federal agencies to roll over unused funds into

Federal contracting by week, 2004–09

Spending in billions of dollars



the next fiscal year, without consequences for the following year’s budget. It is a solution that has worked well, they argue, for the Justice Department’s information technology budget since 1992: more than a decade

later, IT spending at the DOJ is considerably lower than non-IT spending at the DOJ, lower than year-end IT spending at other agencies, and does not drop in quality at the end of the year.

—*Adrianna Szenthe*

GRAPHIC COURTESY NEALE MAHONEY AND JEFFREY B. LIEBMAN; ADAPTED BY JOY OLIVIA MILLER

FOR THE RECORD



COLLEGE FUNDS

A \$10 million gift from University trustee **Steven Kersten**, JD'80, and his wife, Priscilla Kersten, will support the Urban Education Institute's efforts to better prepare low-income students for college. Highlighting UEI's work at a January 16 White House event, President Barack Obama said "not enough low-income students are taking the steps required to prepare for college." UEI's initiative will "reach 10,000 high schools over the next five years," Obama added. The Kerstens' gift will also help UEI provide data to policy makers, elected officials, and education leaders to improve college preparation, access, and success.



ARTISTIC GIFT

A \$25 million gift from the George Lucas Family Foundation will support the Laboratory Schools' new arts hall. At the request of the filmmaker George Lucas and his wife, financial executive Melody Hobson, the hall will be named in honor of American artist Gordon Parks. The building, scheduled to open on the Lab Schools' Hyde Park campus in 2015, will include three new performance halls, studios, rehearsal and practice spaces, and a digital media lab.

DIVERSE ACCOMPLISHMENTS

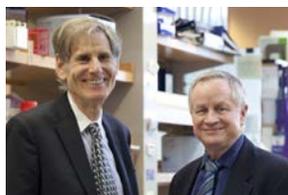
In January public health researcher **Aida Giachello**, AM'71, PhD'88, received the University's 2014 Diversity Leadership Alumni Award, joining staff recipients **Kathleen Forde** and **Theaster**

Gates. Giachello, professor of preventive medicine at Northwestern University, has helped establish organizations such as the Hispanic Health Alliance, the Midwest Hispanic AIDS Coalition, and the National Latino Institute for Reproductive Health. Forde, assistant dean of students, created a mentoring program for LGBTQ students. Gates, director of arts and public life, led the development of the Washington Park Arts Incubator, which offers artist residencies, education, exhibitions, and performances.



SUCCESSFUL RESEARCH

A \$17 million gift from the Hymen Milgram [AB'35] Supporting Organization has established a research initiative to study ways to help urban schoolchildren become more successful adults. Called Successful Pathways from School to Work, the program has so far awarded \$1.2 million in grants to study how early-childhood intervention influences long-term outcomes and the impact of vocational training in the Chicago Public Schools. Another \$2 million in grants are expected to be announced this year.



ALTERING CANCER'S COURSE

UChicago cancer researchers received a \$90 million infusion from Ludwig Cancer Research. One of six institutions that shared equally in the \$540 million Ludwig gift, UChicago's research efforts will focus on targeting metastasis, which is the leading cause of cancer

deaths, according to **Ralph Weichselbaum**, codirector of the Ludwig Center at the University of Chicago.



GATES TO CAMBRIDGE

Tim Rudnicki, '14, is one of 40 US students to receive a Gates Cambridge Scholarship. With plans to pursue an MPhil in economic and social history at Cambridge, Rudnicki will study how economic growth in Britain between the 14th and 19th centuries might apply today in the developing world.

WELL APPOINTED

David Fithian, vice president and secretary of the University, will become executive vice president on March 31. Fithian succeeds **David Greene**, who has been appointed president of Colby College. **Darren Reisberg**, executive director of the Institute of Politics, will replace Fithian as secretary of the University. **Steve Edwards**, the institute's director of programming, will become executive director.



SCHOLARS HONORED IN INDIA

Susanne Hoeber Rudolph, the William Benton distinguished service professor emerita, and **Lloyd I. Rudolph**, professor emeritus of political science, will each receive the Padma Bhushan Award, the third-highest civilian honor from the government of India. University faculty members since 1964, the Rudolphs have together coauthored eight books, including *Postmodern Gandhi and Other Essays*

(University of Chicago Press, 2006). In 2008 Oxford University Press published *Explaining Indian Democracy: A Fifty-Year Perspective*.

PRESIDENTIAL ENDORSEMENT

University president **Robert J. Zimmer** supported the South Side of Chicago as a site for the Obama Presidential Library after the January establishment of a foundation dedicated to its planning. "I strongly believe the Obama Presidential Library would be ideal for one of our neighboring communities," Zimmer said in a statement. Chicago mayor Rahm Emanuel called for a unified, citywide effort to attract the library and Zimmer pledged the University's support for that process, "working in partnership with the City of Chicago, our neighbors, civic leaders, and cultural and educational institutions."



ASTRONOMICAL ACHIEVEMENT

Joshua Frieman, PhD'89, has been named an honorary fellow of the Royal Astronomical Society. A UChicago astronomy and astrophysics professor and a member of Fermilab's theoretical astrophysics group, Frieman directs the Dark Energy Survey, a collaboration among 300 scientists from 25 institutions on three continents.

EXECUTIVE DECISION IN DELHI

Bharath Visweswariah, a management consultant in India, has been named executive director of the University's new Center in Delhi. As managing director of CEB Asia since 2011, Visweswariah oversaw a research staff of 130. At the Center in Delhi, he will work with faculty director **Gary Tubb** to implement a strategic plan and oversee administrative and staffing functions.

Interpret station

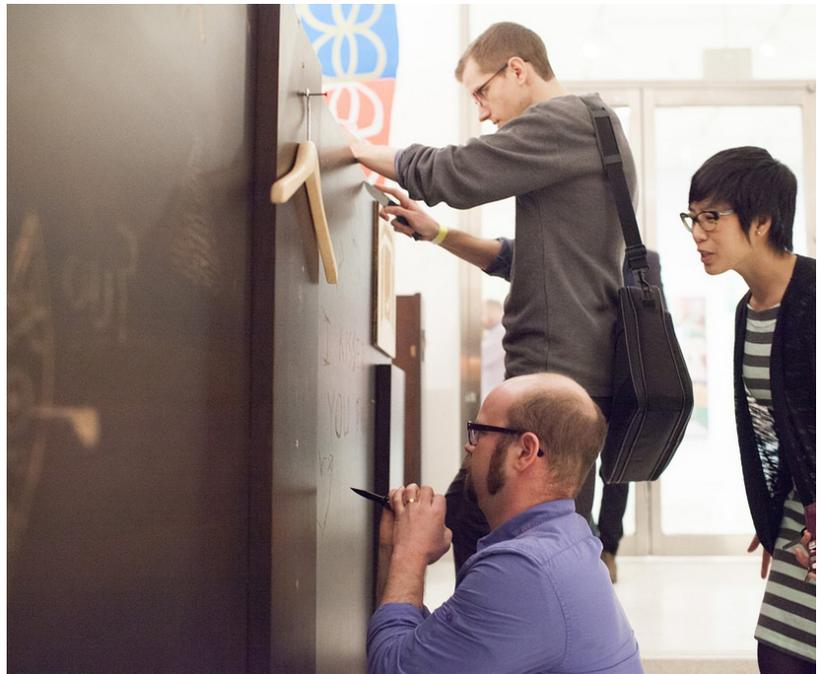
An interpreter in residence holds “office hours” for visitors to the Smart Museum of Art.

With 30 pieces of particle board, 28 screws, a drill, and about 45 minutes, artist **Matt Austin** can create a temporary office big enough to accommodate himself and a guest.

His pop-up workspace materializes periodically in the lobby of the Smart Museum of Art, where Austin is the museum’s inaugural interpreter in residence. A yearlong position, paid with an honorarium, it is intended to provide a framework for artists—Austin is a photographer and bookmaker—to engage museum visitors and for visitors to have more dynamic give-and-take experiences with the Smart’s collections and with art in general. “There are people who already know the museum, who have a relationship with the museum and probably have a relationship with the works in the museum, and this is a way that we’re inviting them to see those works differently,” says **Michael Christiano**, the Smart’s director of education and interpretation. “And it also serves as an opportunity to invite new people into the conversation about those works.”

During periodic “office hours” and other museum events, Austin invites people to come talk to him about all kinds of things: who they are, why they’re there, their experiences with art, what they think about the artwork. On days when he’s there, visitors receive a printed card when they step into the museum, listing several open-ended questions and inviting them to talk to Austin before they leave. “What events and plans of your day have led you here?” one card asked. “Why right now? How much time do you have?” Also, “What experiences throughout your life have had an influence on the kind of art you are drawn to? Why do you think that is?”

Sometimes people come and talk to Austin for 20 minutes; usually



Guests carve the names of their first kisses into the wall of Matt Austin’s Perch during a February event at the Smart Museum.

they talk for longer. At the end of the conversation, he asks visitors to take a knife and carve something—anything—into the walls of his office, made from walnut-veneered panels salvaged from the recently renovated Special Collections Research Center at Regenstein Library. Among the carvings, which Austin calls “evolving signifiers of participation,” are a coffee cup with a balloon rising from it; a cursive “h”; “Harold at the beach”; an ampersand in a square; “Don’t forget about me.”

By appointing an interpreter in residence instead of the more obvious “artist in residence,” the Smart is examining the idea of interpretation itself, moving beyond the traditional explanatory text that accompanies a work of art, Christiano says, to also include more “ephemeral” interactions: things like museum-hosted parties, art-making programs, or conversations with the interpreter in residence. “We’re interpreting our role as an institution,” he says. “We want to experiment with what interpretation is and what it means to be an interpreter. The program provides a place for us to think a little more loosely about that.” The Smart’s program is part of a wider trend among muse-

ums—and among some individual artists rethinking their own creative practices—to explore new ways of engaging the public and offering them compelling, lasting experiences. This exploration is “in the air,” Christiano says, “and it’s manifesting differently at different institutions.”

The interpreter in residence program was born out of the 2012 exhibition *Feast: Radical Hospitality in Contemporary Art*, which orchestrated meals and participatory experiences to spark dialogue among museum goers. These were a hit, and they developed into monthly events called *At the Threshold*—evenings of conversation, cocktails, and music inspired by the museum’s current exhibits. The interpreter in residence program, which launched last August, was a way of formalizing this “yearlong adventure” that preceded it, Christiano says.

Austin, who teaches at the School of the Art Institute and the Museum of Contemporary Photography, was an apt choice for the first interpreter in residence, he adds. He came recommended by artists Joseph Rynkiewicz and Graham Hogan, whose experimental project *Hornswaggler Arts* was instrumental in the *At the Threshold* events—Rynkiewicz and Hogan were

the ones inventing and mixing those art-inspired cocktails. Austin has an art project of his own, called The Perch, which aims to engage people in much the same way that the Smart was hoping to do. Operated out of Austin's apartment in Chicago's Pilsen neighborhood, The Perch is part printing press, part social forum, part experimental dinner party. During curated meals, Austin initiates conversation among his guests using prompts that ask them, for instance, to chart their artistic progress, discuss their creative practices, or describe their philanthropic projects as if delivering a eulogy. From his Perch outpost at the Smart, during office hours and At the Threshold events, Austin strikes up similar conversations.

There's no formal system set up to evaluate Austin's or the residency's success—"it feels like we should go through this first year and see how it works"—but Christiano is pleased with the anecdotal evidence. "It's really interesting to see people spend 15, 20, 30, 40 minutes talking with him," he says. "And to me that suggests that there is a desire for that kind of human engagement. When Matt's here, it does tend to inflect the space with a different sense of wonder and awe." The museum is making plans for future interpreters in residence and how exhibits and events might be structured around collaboration with the artists who will inhabit the job. "We want to keep pushing the

position even deeper into the institution," Christiano says. "We're even kind of shifting the nature of the work we have—not shifting the work in the collection but how we treat the work in the collection, how we position it, how we frame it. The more we look at it, the more we see this person really steering the ways we engage our visitors."

Austin has been documenting his conversations with visitors over the year and plans to compile them into a handmade book, offering, he says, a poetic perspective on the visitor experience. "My only real goals in life are to keep doing things like this," he says. "Talk to people about interesting ideas and challenge myself to do it better."

—Megan Doherty, AM'05, PhD'10



PHOTOGRAPHY BY ERIK PETERSON

When Austin sets up shop, people visit for extended conversations about their experiences with art.

Disturbing results

Researchers show that quality of sleep has a profound effect on cancer growth rates.

Poor-quality sleep marked by frequent awakenings can speed cancer growth, increase tumor aggressiveness, and dampen the immune system's ability to control or eradicate early cancers, according to a study published online January 21 in the journal *Cancer Research*.

The study is the first to demonstrate, in an animal model, the direct effects of fragmented sleep on tumor growth and invasiveness, and it points to a biological mechanism that could serve as a potential target for therapy.

"It's not the tumor, it's the immune system," says study director **David Gozal**, chair of pediatrics at the University of Chicago Comer Children's Hospital. "Fragmented sleep changes how the immune system deals with cancer in ways that make the disease more aggressive."

"Fortunately, our study also points to a potential drug target," he says. "Toll-like receptor 4, a biological messenger, helps control activation of the innate immune system. It appears to be a linchpin for the cancer-promoting effects of sleep loss. The effects of fragmented sleep that we focused on were not seen in mice that lacked this protein."

Gozal, an authority on the consequences of sleep apnea, was struck by two recent studies linking apnea to increased cancer mortality. So he and colleagues from the University of Chicago and the University of Louisville devised a series of experiments to measure the effects of disrupted sleep on cancer.

They used mice, housed in small groups. During the day—when mice normally sleep—a quiet, motorized brush moved through half of the cages every two minutes, forcing those mice to wake up and then go back to sleep. The rest of the mice were not disturbed.

After seven days in this setting, both groups of mice were injected with cells



Fragmented sleep can lead to more aggressive tumor growth.

from one of two tumor types (TC-1 or 3LLC). All mice developed palpable tumors within nine to 12 days. Four weeks after inoculation the researchers evaluated the tumors.

They found that tumors from mice with fragmented sleep were twice as large, for both tumor types, as those from mice that had slept normally. A follow-up experiment found that when tumor cells were implanted in the thigh muscle, which should help contain growth, the tumors were much more aggressive and invaded surrounding tissues in mice with disrupted sleep.

"In that setting, tumors are usually encased by a capsule of surrounding tissue, like a scar," Gozal says. "They form little spheres, with nice demarcation between cancerous and normal tissue. But in the fragmented-sleep mice, the tumors were much more invasive. They pushed through the capsule. They went into the muscle, into the bone. It was a mess."

The difference appeared to be driven by cells from the immune system, called tumor-associated macrophages (TAMs), which cluster at the site of tumors. TAMs are a hallmark of the immune system's response to cancer, but they can respond in a variety of ways, depending on chemical signals they receive. Some, labeled M₁, promote a strong immune response and can eliminate tumor cells. Others, known as M₂, suppress the immune response and instead promote the growth of new blood vessels—which encourages tumor growth.

Well-rested mice had primarily M₁-type TAMs, concentrated in the core

of the tumors. Sleep-fragmented mice had primarily M₂-type TAMs. These were abundant, especially around the periphery of the tumors. The sleep-disrupted mice also had high levels of toll-like receptor 4 (TLR₄).

Three key molecules are part of the signaling pathway that appeared to be tilting macrophages toward M₂: TLR₄ and two downstream signals called MYD88 and TRIF. So the researchers injected tumor cells into a series of mice that were unable to produce one of these three proteins and subjected them to fragmented sleep. Tumor growth was slightly reduced in mice lacking MYD88 or TRIF, but in mice lacking TLR₄, tumor growth was no greater than in mice with undisturbed sleep.

Taking TLR₄ out of the picture resulted in major curtailment of tumor growth. "When we injected tumor cells into mice that lacked TLR₄," Gozal says, "the differences between undisturbed and sleep-fragmented mice disappeared."

"This study offers biological plausibility to the epidemiological associations between perturbed sleep and cancer outcomes," Gozal says. "The take home message is to take care of your sleep quality and quantity like you take care of your bank account."

The Centers for Disease Control and Prevention estimate that about 70 million Americans suffer from chronic sleep problems. "Considering the high prevalence of both sleep disorders and cancer in middle age or older populations," the authors wrote, "there are far-reaching implications."

—John Easton, *AM*'77

Popular science

David Saltzberg, SM'91, PhD'94, keeps the research realistic on *The Big Bang Theory*.

Particle physicist **David Saltzberg** was in Antarctica in 2008, hunting for evidence of little-understood subatomic particles striking the ice continent. During his expedition, the UCLA physics and astronomy professor had another task that was almost as important to him: making sure scripts for the hit CBS sitcom *The Big Bang Theory* didn't say sine when they meant cosine.

Saltzberg, SM'91, PhD'94, is the science consultant for *Big Bang*, which follows four brilliant, but often socially inept, Caltech researchers. Probably, a show that finds comedy in electron transport and dark matter has become one of the most popular shows on television—nearly 19 mil-

lion people watched its most recent season premiere. Ever since the 2006 pilot, it's been Saltzberg's job to keep the actors' portrayal of university researchers believable. "Even though it's a comedy," Saltzberg says, "it's a fairly accurate representation of what physicists do all day."

Saltzberg's own work focuses on neutrinos, particles with no electrical charge and almost no mass, which rarely interact with other matter. The high-energy neutrinos Saltzberg observes near the South Pole could shed light on the mysterious properties of cosmic rays, which seem to flout physicists' theories.

Saltzberg has used the world's most powerful particle accelerators, where subatomic particles are smashed together at nearly the speed of light for a glimpse of rarely seen building blocks of the universe. He conducted his doctoral research at Fermilab's now-defunct Tevatron and currently works on CERN's Large Hadron Collider in Switzerland.

But instead of sifting through the aftereffects of an atomic collision inside an accelerator, Saltzberg looks for neutrinos made by cosmic rays in other galaxies that travel to Earth. Ice is al-

most transparent to radio waves, making Earth's poles prime spots to use radio antennas and pick up any interactions between neutrinos and the ice. Saltzberg has been to Antarctica three times, sometimes sending telescopes in unmanned balloons to the outer reaches of the atmosphere to observe broad swaths of the ice. "Most people go in balloons to look up," Saltzberg says, "and we're the crazy people that point the telescope down."

When he turns his professional attention to *The Big Bang Theory*, Saltzberg works with writers who keep up with prominent scientific news but often leave blanks in the script for him to fill in with science "gobbledygook." Sometimes the writers will devise a key plot point and ask Saltzberg to flesh it out with realistic research.

In a recent episode, for example, the writers wanted main character Sheldon to make a significant discovery, but then realize he made a serious error. The achievement needed to be big enough to warrant Sheldon's crowing, but not so large that it would appear unrealistic. Saltzberg gave the writers about a dozen suggestions, and they settled on Sheldon discovering a superheavy element. "It's interesting and important, but it's not an earthquake that would change the scientific world as you know it," Saltzberg says.

In creating his formula, Sheldon misreads the units on a table, causing his result to be off by a factor of 10,000. That's a common mistake in nuclear particle physics, according to Saltzberg, an Easter egg for experts in the field who may be watching. "There are probably dozens of people who got that joke," Saltzberg deadpans.

Saltzberg also plans out the scientific scribbles on whiteboards scattered about the set. He tries to have the boards relate to scientific discoveries the characters are discussing, but if a scene is light on science, he'll sneak in references to recent real-world discoveries.

The whiteboards have developed their own following, and Saltzberg occasionally hears from people questioning his calculations. Sometimes he plants a reference in tribute—as he did after the death of physicist John Wheeler, who coined the term "black hole"—or for members of the studio

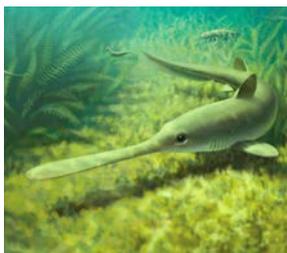


Physicist Saltzberg has gotten a big bang out of his television experience.

CITATIONS

SHARK TALES

In the backward days of Pangaea, *Badrinda* sharks migrated like salmon in reverse, living as adults in freshwater swamps and heading to the coast to breed. Paleontologists **Michael Coates**, from the University of Chicago, and **Lauren Sallan**, SM'09, PhD'12, from the University of Michigan, analyzed 24 *Badrinda* fossils previously categorized into two separate species—one a freshwater swamp dweller, the other inhabiting saltwater shallows—and concluded that the species' differences were actually evidence of the earliest known shark migration. The saw fish-like *Badrinda*, extinct for 30 million years, inhabited an ancient river delta system in today's Upper Midwest, using its extended snout for suction feeding off of river floors. Coates and Sallan's study was published in the January *Journal of Vertebrate Paleontology*.



Prehistoric *Badrinda* was the first migratory shark.

TRAVEL FOR WORK

Partly an ongoing legacy of racial segregation in American cities, African Americans spend more time commuting to work than any other group. According to **Virginia Parks**, associate professor in the School of Social Service Administration, the average urban two-way commute is about an hour, but for black workers it can be significantly longer. Parks analyzed 2011 census data and found that low-wage black workers' commutes are an average of seven minutes longer each way than those of low-wage whites. That's evidence, Parks says, of a "jobs-housing mismatch," driven in part by segregation, as blacks must travel far out of their neighborhoods to find service and other jobs. Parks presented her research at the annual meeting of the American Association for the Advancement of Science in February.

BABYWATCH

Even at nine months old, babies can tell whether or not adults get along with each other. University of Chicago psychologists **Amanda L. Woodward** and **Katherine D. Kinzler**, believing that infants understand eating as a social activity, showed 64 nine-month-olds videos in which adults ate different foods and reacted positively or negatively, sometimes

agreeing, sometimes disagreeing. Then the babies were shown videos in which the same adults either greeted each other in a friendly tone or turned away with a grunt. When the tone of those greetings did not match up with the adults' previous agreement or disagreement over the food, babies expressed surprise by lingering longer on those videos. "This is some of the first evidence that young infants are tracking other people's social relationships," says Woodward. The study was published online September 23 in the *Journal of Experimental Psychology: General*.

WOLVES LET THE DOGS OUT

Dogs are commonly understood to have evolved from wolves domesticated by early farmers. But a January 16 *PLoS Genetics* study argues that modern wolves and dogs descended from a common ancestor between 11 and 16 millennia ago, when humans were still hunter-gatherers. An international team of researchers, including University of Chicago genetics professor **John Novembre**, compared genomes from two dog breeds, basenji from central Africa and dingo from Australia, to the genomes of three gray wolves from China, Croatia, and Israel, regions where dogs are believed to have originated. The researchers

also sequenced a golden jackal genome, to serve as an out-group representing earlier divergence from wolves. To their surprise, they found that the dogs were most closely related to each other, rather than to the wolf lineages, and the wolves' closest relatives were each other as well. This suggests that dogs and wolves both descended from an older wolf-like common ancestor. Analyzing genome-wide patterns of variation, the researchers concluded that dogs and wolves both suffered massive decreases in population after their divergence, and that early dogs—lacking the gene for starch digestion, critical for domestication because it helped dogs adapt to human agricultural diets—were more carnivorous than modern dogs.—*Derek Tsang, '15*



Gene research complicates the wolf-to-dog story.

audience. A group of his graduate students attended a taping after taking an exam and Saltzberg adorned the whiteboard with solutions to the questions on their test.

Saltzberg attends the taping most weeks to chat with the writers and occasionally field questions on the fly. Watching the show live, he has come to realize that comedy writing is an empirical science. "You can argue, in theory, that your joke is funny and explain to everyone why your joke is funny, just like our theorists can explain to us why supersymmetry must be true," Saltzberg says. "Every Tues-

day night is an experiment where they decide whether a joke is funny."

Since its premiere, *Big Bang* has been criticized for perpetuating negative stereotypes about scientists—that they can't muster the courage to talk to the opposite sex and are social misfits. But Saltzberg says the characters are fundamentally likable and have evolved over the seven seasons; one has gotten married and others are dating.

Big Bang shows its characters outside their labs more often than not, but even brief looks at the work they do can only encourage more people to view research as a viable career,

Saltzberg says, just like his passion for Isaac Asimov inspired him. "There are people out there that may have thought all of science ended with Newton or Maxwell."

A particle physicist could spend an entire career going down dead ends, Saltzberg says, so increasing scientific literacy through the show could be as important as his research.

"My career's not over yet—I don't know if I'm going to stumble across a major discovery," Saltzberg says. "So it may well be that the thing I have with the most lasting impact is the show."—*Michael Lipkin, AB'11*

Call of the wild

Going to the Law School helped Natalie Shapero, JD'11, let her poetry loose.

Last September **Natalie Shapero**, JD'11, was awarded a 2013 Ruth Lilly Fellowship from the Poetry Foundation and *Poetry* magazine, one of the most prestigious prizes for poetry in America. It came soon after the publication of her first book, *No Object* (Saturnalia Books), written during her three years at the Law School.

Shapero's poems overlay quirky imaginative leaps on formal frames of meter and rhyme, at once spontaneous and controlled, like a figure-skating routine set to the Ramones. In "Your Other Heart," for example, she spins the story of an ill-fated rescue dog on moments of wordplay: "I took in a dog the way some might take in / a dress," and, later, "That dog: I called it Help, and I cried for it."

Shapero spent one year as a Steven Gey Fellow with Americans United for Separation of Church and State before returning to poetry full time as the *Kenyon Review* Fellow at Kenyon College, where she teaches undergraduate creative writing. The *Magazine's* interview with her is condensed and edited below.—*Daniel Story*

Stranger in a strange land

I think of my time in law school like going to live in another country and learn the language and culture and expand the mind and heart that way. It almost feels like going backward, in terms of where you are in the discipline. Most people who go to MFA programs have been writing for a long time and are trying to hone something that they already have a handle on. Whereas in law school everyone is starting from scratch—no one's been practicing law in advance. I felt like I was sitting farther back from what I was trying to see.



Putting on a new suit

I worked at a nonprofit that did litigation and advocacy to promote the Establishment Clause, which is the part of the First Amendment that guarantees the separation of church and state. It was great. It was a real crash course in how actual lawsuits proceed. Law school was a great education and very theoretical, which I was really digging while I was there, but when I came out of law school I didn't know how to bring a lawsuit or what happens on the ground. I had taken classes about the procedural rules of lawsuits, but there's no substitute for actually being involved in one. It was really fascinating, and I love constitutional law, so the subject matter appealed to me a lot. And I got to work with some really awesome clients.

Critical thinking and poetic form

I continued to write formal poetry through my MFA program, and it was getting increasingly elaborate and weighted down by its own insane trickery. The classes in law school were really terrific, and they were like a pressure release valve for the analytical part of my brain, which freed up the poetry-writing part of my brain to kind of chill out a little bit. *No Object* does have a lot of formal impulses in it, and a number of the poems are in pentameter, but mostly what I wrote then and write

now is free verse that is inflected with metrical phrasing. I feel like that's the voice that I found my way into that I'm happy with.

Exactitude

I try in my own writing to calibrate a metaphor as tightly as I can to what I'm talking about underneath the surface. But the danger with that is that your poems get too packed, so you have to find other ways of introducing wildness into the poem. There's something to a poem representing a little bit of the messiness of actual life and not being sewn up shut too much. I'm a disciple of Robert Frost in a lot of ways: "no surprise in the writer, no surprise in the reader." And as a reader I'm always looking for a book to tell me something that I couldn't have come to on my own. I want to write poems that tell me something I couldn't have come to on my own, in the absence of taking that trip.

Jolly good fellow

Fellowships have been incredibly helpful in terms of allowing me to carve out time and space for writing in my life. It's a difficult thing to do. I'm kind of a slow writer, and I work best when I have focused time that I can devote to it. I'm pretty steadily at work on a second book in a way that I wouldn't have been able to without the fellowship, so I'm very, very happy about that.

On being wrong

I try to write a lot of poetry about being wrong, and from the stance of someone who is wrong, working through the problems of the world to try to come to an answer. It's a nice place of vulnerability and humility to start from, saying "I don't understand this." I try to read pretty broadly and use a lot of diverse sources in my poetry—and not just poetry but scholarly literature and pop literature—to see how other people are thinking through the problems of the world. And I try to chart those same trajectories through the smaller problems of my own world.

Advice to young poets

Get out of your poetry head, even just a little bit.

Encyclopedic knowledge

Nestled against the Chicago River, the Reid-Murdoch building on LaSalle Street is steeped in history. Red brick, with a rectangular clock tower rising from the roof, it served as a temporary morgue after the city's 1915 *Eastland* steamship disaster and is said to be haunted.

But on a bright November morning, it seems an unlikely place for ghosts. Home to Encyclopaedia Britannica since 2005, the space harmoniously melds the company's past and present. Rows of old gold-embossed volumes blend with modern décor: streamlined furniture, shiny glass tables, video screens on the walls.

Riding down the lobby escalator is **Dale Hoiberg**, Britannica's editor in chief and senior vice president. Fair and bespectacled with reddish-brown hair, Hoiberg, AM'74, PhD'93, has a tranquil demeanor, but his three and a half decades with the encyclopedia have been intense. Traveling the world to establish Britannica editions in other languages, Hoiberg also has overseen the 246-year-old company's move to an all-digital format.

Born in North Dakota, Hoiberg attended Augustana College in Sioux Falls, South Dakota, where he befriended students from Hong Kong and Taiwan whose families had originally hailed from mainland China. Hoiberg was attracted to what he saw as the mysteries of their language and culture; looking at Chinese characters, he was gripped by the wish to understand their meaning.

Studying Chinese in Augustana's comparative literature department and then in UChicago's doctoral program, his fascination deepened. There is "a sensitivity in a lot of Chinese literature that I found so enticing," he says. "The way the language in poetry, for example, is terse yet capable of immense meaning." Hoiberg wrote his master's paper on Chinese romantic poet Xu Zhimo, spent a year in Taiwan, and completed his doctoral courses before deciding in 1977 that he'd take a break and work for maybe a year to help fund his living expenses.

A fellow student suggested that Hoiberg contact Encyclopaedia Britannica, then owned by the Benton Foundation. The foundation was established by William Benton, an advertising executive, US senator, and friend and supporter of the University. Hoiberg placed a call

to HR and did a temporary stint in the credit department before starting in editorial, indexing articles on China. One year turned into six and then more as he became involved in producing the 11-volume *Concise Encyclopaedia Britannica in Chinese*, a collaborative venture between Britannica and the People's Republic of China.

The initiative began at the request of Chinese leader Deng Xiaoping, whose statement that China needed a modern encyclopedia was widely reported. Hoiberg became Britannica's liaison to the project in 1983. The agreement had the Chinese drafting China-related content while Britannica provided the remaining articles for translation. Questions or discrepancies were addressed during meetings of the editorial board, composed equally of representatives from Britannica and the Chinese publishing company.

Although China was known for suppressing free expression, the process was "amazingly free" of acrimony, says Hoiberg. "We had the same goal—we were going to make this work." Most of the debates that arose could be attributed to philosophical differences or conflicting information, but in a few cases the Chinese balked at including information—for example, some articles on significant historical figures who were out of favor at the time. "We fought that kind of thing," says Hoiberg. In the end those profiles were included and other disputed entries were edited to the satisfaction of both parties. The one exception was an article on Stalinism, which included scholarly criticism unacceptable to the Chinese; the entire article was eventually scrapped because a consensus couldn't be reached.

By 1986 Hoiberg's role at Britannica had expanded to senior editor for Asian products, which included encyclopedias and English language teaching materials. Hoiberg remained in international product development for the next 11 years, taking on more responsibility as Britannica launched encyclopedias in Japan, Hungary, Poland, India, and Korea. During a lunch of the Japanese editorial board in the late '80s, former UChicago history professor Akira Iriye reminded the editor: "You haven't finished your dissertation yet—what are you going to do about that?"

Soon, with more encouragement from Iriye, Hoiberg was working un-

MILESTONES

1971 Hoiberg enrolls at UChicago.

1978 On a hiatus from his studies, he becomes an index editor at Encyclopaedia Britannica.

1983 Hoiberg starts work on the *Concise Encyclopaedia Britannica in Chinese*.

1993 Hoiberg finishes his dissertation on the traditional Chinese opera *The Broken-Down Kiln*.

1997 As Britannica's focus shifts to its web-based encyclopedia, he becomes editor in chief.

2006 He participates in a *Wall Street Journal*

e-mail debate with Wikipedia cofounder Jimmy Wales.

2012 Britannica announces that publication of the print volumes will cease; Hoiberg writes that his company is "proudly in the digital camp."

der famed sinologist **David Tod Roy** on annotated English translations of an imperial-era opera about a struggling scholar who rises to become grand councillor. Hoiberg initially intended to write his dissertation on poetry, but Roy nudged him toward traditional Chinese drama. Thinking “that’s poetry too, in its way,” Hoiberg fell in love with the topic his adviser suggested and is an avid opera goer to this day.

While writing, he continued at Britannica, where it became clear that the business model would change dramatically. Sales of its printed encyclopedia started to plummet, affected most directly by CD-ROM encyclopedias like Encarta, bundled with Microsoft PCs for free. Britannica leadership decided to bet on its web-based encyclopedia, introduced in 1994 while the print edition continued. In 1996 Britannica was sold to Swiss investor Jacob E. Safra, who hired Jorge Cauz, now Britannica’s president, to evaluate the reference market.

Cauz soon came to value Hoiberg’s scholarly background and international experience and approached him about becoming Britannica’s editor in chief. “He’s a very modest person, but he is also a very open-minded person,” says Cauz. “We needed to have someone who would be able to modify the way in which we had been doing editorial.” Hoiberg was “very surprised” by the promotion. First thinking the role would be largely academic, he quickly recognized its administrative demands. His biggest responsibility is ensuring that about 100 editors stay keenly attentive to detail. He also makes calls on sensitive issues; deciding how to represent disputed international borders on maps is one particularly formidable challenge.

Another time-consuming charge has been helping his team transition to *Britannica Online* and the continuous updating it demands. All the editors had to quickly learn to write code and tag images. Five or so editors monitor the feeds regularly. One comes in on Saturdays, another on Sundays, and a third works around the clock, or as close as possible, says Hoiberg, clarifying that “he does sleep.” Once those editors identify a needed update, they access the article, fact-check, and make the change, which then goes to



Clockwise from top: Hoiberg with Chinese publishing colleagues; Britannica’s Asian product development team in 1991; holding a puppet once used in the Chinese puppet theater.

the copy department for review and is posted live about 20 minutes later.

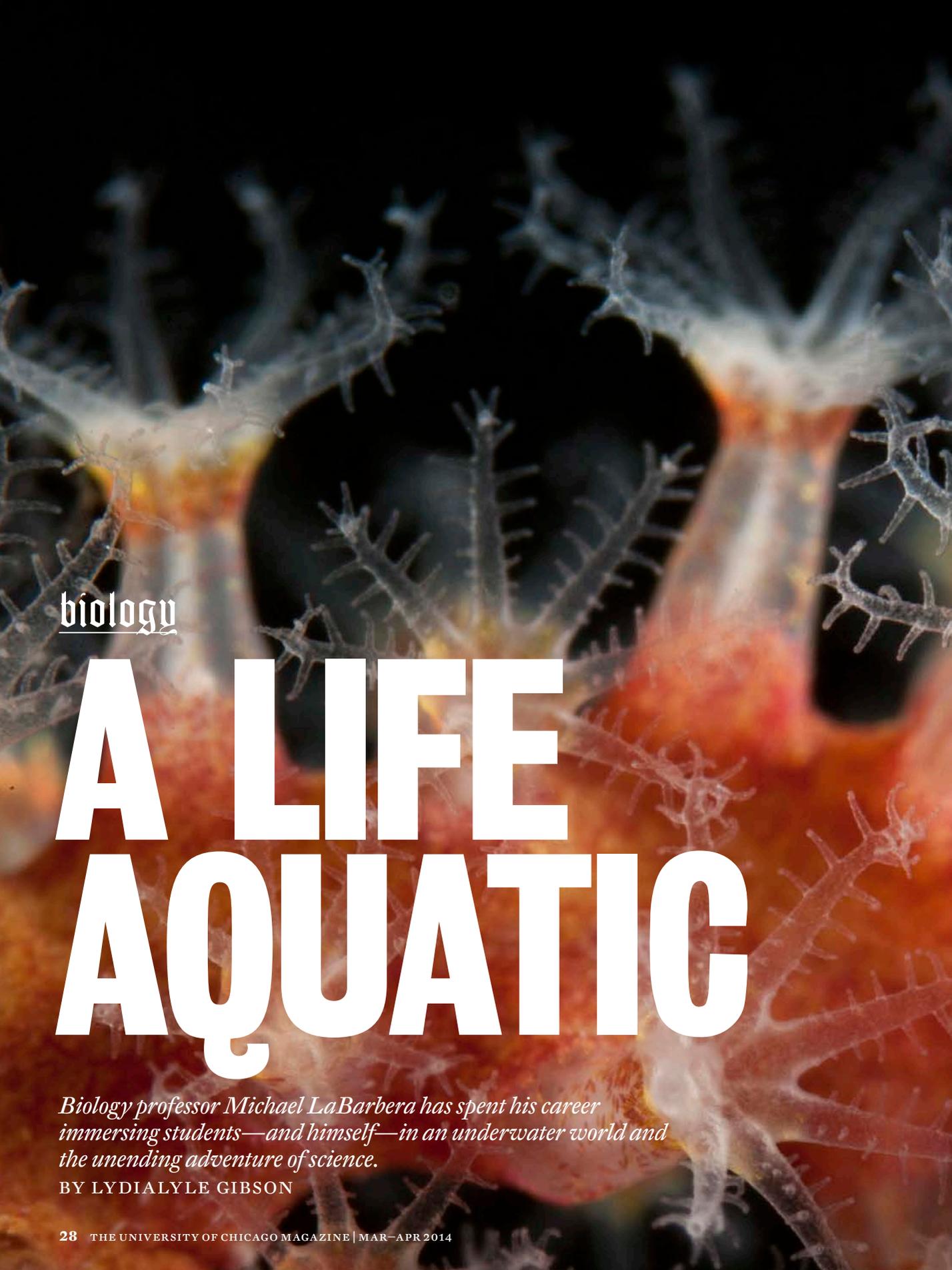
Hoiberg is a huge fan of instant publishing, but some users weren’t so convinced. When Britannica announced in March 2012 that the print volumes were being discontinued, the communications department was deluged with e-mails and letters, some bemoaning the demise of a beloved product. In a post on the Britannica site, Hoiberg stressed that the transition, far from rash, had been more than 30 years in the making.

And it’s proved wise. In addition to Britannica’s 500,000 consumer subscribers, about 100 million people worldwide have access to the encyclopedia though institutional subscriptions. The company has been profitable for more than ten years running, after a rough patch in the 1990s as it made the transition from print to digital. Britannica’s old encyclopedia competitors have largely fallen off the map, says communications director **Tom Panelas**, AM’79: “It’s pretty much us and Wikipedia.”

In a 2006 *Wall Street Journal* e-mail debate with Wikipedia cofounder Jim-

my Wales, Hoiberg defended Britannica’s continued relevance despite the existence of a free information provider. He was steadfast, writing, “Most of us don’t need all the information in the world. We need information that yields knowledge—a practical and enlightened understanding of ourselves and the world we live in.”

Wikipedia may dismiss his company as antiquated, but Hoiberg prefers to talk about the future. He sees the encyclopedia’s new format as rich with possibilities, able to track current trends and, once old editions are digitized, to trace the history of a given topic over time. In a hallway of the Chicago headquarters, Hoiberg points out a set of copperplate engravings from the encyclopedia’s first edition, depicting the topics of midwifery and childbirth in graphic detail—private parts, forceps, and all. Legend has it that a member of King George III’s government was so outraged, he urged every encyclopedia owner to rip the illustrations out of their sets. As Hoiberg knows, when you give birth to something new, people are bound to react. —*Katherine Muhlenkamp*



biology

A LIFE AQUATIC

Biology professor Michael LaBarbera has spent his career immersing students—and himself—in an underwater world and the unending adventure of science.

BY LYDIALYLE GIBSON



A little after two o'clock, biology professor **Michael LaBarbera** strides toward the front of the lab with his customary grin, the chatter in the room dies down, and 12 undergraduates fall into a cluster around him. "OK!" he says, booming, excited. He is not quite shouting. "Arthropods!" It's a Friday afternoon, the eighth week of fall quarter, and LaBarbera's Invertebrate Biology class, having covered mollusks, sponges, hydroids, corals, parasites, and all manner of worms, has arrived at arthropods. It is an impossibly vast phylum, encompassing lobsters and shrimp, spiders and scorpions, centipedes, millipedes, and the exquisite, prodigious diversity of insects. Taken together, arthropods account for the majority of all known living animal species—more than 80 percent, studies estimate—and occupy nearly every habitat on Earth.

Earlier in the week, LaBarbera gave two lectures on arthropods. Now he lays out the tasks for today's lab: first, students will dissect crayfish, paying particular attention to the limbs, noting how each branches out from the base like a Y, how different appendages share a similar architecture up and down the body, all drawing on the same ancestral pathways and gene cascades, which eons ago coalesced to build fins and, later, legs.

Then, a horseshoe crab dissection, lifting up the carapace to study the long thin tube of the heart, the gut nestled beneath it, the muscles that control the legs. There are also microscope slides of insects to examine—lice, mosquitoes, bed bugs—and a collection of trilobite fossils. Horned and beetle-like, with their wide bodies and furrowed backs, trilobites were among the planet's most prosperous early animals; they disappeared at the end of the Paleozoic, in a mass extinction that killed off more than 90 percent of all marine life.

Finally, LaBarbera introduces the live animals. The petting zoo. This is where the most boisterous learning happens, and some of the best, as students interact with moving, breathing creatures; watch them swim, crawl, burrow, and feed; see them behave the way they do in the wild. A few weeks earlier, as an aquatic snail, guided by chemosensors on its tentacles, sniffed its way toward a piece of shrimp—"just like a dog follows a rabbit trail"—LaBarbera explained why these live interactions matter so much: "Once you sit there and get down on the level of the animal," he said, "you suddenly realize what its sensory modalities are, what it's doing, how it's working. What its world looks like."

And so the whole back of the lab hums with half a dozen saltwater aquariums, each filled with a growing census of live creatures the class has studied during the quarter:

THOSE OF YOU WHO HAVE BEEN IN MY BIODIVERSITY CLASS KNOW HOW MUCH FUN IT IS TO HAVE GIANT MILLIPEDES CRAWLING UP YOUR ARM.

clams, jelly fish, sea fans, sea anemones, a hauntingly elegant parchment worm, a dwarf octopus hiding under a rock. To this menagerie, LaBarbera has recently added several arthropods, mostly shrimp and crabs (his marine biology bias showing through, he confesses). In a freshwater jar, *Daphnia*, also called water fleas, and in another container, pill bugs, a terrestrial crustacean. Elsewhere there are hermit crabs, fiddler crabs, a calico crab ("lots of personality," he says), and tiny, mesmerizing *Petrolisthes*—the porcelain crab, waving its two fan-shaped appendages through the water, grabbing at bits of floating food. Markings that look almost like sky-blue eyes gaze out from behind its claws. There's also a three-inch-long pink shrimp, with a chemosensor that looks like a big eyebrow; a red cleaning shrimp ("if you put your finger in the water and pretend you're a fish, it will come up and clean your hand"); and several grass shrimp, which LaBarbera tells the students to put into a clear dish under a microscope with a little food, so they can watch its gastric mill go to work, grinding the particles finer and finer until they're small enough for the stomach to ingest. Don't miss the heart, he says; it's the thing that looks like a fluttering triangle.

What else? "Millipedes!" LaBarbera suddenly remembers his two pet millipedes, one of them a foot long and as big around as a man's thumb. Left over from a class he taught a couple of years ago, now they spend most of their time in a terrarium in his office, munching on green peppers and slumbering among the moss, but today they're here, in their little traveling cases. Millipedes, LaBarbera likes to say, are basically invertebrate cows: harmless, herbivorous, vaguely lumbering. (Their centipede cousins, by contrast, are more like cheetahs: nocturnal predators that chase down their prey and stab them with fangs at

tached to poison glands.) “We’ll play with the millipedes after everybody is finished with the dissection,” he tells the students, by which he means, let the millipedes walk from student to student across hands and fingers and arms. All those tiny legs, all moving at once. “Those of you who have been in my biodiversity class know how much fun it is to have giant millipedes crawling up your arm,” LaBarbera says, beaming. He’s completely serious. “Truly, it feels like magic fingers.”

And finally, if there’s time, he’ll take out the grand dame from the big tank up front, the female horseshoe crab, with a shell a foot across, another veteran of a previous class. He’ll turn her belly side up (she doesn’t mind, he says) and feed her a wedge of shrimp (she loves shrimp) and maybe a live earthworm so the students can see how she chews with her powerful back legs, tearing and churning the food as she marches it toward her mouth.

“All right,” LaBarbera says, winding down. “We’re not doing the arthropods justice in any sense at all, but it’s still a busy lab. So get to it.” Breaking off into pairs, the students head first for the trays of crayfish.

This December, after 36 years at the University of Chicago, LaBarbera is planning to retire. It will leave a hole. He’s one of those professors whose class you take just because he’s teaching it. Maybe you think invertebrate biology sounds boring, or maybe you’re not exactly sure what “biological fluid mechanics”—the title of another course and, incidentally, LaBarbera’s

research specialty—even means, but it doesn’t matter; you sign up anyway. “He makes everything interesting,” says fourth-year **Andrew Burchill**. “Whenever there’s been a class offered that he’s teaching, I’ve taken it.” Burchill has taken four, including this fall’s Invertebrate Biology. That’s not as unusual as it sounds.

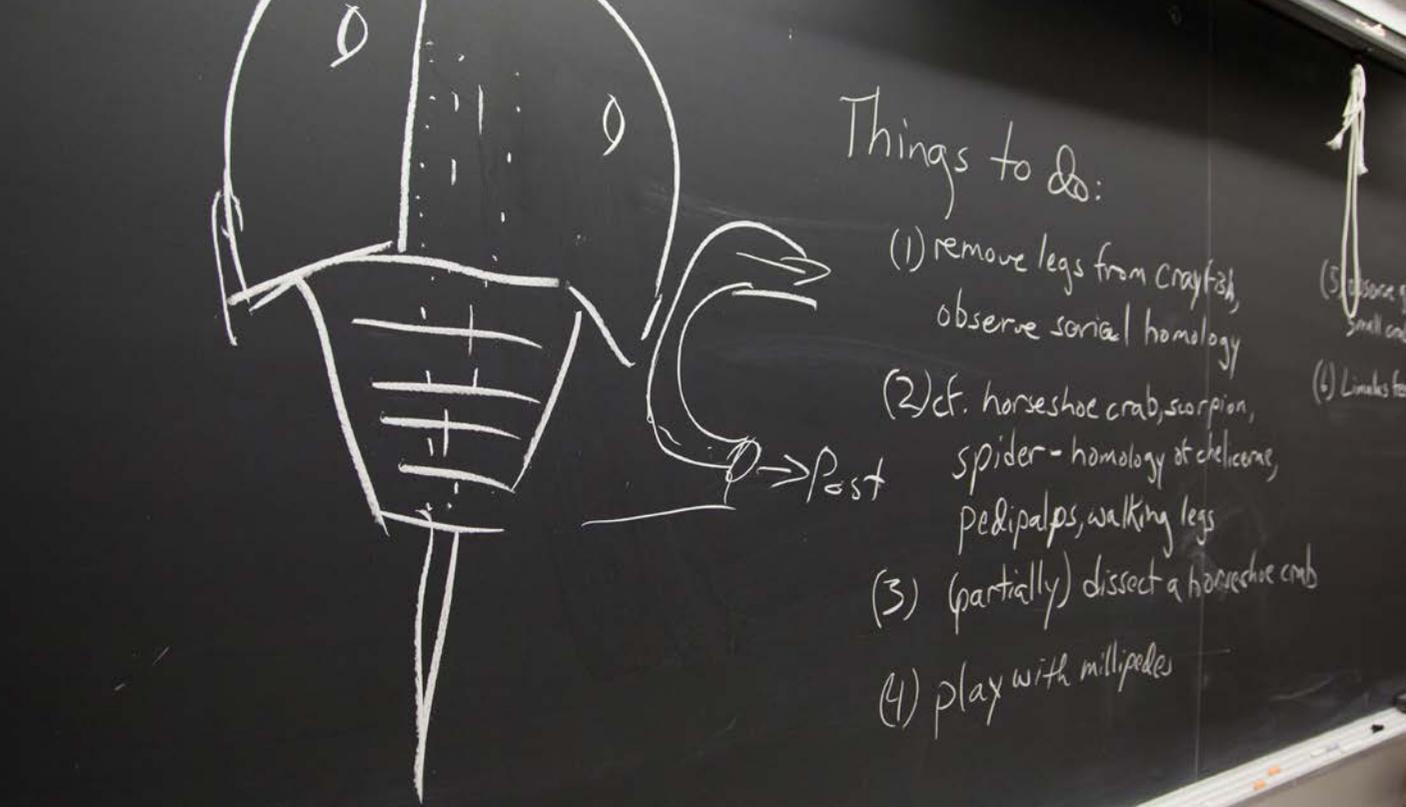
Many students’ first encounter with LaBarbera is in a course he teaches in the spring called Biodiversity. It’s basically the story of all life on Earth, compressed into ten weeks. Midway through, LaBarbera gives the students waders and dip nets and takes them out to the Jackson Park lagoon, where they spend an hour and a half dredging up whatever moves: fish; flatworms; leeches; freshwater insect larvae from dragonflies, damselflies, and mayflies. They take samples of the water, which they bring back to the lab and put under a microscope to try and identify all the teeming, crawling organisms within. Students are always amazed—and sometimes a little horrified, LaBarbera says—to see just how crammed with life their microscope slides are.

An expert in the biomechanics of marine invertebrates, LaBarbera joined the faculty in 1978, teaching in organismal biology and anatomy, geophysical sciences, the Committee on Evolutionary Biology, and the College. Especially the College. There’s enormous satisfaction and reward in graduate-level teaching, LaBarbera says, but undergraduate education is “the heart and soul of it.” You have to work harder to get the students interested, but then they’ll jump in with both feet. You watch them discover what they can do. You help them get there.



PHOTOGRAPHY BY ANNE RYAN

Students line up to take their turn with the “magic fingers” of LaBarbera’s pet millipede.



Most students call him “LaB,” an old grad school nickname he resurrected when he found that some students were tripping over the syllables of his last name. Unable to say “LaBarbera,” they would retreat to “Professor.” “I didn’t like the wall that immediately went up,” he says. Switching to LaB brought the wall back down. “They’re willing to say, ‘Hey, LaB, I don’t understand what’s going on here.’”

Ask College students what they like so much about his classes, and they’ll tell you how much fun his labs are, how generous he is with his time, how it’s almost impossible to ask a question he can’t answer, no matter how odd or esoteric. Fourth-year **Chelsea Leu** notes that last fall he offered to read drafts of students’ papers and give comments for revision before they handed them in for a grade. As many drafts as they could turn out before the due date, he would read and

hand back. “Which I have never had any professor do, ever,” Leu says. Plus, says **Andrea Rummel**, another fourth-year: “I mean, the millipede. I love that. It’s like the most random, kind of specialist animal you could keep for a pet.”

But part of what draws students in is something else, an idea that also animates LaBarbera’s own research and sends him chasing after new questions sometimes while he’s still answering the last one: it’s the sense that science is a shared adventure, one that his students can take part in, that it’s a story always being written and rewritten. “Which is the truth in all science, but usually no one presents it like that,” Burchill says. “So something like taxonomy, which is usually considered pretty dry, he presents it like a mystery that we’re working on. Like, ‘We’re not done yet.’ And we’re not—taxonomies sometimes change. But it makes you cu-

PHOTOGRAPH BY ANNE RYAN

A vast and diverse phylum, arthropods make for a busy lab day; to-do items on LaBarbera's list include a crayfish dissection and a live demonstration of a horseshoe crab eating a worm.

THEY WERE SO HUNGRY, THEY WERE COMING AFTER US. THE SCARIEST THING I'VE EVER SEEN IN MY LIFE.

rious. At the end of every class, I always come away like, "What's going to happen in the next class?"

Sometimes the intellectual adventures seem inseparable from more tangible ones. For instance: the gigantic Humboldt squid with ten-foot tentacles that washed ashore one summer near the Puget Sound marine lab where LaBarbera was working. "We dissected this thing in a driveway," he told his students, who at that moment were hunkered over their own squid dissections with tweezers and clippers. "It was really fun. It took us all day. You don't see these specimens very often. Everybody was in there taking samples and studying the morphology." Instead of the rings of teeth that line the suckers of smaller squids' tentacles—the suction presses the teeth into the prey's flesh, making the squid's grasp inescapable ("such a cool adaptation")—the Humboldt had hooks, LaBarbera said. "*Literal hooks.*" He seemed amazed all over again.

Among the shells on display in the lab that day was one from a giant clam about a foot and a half wide. LaBarbera brought it home from Fiji himself, snorkeling down 25 feet to get it. Swimming back up with it, he nearly drowned. "They get rid of predators by squirting water at them," he told the students gathered around him, "so I had this clam under my arm, and it was going, whoosh! Whoosh! And shooting this rocket of water up. And every time I would kick we would go up, and every time it would close, we would go down, and I wasn't sure I was going to make it." He paused. "Anyway. This is my giant clam."

A week later, during a lecture on annelids, the phylum of segmented worms, talk turned to the odd kinship between earthworms and leeches. LaBarbera was explaining how leeches, with their suckers and jaws, are a sister group to earthworms, except they've undone many of the evolutionary complexities of those "fancy worms"—the segmented body cavities, the high-efficiency locomotory apparatus. "What leeches do is lose all of that. ... So they basically turn into flatworms with mesenchyme"—loosely packed, relatively undifferentiated cells—"filling in the spaces." Why? He told students to think about it and offered a hint: "It has to do with the way they locomote." Which reminded La-

Barbera of a story about the big mountain pond in northern Uganda where, during grad school, he and another student were taking sediment samples and suddenly discovered that their canvas boat was crawling with leeches. The animals were coming over the side. "They were so hungry, they were coming after us," LaBarbera said. "The scariest thing I've ever seen in my life." Yet he was grinning again.

And that's the thing. LaBarbera's affection for animals—all animals—is enormous. For him, there seems to be something wonderful and exhilarating in almost every encounter. That's why he's forever taking pictures, carrying his camera to Botany Pond, Jackson Park, Washington Park, and to faraway oceans across the world. In the lab, he keeps a tripod trained on the aquariums, waiting to catch a flower-like phoronid with its tiny mouth open, or a barnacle with its feathery legs extended. ("This is what is captivating me in my old age," he says, the beauty and strangeness of the natural world. Retirement will allow him more time behind the camera; he has at least one photography expedition already on his calendar.)

LaBarbera's love for animals is warmly generous and familiar, even intimate, but it's also a scientist's love: clear-eyed, unsentimental, without romantic illusions. He understands how an animal is working, what it needs, what it's trying to do. What its world looks like.

LaBarbera is also the guy people call when they find an animal on campus hurt or lost, or just in the wrong place—like, say, when a snapping turtle gets into Botany Pond and starts menacing the fish, or a duckling escapes, or wanderlust overtakes the painted turtles and they start heading toward the road. (Spring, he says, is a busy time of year; whenever he hears the phone ring, he reaches for his net.) He also gets calls about birds that fall to the ground after flying into buildings: "We're on a major north-south flyway," he says. "Birds that fly up to Canada come up along the lake, and they stop in Hyde Park because of Jackson Park and Washington Park, these semiwild areas." From the air, the whole neighborhood looks like a forest; trees everywhere, with the occasional roof and spire peeking through the canopy.

Other faculty call LaBarbera when they have animals they can no longer keep and don't want to kill. A researcher came in recently with some *Daphnia* left over from a study on heart rates; one afternoon this past fall, a postdoc from another lab showed up with a pleading look and a Styrofoam cooler full of starfish and sea urchins. "I'm the guy that takes care of everybody else's animals," LaBarbera says. "Anything that's aquatic, and especially aquatic and invertebrate—that's mine. Everybody knows. Just call me up." He's inherited a couple of fish and some corals from an aquarium upstairs. Some years ago, he took in an injured baby softshell turtle

During three-hour labs with the professor they call “LaB,” students split their time between dead animals and live ones, such as (from top left) *Eudendrium car- neum* colonies, comb jellies, and phoronids (also called horseshoe worms).

after a former student rescued it from the jaws of a snapping turtle at a Field Museum laboratory, prying the frightened animal loose with a screwdriver. That one LaBarbera took home to his wife and two daughters, where it joined an ever-evolving collection of pets that has included, at one time or another, fish, lovebirds, parakeets, ferrets, gerbils, guinea pigs, a tortoise, and a hamster. “We’ve always had a houseful,” he says.

LaBarbera’s wife, **Maggie Hivnor**, AM’77, is the paperback editor at the University of Chicago Press. His youngest daughter, **Claire**, U-High’10, is in college, and his oldest, **Katie**, U-High’06, is a PhD student at Berkeley, where she studies behavioral ecology. The first sign of her scientific disposition, LaBarbera says, came when she was seven years old and one of the family parakeets died. “She said, ‘I miss the bird so much,’” LaBarbera recalls. And then, knowing that her father knew taxidermy, she asked, “‘Dad, can’t you stuff it?’ And I foolishly said, ‘Sure.’ So we had this long afternoon in which we skinned this poor parakeet and I proceeded to prepare the skin and stuff it.” There’s an art to taxidermy; you have to cut the legs off and clean out the skull while keeping it intact. Everything else—bones, organs, viscera—comes out, and then the body is packed with cotton. “It’s pretty gruesome,” LaBarbera says. “But Katie was right in there, watching every step. . . . I thought a seven-year-old would chicken out as soon as I started peeling back the skin.” At Berkeley Katie LaBarbera studies the dark-eyed junco, a species of sparrow. Her stuffed parakeet is in a drawer back home in Hyde Park.

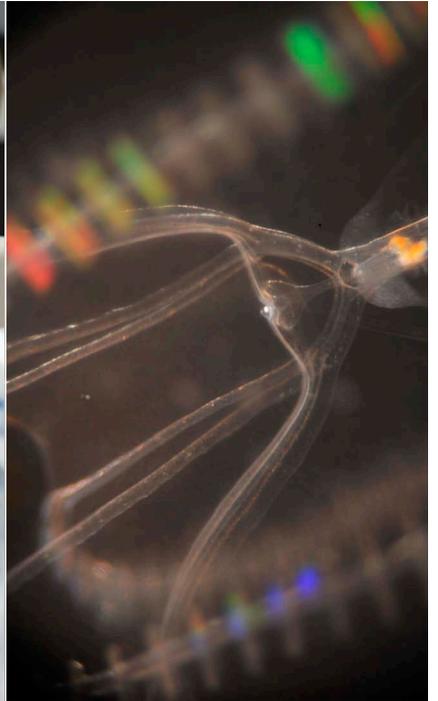
From the time he was in middle school, LaBarbera wanted to be a biologist. Paleontology was the thing that hooked him first. “Because I grew up in upstate New York, surrounded by all these wonderful Devonian formations,” he says. “There, you kick a rock, and it’s a brachiopod.” In eighth grade, he discovered zoologist Libbie Hyman’s *The Invertebrates* (McGraw-Hill, 1940) at the public library, an exhaustive multivolume compendium that Hyman, SB 1910, PhD 1915, devoted the last decades of her life to writing (the sixth and final volume came out in 1967, when LaBarbera was in college and Hyman was 79). He read the whole thing cover to cover, encountering strange and fascinating creatures. *The Invertebrates* had loads of pictures, although some of them were less than elegant—mostly they were line drawings taken straight from journal articles. But they were endlessly detailed and scrupulously annotated. “Hyman labeled *everything*,” LaBarbera says: every joint and appendage and tissue and lobe. Every tentacle, every papilla, every ventral groove. He spent hours lost in those pages, deciphering each organism, structure by structure.

The marine animals were the ones that interested him most. They seemed so otherworldly, with their alien shapes and bizarre formations. This, he realized, was where the real diversity was. “I was absolutely captivated by the cnidarians,” he says. That group includes corals, jellyfish, and sea anemones. For a kid living in a one-stoplight town far from the ocean, “sea anemones and corals were the ultimate exotics—wonderful beasts that did so much with so little.” The cnidarian body plan is surprisingly simple: two layers of cells separated by a gelatinous substance that acts as a kind of flexible internal skeleton. Essentially, they are a sac within a sac. “We got some occasional fossil corals in my neighborhood,” LaBarbera says, “but I’d never seen any of these animals alive.” Hyman’s depictions set his mind on fire.

And so in 1966 LaBarbera enrolled at Cornell University as a marine biology major, having never seen the ocean. “It was kind of this magic thing that I was just intrigued by,” he says. He finally got there the summer after his junior year, on a research fellowship at the Virginia Institute of Marine Science, an academic laboratory on a little jut of land on the Chesapeake Bay. The following year, an oceanography course took him on a cruise to the Sargasso Sea.

After Cornell, he went to Duke, where he studied with Steven Vogel, a founding scholar of modern biomechanics. A relatively small discipline, it suited LaBarbera’s conceptual-yet-in-the-mud-up-to-his-elbows approach to science. Biomechanics studies the structure and function of living systems using methods taken from mechanics, which analyzes the effect of forces on the motion of bodies. There’s physics in biomechanics, and more than a little engineering. **Kristin Sherrard**, SM’00, PhD’03, a former graduate student of LaBarbera’s, explains: “Biology can be very descriptive, or it can be very quantitative and technical.” Biomechanics makes it possible to do both, examining how an organism’s structure influences its ability to survive and reproduce.

SEA ANEMONES AND CORALS WERE THE ULTIMATE EXOTICS—WONDERFUL BEASTS THAT DID SO MUCH WITH SO LITTLE.





LaBarbera with a giant red hermit crab and with his ever-present camera. At right, his photo of a lion's mane jellyfish.

In lab one afternoon, LaBarbera and his students crowd around a dish of yolky, translucent eggs, from which cuttlefish are hatching. The room goes silent as one of the eggs begins to quiver and break open. Gasps. “Oh, he came out!” says grad student **Carrie Albertin**, SM’12, who’d brought the eggs over from a lab down the hall, along with a newly hatched octopus in another dish. Each newborn is perhaps half an inch long, maybe less; the cuttlefish, a *Metasepia pfefferi*, changes colors furiously as it emerges: yellow, red, purple, white, brown. With its ribbonlike arms billowing, it looks almost like a tiny shifting flame in the water. The newborn octopus, curled and motionless, waits at the bottom of its dish.

In the wild, octopuses are on their own from the moment they hatch, because adults do not survive after reproduction. The male dies after fertilizing the eggs—an elaborate process that often involves a detachable sperm-carrying tentacle, which swims through the water independently. The female broods the eggs for as long as she can, forgoing food and losing strength until she dies. In her lab, Albertin says, the female usually stays alive until about ten days before her eggs hatch. A strange and tragic lifecycle, adds LaBarbera, for an animal of such intelligence. “Cephalopods are the invertebrates that most closely approximate vertebrates in terms of intelligence and learning ability,” he says. Their brains are huge, and hugely complex, with nerve cords extending into each of their eight arms. “In terms of basic intelligence, it’s hard to compare animals, but estimates I’ve seen say that your average good-sized octopus is about as intelligent as your average good-sized cat.” He pauses. “Which is not bad for an animal whose nearest relative is a snail.”

A student asks LaBarbera why octopuses became genetically programmed to die.

“We don’t know,” he says. “Best guess is that it’s an accident of their evolutionary history.” At some point there must have been advantages in investing everything it had into one brood. “It’s now built into the hormonal system,”

LaBarbera says, “so the only way to extend the life of the octopus is to go in and remove organs that normally secrete hormones associated with brooding and mating. If you do that, they will live longer, but they’re not the same. They just kind of turn into vegetables. It’s really sad.”

He wonders what would happen if octopuses had “cultural transmission,” if adults could teach things to their young. Put two octopuses in adjacent tanks, and one will watch the other and learn from it, he tells the students. “If there was generational overlap, they could give us real competition.” He trails off.

LaBarbera’s biomechanics research focuses on fluid dynamics, and often—because that childhood curiosity about the Devonian fossils in upstate New York never left him—the fluid dynamics of long-dead species. Years ago, when he wanted to test whether a mathematical formula called Murray’s law, which predicts the relative size of blood vessels in a branching network, held up in invertebrates, he started with a 60-million-year-old fossilized sponge. (Then he moved on to earthworms, horseshoe crabs, bivalves, and blue crabs.) Murray’s law worked, he found, after some initially confounding results.

More often than not, LaBarbera’s research has him building models of extinct marine animals, which almost inevitably he ends up submerging in the ocean somewhere, to see what happens out in the wild. To see how they might have behaved, what they did to eat and survive, what their worlds looked like.

He’s famous for his models. “Elegant,” is how former graduate student **Paul Magwene**, PhD’99, describes them: Mesozoic clams with shells shaped like giant ice-cream cones; oysters from the Cretaceous; plant-like echinoderms called blastoids, with long stalks and hundreds of arms radiating out from small kerneled bodies. Extinct for 250 million years, blastoid fossils now litter the Midwest.



YOU SIMPLIFY, YOU LOOK AT ONE VARIABLE, BUT YOU STILL LOOK AT IT IN THE NATURAL WORLD, SO IT'S GOT THE WHOLE MESSINESS OF THE NATURAL WORLD.

LaBarbera's blastoid model, with its wire stalk and 570 red bristled arms ("I counted," he says), sits atop his desk.

His office, on the first floor of Culver Hall, with a window overlooking Botany Pond, resembles a machine shop, with equipment and construction materials scattered everywhere—saws, drills, electrical wiring, a bucket of epoxy, a can of WD-40. Aquariums crowd one corner. The whole place seems emblematic of LaBarbera's approach to his work. His colleague **Susan Kidwell**, who teaches in geophysical sciences and also studies marine fossils, describes that approach. He's able to "simplify," she says—conceptualizing complex animals as machines with measurable variables—but he's also "completely willing to leave it messy." That's why LaBarbera takes his models to the ocean, not relying solely on tests in specialized flow tanks with controllable forces. "You simplify, you look at one variable," Kidwell says, "but you still look at it in the natural world, so it's got the whole messiness of the natural world." As useful as it is to think about animals as machines, they're still animals, living in environments that aren't always predictable. It helps to see models in real marine conditions, even models of prehistoric animals in modern-day seas. As LaBarbera says, "Let's just see what happens."

In his classes, both graduate and undergraduate (Kidwell and LaBarbera have cotaught College field courses in Mexico and the Bahamas, where students conduct their own research projects), LaBarbera passes on this sensibility. Sherrard describes his willingness to let students make instructive mistakes and attempt things that may not lead anywhere. She once spent several months on an experiment that yielded no data; the effort, she says, was still valuable. Magwene, who switched dissertation topics midway through his studies, from limbless lizards to turtles,

says the independence to explore, even blind alleys, was important to his education. "Mike makes the students so fearless about trying things," Kidwell says. "But also, they learn how to think, and how to conceptualize a problem and turn it into something doable and testable."

On the day before his arthropod lab, LaBarbera is in his lab by noon. This week's live animals have arrived, shipped from the Gulf of Mexico in a giant Styrofoam cooler, each sealed in its own plastic bag full of water. All those crabs and shrimp—which he pulls out one by one, greeting them merrily, "Hi there! Good to see you, little guy"—are hungry and tired. LaBarbera will spend the next three or four hours slowly acclimating each animal to its new habitat in the aquariums: opening the bags to let in fresh oxygen, incrementally adding water from the tanks, careful not to stress the creatures with abrupt changes in temperature or salinity. "I want the shock to be minimal," he says.

With his TA, **Liam Heins**, AB'13, LaBarbera ventures up to the fourth floor where the preserved specimens are stored, in a narrow windowless closet crammed floor to ceiling with dead creatures, staring out opaquely from jars of formaldehyde. "Here's the house of horrors," LaBarbera says cheerfully, swinging open the door. Scanning the shelves, he hands jar after jar to Heins, who places them on a cart to wheel back to the lab: scorpions, tarantulas, sea spiders, gooseneck barnacles, a mantis shrimp. "Some of these specimens are just ancient," LaBarbera says. "That thing up there?" He points to a jar on the top shelf containing cross sections of an eel-shaped, rasp-faced hagfish. "That's probably 100 years old."

Back downstairs in the lab, the live animals are ready for full immersion. Fiddler crabs, set up in a tank that simulates a sandy beach, are already building their burrows. In the back corner, Heins organizes the trilobite fossils. LaBarbera gets out the microscope slides of insects and crustaceans, some of which he made when he himself was an undergraduate, from specimens collected on that trip to the Sargasso in 1969. "M. LaBarbera," they read, in miniature black script.

"When students come in, all of this is transparent," he says. They never know how much work goes into each lab.

One last check around the room to make sure everybody's fed and happy and settled. It's nearly four o'clock. "All right," LaBarbera says. "I'm out of here. I think we're ready for tomorrow." ♦



To see more of LaBarbera's photos and read about a fund he is organizing to support College student research, visit mag.uchicago.edu/creatures.



UNPLANNED ENCOUNTERS

Surprise specimens in the lab.

BY MICHAEL LABARBERA

Porcelain crabs have begun showing up unexpectedly.

When you buy a shrimp from an animal supplier, you generally get a shrimp (and, occasionally, some shrimp parasites). But when you buy an oyster, you get an ecosystem: the oyster and the sponges, hydroids, barnacles, and clams growing on the oyster (the “epifauna”); the flatworms, crabs, snails, and copepods living among the epifauna; and any eggs that happen to be attached.

Some of these “volunteers” are obvious immediately, and they add a note of extra diversity to the labs. (And teachable moments. The sight of barnacles mating produces indelible memories of invertebrate debauchery.) The most obvious—and charming—volunteers this past fall were several dozen green porcelain crabs, *Petrolisthes armatus*, which came hidden among the clumps of oysters and barnacles.

Porcelain crabs look like flattened crabs, but are actually more closely related to squat lobsters; this species has been progressively moving north from Brazil along the coast of the Atlantic over the past 80 years and now is common in the Gulf of Mexico and along the southeast coast. Like barnacles, porcelain crabs are suspension feeders: if ambi-

ent currents are low, porcelain crabs sweep their front appendages, called maxillipeds, through the water, catching planktonic animals, but if the current is high enough, they just hold the maxilliped in the flow, like a feathery catcher’s mitt, letting the current do the work. Because currents are stronger farther from the bottom, porcelain crabs tend to be climbers; in our tanks they routinely decorated the arms of the sea fans, semaphorically flashing the yellow and blue bases of their maxillipeds with messages unknown.

Some volunteers are initially cryptic but as reliable as clockwork in their appearance. For example, each time I offer Invertebrate Biology, sometime in the sixth or seventh week there appears an acoel flatworm, *Heterochaerus sargassi*, two to three millimeters long, a living representative of a group that immediately predates the major diversification of multicellular animals. More commonly, the volunteers are unpredictable, and every day offers the possibility of a surprise. Last quarter it came in week six when half a dozen jellyfish, two millimeters in diameter, suddenly appeared in one of the tanks, clinging to the aquarium glass like tiny ornaments. A week and several trips to the library later, I finally put a name to them: *Cladonema radiatum*. The jellyfish represents the sexually mature stage of a benthic hydroid (which I never found despite much searching). *Cladonema* is unusual in that the jellyfish stage normally lives attached to eelgrass blades, letting its tentacles stream out in the current to catch zooplankton; when disturbed, it releases its hold, swims away, and finds another spot to attach to. Apparently the glass wall of an aquarium serves as well as an eelgrass blade, giving the class—and me—a chance to appreciate the delicate symmetry of this tiny predator. ♦

WHEN YOU BUY AN OYSTER, YOU GET AN ECOSYSTEM.

PHOTOGRAPHY BY MICHAEL LABARBERA

glimpses

JUDITH VICTOR GRABINER

BY DEREK TSANG, '15

Mathematics historian **Judith Victor Grabiner**, SB'60, took UChicago's Core to heart. Now a Pitzer College professor, in high school she found math to be the only subject "taught with any intellectual rigor and integrity" and chose the University of Chicago because of its strong math department. There Grabiner discovered that problems in the humanities were "just as challenging and just as interesting and just as important as problems in the sciences," she says. Humanities 3, taught by Herman Sinaiko, AB'47, PhD'61, was the turning point. She realized "that history, philosophy, and literature were going to be part of my intellectual approach to the world after that."

Grabiner wedded the humanities to her mathematical literacy with a PhD in the history of science from Harvard, where she read Galileo's and Newton's original writings for the first time. After a few years as a Harvard instructor, she and husband Sandy, a mathematician at the Massachusetts Institute of Technology, headed to California looking for jobs. Grabiner bounced between teaching and working on her first book—*The Origin of Cauchy's Rigorous Calculus* (MIT Press, 1981)—before spending 14 years at California State University, Dominguez Hills, teaching history.

Now in Pitzer's math department, Grabiner teaches courses such as Mathematics, Philosophy, and the "Real World" and Mathematics in Many Cultures to humanities students looking to satisfy their general education requirement. Her writing covers similar ground: the importance of historical context when teaching mathematics, the way proof writing changed over time, and the diverse traditions that led to modern mathematics.

In January Grabiner won the Mathematical Association of America's (MAA) prestigious Beckenbach Book Prize for *A Historian Looks Back: The Calculus as Algebra and Selected Writings* (MAA, 2010). She is the only four-time winner of

the MAA's Lester R. Ford Award for best article in *American Mathematical Monthly*. After finishing her current project on math's place in the liberal arts, Grabiner plans to research the history of optimization in mathematics and philosophy. In an interview with the *Magazine*, edited and adapted below, she talks about her life, teaching, and research.

Resonance

There's a guy who taught music at the University of Chicago, back when I was a student, called Leonard Meyer [PhD'54]. And he wrote a book called *Emotion and Meaning in Music* (University of Chicago Press, 1956). I was flipping through it one day, and this just jumped out on the page at me: that musical beauty is a violation of your expectations in a way that afterward seems natural. That's what I think mathematical beauty is too. I'd like to see liberal arts students get that and have that experience.

Multicultural math

Almost every culture that we know anything about has had some kind of mathematics, and the mathematics that they have is developed to solve problems of that particular culture. There are cultures that have mathematically complicated kinship systems and geometric representations of how those kinship systems work. There are cultures that have experimented with all sorts of patterns and symmetries to do art. And then the historic cultures like the Chinese,

I JOKE THAT I TEACH COURSES WHOSE PREREQUISITE IS HATRED AND FEAR OF MATHEMATICS.



Mathematics historian Judith Grabiner, SB'60, brings math to the liberal arts masses.

the Indian, the Islamic, that have very sophisticated mathematical systems. One of the subjects that's been discovered in many different cultures is elementary combinatorics. Say in medieval India, you've got a line of Sanskrit poetry that has five syllables in it, and every syllable can be either heavy or light, and a good poem that's got five syllable lines uses every possible combination of heavy and light—well, how many are there?

Fear and loathing in math class

My students don't take mathematics as part of their major. They want to find a math course that interests them, and they don't think there's going to be one. I joke that I teach courses whose prerequisite is hatred and fear of mathematics. That's an indictment of how we do K–12 mathematics, you know. It's taught as a collection of recipes. There's no “why was this discovered and why would you ever need it?” And if there's any subject in which the answers to “why” are very well known, it's mathematics.

Not your mother's calculus

Aristotle said to understand motion is to understand nature, because nature is that which changes and the eternal principle of change itself. OK, Plato's mathematics is the study of that which does not change, right? Two and two is always four, the circle's always round, etc. Mathematics

is a model for what the search for absolute truth could be, because although the objects in mathematics aren't as good as Plato's form of good, they are unchanging, and so you can have unchanging truth about them. So the idea that you could have a mathematics of change, at least in the ancient world, well, that doesn't seem like a reasonable thing to do. But that's what calculus is.

Misleading statistics

In political life, a little quantitative understanding can help you speak intelligently about public policy. You have to figure out whether the average is an arithmetic mean, where

the outlier cases pull the mean very much, or whether it's a median, half above and half below, or whether it's the most-often-achieved value. Statistical abstractions are very handy, and they're nice shorthand for a large amount of data. But what's real, ultimately, are the individuals, and you really have to look at how things are distributed. Francis Galton, a famous 19th-century British statistician, is supposed to have said that, on the average, Switzerland is flat.

Math, philosophy, and the “real world”

At the end of my class, every student has to do a report on how mathematics is used in an area of interest to that student. I just had a student report on mathematics and music in my class last semester, and it's news for a lot of people that there is mathematics in music. When he was done, a guy got up to talk about ski jumping and the way mathematical physics describes the curved course. Then I had a student do a logical analysis of arguments using symbolic logic and arguments about free will. For probably the first time in my students' lives, the student is an expert in the class on that particular piece of mathematics. And let me say one more thing about teaching math for a liberal arts course. Every math course these students have ever taken is a prerequisite to something else. You can't do Algebra 2 if you didn't get Algebra 1. But in a liberal arts course, you're not going anywhere. So you can try to build a sense of mastery. Because the exciting thing about mathematics is when you get it. ♦

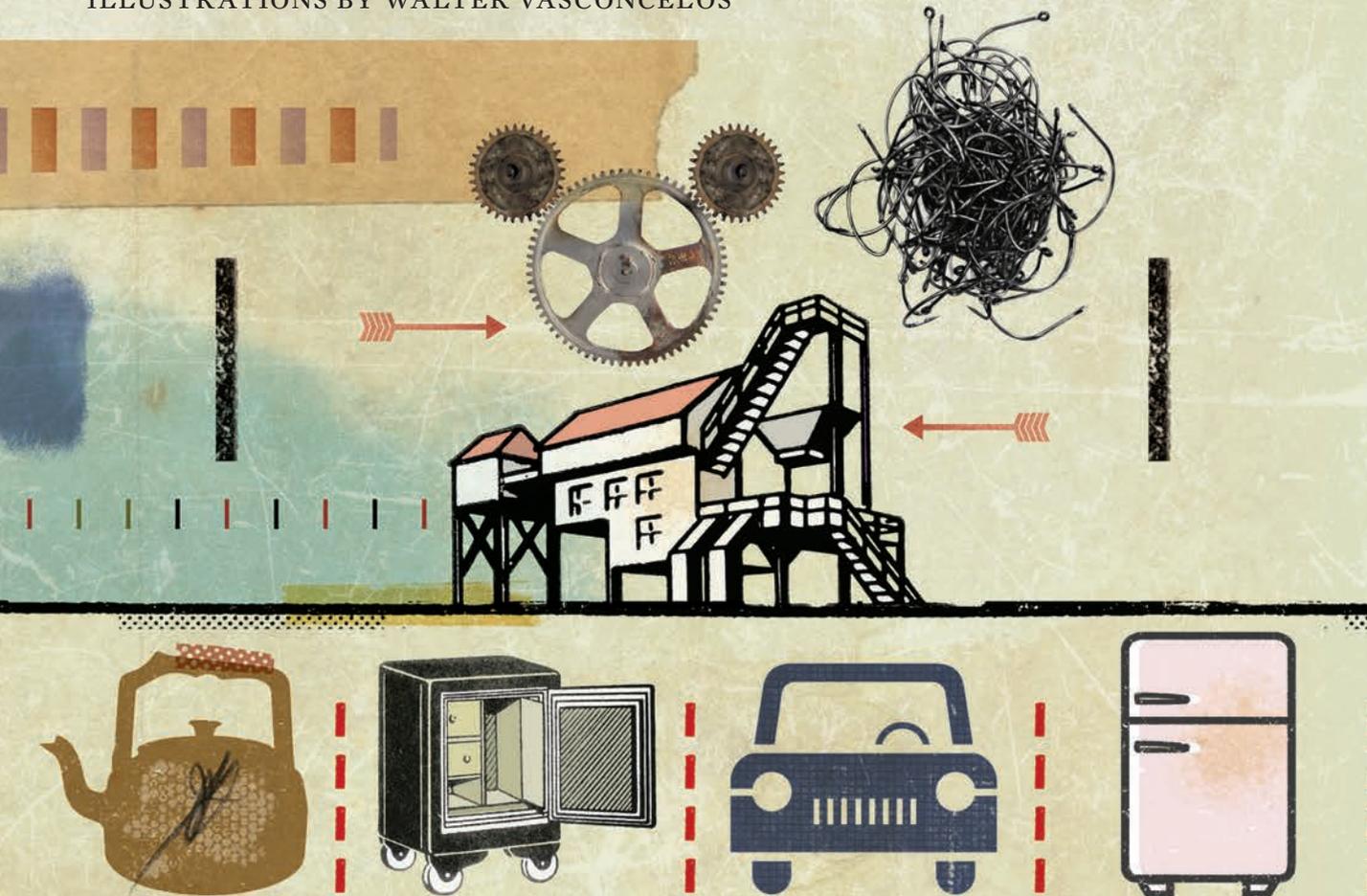
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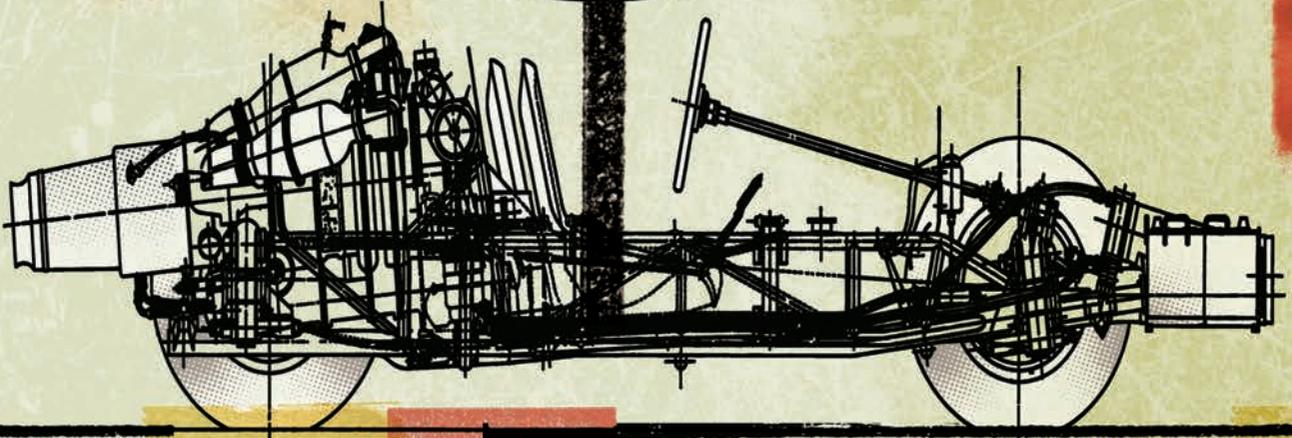
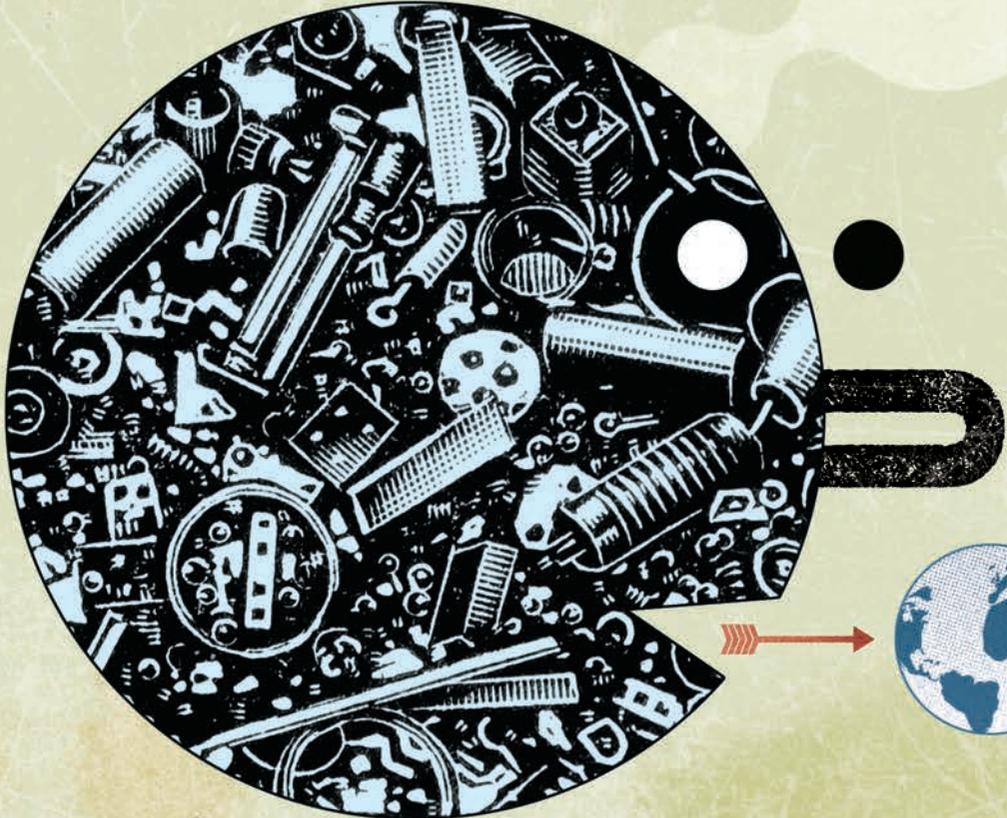
SCRAP METTLE

Entrepreneurs meeting the demand for raw materials, not environmental virtue, drives the expansion of the recycling industry.

BY ADAM MINTER, AB'93

ILLUSTRATIONS BY WALTER VASCONCELOS





The first thing to do when you open up a small American scrapyards in the morning is unlock the safe and count the money. Back in the 1980s and 1990s, I was active as a teenager and young college graduate at my family's scrapyards in Minneapolis. During the summer months, my younger sister Amy would join my father and my grandmother at the front desk, counting money. After college, I joined them, too.

But for most years it was just the two of them, my father and grandmother, at 6:30 a.m., counting money into the register, the short paunchy man with the circle of hair atop his head counting the big bills, and the hundred-pound whip with the ice-blue eyes counting the small ones. Inevitably, though, the mother-son moment was interrupted by a ringing phone, and my father left his mother to finish the job on her own, while he took the call in his office.

There were two features to that office: a tacky wall clock made from a slice of a giant tree stump, purchased at the Minnesota State Fair, and a very large window that looked out upon the front desk and its cash register. From there, my father could not only watch his mother and whoever she might be paying but also see the television screens that pointed at his metal warehouse filled with aluminum, copper, brass, and lead, the scales where his scrap was bought and sold, and the metal yard where people dropped off everything from old cars, to mainframe computers from the 1970s, to giant drill presses from the 19th century.

As he slipped into his ratty office chair, he'd glance at the television cameras and then hit the line-one button on the phone. "Scrap Metal Processors. How can I help you?" It could be anything: aluminum cans, baseball bats, copper mesh from a chemistry laboratory at the University of Minnesota, whole automobiles, half of a refrigerator, silver-plated wire, a load of bathroom scales. Nothing was surprising, and everything had a price. "Tuning forks?" he'd ask the person on the other end of the line. "Maybe 15 cents a pound, but I'll need to see them. Ask for Mickey when you get here."

Right around that time, the cash register drawer slammed shut, ready for business, and my grandmother retreated into the glorified broom closet that she called her office. It was notable for a handful of features: the microwave oven, the refrigerator where she kept her stash of kosher hot dogs, and the odd array of brass figurines and loosely defined antiques that she had stolen from my father's employees, who in turn had stolen them from the metal warehouse, hiding them in places that only she seemed to know. It was the one room in the office with the scrapyards smell known to scrap men (and grandmothers) all over the world: tangy like

metal and thin like wire. I've smelled it on four continents, from small towns in Thailand to warehouses on the edge of Chicago. Each time, each breath, reminds me of my grandmother's office, and the piles of metal just beyond it.

While she cooked the hot dogs, one for my father and one for herself (and one for me, if I could be bothered to show up so early), my father would leave his office, cross the hallway, open the metal warehouse door, turn on the lights, and raise the loading dock door. While the lights buzzed to icy life, he'd take a walk around, squinting in the darkness at his inventory.

If he had a moment, my father might run his fingers along the edge of a carton filled with brass shavings generated by a factory in St. Paul; then peek into the bottom of a carton filled with automobile radiators delivered by a suburban repair shop. Near the front, there were always boxes of brass "drippings"—literally, the brass that dripped on the floor of a factory during the casting process; aluminum clippings, the clean scraps that fell away when a machinist cut a widget from a piece of aluminum; boxes of copper tubing delivered by plumbers; boxes of water meters; boxes of fine, shiny copper wires, dropped off by defense manufacturers who'd completed their smart bomb orders; steel bins full of aluminum cans dropped off by neighbors; cartons full of old PCs dropped off by well-intentioned environmentalists; more cartons overflowing with brass bullet shell casings picked up from a local gun range favored by cops, gangbangers, and, in my experience, dentists; printer plates from the local printer responsible for our business cards and letterhead; and forks, knives, and spoons that my father had bid for, and won, from a major airline.

**WHAT THAT WAREHOUSE
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THE SUPPLY OF SCRAP,
AND THE DEMAND FOR
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It was fairly typical, though small, as scrap warehouses go. Still, it was more than enough to pay for two private college educations (mine and my sister's). To my young eyes, though, the most amazing thing about that warehouse wasn't the scrap or the wealth, necessarily, but how quickly it all turned over. What that warehouse contained on Monday was never what it contained on Friday. The supply of scrap, and the demand for scrap, just never seemed to end.

In 2012, the 7,000 or so businesses that constitute the US scrap recycling industry were responsible for transforming 135 million metric tons of recyclable waste into raw materials that could be made into new stuff. That's 135 million tons of iron ore, copper ore, nickel, paper, plastic, and glass that didn't have to be dug out of the ground or cut out of a forest. It also exceeded, by an astounding 55 million tons, the volume of recycled municipal solid waste—that is, recyclables dumped into blue, green, and single-stream bins—generated by homes, government offices, and businesses during that same period.

What's the difference between what a scrapyards recycles and what gets transported to facilities that deal with municipal solid waste? There's some overlap, but in general the scrap business handles everything that's not generated in the daily course of life in an office or home. Your old automobile ends up in a scrapyards; so do the metal grindings that fall away when an automobile manufacturer makes a new engine; the old electric meter on the back of your house ends up in a scrapyards (if the power company has the good sense to sell it); so do the power and telephone lines that connect to your house when they're replaced; the cardboard packing boxes behind your local supermarket go to a paper scrapyards; so do the unsold newspapers in newspaper boxes.

Altogether, according to the Institute of Scrap Recycling Industries, the American scrap recycling industry, a set of companies that buy, pack, and process everything from metal to rubber, employed 138,000 people in 2012. But for all of the traceable businesses, with traceable employees, there are just as many untraceable ones: everything from the organized gangs of scrap thieves who roam Detroit to panhandlers who stick their hands into subway waste bins in search of a Coke can. It's hard, I know, to think of a panhandler as part of any industry, but believe me, if the panhandler didn't pull that bottle from the subway bin, nobody else would. He's the bottom rung of the chain that moves up through your home recycling bin (he might steal the contents to sell rather than allow you to give them away) through my father, a processor and packer, to the companies that melt and transform scrap into new metal, paper, and plastic.

On weekday mornings at my father's scrapyards, the cus-

tomers who showed up before 7 a.m. were strongly represented by plumbers, electricians, and contractors with scrap that they'd acquired on recent jobs—usually plumbing, wire, siding, and window frames. They weren't panhandlers, but they too were at the bottom rungs of the American recycling chain, collecting what a large company would never have bothered to collect because the volumes were just too small to be worth the trouble. Sometimes they brought a mere day's worth of stuff, just enough to be cashed in for a couple cases of beer; and sometimes it was enough to pay for a first-class barbecue to go with that beer. Usually, though, the transaction fell somewhere in between those two extremes. A handyman, for example, might arrive with several white plastic buckets. One might be filled with copper tubes used for bathroom plumbing; another might have old brass plumbing fixtures and perhaps a few brass electrical connectors; and the last might be filled with a lightweight mix of wires and an electrical meter or two.

My father, a man with a talent for gabbing with the random characters who appear on scrapyards docks, would saunter over with a gambler's confidence. "What've we got?" Then, without waiting for an answer, he'd pick up one of the buckets and place it on the kitchen-table-sized metal scale built into the concrete floor.

As the electrician looked on, my father would slide the scale balances down the beam, achieve a very quick weight, and write the weight on an invoice. Then it was time for the second bucket, and my father would reach for it, quite often before that customer could get around to asking what the day's price on copper tubes was. "Ah, so what're you paying for copper these days?" the electrician might ask as he watched the second bucket slide onto the scale.

This always took some reckoning. Scrap metal, despite its association with trash, is as much a commodity as bushels of corn, barrels of oil, and ingots of gold. Pre-Internet, my father would just go to the *Wall Street Journal*, look for the price of copper on the London Metal Exchange (LME) or the metal trading division of the New York Mercantile Exchange (COMEX), and offer that, minus a few cents to allow himself a profit. Then he'd sell it to a company that melts copper—perhaps the nearby foundry that cast copper into pots and pans.

A pound of wires isn't quite so simple to buy. After all, a pound of wire isn't a pound of metal; it's a pound of metal (often more than one kind) and insulation. The insulation doesn't weigh much, but you'll have to pay somebody to remove it, and separating different kinds of metals costs even more. So the price paid for the wire needs to reflect those costs. The experienced scrap buyers—people like my father—know by experience, if not instinct, what the metal recovery will be from a certain kind of cable. Once a scrap buyer knows, or thinks he knows, the percentage of metal



In the mid-1990s, when the family scrap business started trading in earnest with China, the transactions were all but local. Chinese traders arrived at our door, paid cash, and left with the scrap. It was international trade, sure, but it was trade that we could do from home. In the midst of the 1990s boom, my father flew to China for a couple of

in a load of scrap, he then formulates a price by looking up the LME or COMEX price for, say, copper, and subtracting the cost of processing it.

Meanwhile, one of our delivery trucks might be arriving, loaded down with several washing-machine-sized boxes of copper shavings, generated during the overnight shift of a factory across town and picked up 20 minutes ago. That load would be worth more than all of the scrap collected by the plumbers and electricians who wandered in during the course of the week (and there would be tens more such loads from various factories over the course of the week). My father, meanwhile, would take the contractor's ticket into the office, where more likely than not there was a hot dog and a kosher dill waiting on a paper plate next to a list of what he had in inventory, available to sell.

I can't recall, precisely, when the first Chinese scrap buyer appeared at the front window of my father's scrapyards. It was probably around 1994, right around the time that China had begun to deregulate key industries, and private entrepreneurs had decided that scrap metal was the business where they'd strike it rich. It was a good bet: China was at the front end of a drive to become one of the world's great economies. It had labor and government support; the only thing it needed was raw materials. Digging mines was one way to obtain those raw materials; the other was to go to the United States, the place that many scrap traders call the Saudi Arabia of Scrap, the land where there's more scrap than the people can handle on their own. It's a funny nickname, Saudi Arabia of Scrap, but it's not meant as a compliment. Rather, it's an opportunity to exploit.

Those first Chinese traders are a blur to me. I just remember Chinese faces, broken English, and a willingness to buy everything in our inventory. "You have number-two wire?"

Sure, we have number-two wire. We also have customers for it. "How much do you want?"

"Can we see it?"

So we'd go out to the warehouse, and after a quick inspection, they'd ask to buy all of it. My father would offer a price—one significantly over what our customers in North America were paying—and they'd accept on the spot, no question.

quick trips, returning with photos of Chinese scrapyards filled with people and colorful piles of wire. But I always suspected those trips were nothing more than excuses to travel, if not enjoy some big nights out on the (Chinese scrap) town. The only lessons learned, so far as I could tell, were that the Chinese were becoming rich, and that they'd be hungry for scrap metal for a long, long time. They weren't bad lessons—over the last two decades, giant fortunes in scrap metal have been made on those observations.

Ironically, though, my family didn't manage to make one of those fortunes. The fact that the family business remained in business at all through that period is an accomplishment in its own right.

Credit belongs to my father. He's a talent, a scrap man to the core, one of the great wheelers and dealers in an industry that sends them spinning off like tires down a hillside. But that was not enough to make him happy.

For much of the 1990s, in fact, while I was associated with the business, he was heavily intoxicated with booze and other substances. Back then I was a young, inexperienced honors graduate in philosophy, ambivalent about the idea of devoting myself to the scrap-metal industry. There were other things I wanted to do: write songs, write novels, get a PhD in evolutionary biology, and fall in love with depressive women. But when your family—and your family business—is in trouble, you do what you can. So I made one of the best choices of my life and went to work closely with my grandmother at the scrapyards. We did our best to

GLOBALIZATION OF WASTE IS NOW A PERMANENT FEATURE OF THE WORLD ECONOMY.

keep cash from disappearing, and we labored to send my father to some of the finest chemical dependency treatment centers in the United States.

By my late 20s two things were becoming painfully obvious to me: first, my father was never going to embrace sobriety as my grandmother and I had hoped; and two, I had no future in a business where the top manager was extraordinarily talented but mostly absent.

It wasn't exactly a lost cause—my father had demonstrated a talent for doing just enough to keep the company afloat—but it wasn't a future. I needed a life, something beyond the scrapyards, even if “beyond” meant that I couldn't have lunch with my grandmother several times a week.

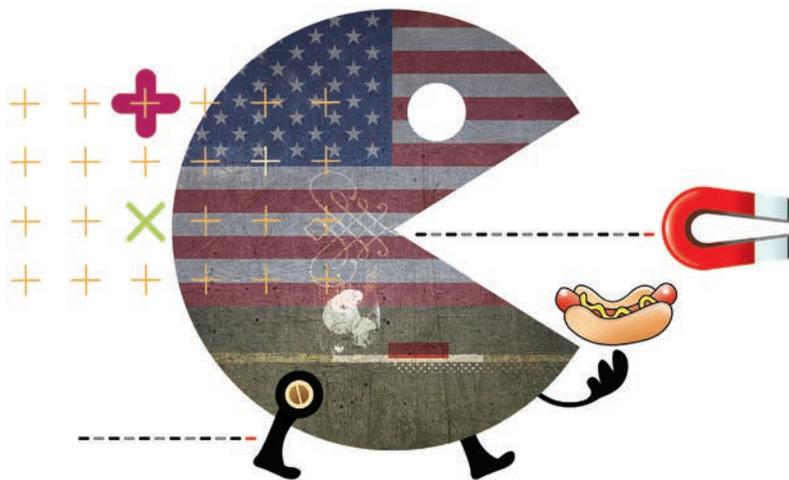
In Minneapolis, I started out freelancing for magazines, quickly working myself into bigger and bigger assignments. Then, after a year or two, I was given the opportunity to do a freelance assignment on scrap in China, and I took it without hesitation.

What a terrible idea.

First, I didn't know the language. Second, I'd never been to Asia. And third, the family business was still flailing in Minneapolis. But my grandmother, daughter of the scrap industry, encouraged me to go. “You have to live your life,” she told me. I don't think she expected that I'd remain in China for a decade; I sure didn't.

Globalization of waste is now a permanent feature of the world economy. So long as goods are made in one place, and consumed and thrown away in another, there will be companies that specialize in moving that waste to where it's most valued as a raw material. More often than not, those companies belong to what my grandmother called the junk business.

First America Metal in Joliet, Illinois, looks like any other American machine shop. It's located at the end of a cul-de-sac, surrounded by a green lawn, and accented by a tall flagpole that flies the American Stars and Stripes. Nothing about the place suggests it's one of the most successful Chinese American-owned and -run scrapyards in the United States. In fact, most people don't realize that scrap men with a deeper personal connection to China—and they're almost all men—are quietly buying up and running scrapyards across the United States. The motivation isn't hard to discern: they want to cut out the middleman—in this case the American scrapyards standing between China's raw materials importers and the Americans who toss all that metal and paper into their recycling bins.



The Joliet scrapyards is owned by James Li, a naturalized American from Hangzhou, China, and he's giving me a tour of his warehouse. We pause beside a box of defective home food processors. James picks up one that's been broken apart and shows me the baseball-size motor inside it. The best way to get at the copper is by hand, using a pincer and perhaps a hammer and screwdriver. That's not going to happen in the United States, so—predictably—that box is bound for one of James's scrapyards in China, where it can be done cheaply.

James stops beside another box. “You know what this is?” he asks with a big smile.

I peer into it: there's an oily mix of gray metal shavings of the kind left over when a factory grinds a block of metal into a rounded shape. “No. What are they?”

“Titanium.”

Titanium is an expensive, extremely strong, lightweight metal commonly used in aerospace—and in golf clubs. A few years ago, while traveling in Taiwan, I visited the island's biggest titanium recycler. It was a memorable visit: I was shown sheets of titanium from which putter heads had been punched out like cookies from dough. The scrap at First America, however, looks more like oily confetti, and I suspect it's not easy to find somebody who wants to buy it. James, however, has the potential to surprise. “Fireworks,” he tells me. “Titanium burns white. So you sell them to the fireworks makers. They make white fireworks with them.”

Maybe those shavings were ground off an airplane jet engine part destined for Boeing. Whatever the source, they're now bound for a central Chinese fireworks factory. “How do you find those fireworks buyers?”

“I know where to look,” he answers. “The American scrap guys don't know where to look.”

James leads me through the warehouse doorway and into muted offices that could belong to a small real estate company. “The face of the company is American,” James explains as we walk the single hallway. “But the office is Chinese.”

It is, indeed. The receptionist is a white American; but the small handful of offices behind the receptionist are occupied by Chinese, speaking Chinese.

According to James, First America Metal ships 3.2 million pounds of metal per year, making it one of the top five

nonagricultural exporters of any product, by volume, from the American Midwest.

I'm aware that people outside the industry—especially in the environmental community—don't view the globalization of the waste and recycling trade with warm feelings. They view it as outsourcing, dumping, an encouragement to pollute.

I understand their concerns: recyclers in developing countries don't generally meet the standards that rich countries impose upon themselves. The question is, though: Are

they able to conserve more, even if they operate dirtier? Is it better to reuse a computer chip in China, or shred it in a warehouse in North America?

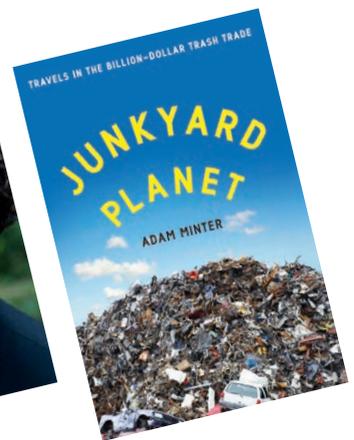
In the end, those questions aren't going to be answered by wealthy recyclers in the developed world. Rather, they'll be answered by people in developing countries who need raw materials.

Recycling is better—I won't write "good"—for the environment. But without economics—without supply and demand of raw materials—recycling is nothing more than

TRASH TALKER

Author Adam Minter, AB'93, weighs in on the wide world of waste.

BY JASON KELLY



A high-tech Japanese recycling company called Econocol has a facility in the forest at the foot of Mount Fuji. **Adam Minter**, AB'93, visited the plant while working on his book, *Junkyard Planet*, but what he saw there didn't make it into his narrative of "travels in the billion-dollar trash trade."

Ask him about the most memorable sights and sounds from those travels, though, and Minter recalls the invitation he received after seeing Econocol's automobile shredding and sorting machines.

"Do you want to see the pachinko recycling?"

Minter, who grew up around his family's Minneapolis junkyard and has reported on the industry from Asia since 2002, wanted to see that very much.

A ride down a winding road led him to a warehouse where the colorful, pinball-like devices that are a popular gambling pastime in Japan were stacked by the hundreds. "I remember there were *Star Wars* pachinko machines," Minter says. "That stuck in my mind."

Pachinko parlor operators, he learned, replace machines

every few months because customers get tired of them. They are often of very high quality, gold-plated—"not gold-painted"—with state-of-the-art HD touchscreens. Econocol takes them apart to feed the market for those component parts. "They were extracting these touchscreens and packing them in foam and shipping them off to China where they were remanufactured into GPS devices and other stuff," Minter says. "It was just amazing to me."

Minter's sense of amazement at the ingenuity and scale of recycling technology permeates *Junkyard Planet*. He details problems as well as progress, but his personal history gives him an appreciation for the characters and their accomplishments in an obscure, misunderstood industry.

Meeting Scott Newell, the CEO of a company that supplies metal shredders, thrilled him. Newell is the son of Alton Newell, whose design for a "machine that eats cars whole" helped solve an American epidemic of abandoned automobiles. "If there was an environmental Mount Rushmore in the United States, Alton Newell should be on it," Minter says, "along with guys like Leonard Fritz."

PHOTOS COURTESY BLOOMSBURY PRESS

a meaningless exercise in glorifying garbage. No doubt it's better than throwing something into an incinerator, and worse than fixing something that can be refurbished. Placing a box or a can or a bottle in a recycling bin doesn't mean you've recycled anything, and it doesn't make you a better, greener person: it just means you've outsourced your problem. Sometimes that outsourcing is near home; and sometimes it's overseas. But wherever it goes, the global market and demand for raw materials is the ultimate arbiter.

If—as seems inevitable—China becomes the world's big-

gest generator of waste, why shouldn't it then become the biggest recycler, too? If China remains the world's biggest manufacturer, why shouldn't it be the biggest harvester of raw materials from the cast-offs of other countries? Why shouldn't it be the capital of Junkyard Planet? ♦

Adapted from *Junkyard Planet: Travels in the Billion-Dollar Trash Trade* by Adam Minter. Copyright 2013 by Adam Minter. Published by Bloomsbury Press. Reprinted with permission.

Fritz, who died in August, began “grubbing” around Detroit-area dumps in 1931 as a nine-year-old in need of money for school clothes. With a lot of effort, and more than a little luck, in less than a decade he made enough to build a business that would become the behemoth Huron Valley Steel Corporation. The company grew by virtue of its proximity to Detroit's auto industry, salvaging and selling scrap from cars, but it has never become too big to let pennies go to waste.

Today, even as it receives more than half a billion pounds of scrap metal a year for recycling, Huron Valley Steel still harvests loose change. The cars in American junkyards have an average of \$1.65 jangling around under the floor mats and between the seats. Gathering coins using a proprietary process—which Minter witnessed and declares “awesome”—the company returns them to the US Treasury in exchange for a percentage of the overall value. “They're making money from money,” Minter says. “How great is that?”

Making money, not saving the earth, is the impulse that drives innovation in industrial design and waste management. “I'm a U of C guy, so I believe in markets,” the former philosophy major says. “I'm also a junkyard kid. I do think that markets are going to drive a lot of this change.”

The price of copper, for example, has increased from about a dollar a pound in the 1980s at his family's Minneapolis scrapyard to as much as \$3.50 today. Those costs force manufacturers to factor efficiencies into their designs—thinner or fewer wires, alternative materials—that have a net environmental benefit, but the economic incentives sometimes reward wasteful production. “I'm also enough of a pragmatist,” Minter says, “to know that markets aren't going to solve everything.”

A policy in China gives electronics manufacturers a visible hand, imposing a fee that subsidizes the recycling of e-waste. After Japan instituted a similar program, Minter says, manufacturers and recyclers began working together to find more efficient practices.

Although he's a satisfied iPhone 4S user—resisting an upgrade on environmental principle—Minter criticizes Apple's products from a sustainability perspective. Its iPads cannot easily be taken apart and must be shredded to extract reusable materials, he says, a process that has sometimes caused them to burst into flames.

The company also collects used iPhones to recycle but “probably 30 percent of that phone is going to end up in a landfill,” Minter says. “As I describe in the book, this is ultimately a way to encourage people to buy more phones. Greenwashing.”

That compromises the virtuous circle of reduce, reuse, recycle. High recycling rates, in Minter's experience, tend to be associated with poverty, which makes reuse a financial necessity. Among the wealthy, it often goes hand in hand with increased consumption, diminishing the environmental value of bins full of Amazon boxes. For those who consider conservation their ultimate goal, he suggests “stop buying so much crap in the first place.”

Minter, a columnist for *Bloomberg* living in Kuala Lumpur after 11 years in Shanghai, tries to live by that mantra. He uses refurbished laptops and hangs on to that old iPhone despite the flashbulb going off every time he turns on the screen. He and his wife, Christine, don't own a car, relying on public transit. Packaging informs their shopping decisions.

While on tour to promote *Junkyard Planet*, though, Minter found himself in “the uncomfortable role of being Mr. Sustainability.” A simple calculation of the carbon burned on his research trips, he says with a laugh, would disabuse people of that notion.

Minter plans more travel this summer for his next book. He won't divulge the subject, saying only that it's about another overlooked industry but unrelated to the trash trade—ideas being one of the few commodities Minter finds no value in reusing. ♦





John Snyder traversed Ethiopia seeking inspiration for a screenplay. Instead he captured a landscape about to disappear.

In Lalibela, Ethiopia, “we hiked out a long ridge followed by a dozen cheerful boys, each claiming to be an orphan in need of a pair of shoes,” Snyder writes.

documentary

EPIC CROSSING

BY LAURA DEMANSKI, AM '94
PHOTOGRAPHY BY JOHN SNYDER, AB '56

t was a saga to rival *Lawrence of Arabia*. **John Snyder** thought. In the middle of the 19th century, Tewodros II, only 35 years old, rose to power in Ethiopia. The young emperor sought to abolish slavery, reform taxation, and make other improvements; he made enough progress to be revered in the country a century and a half later. He befriended two Englishmen, hoped to learn from Western technology to advance his country, and came to adore Shakespeare. But his ambition, paired with a temper fired hot after a series of tragic losses, earned him enemies throughout his country—and eventually provoked the British to send an army after him.

Fascinated by the emperor's rise and fall, Snyder, AB'56 (Class of 1954), set out on his own Ethiopian quest in 1972. A writer and artist who splits his time between New York City and North Carolina, Snyder left rural South Carolina in 1952 for the Hutchins College. In the early 1970s he was doing marketing for a New York carpet mill when he read Alan Moorehead's absorbing history of Westerners in Africa, *The Blue Nile* (Harper and Row, 1962). Snyder, who had studied film writing at the New School, thought the tale of Tewodros's rise and fall "had everything...genius, epic drama, and a spectacular locale." It would make a knockout film, and he would write it, first traveling to Ethiopia for research.

Following the same rugged path Tewodros took on his collision course with the British, Snyder traveled by foot, mule, bus, and Land Rover across a country that was still essentially premodern. With him were his new wife, a local translator, and a professor of African history who knew the country well. He also had a twin-lens reflex Mamiyaflex C-33 Professional camera and enough rolls of 120 film to take almost 500 photographs.

The screenplay never materialized, but last year Snyder published more than 900 of the photos in *Crossing Ethiopia: A 1972 Photographic Journal Retracing the Last March of Emperor Tewodros to Magdala* (Smith/Kerr). The platter-sized coffee table book has starkly gorgeous landscapes of a world half-earth, half-sky; cumulus clouds, captured with a red filter, that seem transplanted from a John Constable painting; a bell

and a mortar in the grass, lonely relics of Tewodros's reign that invoke "Ozymandias"; and faces of Ethiopians, young and old, Christian and Muslim.

"The pristine world in these images has vanished. There was absolutely no garbage," Snyder recalls, "no plastic at that time. And there were no stores, only local markets selling local goods. Two years later, revolution came to Ethiopia, followed by famines that savaged the country. Today the population has grown threefold or more since Snyder's visit, and a road connects the end points of the journey that so tested his party. His photos, which he has donated to Addis Ababa University's Institute of Ethiopian Studies, are among few records of what this part of the country used to look like. **Donald Levine**, AB'50, AM'54, PhD'57, UChicago sociology professor emeritus and author of two books about Ethiopia, says visitors at this time had "the rare privilege of being witness to the old historic order; you felt like you were living 1,000 years ago in a culture that had been preserved."

The brilliant, destructive, but affecting figure of Tewodros isn't easily grasped or forgotten, and the idea of a film never quite let go of Snyder. (Levine named his son Theodore after the emperor.) *Crossing Ethiopia* gave Snyder a chance to tell this grand historical character's story. "He would see through subterfuge and he hardly slept," Snyder says. "A driven, driven person. Unfortunately he did a lot of bad stuff too." The worst came in the 1860s.

In 1858 Tewodros lost his young wife, Tewabech, whom Snyder calls "a leveling influence." Two years

YOU FELT LIKE YOU WERE LIVING 1,000 YEARS AGO IN A CULTURE THAT HAD BEEN PRESERVED.



PHOTO COURTESY JOHN SNYDER

later, his confidantes Walter Plowden, the British consul to Ethiopia, and John Bell, who introduced him to Shakespeare, were dead at the hands of rival tribes. A new consul, Charles Cameron, arrived from England with a gift of pistols engraved to the emperor from Queen Victoria. When Tewodros wrote back to her and no response came (the letter never reaching her), he imprisoned Cameron and several European missionaries. After a series of failed negotiations, Britain's Indian army invaded, arriving in October 1867 with advanced weapons and 14,700 men to fight the Ethiopian emperor's 5,000. As they began their march from the Red Sea to Magdala, where the prisoners were held, Tewodros traveled east from Debra Tabor to the same destination.

With enemies of the emperor rife in the country, the British had relatively safe passage. The following April, defeat certain, Tewodros took his own life using one of the gift pistols. First, though, he released the prisoners unharmed, losing his only leverage in the conflict. Why? Nobody knows. Snyder speculates that "he really admired their technology and the fact that they had beaten him, and he almost felt that they had earned it." Whether mercy, honor, or simple fair play, the act, for many, tipped the balance of Tewodros's ambivalent legacy toward tragic hero. ♦

Schoolboys in the northern city of Axum (top left). Priests inside Libanos Church in Lalibela, one of 11 churches there carved from living rock (right). A young daughter of Dejazmach Bereded (bottom left), the Gayint Province governor who put up the travelers early in their journey and provided notes that allowed them passage through other districts. "It was just little pieces of lined tablet paper with something scrawled on them, but they were magic," says Snyder.





A Begait bull, one of four major breeds indigenous to Ethiopia (left). Snyder crossing the fertile Wadla Plateau, where “clouds of chaff lofted from countless threshing floors like little golden whirlwinds” (above). From atop a precipice nearly a day’s walk from Debra Tabor, Snyder captured Zur Amba (below), “a group of enormous stone outcroppings across a valley so deep the tukuls”—mud huts—“far below looked like mushrooms,” he wrote. While the party took in the panorama, “half a dozen little shepherds materialized to study us until we began the descent” toward Nefas Mewcha, home of the Dejazmach Berered. The landscape reminded Snyder of Wyoming.







Snyder never got over the kindness of the Dejazmach Bereded, shown with his staff (top left), who served the travelers honey mead, goat stew, and the Ethiopian bread injera and sent them off with this admonition: "You will travel the same road that Tewodros took to Magdala. Each of his cannons was pulled by 500 men with ropes of leather. They had little to eat but grass. You will soon appreciate his accomplishment. Please send me a photograph of Magdala." The party's Ethiopian translator, Shumet Sishagne, sits atop the giant mortar named Sebastopol (above), the greatest of those cannons. Never fired during the battle, it lies "in a pitiful enclosure of stones and wooden palings" on the plain of islam-gye near Magdala. In Asmara, a boy carrying his little brother grins for the camera (left).



peer review



Moving right along: This cheerful pair rolled to class in the spring of 1930.

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American Hustle and me

BY LESLIE MAITLAND, AB'71

On Saturday, February 2, 1980, Thomas P. Puccio, then chief of the federal Organized Crime Strike Force in Brooklyn, struggled in a last attempt to win the cooperation of a key target in the most daring undercover investigation of political corruption in the nation's history. At the *New York Times*, I was racing to finish a story that would soon make Abscam front-page headlines from coast to coast.

I was reaching out for comment from the operation's biggest catch, Senator Harrison A. Williams Jr., Democrat of New Jersey, while FBI agents positioned around the country swooped down on him and many others who would face charges in the bribery probe. As Puccio later described that climactic day in his memoirs, the potential informer rejected any further bargaining and stalked out of the Strike Force office around 8 p.m. after overhearing talk in the hallway that the story was already running in the *Times*.

Indeed, the early edition of the Sunday paper hit Midtown newsstands that evening and the story was flying across the wires. Phones rang non-stop, with other media organizations calling from everywhere to demand whether the zany, blockbuster story could be believed. It tested credulity. Senator Williams and seven House members had been caught up in a two-year covert operation in which agents posed as businessmen and Arab sheikhs willing to pay bribes to offi-

cialists who agreed to further their financial ventures. Code-named Abscam for Arab scam or Abdul Enterprises Ltd.—the phony Arab business the FBI concocted—it featured an agent masquerading as a sheikh and surreptitious video recordings to capture the politicians pledging to trade favors for what ultimately totaled hundreds of thousands of dollars in cash.

Fast-forward more than three decades. When I first learned that Amy Adams would be starring in an Abscam movie called *American Hustle*, I couldn't help but daydream that she'd be playing me. After all, I'd been the woman most visibly involved, especially as uproar mounted over pre-indictment publicity. Allegations swirled, even within the Justice Department, that someone had leaked me the government's confidential 80-page prosecution memorandum. So when I recently asked federal district court judge Edward R. Korman whether he'd seen the movie yet—since he'd been the US attorney with Abscam under his authority and handled the appeals—I had to laugh when he shot right back, "Who plays you?"

While the *Times* coverage makes it into the movie, however, I personally do not. And while the film begins with the disclaimer, "Some of this actually happened," there's a good deal that Hollywood contributes to events. Most significantly, the two main female characters played no part in the actual operation. Likewise, the involvement of the Mafia, so brilliantly embodied on screen by Robert De Niro, is fantasy.

When it comes to the central role of Irving Rosenfeld, the swindler who turned FBI informer to save himself from prison and then proved instrumental in the sting, the movie does the real con artist, Melvin Weinberg, more than justice. Christian Bale's deliberately paunchy, bearded, balding, cigar-chomping personification is a younger and more seductive figure than was Weinberg. Nonetheless, in 1980, I couldn't help but marvel at this charlatan's ability to trick theoretically sophisticated public officials into believing that an immensely wealthy Arab sheikh would choose *him* as a representative. For starters, he was a Jew, and besides, his wise-guy language and demeanor seemed incongruous.

Yet in meetings in posh places with elected officials, Weinberg convincingly described the sheikh as prepared to pay bribes for help securing a casino gaming license in Atlantic City and permission to reside long-term in the United States. When outrage inevitably erupted in Congress at what some decried as a "fishing expedition" that unfairly lured its victims into the net, the Justice Department took pains to show that a modest attempt to investigate stolen art and counterfeit certificates of deposit had only detoured unexpectedly into political corruption. In each instance, crooked middlemen unwittingly led undercover agents to politicians alleged to have previously engaged in illicit bargains. Key among these middlemen was Camden, New Jersey, mayor Angelo Errichetti, or Carmine Polito, sympathetically portrayed by Jeremy Renner, in the movie.

When I first learned that Amy Adams would be starring in an Abscam movie called *American Hustle*, I couldn't help but daydream that she'd be playing me.



ILLUSTRATION BY JAMIE RAMSAY, AB'99

“The significant thing about this case is that if Tom [Puccio] had gone to the Justice Department with a scam to catch congressmen and senators, they would not have authorized it in a million years,” Judge Korman told me recently. “Not then, not now. But once it started going, the department couldn’t stop it, especially since there was a Democratic administration in the White House and most of the suspect officials were Democrats.” All of those charged were convicted, he noted, and every one of their convictions was upheld on appeal.

I have never disclosed to anyone how I learned extensive details about the probe before its targets were arrested or indicted. In that journalistic era—the *Washington Post*’s Deep Throat already an anonymously honored Watergate whistleblower,

the *New York Times*’s reckless Jayson Blair not yet a warning symbol of reportorial perfidy—my editors respected my sources’ confidentiality. Scores of agents assigned to a \$750,000 government leak investigation, in which even Puccio had to take a lie detector test, failed to find the answer.

When a Senate select committee convened hearings on Abscam and the legality of its investigative tactics in 1982, the *Times* transferred me from New York to the Washington Bureau to report on them and then assigned me to cover the Justice Department. In Washington I met the man I married, had children, and remained. Then one day last fall my husband came home and said he had played golf with a really nice guy who claimed to have known me longer than he had.

Irvin B. Nathan, now attorney gen-

eral for the District of Columbia, had been deputy assistant attorney general in charge of the Justice Department’s Criminal Division in the Carter administration in 1980 and hence involved in Abscam. It would be fun, Irv had suggested, for us to go see *American Hustle* together. And so we did, agreeing at dinner afterward that the film was a terrifically amusing satire, if wildly different from what occurred.

Still, memories of Tom Puccio sadly tempered our evening. He died two years ago at the age of 67 and is depicted in the film as a glory-seeking bureaucrat with limited direct engagement in the case (Alessandro Nivola playing Anthony Amado). “Not right!” Irv grouched, that the dynamic Abscam prosecutor is portrayed that way. “Tom was the soul of the operation, and the agents trusted him,” he said. “They expressly tried to set up meetings with the politicians in locations that would put them on Tom’s turf.”

We clinked glasses to toast Tom, the true scriptwriter of the evening. For all we seek to plan our lives, I found myself reflecting, our paths—including those that lead to prison and to front pages—are unexpectedly diverted by the people whom we meet and the trust we place in one another. “You can’t cheat an honest man,” my father used to say. On the other hand, some seem to con the gods themselves. Mel Weinberg not only won a reprieve from prosecution and \$200,000 for his work in Abscam, but now near 90 in Florida retirement, he also reportedly sold the film rights to his “life” story for a quarter of a million dollars. That’s *American Hustle* for you. ♦

Leslie Maitland is an award-winning former investigative reporter for the *New York Times*, the author of *Crossing the Borders of Time: A True Story of War, Exile, and Love Reclaimed* (Other Press, 2012), and a frequent panelist on NPR’s *The Diane Rehm Show*. Links to some of her original Abscam coverage can be found at lesliemaitland.com.

The things they carried back

BY NISSA RHEE, AB'06

Squinting through the Hanoi smog, Bob Mulholland points to a mud-colored monument on the far end of Truc Bach Lake.

"That's where John McCain's plane was shot down," the American veteran tells me. "He nearly drowned and had to be dragged out of the water."

It was October 1967, and the United States was bombarding the North Vietnamese cities of Hanoi and Haiphong daily. The attacks targeted railways, roads, and bridges along with a major power plant, but neighborhoods were also flattened and many civilians were killed. After McCain was pulled from the water, the locals beat him, shattering his shoulder with the butt of a rifle and bayoneting his foot and groin.

Today Bob and I stand at the lake's edge, sipping Coke and talking about the war. I had arrived in Hanoi just a few hours earlier and was going to spend the next two months in the country doing research for a book. I wanted to tell the story of American veterans who return to Vietnam to work on some of the lingering legacies of the war, like Agent Orange and unexploded bombs.

I knew that in some ways the American veterans in Vietnam were no different from those who had made pilgrimages to Normandy and Iwo Jima. But Vietnam was not World War II; the veterans who returned to Southeast Asia would be doing so as the defeated enemy, not as heroes. How,

I wondered, would the Vietnamese receive them? Could the violent past ever be forgotten?

At the lake, a Caucasian man and his son drive by on a motorcycle, towing a red balloon against the gray winter sky. The neighborhood that was once the target of American bombs is now home to a large Western expat population. Hotels and cafés abound, but from the street posts hang reminders of a darker time. Banners mark the 40th anniversary of the 1972 Christmas bombing, America's most concentrated air attack of the war. The United States dropped 20,000 tons of bombs in Operation Linebacker II, killing more than 1,000 civilians in the process.

A Vietnamese television crew had invited Bob to return to mark the anniversary. With a retired Russian general and some members of the Vietnamese military, he was to participate in a nationally broadcast town hall about the bombings. While Bob hadn't flown in the operation, he had been a member of the 101st Airborne Division and was known to speak publicly about his time in Vietnam.

Bob has been back several times. Initially he was interested in connecting children fathered by US troops with their Vietnamese family members. In 1985 he was part of the first official group of American tourists to visit Vietnam since the fall of Saigon a decade earlier. Bob carried letters and photos from the children living in the States to their mothers and relatives who had stayed in Vietnam. On that first trip back he learned that

reconciliation was possible with his former enemies. Bob told reporters afterward, "The one message we got from the Vietnamese was, 'We have an open door to America.'"

Bob and thousands of other American veterans have taken advantage of that open door since the 1980s. What they have found in Vietnam is far from the bullet-strewn battlefields they once knew. The towns shelled by rubble have since been rebuilt. Saigon, once the capital of South Vietnam, is now named after North Vietnamese leader Ho Chi Minh and serves as a bustling economic center. But most striking, returning American veterans discover that Vietnamese veterans welcome them as equals.

American veteran Chuck Searcy has lived and worked in Vietnam since the United States normalized relations with the communist country in 1995. He's worked closely with the Vietnamese, first as a representative of the Vietnam Veterans of America Foundation and then as a cofounder of Project Renew, which removes unexploded bombs from the Vietnamese countryside. Chuck says that instead of blaming him and other veterans for the casualties during the war, the Vietnamese respect him for his service.

"They tell me that the war was a tragic situation and an awful policy of the US government, but you didn't make that policy. You served your country when you were called to and we respect that. You know what we suffered through because you suffered the same thing. We're brothers."

Recognizing shared experiences can be healing for both American and Vietnamese veterans.

"Veterans who meet today in Vietnam are sharing their sorrow and trying to move forward together," says Christina Schwenkel, an anthropologist at the University of California, Riverside. Schwenkel is the author of *The American War in Contemporary Vietnam: Transnational Remembrance*

How, I wondered, would the Vietnamese receive them? Could the violent past ever be forgotten?



In central Vietnam, US veteran Chuck Searcy (left) discusses bomb disposal with members of Project Renew.

and Representation (Indiana University Press, 2009). “Commemorating the war together is one of the most important ways in which veterans are able to work through the past.”

A few miles from Truc Bach Lake in Hanoi, I meet Senior Colonel Phan Duc Tuan, a 43-year veteran of the People’s Army of Vietnam. Tuan got his start in the military as an 18-year-old, planting landmines meant to kill American soldiers. Today he is working with the Vietnam Veterans of America Foundation to remove the mines and other explosive remnants of war.

“It’s funny,” Tuan tells me. “During the war all of us in the military tried to kill each other, but now we get along well.”

Tuan’s experience with Americans during the war was limited. He was only nine years old when the United States began bombing North Vietnam. His family moved from one place to another trying to avoid the aerial attacks. He remembers making hats and shields out of straw for protection.

In 1968 Tuan met his first and only American of the war. A US plane had been shot down by a surface-to-air

missile, and the pilot parachuted into Tuan’s village. Children threw stones at the pilot, whom Tuan remembers as being very tall, young, and scared. Tuan’s father knew some English, and when he spoke to the pilot, he calmed down. Tuan offered the American a guava, but he didn’t eat it. In the brief reprieve from bombing, Tuan felt sorry for the American soldier so far from home. But the war marched on. A North Vietnamese military car soon arrived and took the pilot away. And the next day, the US planes returned and bombed his village, killing a girl from his school.

In the four decades that have passed, Tuan has never forgotten that girl and the pain of seeing his village destroyed. But the memory has driven him to reach out to his former enemies and work for peace.

“Veterans hope to never again see the terrible things they saw at war,” Tuan says. “That’s why we make good peace builders. We understand well that war is a stupid human game.”

This April 30 will mark the 39th anniversary of the fall of Saigon, which ended the war in Vietnam. While

bombs and chemicals dropped by the United States continue to claim Vietnamese lives, the conflict has largely faded from the American consciousness, often reduced to a symbol of failure, a controversial war in which the world’s most powerful army could not claim victory.

The veterans I met in Vietnam aren’t interested in winners and losers. For Americans like Bob Mulholland and Chuck Searcy and Vietnamese like Phan Duc Tuan, the war is a shared burden for which both sides are responsible. Four decades on, these veterans are teaching us one of the most important lessons of the war—how to turn enemies into friends. ♦

Nissa (Thompson) Rhee, AB’06, is writing a book about American veterans who have returned to Vietnam to help overcome legacies of the war. Her work has appeared in the *Christian Science Monitor*, on NPR, and in the Korean partner of the *International New York Times*. In 2011 Nissa was named a Rotary Peace Fellow for her reporting on conflict issues in the United States and South Korea.

NOTES

SECURING FUTURES

In January **Carmen Heredia-Lopez**, IMBA'97, was named chief investment officer of the Chicago Teachers' Pension Fund. Previously director of investments, Heredia-Lopez is now responsible for managing the fund's nearly \$10 billion investment portfolio. She also serves on the boards of the Robert A. Toigo Foundation, from which she received the Leading by Example Award in 2013; the CFA Society of Chicago; the National Society of Hispanic MBAs; and the Alternative Investments Forum.

A PRESS-ING APPOINTMENT

This winter **Phillip T. Walzak**, AB'99, joined New York City mayor Bill de Blasio's administration as press secretary. Walzak previously served as senior communications adviser for de Blasio's campaign. Before that, he led Wisconsin communications for President Barack Obama's 2008 campaign, served as director of strategic communications at the US Department of Homeland Security, and worked on Tammy Baldwin's successful US Senate run in Wisconsin.

THE RIGHT STUFF

Director **Philip Kaufman's** (AB'58) 1983 film *The Right Stuff* has been added to the Library of Congress's



Philip Kaufman



MICROSOFT MAN

Satya Nadella, MBA'97, was named Microsoft's new CEO on February 4. Nadella, who has master's degrees in computer science and business administration, has worked at Microsoft since 1992 and was head of the company's Cloud and Enterprise Group before his promotion to CEO. "Satya is a proven leader with hard-core engineering skills, business vision, and the ability to bring people together," said Microsoft founder Bill Gates in a press release.

National Film Registry. Adapted from Tom Wolfe's novel of the same title and starring Sam Shepard and Scott Glenn, *The Right Stuff* depicts the space program as sparking both national pride and media-fueled hero worship. Kaufman's film becomes one of 625 preserved in the National Film Registry on the basis of their cultural, historic, or aesthetic qualities.

THE BUSINESS OF BISHOP-ELECT

On November 30 **Melissa M. Skelton**, MBA'89, was elected bishop of Vancouver's Anglican New Westminster diocese. She is the first woman and first US citizen to be granted the post. Ordained in 1993 while working as a brand manager at Procter and Gamble, Skelton is the rector at St. Paul's Episcopal Church, Seattle, where her congregation has doubled in size since she arrived in 2005. She was to be ordained and installed as Westminster's ninth bishop on March 1.

AN APPEALING COURTSHIP

On December 24 state representative **Christopher Lewis Garrett**, JD'00, was appointed to the Oregon Court of Appeals by Governor John Kitzhaber. Garrett, a Democrat who was elected to the state house in 2008, worked as a lawyer for New York's Simpson Thacher & Bartlett and clerked for Judge Dennis Jacobs of the US Second Circuit Court of Appeals before returning to Oregon to practice business law at Portland's Perkins Coie.

ENTERTAINMENT NEWS

Former SportsIllustrated.com managing editor **Matt Bean**, AB'00, became editor of *Entertainment Weekly* on February 10. Bean worked for eight years at Rodale publishing prior to joining *Sports Illustrated*, where traffic rose to record levels during his tenure, and he led digital initiatives including the live daily talk show *SI Now*.

—Adrianna Szenthe

PHOTOGRAPHY BY ROBERT KOZLOFF (TOP), WARNER BROS./GETTY IMAGES (LEFT)

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.

MIXED: MULTIRACIAL COLLEGE STUDENTS TELL THEIR LIFE STORIES

Edited by Andrew Garrod, Robert Kilkeny, and Christina Gómez, AB'85, MBA'87; Cornell University Press, 2013
What is it like to grow up identifying as multiracial in a “postracial” world that often isn’t? *Mixed* shares the perspectives of 12 Dartmouth students who know how it feels. Whether searching for middle ground between black and white or navigating a rainbow of roots around the world, the student essayists reveal how their experiences, families, and surroundings have shaped their identities and worldviews.

SONG ONE

Written and directed by Kate Barker-Froyland, AB'04; World View Entertainment, Marc Platt Productions, 2014
Song One chronicles Franny’s (Anne Hathaway) return to her estranged family after a car accident leaves her brother in a coma. Prompted by regret to explore her brother’s passion for Brooklyn’s live music scene, Franny befriends a guitarist her brother idolized. The daughter of Sony Pictures Classics copresident and cofounder Michael Barker, writer-director **Kate Barker-Froyland** is no stranger to film, but it was music that inspired her tale of love, loss, and human connection.

PRECARIOUS JAPAN

By Anne Allison, AM'80, PhD'86; Duke University Press, 2013
Until the collapse of Japan’s economic bubble in 1991, most Japanese men were able to secure lifelong employment and a middle-class lifestyle. Today fewer and fewer people are able to find full-time work and buy the homes that afford a comfortable family lifestyle. As

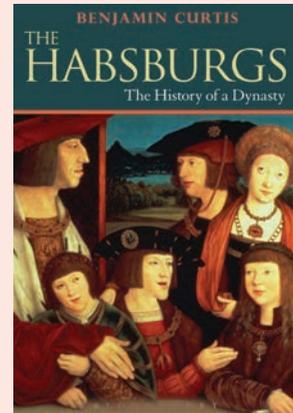
the country’s birth rate has declined, so has morale, but **Anne Allison** chronicles how some modern Japanese are finding fulfillment in unconventional work and reconceived notions of home, family, and togetherness.

THE HABSBURGS: THE HISTORY OF A DYNASTY

By Benjamin Curtis, AM'97, PhD'02; Bloomsbury Academic, 2013
Ruling Europe for nearly a thousand years is no small feat, especially while juggling territories in Asia, Africa, and the Americas. Considered one of the most dominant dynasties in history, the Habsburgs endured enough drama to rival *Game of Thrones*. In his study of the Spanish and Austrian branches of the dynasty, **Benjamin Curtis** documents the family’s journey from rise to fall.

OVER THE RIVER AND THROUGH THE WOOD: AN ANTHOLOGY OF NINETEENTH-CENTURY AMERICAN CHILDREN’S POETRY

Edited by Karen L. Kilcup and Angela Sorby, AM'89, PhD'96; Johns Hopkins University Press, 2014
In their new anthology Karen L. Kilcup and **Angela Sorby** resurrect hundreds of 19th-century American children’s poems—many of which have languished in obscure periodicals and primers for more than a century—with themes ranging from creepy crawlies to politics and social reform. Including kid-friendly period illustrations, *Over the River and through the Wood* features well-known names



such as Ralph Waldo Emerson as well as less familiar figures like Christina Moody, an African American author who published her first book at 16.

A GUIDE TO WIDER HORIZONS

By Kevin Krisciunas, AM'76; Kendall Hunt Publishing, 2013
In *A Guide to Wider Horizons*, **Kevin Krisciunas** assembles a potpourri of facts and stories about physics, biology, math, ethics, history, linguistics, and literature. An astronomer at Texas A&M University whose other books focus more strictly on astronomy, Krisciunas intended this one as an omnivorous read. Chapter titles include “Astronomical Measurements without a Telescope” and “Books with a Moral Angle.”

DRAGNET NATION: A QUEST FOR PRIVACY, SECURITY, AND FREEDOM IN A WORLD OF RELENTLESS SURVEILLANCE

By Julia Angwin, AB'92; Times Books, 2014
With the seemingly endless stream of revelations about how governments and corporations keep tabs on citizens around the world, sometimes 2014 feels more like 1984. In *Dragnet Nation*, Pulitzer Prize-winning investigative journalist **Julia Angwin** describes the extreme measures she took to protect her privacy over one year—using a “burner” phone, among other tactics—and shows us just how difficult it is to elude the gaze of Google and the NSA. Her account holds far-reaching implications for balancing safety and freedom in the information age.

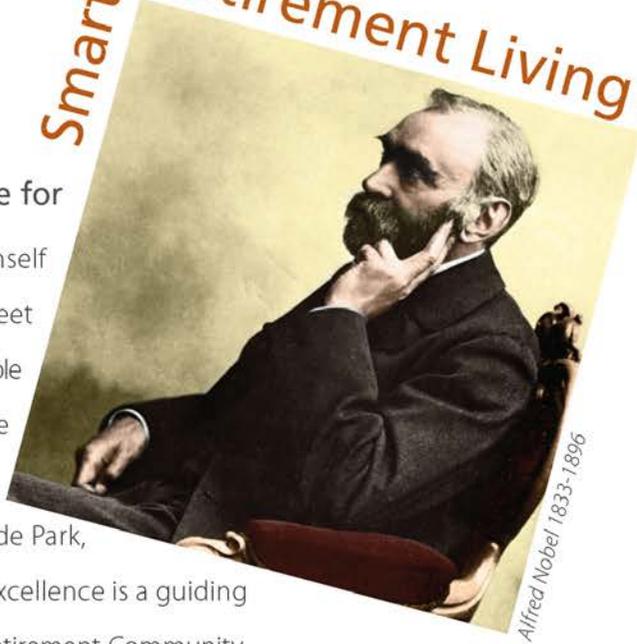
—*Ingrid Gonçalves, AB'08*

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Degrees of honor

The 2014 alumni award recipients have made their mark on the University, their field, or their cause. The University of Chicago Alumni Association will recognize them at a ceremony in Rockefeller Chapel during this June's Alumni Weekend.

ALUMNI MEDAL

**Donald F. Steiner, MD'56, SM'56
(Biological Sciences)**

For more than five decades, Steiner, the A. N. Pritzker distinguished service professor in biochemistry and molecular biology, has pursued groundbreaking research on diabetes, earning international acclaim for his discoveries on the biosynthesis of insulin. His work "has improved life for millions of people," says a colleague in the Biological Sciences Division. A member of the National Academy of Sciences, Steiner has been recognized with the Canada Gairdner International Award, Israel's Wolf Prize in Medicine, and the American Diabetes Association's Banting Medal, among many other honors.

ALUMNI SERVICE AWARDS

**Judith Munson, AB'63, and
Lester Munson, JD'67**

Judith and Lester Munson have shown their commitment to students and alumni as Taking the Next Step panelists, Metcalf Internship hosts, committee volunteers, and more. The Munsons, says a young alumna who interned with Judith, "are icons of guidance and leadership for the UChicago community."

**Terri Travis-Davis, AM'99 (School of
Social Service Administration)**

In addition to supporting the School of Social Service Administration community through fundraising, event planning, and mentorship, Travis-Davis established SSA's annual African American Alumni Award. A fellow SSA alumni board member says her "commitment to SSA, its students, and alumni has been unwavering and unconditional."

YOUNG ALUMNI SERVICE AWARDS

Jenna Beletic, AB'07

Beletic has chaired Phoenixphest Chicago, interviewed prospective students, reviewed Metcalf applications, hosted an Alumni Board of Governors extern, and served on the 2012 Caucus Advisory Committee. A fellow alumna writes, "Jenna has convinced me, and other reluctant alumni, that we owe a great deal to the University of Chicago."

Luke Rodehorst, AB'09

Rodehorst has served on alumni club boards in Chicago, Detroit/Ann Arbor, and Washington, DC, and spoken on panels at numerous alumni events. He established and maintains the Chicago Men's A Cappella affinity group. What sets Rodehorst

apart, says a fellow UChicago graduate, is the "ability to translate his passion into action."

PROFESSIONAL ACHIEVEMENT AWARDS

Leon R. Kass, U-High'54, SB'58, MD'62

The Addie Clark Harding professor emeritus in the John U. Nef Committee on Social Thought at the University of Chicago and a founding fellow of the Hastings Center, Kass has served on the National Council on the Humanities and the National Endowment for the Humanities and chaired George W. Bush's Council on Bioethics. Although Kass "has distinguished himself as a bioethicist," a colleague writes, "he prefers to be considered an 'old-fashioned humanist.'"

C. Noel Bairey Merz, AB'77

A pioneer who was among the first to show that heart disease affects women differently than men, Bairey Merz is chair of the American College of Cardiology Cardiovascular Disease in Women Committee. A fellow cardiologist says, "Her research has and will have profound implications for women, clinical practice, and public policy."

**Peter Selz, AM'49, PhD'54
(Humanities)**

An internationally recognized art historian, Selz was the first curator of modern painting and sculpture exhibitions at the Museum of Modern Art and founding director of the Berkeley Art Museum. "When I think of him," a colleague says, "I see erudition, enthusiasm, and energy."

Bret Stephens, AB'95

A foreign affairs columnist and deputy editorial page editor at the *Wall Street Journal*, Stephens received the 2013 Pulitzer Prize for Commentary. A fellow alumnus describes his work as "reliably and beautifully researched, accurate, and thought provoking."

PUBLIC SERVICE AWARDS

Bernard (Bernie) Sanders, AB'64

After serving 16 years in the House of Representatives, Sanders was elected to the US Senate in 2006. The



At last year's 72nd Annual Alumni Awards Ceremony, recipients of alumni awards and graduating seniors who received the Howell Murray Alumni Association Award processed into Rockefeller Memorial Chapel. This year's ceremony takes place Saturday, June 7, at 10:30 a.m.

chair of the Senate Veterans Affairs Committee and the Subcommittee on Primary Health and Aging, Sanders, writes an alumna, “fights for working people and those who are left behind in this time of growing inequality.”

Michael L. Shakman, AB'62, AM'64, JD'66 (Social Sciences)

A partner at Miller Shakman & Beem LLP since 1972, Shakman has battled political patronage throughout his career, establishing the influential Shakman Decrees prohibiting politically motivated treatment of government employees. According to a colleague, Shakman “represents the very best in the legal profession in

intellectual competence, honesty, and ethical commitment.”

**NORMAN MACLEAN
FACULTY AWARDS**

Richard A. Epstein, James Parker Hall Distinguished Service Professor Emeritus of Law and Senior Lecturer

A member of the American Academy of Arts and Sciences and senior fellow of Pritzker's Center for Clinical Medical Ethics, Epstein has mentored University of Chicago law students for four decades. A former student writes, “In a school known for excelling in the domain of teaching, Richard Epstein is a legend. I saw the world analytically through his eyes.”

Susanne Rudolph, Benton Distinguished Service Professor Emerita, and Lloyd Rudolph, Professor Emeritus in Political Science

Susanne and Lloyd Rudolph, coauthors of many publications on the comparative politics of South Asia, are former Guggenheim Fellows and Ryerson Lecturers. In 2014 they were honored with India's Padma Bhushan Award. The Rudolphs, “teachers by inclination, mentors in the deepest sense of the word,” a former student says, “have created a community, always growing, always interesting, intellectual, and social and very human.”

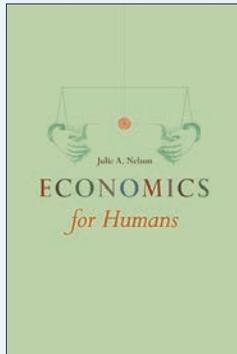
—Adrianna Szenthe

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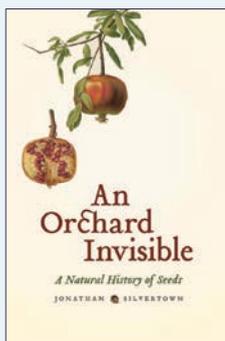


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DEATHS

TRUSTEES

A lifelong resident of Chicago's South Side with deep ties to the University, including as a life member of the Medical Center Board of Trustees, **Lindy Bergman**, U-High'35, AB'39, died January 18 in Chicago. She was 96. Bergman enriched the life of her native city and former school through six decades of dedication and generous financial commitment to the arts, education, and medical care. After losing her eyesight in later years, she became a tireless advocate for the blind. She and her husband, Edwin A. Bergman, AB'39, former chair of the University Board of Trustees, were avid art collectors whose family art collection is now part of the Art Institute of Chicago's permanent collection. At the University she established the Bergman Gallery, home to the Renaissance Society, and donated artwork for the hallways of the University of Chicago medical center. Endowing the University's Lindy Bergman Distinguished Service Professorship and the Edwin A. Bergman Scholarship in the College, she also funded the Bergman Family Eye Center. Her honors from the University of Chicago include the University of Chicago Medal and the Alumni Association's Public Service Award. Bergman's husband died in 1986. She is survived by two daughters, including **Betsy Rosenfield**, U-High'70, and her husband, University trustee **Andrew Rosenfield**, JD'78; son **Robert Bergman**, U-High'67; seven grandchildren, including **Zachary Rosenfield**, JD'10, **Henry Bergman**, U-High'11, and Law School student **Edwin Rosenfield**; and six great-grandchildren.

FACULTY AND STAFF

J. Terry Ernest, MD'61, PhD'67, the Cynthia Chow professor emeritus and former chair of ophthalmology and visual science, died December 26 in Chicago. He was 78. An expert on retinal treatments and glaucoma, Ernest led a team that performed the first experimental cell transplantation to treat age-related macular degeneration, which influenced future treatment of the disease. In 1970, after three years in the Army Medical Corps, Ernest joined the UChicago ophthalmology and visual science faculty, where he taught until 1977. He returned in 1985 as chair, a role he held for 19 years. Also a pioneer in medical ethics, Ernest retired as professor emeritus in 2011. Named one of *Time* magazine's Heroes of Medicine in 1997, he was also honored by the National Institutes of Health and the American Academy of Ophthalmology. Survivors include a daughter and three granddaughters.

Herbert C. Friedmann, PhD'58, of Chicago, associate professor of biochemistry and molecular biology, died January 13. He was 86. Escaping Nazi Germany, Friedmann moved to India, where he earned an undergraduate degree and worked in biochemistry labs at the University of Madras before moving to Chicago in 1954 to begin doctoral studies at the University. An authority on bacterial enzymes, the biosynthesis of vitamin B₁₂, and the history of biology, Friedmann taught at UChicago for almost 50 years. In 1978 he received the Llewellyn John and Harriet Manchester Quantrell Award for Excellence in Undergraduate Teaching. Survivors include his wife, Joan; daughter **Elisabeth Pryor**, U-High'80; and two grandchildren, **Amalia Pryor**, AM'11, and **Eric Pryor**, U-High'13. **Marlene Richman**, of Chicago, a retired counselor for Career Advising and Planning Services (now UChicago Career Advancement), died January 7. She was 75. Richman worked at the University for 36 years, also serving as resident master of Burton-Judson with her husband, Harold A. Richman, AM'61, PhD'69, the Hermon Dunlap Smith professor emeritus and former dean at the School of Social Service Administration. An annual award named in her honor recognizes UChicago staff members' service to students. She is survived by her sons, **Andrew Richman**, U-High'86, and **Robert Richman**, U-High'88; a brother; and four grandchildren.

Janet (Davison) Rowley, U-High'42, PhB'45, SB'46, MD'48, the Blum-Riese distinguished service professor of medicine, molecular genetics and cell biology, and human genetics, died December 17 in Chicago. She was 88. Rowley was the first scientist to establish the genetic basis of cancer, identifying a genetic process called translocation. Her discovery led to targeted drug treatment for leukemia and laid the foundation for the field of cancer genetics. Joining UChicago in 1962, Rowley devoted the following decades to her chromosome research, becoming distinguished service professor by 1984. She served on federal advisory boards including the National Cancer Advisory Board under President Jimmy Carter and the President's Council on Bioethics under President George W. Bush. Rowley's many awards and honors include the Lasker Award, the National Medal of Science, the Presidential Medal of Freedom, and the UChicago Alumni Association's Alumni Medal and Norman Maclean Faculty Award. She is survived by three sons, including geophysical sciences professor **David Rowley** and **Roger H. D. Rowley**, U-High'81, and five grandchildren, including **Jason Rowley**, U-High'08, and **Gia Rowley**, U-High'12. Her husband, Donald Rowley, SB'45, SM'50, MD'50, professor emeritus in pathology

and the Committee on Immunology, died in 2013. Another son, Donald Rowley Jr., U-High'69, died in 1983.

Paul Sally Jr., mathematics professor and director of undergraduate studies in mathematics, died December 30 in Chicago. He was 80. Joining UChicago in 1965, Sally pioneered outreach programs for elementary and secondary math teachers and students, including the University of Chicago School Mathematics Project and Seminars for Endorsement of Science and Mathematics Educators (SESAME); taught in UChicago's Urban Teacher Education Program; and cofounded the Young Scholars Program. Sally held several residencies at the Institute for Advanced Study in Princeton, NJ, and received many awards for his teaching, including the Llewellyn John and Harriet Manchester Quantrell Award for Excellence in Undergraduate Teaching, the University of Chicago Provost's Teaching Award, and the American Mathematical Society Award for Distinguished Teaching. Type I diabetes had afflicted Sally since he was a teenager, resulting in the loss of both legs and one eye. Students affectionately nicknamed him the "Math Pirate" for the black eye patch he wore. Survivors include his wife, **Judith (Donovan) Sally**, PhD'71; three sons, including **David Francis Sally**, PhD'95; a brother; a sister; and eight grandchildren, including **Benjamin Sally**, AB'09, and **Rachel Sally**, '17.

Harry Schoenberg, professor emeritus of surgery and urology and former chair of urology, died November 19 in Sedona, AZ. He was 86. After teaching at the University of Pennsylvania and St. Louis University, Schoenberg joined the Pritzker School of Medicine faculty as urology chair, serving from 1976 to 1993. In retirement he was a board member of the Sedona Medical Center, Verde Valley School, and Chamber Music Sedona. Schoenberg is survived by his wife, Lelia West Schoenberg; a daughter; two sons; two stepdaughters; and 14 grandchildren.

Francis H. Straus II, MD'57, SM'64, professor emeritus of pathology, died January 8 in Mackinac Island, MI. He was 81. Straus spent his entire medical career at the University of Chicago, training many of the nation's leading surgical pathologists. The coauthor of *Hypoparathyroidism* (Grune and Stratton, 1973) and *Essentials of Surgical Pathology* (Little, Brown, and Co., 1974), author of a dozen book chapters, and a contributor to nearly 100 research papers, Straus made major contributions to the understanding of thyroid pathology and other endocrine and urologic disorders. A teacher and clinician, Straus was named by students as one of UChicago Medicine's 20 best teachers on 15 occasions in the 1970s and '80s. With his wife, **Lorna Straus**, U-High'49, X'53, SM'60, PhD'62, he developed and cotaught a course on mammalian anatomy and physiology in the College. Straus is survived by his wife; their

four children, including **Helen Straus**, U-High'80, AB'84, MD'90, **Christopher Straus**, U-High'84, AB'88, MD'92, an associate professor of radiology at the University, and **Michael Straus**, U-High'88; and two grandchildren.

1920s

Roma (Clift) Montgomery, AM'29, of Lawton, OK, died November 28. She was 108. A Lawton resident since 1931, Montgomery helped found or lead local organizations including the Lawton Community Theater, Comanche County Red Cross, and the Shakespeare Club. Survivors include two daughters, three grandchildren, and seven great-grandchildren.

1930s

Dena (Polacheck) Epstein, AB'37, a music librarian, died November 14 in Chicago. She was 96. Assistant music librarian at UChicago from 1964 to 1986, Epstein documented the history of black American music through Reconstruction in *Sinful Tunes and Spirituals: Black Folk Music to the Civil War* (University of Illinois Press, 1977). Her work established the banjo's West African origin and became the subject of a 2013 documentary film, *The Librarian and the Banjo*. Epstein also edited her mother's memoir, *I Came a Stranger: The Story of a Hull-House Girl* (University of Illinois Press, 1989). The past president of the Music Library Association, Epstein received the MLA Citation and the Chicago Folklore Prize, awarded jointly by the American Folklore Society and the University of Chicago. She is survived by daughter **Suzanne L. Epstein**, U-High'68; a son; two grandsons; and one great-grandson.

1940s

Thelma (Iselman) Hayes, AB'40, died May 31, 2012, in Oceanside, CA. She was 94. Hayes was an administrative assistant before helping her husband set up and run his geriatric internal medicine practice in Carlsbad, CA. In 1983 Hayes founded the National Alliance on Mental Illness (NAMI) North Coastal San Diego County, serving as its president for many years. Long active in organizations including the Buena Vista Lagoon Foundation Board and the League of Women Voters, Hayes was named a Carlsbad Citizen of the Year in 1994 and received the UChicago Alumni Association's Public Service Award in 1996.

Egbert Frederick "Tex" Schietinger, AB'40, AM'48, PhD'53, died September 1 in Washington, DC. He was 94. A WW II Army Signal Corps veteran, Schietinger was director of research at the Southern Regional Education Board, where he initiated the SREB-State Data Exchange and wrote six editions of the periodic *Fact Book on Higher Education in the South* (Southern

Regional Education Board). Survivors include two daughters, a son, four grandchildren, and a great-granddaughter.

Ruth (Greenlee) Davis, AB'45, AM'47, died December 26 in Madison, WI. She was 90. For many years, Davis coordinated the activities of the faculty-staff dining club at Beloit College, where her husband, **Harry R. Davis**, AM'49, PhD'51, taught, and was active in local organizations including the Rock County Democratic Party. Survivors include her husband, a daughter, two sons, three grandchildren, and four great-grandchildren.

William C. Davidson, SB'47, SM'50, PhD'54, died November 8 in Highlands Ranch, CO. He was 86. A Navy veteran, Davidson headed the Chicago section of the Federation of American Scientists and codeveloped the Davidson-Fletcher-Powell formula. He then taught physics and mathematics at Haverford College for 30 years. A peace activist and opponent of nuclear weapons, Davidson was a leader of the National Committee for a Sane Nuclear Policy. He is survived by two daughters, two sons, a stepdaughter, two stepsons, and eight grandchildren.

Donald H. Bates, SB'48, SM'51, died October 6 in Park Ridge, IL. He was 87. A WW II Navy veteran, Bates worked at Fermilab and Argonne National Laboratory. He studied the geology of the moon and also helped develop biomedical engineering departments at several Chicago-area hospitals. He is survived by his wife, Mary Alice; two brothers, including **Vincent Bates**, MBA'62; and a grandson.

John W. Rogers Sr., JD'48, a Chicago lawyer and judge, died January 21. He was 95. A member of the Tuskegee Airmen during WW II, Rogers was one of approximately 300 Tuskegee Airmen honored in 2007 for their valor with a Congressional Gold Medal. Attending the Law School on the GI Bill, Rogers met and married Jewel Stradford Lafontant, JD'46, the Law School's first black alumna. They divorced in 1961. After several decades in private practice and with Earl L. Neal & Associates, in 1977 Rogers was named a juvenile court judge in Illinois, where he served for 21 years. In 2012 the University of Chicago Law School honored Rogers and Lafontant (who died in 1997) by naming its dean of admissions office for the couple. Rogers is survived by his wife, **Gwendolyn D. Rogers**, AM'53; son **John W. Rogers Jr.**, U-High'76, a University trustee; and granddaughter **Victoria Rogers**, U-High'08.

1950s

Ian G. Barbour, PhD'50, a scholar of science and religion, died December 24 in Minneapolis. He was 90. Barbour was a pioneer in promoting discourse between religion and science. In 1955 he was hired to teach physics and religion at Carleton College, retiring in 1986. The first chair of Carleton's religion department, he cre-

ated several interdisciplinary programs. The author of 16 books, including *Issues in Science and Religion* (Prentice Hall, 1966) and *Religion in an Age of Science* (Harper and Row, 1990), Barbour received the Templeton Prize for a lifetime of work that helped expand the field of theology. He is survived by two daughters; two sons, including **John D. Barbour**, AM'75, PhD'81; a brother; three grandchildren; and a great-grandson.

Don A. Mills, AB'51, of Philadelphia, died November 15. He was 89. Mills was a family physician for more than 40 years, and worked at Holy Redeemer Hospital in Meadowbrook, PA. He retired at age 83. Survivors include his wife, Evelyn; four children; and six grandchildren.

Althea J. (Greenwald) Horner, SB'52, died December 24 in Sierra Madre, CA. She was 87. A clinical psychologist, Horner had a private practice for 40 years. She also taught at the University of California, Los Angeles, and was supervising psychologist at Beth Israel Medical Center in New York. Horner published nine books including *Being and Loving* (Schocken Books, 1978) and *Object Relations and the Developing Ego in Therapy* (Jason Aronson, 1979). She is survived by two daughters, including **Martha J. Hartley**, AB'70; two sons; ten grandchildren; and three great-grandchildren.

Carl Albert Westberg Jr., U-High'44, PhD'50, MBA'55, of Placentia, CA, died December 18. He was 85. An accountant, photographer, and computer enthusiast, Westberg worked for Hunt-Wesson Foods. Survivors include his wife, Winifred; three sons; seven grandchildren; and two great-grandchildren.

Jack J. Honomichl, AM'56, of Barrington, IL, died December 8. He was 85. A Navy veteran, Honomichl was a pioneer in the field of market research. Honomichl started his career in the *Chicago Tribune's* marketing/advertising research department. After working on research panels at firms including Dun & Bradstreet, he started his own firm, Marketing Aid Center, in the late 1970s. Credited with helping to define the market research industry, Honomichl was an *Advertising Age* columnist for 18 years and founded the trade newsletter *Inside Research*. His "Honomichl Top 50" ranked market research firms in the United States. Honomichl was inducted into the Market Research Council's Hall of Fame in 2002 and received the 2011 Lifetime Achievement Award from the Council of American Survey Research Organizations. He is survived by three daughters, including **Beth (Honomichl) Cole**, MBA'85; a son; and eight grandchildren.

Shirley (Weinstein) Kaplan, AM'56, died December 5 in Wilmette, IL. She was 83. From 1970 to 1996, Kaplan was a psychiatric social worker at the Josselyn Center in Northfield, IL. Survivors include her husband, **William Kaplan**, AM'57; two daugh-

ters; a brother; and three grandchildren. **Robert A. Silverman**, SM'56, of St. Louis, died April 6, 2013. He was 80. Silverman was a chemist at Central Farmers Fertilizer Company in Chicago (now CF Industries in Deerfield) and a field test supervisor at Brucker and Associates in St. Louis. A photographer and amateur recording engineer, he donated photos of animals to the St. Louis Zoo. He is survived by his wife, **June (Dunn) Silverman**, X'60; a daughter; a brother; a sister; and three grandchildren.

Sheldon Wolfe, MD'56, died August 17 in Berkeley, CA. He was 82. Wolfe practiced psychoanalysis and psychiatry in San Francisco and Berkeley until his 2006 retirement. He was a member of the San Francisco Institute for Psychoanalysis and an associate clinical professor of psychiatry at the University of California, San Francisco. Wolfe also sang in the Berkeley Community Chorus. Survivors include his wife, Nancy; two daughters; two sons; a sister; and ten grandchildren.

Richard P. Hartung, U-High'53, AB'58, of Janesville, WI, died October 30. He was 75. As director of the Rock County Historical Society for 25 years, Hartung helped develop the society's archives, opened a museum of Rock County history, and worked to increase community awareness about historic preservation. Under his supervision, the society was one of the first recipients of certification from the American Association of Museums, and Hartung was named to the Rock County Hall of Fame in 2006. In retirement, he consulted on private National Register nominations. Survivors include his wife, **Ilah (Bjorklund) Hartung**, BFA'60; two sons; four grandchildren; and two great-grandchildren.

1960s

Morris Finder, AM'49, PhD'60, of Pittsburgh, died November 11. He was 96. A WW II veteran, Finder spent 21 years as an English education professor at the University at Albany, State University of New York. Retiring in 1987, he later published a book about his former professor at UChicago **Ralph W. Tyler**, PhD'27, called *Educating America: How Ralph W. Tyler Taught America to Teach* (Praeger, 2004). Survivors include his wife, **Natalie Finder**, AB'41, AM'46; two daughters; three sons; and five grandchildren.

Michael D. Richter, SB'60, died October 21 in Glenview, IL. He was 74. Richter spent his early career at MIT Labs, where he helped design microcomputer applications in the Apollo guidance systems, earning him a Presidential Medal in 1969. After a brief stint designing software at Commodore Corporation, he joined TRW Corporation's aerospace division in Los Angeles. A heart infection in his 40s prompted Richter to start a second career in opera preservation. In addition to founding two websites

for opera enthusiasts, in the 1980s he began to preserve rare vintage opera recordings to clarify the sound. In 2009 he transferred his collection of thousands of recordings to a distributor to prepare them for public release.

Walter Oi, PhD'61, an economist, died December 24 in Brighton, NY. He was 84. During WW II, Oi spent three years in Japanese American internment camps, where he first showed signs of a degenerative eye disease that left him blind by his late 20s. In 1967—the same year he joined the University of Rochester economics faculty, where he would serve for 41 years—Oi published two influential papers on the costs of conscription and the real cost of a volunteer military. His analysis helped convince President Richard Nixon and Congress to end the military draft, and two years later he was appointed senior staff economist to the President's Commission on an All-Volunteer Armed Force. An expert on applied economic theory and labor markets, Oi also served as vice chair of the President's Commission on Employment of People with Disabilities, was a consultant for the Department of Defense and the National Commission on State and Workmen's Compensation Laws, and received the Secretary of Defense Medal for Outstanding Public Service. Survivors include his wife, Marjorie Robbins; two daughters; a sister; and three grandchildren.

Mike Michaels, X'63, a musician by profession and avocation, of Guilford, CT, died November 5. He was 72. For 35 years Michaels recorded and created scores for entertainment and advertising. Michaels helped organize the first University of Chicago Folk Festival in 1961, now an annual three-day festival in its 54th year. He became a blues and jazz harmonica player, collaborating with local musicians and performing in schools and libraries. Michaels also published his writing and photography in music magazines and journals. Survivors include two sons, a brother, a stepsister, and three grandchildren.

William S. Bice, MBA'65, died October 29 in Petersburg, VA. He was 85. An artillery and ordnance officer in the US Army for 29 years, Bice served two tours of duty in Vietnam, as well as tours in Korea and Germany. Moving to Petersburg in 1973, he was the officer in charge of the logistics division of Combined Arms Support Command and retired with the rank of colonel. He then joined the business school faculty of Virginia State University and, after earning his PhD, joined the faculty of Virginia Commonwealth University School of Business. In retirement, he taught information systems to active duty personnel at Fort Lee (VA). He is survived by his wife, Joan; a daughter; a son; four stepdaughters; two stepsons; eight grandchildren; nine step-grandchildren; and one great-grandson.

J. Robert Effinger Jr., MBA'67, of Chica-

go, died December 19. He was 79. A banking executive in Chicago and New York City, Effinger later founded a church software company, Omega C.G. Limited; he sold the company in 1996. In retirement, Effinger volunteered as a youth advocate for foster children with his wife, Kathy, and served on the board of directors for Goodcity. He is survived by his wife, four daughters, and eight grandchildren.

1970s

Gerald Lee Schertz, MD'71, of Troutville, VA, died November 29 from injuries in a pedestrian accident. He was 67. An oncologist, Schertz practiced medicine in the Roanoke Valley for more than 35 years. He was a senior partner with Blue Ridge Cancer Care, the area's first oncologic partnership. He is survived by his wife, Denise; a daughter; a son; two sisters; and two grandchildren.

Richard Calica, AM'73, of Highland Park, IL, died of cancer December 22. He was 67. After more than 30 years as the executive director of the Juvenile Protective Association, Calica became director of the Illinois Department of Children and Family Services in 2011. He also served on the faculties of the Institute for Clinical Social Work and the Loyola University Chicago School of Social Work. Survivors include his wife, **Judith Calica**, AM'74; a son; two brothers, including **Arnold Calica**, SM'61, MD'75; and a grandson.

Christine Winton Jones, AB'74, an economist, died of leukemia May 11 in Portland, OR. She was 60. After serving in the Peace Corps in eastern Congo, Jones earned a PhD from Harvard, studying the economics of women's work in Cameroon. As an economist for the World Bank, she focused first on Africa and then on Eastern Europe and the former Soviet Union. Jones moved to Sisters, OR, in 2003, where she chaired the local school board, volunteering in classrooms and advocating for better schools; in 2012 she received the Sisters Citizen of the Year Award. She is survived by her husband, Chuck; two sons; her mother; a brother; and a sister.

James D. Zalewa, JD'74, an intellectual property attorney, died of cardiac problems November 19 in Fort Lauderdale, FL. He was 66. Zalewa was a partner at the now-defunct boutique law firm Liss before joining Leydig, Voit & Mayer in 1990. He retired after approximately two decades at the firm. Zalewa also served as president of the board of St. Mary's Services adoption agency. Survivors include his wife, Cheryl Smalling; a daughter; and a sister.

Erin (Glynn) Kato, MBA'78, of Chicago, died December 26. She was 62. After working as a systems consultant at Harris Bank for many years, Kato worked in the counseling office at Northside College Preparatory High School. Survivors include her husband, Robert; a son, **Michael Glynn Kato**, AM'13; three brothers; and two sisters.

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