

SPRING 2019

# COLUMBIA

MAGAZINE

COLUMBIA MAGAZINE

MAGAZINE.COLUMBIA.EDU

SPRING 2019



## HAIR-RAISING DISCOVERIES

Geneticist Angela Christiano's radical solutions for baldness may point the way to new cancer therapies



ADVERTISEMENT

# VANDEWATER



## A BRILLIANT MOVE

CONDOMINIUM RESIDENCES  
STARTING FROM \$920,000

543 W 122ND STREET



IN THE HEART OF MORNINGSIDE HEIGHTS



646.992.4837

THEVANDEWATER.COM

SAVANNA

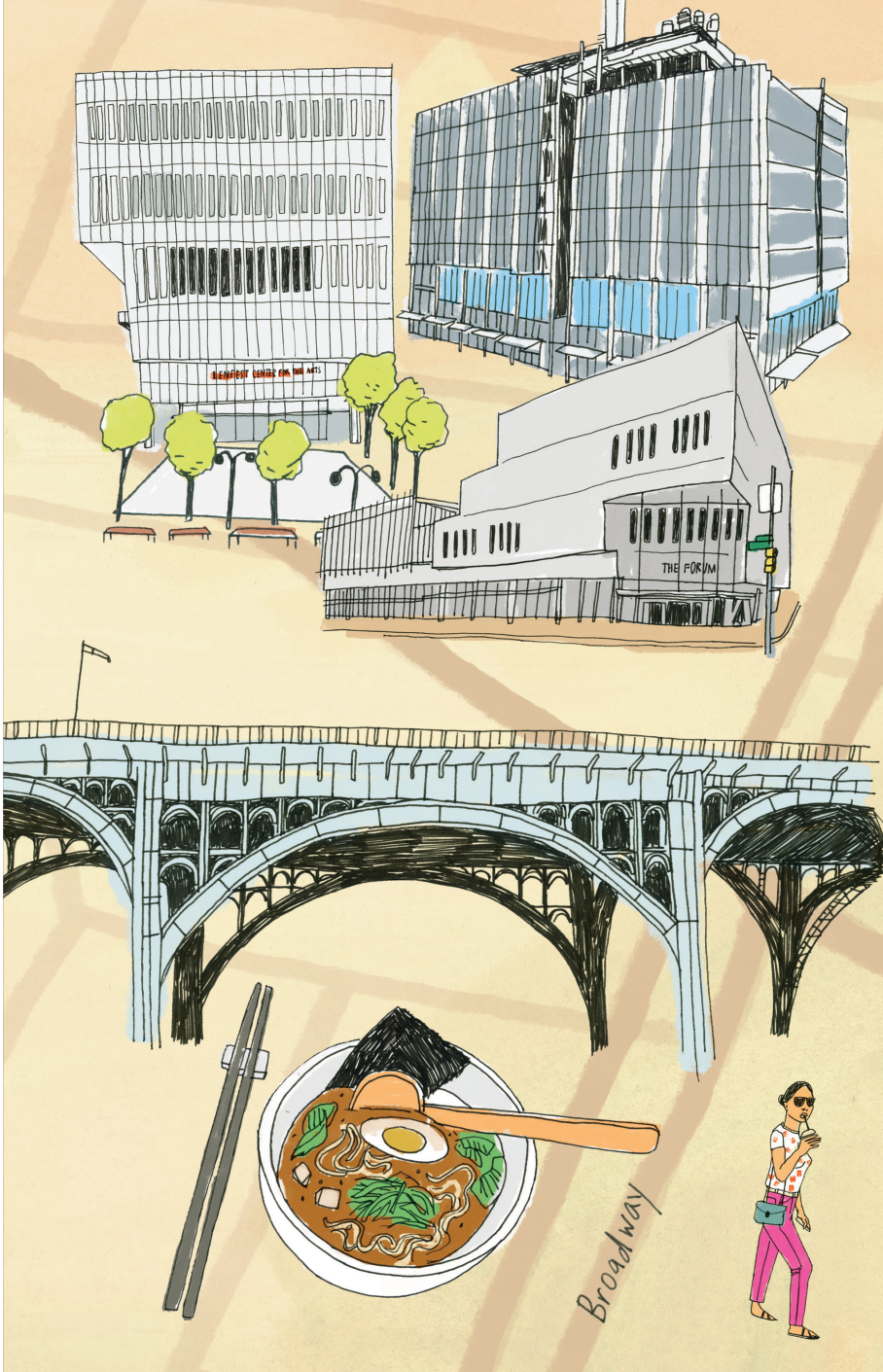
The complete offering terms are in an Offering Plan available from Sponsor. File No. CD17-0232. Sponsor reserves the right to make changes in accordance with the offering plan. Prospective purchasers are advised to review the complete terms of the offering plan for further detail as to type, quality and quantity of materials, appliances, equipment, and fixtures to be included in the units, amenity areas and common areas of the condominium. All images are artist renderings. Sponsor: West 122nd Street Property Investors III, LLC, 430 Park Ave, 12th FL, New York, NY 10022. Property Address: 543 W 122nd St, New York, NY 10027

hpcn HALSTEAD PROPERTY  
DEVELOPMENT MARKETING





# WELCOME TO MANHATTANVILLE



JULIA ROTHMAN

# CONTENTS

## FEATURES

**14**  
**THE RAPUNZEL EFFECT**  
 Geneticist Angela Christiano's radical solutions for baldness may also point the way to new cancer therapies  
*By Paul Hond*

**22**  
**WELCOME TO MANHATTANVILLE**  
 Discover arts, culture, and exceptional eats uptown

**26**  
**A TERRIBLE BEAUTY**  
 Cy Gavin '16SOA creates luminous paintings that tell dark stories — and the art world is taking notice  
*By Rebecca Shapiro*

**32**  
**MEET HAL: HE'S ONE SICK ROBOT**  
 At Columbia's School of Nursing, a medical simulation center exposes students to the emotional and practical challenges of patient care  
*By David J. Craig*

**38**  
**LOSING AT MONOPOLY**  
 A Q&A with Tim Wu on the need for greater enforcement of antitrust laws  
*By Sally Lee*

COVER PHOTO BY ALLISON MICHAEL ORENSTEIN



# CONTENTS

## DEPARTMENTS

### 3 FEEDBACK

### 8 COLLEGE WALK

Mind over Muscle \ Power Dresser \ The Short List \ Palace Intrigue \ How Many Columbians Does It Take to Change a Light Bulb? \ Between the Lines \ Now Hear This

### 42 EXPLORATIONS

Engineers avert L train “apocalypse” \ The great rain robbery \ Let’s talk about sex \ How Congress misreads public opinion \ Are you threatening me? \ Dutch famine of 1944 provides window into natural selection \ Spot a tick? Snap a pic. \ Study Hall

### 48 NETWORK

Eater’s Digest \ Ask an Alum: The Science of Sleep \ Lion in the Subway \ Game Changer \ 8 Documentaries to Add to Your Streaming Queue \ Curating the Legend of Troy \ Newsmakers

### 54 BULLETIN

University news and views

### 58 BOOKS

*How to Hide an Empire*, by Daniel Immerwahr \ *Am I Dying?!*, by Christopher Kelly and Marc Eisenberg \ *Tinderbox*, by Robert W. Fieseler \ Plus, Robert Alter discusses his new translation of the Hebrew Bible

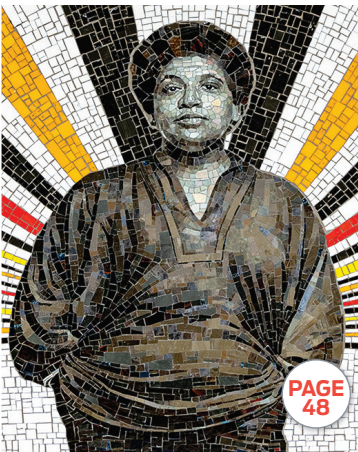
### 64 RARE FINDS

The World on a String

Visit our website for the latest:  
[MAGAZINE.COLUMBIA.EDU](http://MAGAZINE.COLUMBIA.EDU)

 @ColumbiaMag  @columbiomag

 @columbiamagazine



Executive Vice President,  
University Development & Alumni Relations  
Amelia Alverson

Deputy Vice President for Strategic Communications  
Jerry Kisslinger '79CC, '82GSAS

Editor in Chief  
Sally Lee

Art Director  
Len Small

Managing Editor  
Rebecca Shapiro

Senior Editors  
David J. Craig, Paul Hond

Copy Chief  
Joshua J. Friedman '08JRN

Associate Digital Director  
Julia Joy

Editorial Assistant  
Emily Jordan

Senior Director for Strategic Communications  
Tracy Quinn '14SPS

Director for Marketing Research  
Linda Ury Greenberg

Subscriptions:  
Address and subscription assistance  
[assistmag@columbia.edu](mailto:assistmag@columbia.edu)

To update your address online, visit  
[alumni.columbia.edu/directory](http://alumni.columbia.edu/directory),  
or call 1-877-854-ALUM (2586).

Advertising:  
[magazine@columbia.edu](mailto:magazine@columbia.edu)

Letters to the editor:  
[feedback@columbia.edu](mailto:feedback@columbia.edu)

*Columbia Magazine* is published for  
alumni and friends of Columbia by the  
Office of Alumni and Development.

© 2019 by the Trustees of Columbia University  
in the City of New York

 **COLUMBIA UNIVERSITY**  
IN THE CITY OF NEW YORK





## 75°F, CHANCE OF SNOW

The uplifting and delightful cover illustration of the Winter 2018–19 issue captures how I felt when I used to go across town to the School of General Studies as an art-history major. The issue lies proudly on my dining-room table here in California.

**Roseanne (Brown) Oliver**  
 '59GS  
 Los Angeles, CA

Wonderful cover by Jasu Hu. I'd like to see her do all four seasons on College Walk.

**Frank Beck**  
 New York, NY

## GUN FIGHT

I offer the following rebuttal to Jennifer Mascia's "Bullet Points" (Winter 2018–19). Despite the best efforts of the professional men and women who serve and protect the public every day, most crimes will not be prevented. To be sure, after the fact, the police will investigate and make arrests, and suspects will be charged and face trial. But this process, while necessary

for our society to feel secure, is of absolutely no value to me as I lay face-down, my last breath forming small bubbles in a spreading pool of blood.

Confronted with the reality that no one can protect me but, possibly, me, I will keep my handguns. If people wish to disarm themselves, so be it. Let them deal with the violent, well-armed criminal as best they can without handguns, in which pursuit I wish them luck. I will not willingly allow myself to be a helpless victim.

**Lee C. Broad** '73BUS  
 Basking Ridge, NJ

It was painful to read Jennifer Mascia's poignant article on gun violence. But there is hope. The Achilles' heel of the firearms industry is liability. The entire firearms empire was exempted from civil liability by the passage of the so-called Protection of Lawful Commerce in Arms Act (PLCAA) in 2005. Repeal PLCAA and the system will implode.

**James S. Mellett** '66GSAS  
 New Fairfield, CT

## THE ART OF PERSUASION

Of all the enjoyable pieces in the winter issue, David J. Craig and Jackie Roche's illustrated feature "Core Curriculum," about deep-sea-sediment research at the Lamont-Doherty Earth Observatory, was the most important to me.

I was a chemical-nuclear engineer (Columbia-trained, of course) involved in federal support of basic and applied research; I was also a cartoonist for *Jester*. And yet, having sought in the 1970s to convey the importance of reducing carbon-dioxide emissions to Department of Energy political appointees and Congress, I never thought until now that anything other than a formal written document would be the way to do it.

I found that Craig and Roche's presentation met the important need for research scientists to communicate the value of their work to society.

**David M. Richman**  
 '53CC, '56SEAS  
 Bethesda, MD

# FEEDBACK

## WHY CHOOSE?

Kudos to editor Sally Lee for the spectacular winter issue. I read every word in two sittings with the intention of naming my favorite piece. Alas, I couldn't do it — I just loved everything. I have twenty magazine subscriptions, and this is the first time that has ever happened.

**Shauneen Henrick**  
 '66GS  
 New York, NY





## DOUBLE TAKE

I enjoyed Paul Hond's article about Columbia writing teachers Whit Burnett and Martha Foley, as well as the full-page illustration by Matt Rota that accompanied it ("Upper West Side Stories," Winter 2018–19). But if Whit Burnett is wearing his jacket, whose is thrown over the back of the chair at the blackboard?

**John Ahouse '57CC**  
Long Beach, CA

*We assumed it was Burnett's topcoat, but perhaps it was left behind by the class's previous instructor, James Warner Bellah 1923CC, an author of Western novels who left Columbia for Hollywood, where he would eventually write the screenplay for John Ford's The Man Who Shot Liberty Valance. — Ed.*

## A SOUR TASTE

I very much enjoy reading *Columbia Magazine*. It presents a unique selection of topics and well-written articles that I always learn from. But the Network

article "Around the World in 100 Restaurants" (Winter 2018–19), about a Columbia Business School graduate's attempts to dine at all the best restaurants in the world, bothered me. What is the message here? That in a time of food banks, B-school alums have too much money and time on their hands? That we can turn appreciating somebody's exceptional culinary feats into a chore? I just don't get the point. Otherwise, keep up the good work. I will certainly keep reading and enjoying your workmanship.

**Attila Meretei '99BUS**  
Hanover, NH

## INFORMED OPINIONS

We recently asked the more than three thousand members of the Alumni Voices panel what stories they'd like to see in future issues of *Columbia Magazine*. Here's a small sampling of what they told us. Add your own two cents at [feedback@columbia.edu](mailto:feedback@columbia.edu).

Definitely include **more book reviews**. My husband and I find many of our books this way!

Force yourselves to include **conservative-leaning articles**.

Would like to see **more happenings on campus**.

Include **global coverage** and **more international alumni**.

I would like to read **more articles written by African-Americans**.

I would love to read about **graduates who may not have become famous but who contribute to their communities**.

Not all of us can be presidents, Nobel laureates, playwrights, and famous people.

Give us more stories about **the history of Columbia**. The information posted on the Columbia website about the 1968 protests was fantastic.

I'd love to read about **faculty who have made a direct impact on students' lives**. We hear so much about their research and academic work. But many are also great mentors for younger Columbians.

## KEY TO ABBREVIATIONS

CODE	SCHOOL	CODE	SCHOOL
BC	Barnard College	NRS	School of Nursing
BUS	Graduate School of Business	OPT	School of Optometry
CC	Columbia College	PH	Mailman School of Public Health
DM	College of Dental Medicine	PHRM	School of Pharmaceutical Sciences
GS	School of General Studies	PS	Vagelos College of Physicians and Surgeons
GSAPP	Graduate School of Architecture, Planning, and Preservation	SEAS	Fu Foundation School of Engineering and Applied Science
GSAS	Graduate School of Arts and Sciences	SIPA	School of International and Public Affairs
HON	(Honorary degree)	SOA	School of the Arts
JRN	Graduate School of Journalism	SPS	School of Professional Studies
JTS	Jewish Theological Seminary	SW	School of Social Work
KC	King's College	TC	Teachers College
LAW	School of Law	UTS	Union Theological Seminary
LS	School of Library Service		





**NEW YORK | SAN FRANCISCO**  
**ON-CAMPUS | ONLINE | HYBRID | PART-TIME | FULL-TIME**

### MASTER'S DEGREES

- Actuarial Science
- Applied Analytics
- Bioethics
- Construction Administration
- Enterprise Risk Management
- Human Capital Management
- Information and Knowledge Strategy
- Narrative Medicine
- Negotiation and Conflict Resolution
- Nonprofit Management
- Sports Management
- Strategic Communication
- Sustainability Management
- Sustainability Science
- Technology Management

### CERTIFICATES

- Advanced Graduate Certificate in Business
- Certificate in Biotechnology
- Advanced Graduate Certificate in Classics
- Certificate in Ecology, Evolution, and Environmental Biology
- Certificate in Psychology
- Certificate in Quantitative Studies for Finance

### CERTIFICATIONS OF PROFESSIONAL ACHIEVEMENT

- Actuarial Science
- Bioethics
- Business
- Critical Issues in International Relations
- Enterprise Risk Management
- Graduate Foundations
- Human Rights
- Narrative Medicine
- Sustainability Analytics
- Sustainable Finance
- Sustainable Water Management
- United Nations Studies

### SEMINARS AND EXECUTIVE PROGRAMS

- Financial Planning Teaching Seminar
- Strategic Communication: International Perspectives

### VISITING STUDENTS (ACADEMIC YEAR | SUMMER)

#### PROGRAMS FOR HIGH SCHOOL STUDENTS

#### POSTBACCALAUREATE STUDIES

#### COLUMBIA SUMMER

- Columbia Summer
- Business Edge
- Business Plus

#### ENGLISH LANGUAGE STUDY

- American Language Program
- Business Plus

#### AUDITING PROGRAM AND LIFELONG LEARNERS INTERNSHIPS

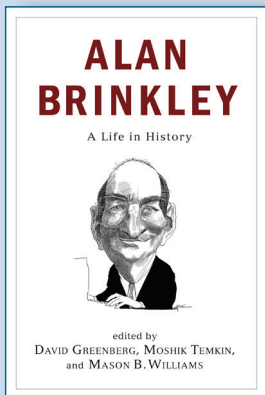


LEARN MORE AT [SPS.COLUMBIA.EDU/CU19](https://www.sps.columbia.edu/cu19)

Choose a personalized pathway  
to advance your education and career.



New from  
Columbia University Press



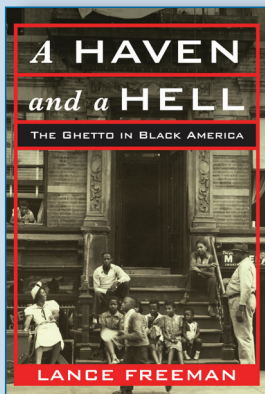
## Alan Brinkley

*A Life in History*

DAVID GREENBERG,  
MOSHIK TEMKIN,  
AND MASON B. WILLIAMS, EDS.

“A marvelous and moving tribute to a historian who changed our understanding of political history and of the twentieth century.”

—Drew Gilpin Faust, Harvard University



## A Haven and a Hell

*The Ghetto in Black America*

LANCE FREEMAN

“A critical read at a time when gentrification is viewed as threatening the black identity of many urban neighborhoods, this book offers a rich and nuanced history of the ghetto’s role in black American life.”

—Ingrid Gould Ellen, coeditor of  
*The Dream Revisited: Contemporary Debates About Housing, Segregation, and Opportunity*

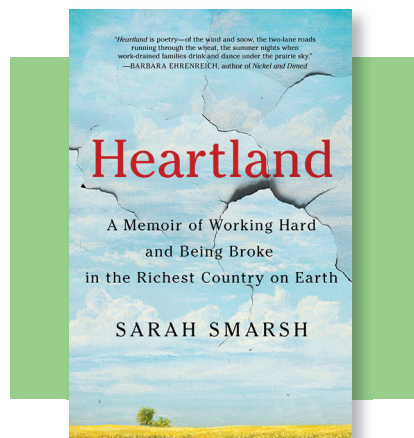
CUP.COLUMBIA.EDU

## FEEDBACK

### KANSAS AWAKENINGS

I am grateful for Rebecca Shapiro’s thoughtful review of my book *Heartland* in the winter issue. I hope you will share a few important corrections with your readers.

First, in describing my political shift from moderate conservatism absorbed as a rural teenager in the 1990s to a liberal worldview found as a first-generation college student at the University of Kansas, Shapiro writes that I joined the Young Republicans and campaigned for George W. Bush. Neither is true, though — as noted in *Heartland* — I did vote for Bush in my first presidential election in 2000.



Perhaps a more valuable correction, pointing toward themes inherent to my work: the review states that “most members of Smarsh’s family are Republicans.” Here the verb tense is crucial. As Shapiro notes, my book documents a Reagan-era childhood that unfolded in tandem with economic deaths in my rural Kansas home. I write that most people there were won over by pro-Reagan sentiment by the time of the 1984 election. However, I also write that my then-teenage mother voted for losing incumbent Jimmy Carter in 1980, the year I was born, and — subtly noted, as the book draws to a close — that all my close family members later developed into political progressives.

The political conclusions Shapiro draws from *Heartland* are sound. While my book never mentions Trump’s name, it indeed might be read as a primer on the culture of “red states” and rural areas that has been exploited to great effect by conservative extremists in recent decades. However, one dangerous fallacy that pervades today’s discourse is that such places are political monoliths. In most states that went for Trump, about 40 percent voted for Hillary Clinton; in many of those places, including Kansas, Bernie Sanders won more primary votes than Trump did. Like many others, my family woke up to the lies of the Republican Party before the Obama era — and unlike me they didn’t have to take an undergraduate sociology class to do it. Not a single college degree among them, save my brother’s, they are more radical in their progressivism than most of my liberal friends in New York. No one loathes the current president with greater fervor than Grandma Betty, arguably the star of *Heartland*.

In the last few years, most of my journalistic commentary for the *Guardian*, the *New York Times*, and others has aimed to bring these facts to light, such that my home will no longer be painted broadly as “Trump country” and crucial political awakenings there will not go unseen.

Sarah Smarsh '05SOA  
Wichita, KS

## QUESTIONS? COMMENTS?

### WE WELCOME THEM ALL!

E-MAIL US AT:  
feedback@columbia.edu

OR WRITE TO US:  
Columbia Magazine  
Columbia Alumni Center  
622 W. 113th Street, MC 4521  
New York, NY 10025

Letters may be edited for brevity and clarity.

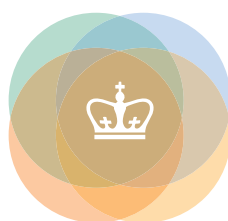


# Summer at Columbia

More than 50 areas of study to explore and endless opportunities to discover for:

Undergraduates | Graduates | Adults & Professionals

Session I: May 28–July 5 | Session II: July 8–August 16



**COLUMBIA SUMMER**  
IN THE CITY OF NEW YORK

[sps.columbia.edu/summer19](https://sps.columbia.edu/summer19)



## PROGRAMS FOR HIGH SCHOOL STUDENTS



### COLLEGE EDGE

An opportunity for high school students to take for-credit courses on Columbia's campus with undergraduate students

Fall & Spring Semesters  
Summer-Fall, Spring-Summer, Fall-Spring

### SUMMER IMMERSION

Immersive programs for domestic and international high school students interested in living and studying in New York City

Session 1: June 24–July 12  
Session 2: July 16–August 2  
Session 3: August 5–August 9

### GLOBAL SUMMER IMMERSION

Study abroad pre-college summer programs for rising juniors and seniors

July 6–26, 2019



# COLLEGE WALK

NOTES FROM 116TH STREET AND BEYOND



## Mind over Muscle

A Columbia neuroscientist goes to the wall

**M**ark Churchland, a professor of neuroscience at Columbia, studies how the brain's motor cortex generates the neural activity behind voluntary movements, which is a handy vocation when your favorite pastime is rock climbing. Churchland's preferred genre is bouldering: scaling boulders and indoor rock walls. He got hooked on climbing when he was a doctoral student at Stanford, and after he came to Columbia in 2012 he hit the quartzite cliffs of the Shawangunk Mountains, near New Paltz. So imagine his elation when the ground-floor commercial space in the Jerome L. Greene Science Center in Manhattanville, where Churchland conducts his research, was leased to the Steep Rock West gym, which built a big, bulging, arcing, fourteen-foot-high rock-climbing wall.

The wall is a modernist canvas spattered with oddly shaped plastic grips, or "holds," of blue, orange, pink, yellow, and green. These are arranged, by color and difficulty, in zig-zagging vertical courses, or "problems," upon which boulderers must fasten their bodies and minds.

"In bouldering, the idea is that you do short routes, not so high that the fall will kill you," says Churchland as he stands near the wall on a recent Friday. "They're a little puzzle. How do I arrange my body to make this work?" A few feet away, climbers are affixed to the wall in various splayed or knotted attitudes of planning or perplexity, and there is the occasional thump of gravity's handiwork upon the well-padded floor. "There's no rope and the moves can be very difficult," says Churchland. "They're meant to be practiced again and again."

Twice this academic year, Churchland has given demonstrations for local schoolchildren in the gym as part of the Saturday Science series run out of Columbia's Zuckerman Institute. Using an electromyography (EMG) machine to record the electrical signals sent from the brain to the muscles, Churchland demonstrates, almost counterintuitively, that good climbing technique leads to a *decrease* of electricity in the muscles. "Climbing uses relatively small muscles, and they tire pretty quickly," Churchland says. "So whenever you can,



you should support your body through your skeleton rather than having to generate force with your muscles.”

Churchland calls climbing, which will make its Olympic debut in Tokyo next year, a “surprisingly nerdy sport,” and names famous climbers who have been academics, like the neuroscientist Louis Reichardt, the first American to reach the top of both Mount Everest and K2, the two highest peaks in the world. “A very logical mind is helpful,” Churchland explains. “In ball sports you need to be able to react quickly and not get your

frontal cortex too involved: don’t overthink or else you’ll fumble. Climbing’s sort of the opposite.”

A college-age man in sweats and a T-shirt stops to chat with Churchland about foot positioning and the best way to break in a pair of climbing shoes. Advice in climbing is called “beta,” since it’s a step removed from direct experience.

Churchland has a few smart suggestions. In this gym, at this wall, the climbing neuroscientist is the alpha of beta givers. — *Paul Hond*



## THE SHORT LIST

**WATCH** The venetian blinds lower

for Columbia’s second annual **Film Noir Festival**. This year’s program is based on fiction by Cornell Woolrich, a former Columbia student whose short story “It Had to Be Murder” inspired the film *Rear Window*, directed by Alfred Hitchcock

’72HON. March 27–31 at the Lenfest Center for the Arts. [arts.columbia.edu/noir](http://arts.columbia.edu/noir)

**THINK** Wrap your head around neuroscience at **Saturday**

**Science**, a family-friendly event full of brainy demonstrations and hands-on activities. Learn about new scientific tools and technology at Columbia’s Zuckerman Institute on April 13, and visit the Super Saturday STEM Expo at the Harlem Armory on May 18. [zuckermaninstitute.columbia.edu/saturday-science](http://zuckermaninstitute.columbia.edu/saturday-science)

**VIEW** New work from Columbia art students will be on

display at the **2019 MFA exhibitions** at the Wallach Gallery. See works in progress by first-year students from March 30 to April 14 and the thesis projects of this year’s graduates from April 28 to May 26. [wallach.columbia.edu/exhibitions](http://wallach.columbia.edu/exhibitions)

**LISTEN** Love doo-wop? Pop? Barbershop? At the

**Harmony Sweepstakes A Cappella Festival** regional competition at Miller Theatre, New York’s most pitch-perfect vocal troupes will compete for a spot in the national finals. March 30. [millertheatre.com](http://millertheatre.com)

**LEARN** Scholars break down surprising historical

connections in **“Comic Books, America, and the Holocaust,”** a discussion of how characters from Batman to the X-Men helped introduce Americans to the horrors of Hitler’s Europe. May 2 in Butler Library. Register online. [ijs.columbia.edu/upcoming-events](http://ijs.columbia.edu/upcoming-events)

**POWER DRESSER** South African artist Mary Sibande’s photographs and sculptures honor the women in her family who were forced into domestic work during apartheid. An exhibit of her work, curated by graduate student Sally Eaves Hughes under the direction of art-history professor Kellie Jones, runs from April 17 to May 1 at the LeRoy Neiman Gallery in Dodge Hall.



*Her Majesty, Queen Sophie*, 2010.



# Palace Intrigue

A new library exhibit looks at Columbia's role in the 1919 Paris Peace Conference

“About a thousand specialists drawn from all parts of the world worked at it, and they were not all there to help,” wrote Columbia history professor James Shotwell 1900GSAS in the summer of 1919, weeks after the signing of the Treaty of Versailles, an eighty-thousand-word pact that formally ended the Great War. Calling it “the most difficult of Treaties that

has ever been made,” Shotwell, one of the agreement's exhausted architects, agonized that “there is hardly a clause in the whole long document that has not been the object of controversy and debate.”

Shotwell belonged to a group of 150 American academics secretly convened by President Woodrow Wilson in September 1917 to analyze US and Allied policy around the world and create a plan

for a postwar global order. This coterie was known as the Inquiry. Based at the American Geographical Society in New York, the Inquiry drew up what would become the Fourteen Points: Wilson's principles for an enduring world peace.

The armistice was signed on November 11, 1918, and in December, Wilson and twenty-one Inquiry conferees, including Shotwell, boarded

the SS *George Washington* and sailed for the peace conference in Paris. In February, Shotwell met with China's delegate to the conference, Wellington Koo 1908CC, 1912GSAS, 1917HON, who had been his student. The two had lunch with some other College grads. “We had a very pleasant time,” Shotwell wrote, “and when I left the young people were singing Columbia songs around the piano.”

This was a rare bright spot in a mission undercut by secret treaties and competing aims. “Boundary making on the basis of statistics of population is difficult enough in itself,” observed Shotwell, “but is doubly difficult when measured up against the claims of culture and of history.” With Germany and Russia excluded from negotiations, France, Britain, and Italy pursued their own aims and imposed harsh terms on the vanquished Germans, thwarting Wilson's goal of “peace without victory.” There was, lamented Shotwell, “hardly a single boundary which can be drawn that does not do violence to some important principle to which ... the Conference was pledged.”

On June 28, 1919, leaders of thirty-three nations gathered at Versailles to sign the treaty. As a nod to Wilson, the settlement included his fourteenth point: a call for a “general association of nations” affording “mutual guarantees of political independence and territo-



Above: The Peace Palace in The Hague, by Milton Halladay. The building opened in 1913 as a seat of international diplomacy; war in Europe began the following year. Right: The emblem above the door of the Carnegie Endowment for International Peace in Paris. James Shotwell became the think tank's director of research in 1917.





rial integrity to great and small states alike.” From this demand, the League of Nations was born. China’s envoy was Koo.

The US Senate rejected American membership in the league, however, alarming liberal internationalists like Shotwell. “The more objections raised to the Treaty,” he wrote, “the greater the importance of the League of Nations as the one means of readjusting solutions and rectifying blunders. Otherwise, chaos, and chaos means the end of civilization.”

A new exhibit, “Remaking the World: Columbians and the 1919 Paris Peace Conference,” on view at the Rare Book and Manuscript Library from March 25 to July 19, gathers materials on the conference, featuring selections from the University-held papers of Shotwell and Koo. Both men remained committed to the League of Nations. Shotwell pushed for US membership into the 1930s, insisting on the league’s virtues even as it failed to enforce its own resolutions — and prevent another world war.

The League of Nations was disbanded in 1946 and replaced by the United Nations. Shotwell, who studied and taught at Columbia for nearly fifty years, helped organize the new world body, and Koo was one of the founding delegates. — *Paul Hond*



Butler 301

## How Many Columbians Does It Take to Change a Light Bulb?

Butler Library’s process of illumination

**R**oom 209 in Butler Library has “great bulbs.” This according to David Banker, assistant facilities coordinator, who came to Columbia three years ago but who has never, until recently, had to change a light bulb in the popular reading room, where thirty-six long-stemmed, half-globed lamps hang from thirty-foot ceilings.

“One of my main responsibilities in Butler is making sure that we are fully lamped,” says Banker, “and the winter intercession is the best time to tackle the largest and tallest reading rooms.”

Relamping, as it’s called, is usually done at night. In 209, one of Butler’s twenty-four-hour reading rooms, the bulbs are changed en masse after several have burned out, which is more efficient than dealing with individual outages as they arise. Each bulb change requires two technicians and a mechanical lift. Occasionally, a single light malfunctions unexpectedly, prompting an ad hoc repair. “If a light is flickering, you have to change it immediately,” Banker says. “You can’t read with a flickering light.”

Each lamp in 209 contains eight twenty-six-watt compact-fluorescent bulbs. That’s

288 bulbs total, plus another eighteen to light the room’s other prominent feature, a stained-glass window of a plumed and scabbarded Peter Stuyvesant, director general of New Netherland, standing covetously, with wooden leg and walking stick, next to the Western Hemisphere.

For three days during winter break, Facilities closed 209 so that crews could change all the bulbs in the fixtures, which were installed during a renovation of Butler completed in 2010. A tall order, but relamping 209 is a breeze compared to 301, the stately Lawrence A. Wien Reference Room — and not on account of that room’s vintage triple-tiered chandeliers.

“In 301,” says Banker, “the other light fixtures are built into the ceiling, with the bulbs above the fixture. To get to them, you have to go to the sixth floor. There’s a door that you go through to get into a crawl space underneath. Mechanics go in there and lie belly-down on a dolly, and that’s how they relamp 301: from above.”

Banker has made his peace with Butler’s antiquated lighting system. “It’s preserved in time,” he says, “and that’s the way we work around here.”

— *Paul Hond*



# Between the Lines

A multigenerational poetry reading throws some curves

Harry Bauld '77CC, batting third, had a hard act to follow. Not that poetry readings in the Alumni Center on West 113th Street are a competitive sport. But even Bauld, who played shortstop for the 1976 Ivy League champion Columbia Lions, and who teaches English at the Horace Mann School in the Bronx, may have felt butterflies at hearing the two younger poets who preceded him.

The first was Lizzy Straus '09CC, '14SOA, who began by saying, "I never read and I'm really nervous," and then, in a voice poised and knowing, declaimed: "I'm only watching shows / Where the serial killer is hot / So don't try to tempt me / With the daytime lineup. / I don't turn on for natural causes." The poem, "November, If Ever," ended on an image of a female cop standing over a girl's body. "I watch a lot of TV," Straus explained.

Next was Kimi Traube '08CC, '14SOA, whose prose poems of dying love contained passages of a sensual piquancy seldom heard in the wood-paneled confines of the Alumni Center lounge. "I felt your kiss like an impact, and I was bleeding, but I yielded to you, as I always did, back then, when I loved you," went a line from "Post-Dated to the Day of the Dead."

And then Harry Bauld, whose name, as Bauld often notes, is an oxymoron, stepped to the plate. Bauld, who is bald (that would be an aptronym: a name apt to its owner), held a copy of *The Uncorrected Eye*, his new collection of poems. Dressed in black, he named his obsessions — baseball, jazz, painting, boxing — and rhapsodized on the "state of blur" that comes without eyeglasses.

He then read "Ball," in which some boys chase down a torn baseball and with a thrill of discovery strip the hide and unroll the blue-gray yarn, "a quarter mile wound tight / as *terza rima* into the most compressed possible / argument around a nucleus that sang *jump* // from a fugue of clarity and cork." To finish, Bauld called on Straus to assist him in a poem for two voices. Straus seemed reluctant, even peeved at Bauld's insistence. What was their relationship? Had she been his student in high school? Straus finally submitted and read her part with zest.

Afterward, people snacked on hors d'oeuvres. WKCR jazz host Sid Gribetz chatted about Lance Hayward, the house pianist at the Village Corner, where Bauld, as a freshman, first heard live jazz. Nearby, a small throng, including an editor from the *New York Review of Books*, formed around Straus, who was

praising the value of readings. "Reading feels good. It feels centering. You hear your own work in a new way when you read it to new ears —"

"I didn't know you were his *daughter!*" a woman broke in, addressing Straus. She had just come from the table where Bauld was signing books. "I had no *idea!*"

Few would have connected the dark-haired Straus with the bare-pated Bauld, but yes, Straus said, Harry was her father. Straus used her mother's last name. As the woman shook her head, Traube drifted over. So did Joe Cosgriff '78CC, a baseball writer and former Lions pitcher. "You guys came out strong," Cosgriff told the poets. "I could have listened for much longer, and that is not always the case."

Over at the table where copies of the *The Uncorrected Eye* were for sale, Harry Bauld, spectacles on his nose, took in the sight of his family, friends, and students. Everyone agreed that "Ball" was a hit, but on this night, it was lines from "The crowd at the ball game," by Horace Mann alumnus William Carlos Williams, that captured the light in Bauld's corrected eye:

So in detail they, the crowd,  
are beautiful

— Paul Hond

## Now Hear This

When we heard that Zach Pentel, head of brand strategy for the music streaming service Spotify, was teaching at the School of Professional Studies this spring, we were inspired to create our own alumni playlist. Listen to it at [bit.ly/columbiamagazinespotify](https://bit.ly/columbiamagazinespotify)



### Harmony Hall — Vampire Weekend

(Ezra Koenig '06CC, Chris Tomson '06CC, Chris Baio '07CC)

### A Heart in New York — Art Garfunkel '65CC

### Burn the House Down — AJR

(Adam Met '13CC; GS students Jack Met and Ryan Met)

### Sponji Reggae — Black Uhuru (with Sandra "Puma" Jones '77SW)

What a Time to Be Alive — Superchunk (with Mac McCaughan '90CC)

### Can't Wait — Laura Cantrell '89CC

### Love Letters in the Sand — Pat Boone '58GS

### O Superman — Laurie Anderson '69BC, '72SOA, '04HON

### Ralph, Stride Meister — Dick Hyman '48CC

### Ol' Man River — Paul Robeson '23LAW





# ENGAGE IN THE LEGACY OF ALUMNI FELLOWSHIP

JOIN THE  
COLUMBIA UNIVERSITY CLUB  
OF NEW YORK

[COLUMBIACLUB.ORG](http://COLUMBIACLUB.ORG)



COLUMBIA  
UNIVERSITY  
CLUB

NEW YORK









# THE RAPUNZEL EFFECT

## GENETICIST ANGELA CHRISTIANO'S RADICAL SOLUTIONS FOR BALDNESS MAY ALSO POINT THE WAY TO NEW CANCER THERAPIES

BY PAUL HOND

PHOTOS BY ALLISON MICHAEL ORENSTEIN

In a laboratory on the third floor of the Russ Berrie Medical Science Pavilion at Broadway and 168th Street, amid blue-capped test tubes and whirling centrifuges, glass beakers and humming refrigerators, there floats, in a petri dish, a pencil-eraser-sized piece of human scalp. Excised from behind the ear of a donor, the skin marinates in a clear solution like a baby scallop. Inside this bit of skin are hair follicles, and at the base of those follicles, in the hair bulb, reside stem cells, called dermal papilla (DP) cells. These cells, whose quantity in a hair follicle determines the dimensions of a hair — three thousand DP cells make a thick fiber, while three hundred make a baby-fuzz wisp — will be removed from the follicles and replicated, the first steps in a radical method to grow robust hair follicles in vitro, with the goal of transplanting them back into the donor's head.

Humans are born with about a hundred thousand hair follicles in the scalp, with each one producing, over its lifetime, about twenty hairs. Our bodies don't make more follicles: once they lose DP cells and shrink — a process called "miniaturization" — there is no way to restore them to normal size. But Angela Christiano, a professor of genetics and dermatology at the Vagelos College of Physicians and Surgeons, wants to plant new, DP-rich hair follicles in the ample spaces *around* the shrunken ones — which is just

one facet of the boundary-shattering research flourishing in her lab.

Christiano made history more than twenty years ago when she became the first person to discover a gene for hair loss. Now, with her team of twenty technicians, grad students, and scientists, she is leading a multi-front attack on baldness, a condition that, in its various forms, affects eighty million American men and women. Hers is a tale of wild imagination and intellectual rigor: the daring geneticist who slashes through the unmapped jungles of hair-loss disorders, meeting dermatologists, immunologists, and biologists and forging collaborations that go beyond hair and into unforeseen territory, including cancer therapy.

Yet growing hair was the last thing on Christiano's mind that spring day when her odyssey began, in the sweet aerosol haze of a beauty salon in Metuchen, New Jersey.

### BAD HAIR DAY

"What happened?" said the hairdresser, ruffling her client's dark, thick hair, which spilled lavishly from her scalp and tumbled past her shoulders. The stylist saw Angela Christiano every six weeks and knew the back of her head well. "Did you have a biopsy?"

A biopsy? Christiano didn't understand. "No," she said. "Why?"

"Oh," said the hairdresser, "you have a small bald spot."



It was May 1996. In the moment, Christiano didn't think much of the remark. She was thirty, recently divorced, and six months into her job as a geneticist and professor at Columbia. During her postdoc at Thomas Jefferson University in Philadelphia, she had studied epidermolysis bullosa, a family of rare diseases that cause skin to become fragile and blister easily; now Christiano had her own lab in which to expand her research. With so much going on, she dismissed the small bald spot as an aberration, nothing to worry about.

But the next day at work, she asked a colleague to take a look. The colleague gasped. "It's not small!" she said. The patch was the size of a coaster. Though Christiano studies the genetic foundations of skin diseases, she is not a medical doctor, so she made an appointment with a dermatologist. The doctor told her she had alopecia areata (AA), an autoimmune disease that runs in families. In AA, the immune system attacks the hair follicles, rendering them inactive and causing sporadic bald patches. Some people get alopecia totalis, which affects

*Really?* Christiano thought. *That's the best we've got?* Her frustration, she remembers, grew into pure rail-at-the-gods rage. **HOW DARE YOU MESS WITH MY HAIR? I'M FROM NEW JERSEY!**

As a scientist, she figured there must be papers on the genetics of hair that would give her insight into what was happening to her, but there was virtually no literature to be found. How could that be? Christiano wasn't sure. But she *was* looking for a new lab venture, and so, with nothing to lose, she applied for research grants to study AA. She quickly learned why there was so little progress on hair disorders.

"Institutions wrote back to me saying, in essence, that hair loss was trivial, cosmetic, insignificant in comparison to AIDS and cancer," Christiano says today, seated in her office next to the lab. Her soft voice bubbles with humor and modesty. "Talk about frustration! The bar to getting funding for alopecia was so high, it was hard just to get in the door."

Still, with doctors telling her that the only treatment for AA was shots in her scalp, Christiano felt she had no choice

chromosomes, genes encode messages for specific proteins to build and run an organism. They determine hair and eye color, send oxygen through the blood, and even control the expression of other genes. The entire chain of DNA in a cell is called the genome — the organism's full set of chemical instructions.

The Human Genome Project — the sequencing of the three billion subunits, or base pairs, of the DNA molecule — gave geneticists a powerful new tool for identifying genetic factors in complex, multi-gene diseases. But in 1996, when Christiano ventured into hair genetics, the project was seven years from completion. At that time, no one had ever found a gene associated with the growth or loss of human hair. To get a genetic picture of hair loss, Christiano had to gain a foothold. She had to start small. That meant focusing on a simple, single-gene form of the disorder that might unlock understanding of forms involving more than one gene, like alopecia areata. She had to find a rare family with a parent-to-child-to-grandchild line of hereditary hair loss that was plainly the work of a lone rogue

## HER FRUSTRATION, SHE REMEMBERS, GREW INTO PURE RAIL-AT-THE-GODS RAGE. HOW DARE YOU MESS WITH MY HAIR? I'M FROM NEW JERSEY!

the whole scalp. The most extreme form, alopecia universalis, leaves the entire body hairless.

Christiano wasn't shocked by the diagnosis: her mother and grandmother had suffered hair loss, and she had a second cousin with alopecia universalis. No, what really stunned Christiano was that doctors could not tell her anything more. They did not know what caused the disease, nor if her case would get better or worse or stay the same. The only treatment that modern medicine had to offer was steroid injections in the scalp, to calm the immune response — a painful prospect.

but to take her hair into her own hands. "As a geneticist, if I had any hope of untangling this disease, I had to lay the genetic groundwork."

### THE HAIR-GROWTH GENE

Most of the estimated thirty-seven trillion cells in the human body contain, in their nuclei, our entire set of genes, about twenty thousand of them. Genes are the basic unit of heredity in all life forms, from people to plants to bacteria. Made up of discrete segments of DNA, a molecule shaped like a twisted ladder and coiled in threadlike bundles called

gene. "It really was like searching for a needle in a haystack," she says.

Combing through a medical database, Christiano found two geneticists in Pakistan who were working with a family that had eleven members with a non-autoimmune form of alopecia that had left them totally hairless from infancy. Christiano knew that with such a genetically isolated type of baldness, the gene mutation would be noticeable. She asked the Pakistani scientists to send her blood samples.

Using automated sequencing, Christiano analyzed the family's DNA and



Christiano with members of her team. From left: Rolando Pérez-Lorenzo, James Chen '13GSAS, Christiano, Eddy Hsi Chun Wang, and Eunice (Yoojin) Lee.

narrowed her search for the mystery gene to an area on chromosome eight. To pinpoint a hair-loss gene out of the nearly seven hundred genes on the chromosome was an imposing task. Fortunately, Christiano learned about a study in which hairless mice were born with fuzz that they quickly shed — which was what had happened in the Pakistani family. And since humans and mice have similar genetic structures, Christiano decided to compare the mouse gene with the family's genes and look for a similar mutation. Incredibly, she found her needle: a gene that controls the growth of human hair.

A paper describing this discovery was published in *Science* in 1998. Given the widespread interest in hair loss, Christiano drew instant media attention. With her alopecia areata in remission after “many, many painful injections,” she appeared on TV and in magazines, explaining that the gene, called “the hairless gene,” or *HR*, was a kind of master switch for the hair cycle. This cycle has three phases — anagen (the growth of a hair, which lasts an average of three to five

years); catagen (the cessation of growth, lasting two to three weeks); and telogen (a several-month dormancy, in which the hair follicle shrinks and the hair falls out). In the *HR* mutation, the switch that regulates this process is turned off, and hair cannot grow.

While this landmark finding did not herald an imminent cure for baldness, it did provide an enthralling glimmer, and Christiano got a substantial National Institutes of Health grant to create a DNA registry in the US for alopecia areata — the first step toward identifying the genes that cause that disease. That meant finding people from extended families in which multiple members had severe hair loss, as well as finding thousands of individual patients whose relatives were not affected. “All were valuable to the gene-hunting efforts,” Christiano says. The registry was compiled by Christiano at Columbia and four other institutions over a period of years.

For the AA community, this process felt endless. Still, year after year, at the annual conference of the National



Alopecia Areata Foundation, for which Christiano is an adviser, attendees would, at her urging, roll up their sleeves and give blood, hoping that someday, somehow, the genes that caused their disorder would be found.

### ATTACK OF THE KILLER T CELLS

In 2003, as Christiano and her colleagues continued to build the registry, the Human Genome Project was completed. This monumental international achievement allowed Christiano to conduct a much broader, more elaborate inquiry, called a genome-wide association study, in which samples from a thousand AA patients in the registry could be analyzed against the DNA of three thousand normal-haired counterparts.

Christiano secured an additional grant to perform the analysis. This haystack was far bigger than any she had ever searched, and she was amazed when the first pass turned up eight distinct genetic regions that were clearly different for sufferers and non-sufferers — “an incredibly

good yield for only a thousand patients,” Christiano says. Since it took just eight regions of the genome, and not fifty or a hundred, to explain the genetic association underlying a thousand cases of AA, Christiano surmised that those regions must contain genes that play a predominant role in causing the disease. If a drug could hit some of those genes, it should work for the majority of patients.

Christiano then compared AA genes to the genes of other diseases, looking for similarities and differences. The results were a thunderbolt. “It turns out we don’t look like any other autoimmune skin diseases — not psoriasis, not eczema, not vitiligo,” Christiano says. “The autoimmune diseases we align with are type 1 diabetes, celiac disease, and rheumatoid arthritis. This was not at all what we expected.”

When she and her team looked at the literature on those diseases, they learned that all three use a similar signaling mechanism, in which wayward genes send out a “kill me” message



that summons immune cells, or T cells, to target a healthy cell for destruction. Normally, when a damaged cell needs to be destroyed, the T-cell cavalry comes in, does its job, and stops. But in patients with AA, Christiano found, the signals that attract the killer cells to the hair follicles don't turn off. "They're always a little on," she says.

lose their hair at any time are certainly devastated, but those teen years can be particularly cruel."

In the face of so much emotion, Christiano always rallied people at the meetings. She'd try to raise their spirits, while encouraging them to keep giving blood. "We're getting there, we're getting there," she'd tell them. She could feel

Metroliner from New York to Washington and a proud member of the Masons. Neither he nor Maria knew precisely what to make of their daughter, who got hooked on science in eighth grade after reading an article about DNA in *National Geographic*. Christiano had an influential junior-high science teacher, a woman who was "very encouraging to girls," she says.

## "PEOPLE ARE DESPERATE, AND VULNERABLE TO THE CORE. THEY'RE UP ALL NIGHT READING ABOUT HAIR AND COUNTING THE HAIRS IN THE DRAIN AND LOOKING IN THE MIRROR."

But which gene was causing this to happen specifically *in the hair follicle* — and nowhere else? Which gene, in other words, was the "AA gene"?

"We geneticists want to find the genes that are unique to our disease," explains Christiano. "There are plenty of other immune genes that are shared among diabetes and celiac and AA, but those just give you a generic susceptibility to autoimmunity."

The team zeroed in on chromosome six, where they detected what Christiano calls "the smoking gun for AA" — a gene called *ULBP3*. "This was the gene that landed us in the hair follicle," Christiano says.

*Nature* published these findings on July 1, 2010. A few days before the journal came out, Christiano flew to Indianapolis to attend the twenty-fifth annual National Alopecia Areata Foundation global conference. Each year, Christiano would hear the stories of grief that so often accompany hair loss. She was especially moved by the plight of girls. "Girls who lose their hair as children and grow up that way are tougher — their identity has been formed without hair," she says. "But girls who reach their teens with hair and then lose it — well, you can imagine. Boys, too. There's a real difference between the kids who grow up with nothing and those who have it and lose it in the formative period. People who

their frayed patience, the pressing weight of their hope.

But 2010 was different. It had been fifteen long years since Christiano discovered the first gene for hair loss. Now, at last, she had news to share about AA. She got up to speak, and the crowd of six hundred, many wearing scarves, caps, and bandannas, listened as she made her announcement: "I'm happy to say that this year, for the first time, we've finally found some genes."

The room got quiet. Then people stood up. They began to weep, and, in a show of unity, they started taking off their head coverings. Christiano, unprepared for any of it, dissolved into tears.

### JERSEY ROOTS

Growing up in Nutley, New Jersey, Christiano was surrounded by hair. Her mother, Maria, was a beautician in a hair salon. Her grandfather, Ernest Evangelista, an Italian immigrant, was a barber. As a kid, Christiano worked Saturdays at the salon, sweeping the snipped hair into fluffy multihued piles. She also served tea to the ladies there. Sometimes, women undergoing chemotherapy would come in and remove their wigs. Observing them, Christiano became sensitized to the powerful emotions around hair.

She was an only child. Her father, Angelo, was an Amtrak conductor on the

"She made science seem like an acceptable path." At Nutley High, Christiano was one of two students selected for a work-study program at the nearby laboratories of the pharmaceutical company Hoffmann-La Roche. When she entered Rutgers to study biology, she became the first person in her family to go to college.

Later, as she began working on AA, Christiano learned more about the feelings that surround hair loss. "Because the condition is usually progressive, once it starts, people really struggle," she says. "I've heard people say: 'I couldn't get out of bed.' 'I will not take off my hat.' 'I won't go out in the wind because I'm afraid my prosthetic will come off.' 'I won't be intimate with someone.' 'I can't go on this job interview.' 'I'm afraid to show my family.' Some patients have told me: 'I can lose my hair, even my eyelashes. But when I lost my eyebrows I lost my identity.' If they could just get back their own eyebrows, they could deal with almost anything.

"Then there is the unwanted attention from others, which is one of the most hurtful things. When you have an outwardly visible disease, the world feels that it's all right to comment on it. 'Are you having chemo?' It's like, *Who the heck are you to ask?*

"You need to walk a day in the shoes of someone before you cavalierly dismiss AA as 'just cosmetic.' It's easy to trivialize it.



But people are desperate, and vulnerable to the core. They're up all night reading about hair and counting the hairs in the drain and looking in the mirror. You can't understand it unless you've been there."

### INTERDISCIPLINARY TANGO

With her genome-wide study of AA done and her findings published, Christiano was at a scientific crossroads. The logical path was to move on and map other skin ailments. But she could not stop thinking about the resemblance between alopecia areata and non-dermatological diseases like type 1 diabetes, in which the immune system is tricked into attacking insulin-producing cells in the pancreas. The parallels enticed her; there was a thread she had to follow.

To do that, she would need help from outside her own field.

another, and he really took us under his wing," Christiano says.

Clynes told Christiano about a new class of small-molecule drugs that disrupt the Janus kinase (JAK) pathway, one of the body's main intercellular signaling systems. The drugs, called JAK inhibitors — there were two on the market — are used primarily for rheumatoid arthritis, in which the immune system attacks the joints. "Rheumatoid arthritis shares many signaling processes with AA," Christiano says. Could the rheumatoid-arthritis drugs also block the killer T cells in alopecia areata?

Using mice with alopecia, the team found that the drugs, both as an oral and topical treatment, not only prevented alopecia but also revived inactive hair follicles. "The drugs did everything we had hoped they would do, and over

In 2016, Christiano got another grant, this one to further her quest for a painless treatment for AA. The grant required her to work with a medical clinician, and Christiano joined forces with Columbia dermatology professor Julian Mackay-Wiggan '98PS, '04PH, who had started testing JAK inhibitors on people soon after the mouse data had proved encouraging. Now Mackay-Wiggan and Christiano kicked the human trials into high gear.

The results have been more than promising. Twelve AA patients were given the drug over a period of three to six months. Of the twelve, nine showed significant hair regrowth, and seven had regrowth of nearly 100 percent. The drugs are still in clinical trials and could gain FDA approval as soon as 2021. Since the *Nature Medicine* paper was published, at least six major drug companies have



Of twelve alopecia areata patients treated with a JAK inhibitor, seven had near-total hair regrowth, including the test subject above.

She did not have to travel far. CUIMC's diabetes center is located below Christiano's lab, and in 2010 Christiano went downstairs to greet her colleagues and get their opinion. They referred her to immunologist Raphael Clynes, then an associate professor of pathology and cell biology. Clynes agreed to meet with Christiano, who brought him stains of hair follicles that had been destroyed by T cells. Clynes looked at the images and said, "This is type 1 diabetes of the hair follicle."

Now there were two people fascinated by the similarity. Christiano and Clynes began an intense collaboration. "As geneticists, not immunologists, my team didn't know one end of a T cell from

time we became more and more skilled in understanding JAK pathways and defining the properties of an ideal JAK inhibitor to use for the disease."

Christiano and Clynes published a paper in *Nature Medicine* in 2014 describing the mechanism by which JAK inhibitors prevented and reversed AA. The paper made waves. Columbia filed for related patents. Hoping to commercialize this intellectual property, Christiano and Clynes started a company called Vixen Pharmaceuticals. ("Vixen" is a play on the word "alopecia," which derives from the ancient Greek *alopez*, meaning fox; alopecia in early medical literature is referred to as "fox mange.") But the medicines still had to be tested on humans.

begun developing JAK inhibitors for alopecia areata. One of them, Aclaris Therapeutics, purchased Vixen Pharmaceuticals in 2016.

"For companies to take an interest in AA for its own sake, and not as a spinoff of psoriasis or eczema, is very gratifying," Christiano says. "It's a defining moment in the field."

### THE CANCER THREAD

When Mackay-Wiggan left Columbia for private practice, Christiano needed another medical researcher with an MD to satisfy a requirement of her grant. The answer was again just around the corner, this time at the Herbert Irving Comprehensive Cancer Center.

Columbia had recently recruited several immuno-oncologists — doctors seeking to harness the power of the immune system to fight cancer. One of them was Charles Drake, director of genitourinary oncology at CUIMC and a premier developer of new cancer immunotherapies. Christiano went to see him.

Though Drake was an immunologist working mainly on prostate cancer and Christiano was a hair-focused geneticist, the pair had an intriguing point of intersection. In treating alopecia areata, the goal was to prevent T cells from attacking the hair follicle. But in cancer, those same T cells were desirable, because they were the agents that killed the tumor. Christiano wondered: if oncologists are trying to attract those cells, could AA researchers learn from their work how to keep the cells out? And conversely: could oncologists use the master regulator of the AA immune response — the gene *IKZF1*, which is always turned on in AA — to draw T cells to malignancies?

An algorithm developed by Christiano's colleague James Chen '13GSAS, a precision-medicine fellow at CUIMC, crunched data on thousands of cancer patients to find tumor types that had the *IKZF1* gene in their cellular communication networks. The algorithm calculated that some cancers, including melanoma, would be receptive to AA T cells. Drake and Christiano went to work: they transplanted the faulty *IKZF1* gene into mice with melanoma. Christiano knew that tumors in most cancer patients evaded the immune system. If she could trigger a tumor-attacking immune response using AA genes, the implications would be huge.

Just as Christiano had hoped, the gene alerted the T cells, which invaded the melanoma and killed the tumor. The mouse study showed, further, that some types of cancer were able to turn off the *IKZF1* gene, shielding the tumors from the immune system. But when the gene was turned back on, the cancers became vulnerable to the immune response.

Christiano and Drake published their findings in the July 25, 2018, issue of *Cell Systems*.

“Using our little autoimmune genes to potentially enhance melanoma immunotherapy is nothing we could have done alone,” Christiano says. “These collaborations create a whole other way of looking at the world.”

### FROM ONE, MANY

There has never been a truly successful treatment for the most common form of hair loss, androgenetic alopecia, better known as male pattern baldness. Hair-transplant surgery merely moves functioning follicles from one site on the scalp to another, with no net gain of hairs, while drugs like Propecia and Rogaine only *slow* hair loss. And while Christiano's lab has been able to revive dormant follicles in AA patients, the problem in male pattern baldness — the depletion of dermal papilla cells in the hair follicle — demands other strategies.

For more than twenty years, Christiano has been working with Colin Jahoda, a cell biologist at Durham University in England. Jahoda has spent his career doing microsurgeries in animals, moving follicle cells from one site to another. He implanted mouse whiskers into mouse ears and showed that a whisker could grow in another part of the body. In 1999, he took follicle cells from his own scalp and implanted them in his wife's arm, which, four weeks later, sprouted scalp hairs: the first human-to-human hair transplant. Jahoda also discovered that cells from human hair follicles could engender new follicles in lab animals. But he lacked a genetics perspective, and that's where Christiano came in.

“It was like music and lyrics,” she says. “Totally interdisciplinary. He's a developmental biologist, we're geneticists, and we were able to help put words to those phenomena for him, helping him learn the molecular language of what he had described over the years. And he taught us everything we know about surgery — how to micro-dissect the hair follicles and move the cells.”

Christiano had long believed that male pattern baldness was too common to have a strictly genetic basis: there must be many environmental and non-genetic

physiological factors involved as well. Certainly, years of genetic studies had not led to any effective treatments. In order to attack the most prevalent types of baldness, Christiano would have to venture beyond DNA. She and Jahoda had an idea: since the body cannot produce new follicles, what if they could grow hair follicles *outside* the body, with the ultimate aim of implanting them in the scalp?

Experiments are underway, and the evidence has been tantalizing. In theory, that little scallop of scalp floating in the dish at the Christiano Lab could be the source of a full head of hair. Working toward that future, Christiano and her team harvest the cultured follicles and implant them in artificial skin built in the lab. This skin nourishes the follicle, prodding from it a colorless, keratin-protein filament. The team then removes the productive follicle and grafts it onto the skin of a mouse. The result? Hair growing out of mice — human hair.

Christiano expects to move these trials from mice to people in two to three years, bringing nearer the day when people can grow, in a lab, their own viable hair follicles — a limitless supply of one's own hair.

“From one, many,” Christiano says. “That's a beautiful technology.”

In 2016, Christiano and Jahoda started a hair-and-skin regeneration company specializing in stem-cell replication and re-implantation. They named it Rapunzel Bioscience, after the girl in the Brothers Grimm fairy tale. Held captive at the top of a tower, Rapunzel has only her long braids to connect her to the outside world. But Christiano's own hair story gives the Grimms a run for their money: the beautiful daughter who, after a brush with baldness, ascends the scientific tower, where she weaves a multidisciplinary ladder to hair regrowth and cancer therapy.

Yet it's a true story. Christiano isn't the type to make a big fuss about it, though. Even after she became a famous geneticist and a leader in hair research, her mother would joke that the fruit hadn't fallen so far from the tree. “You do the same thing I do,” Maria Christiano would tell her daughter. “You just do it at Columbia.” 🍷



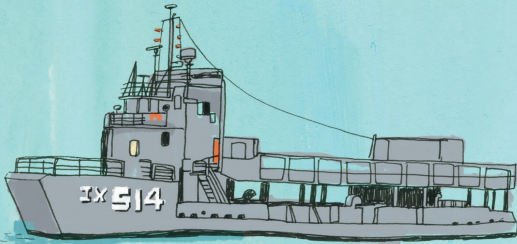


# WELCOME TO MANHATTANVILLE

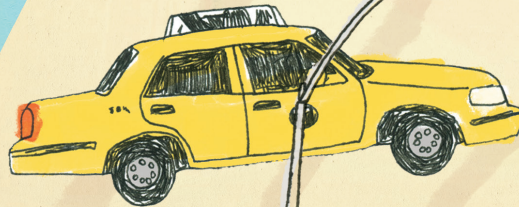
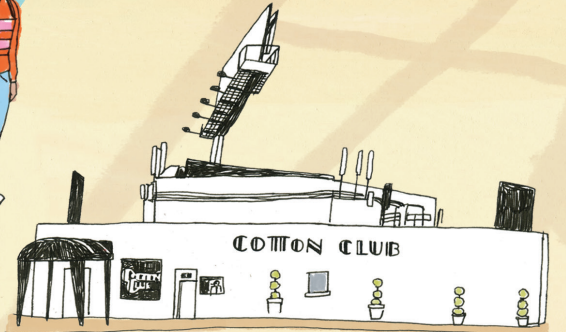
DISCOVER ARTS, CULTURE  
& EXCEPTIONAL EATS UPTOWN



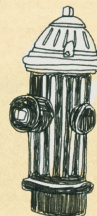
WEST HARLEM  
PIERS PARK



USS BAYLANDER

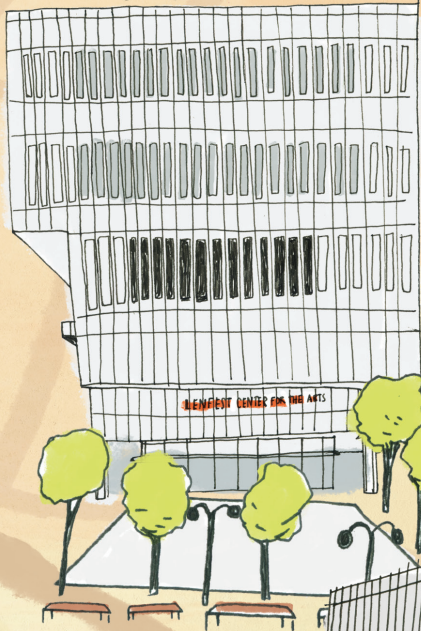


GRANT'S TOMB

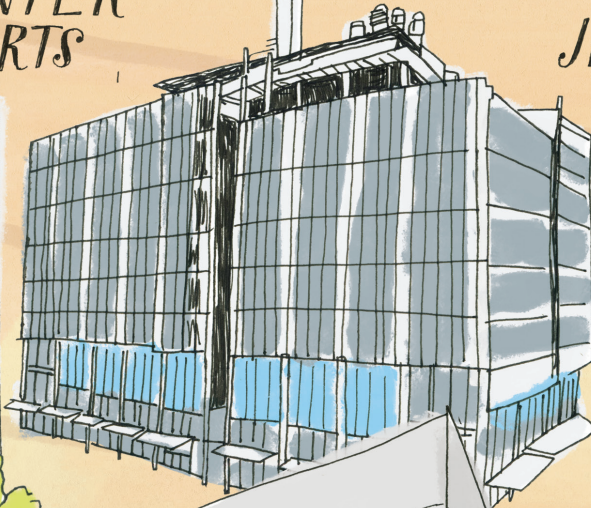




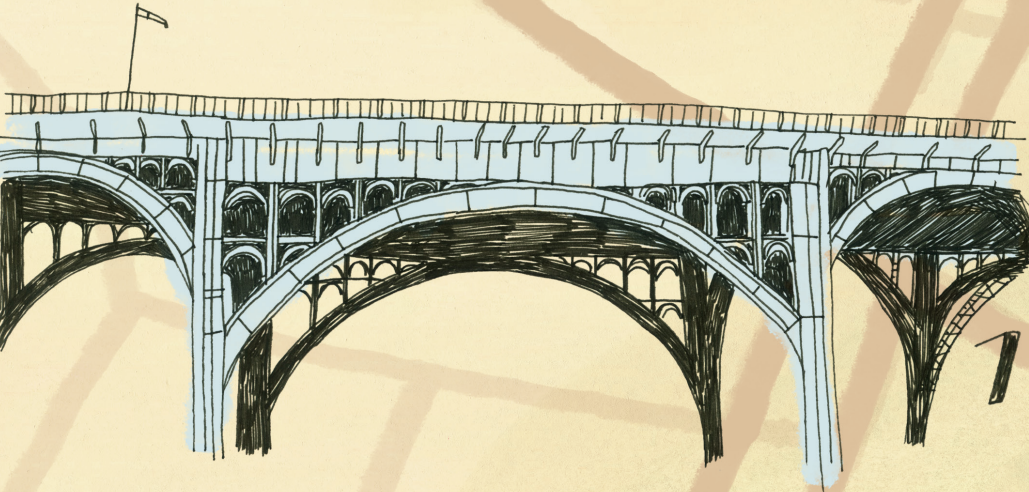
LENFEST CENTER  
FOR THE ARTS



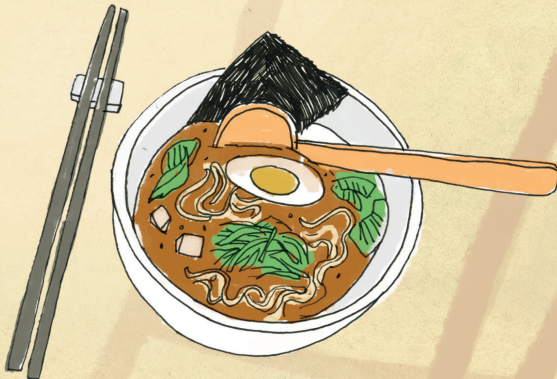
JEROME L.  
GREENE  
SCIENCE  
CENTER



THE FORUM



125 ST.



Broadway



Art by Julia Rothman





## New Campus Crawl

Building a campus takes time: it's been sixteen years since President Lee C. Bollinger first announced plans for Manhattanville, and construction will continue on the seventeen-acre site for several decades. But with three buildings now open, the Manhattanville campus is starting to take shape, and there's already plenty to explore.

### THE FORUM

Serving as the gateway to the campus, at the intersection of Broadway and 125th Street,



this multipurpose venue is a place for members of the Columbia community to come together for meetings and conferences. Even if you're not attending an event in the 430-seat auditorium, you're welcome to lounge in the lobby or the coffee shop and take advantage of the free Wi-Fi.

### THE LENFEST CENTER FOR THE ARTS

Columbia's new cultural hub houses two state-of-the-art performance spaces, a 150-seat screening room, and the Miriam and Ira D. Wallach Art Gallery. In May, why not attend the 2019 New Plays Festival in Lenfest's third-floor theater, hosted by

playwright and Columbia professor David Henry Hwang? Or get tickets to a show at the Katharina Otto-Bernstein Screening Room — Australian film director Lynette Wallworth and multimedia-installation artist Ann Hamilton will both be presenting their work there this season.

### THE JEROME L. GREENE SCIENCE CENTER

At nine stories and 450,000 square feet, this is now officially Columbia's biggest building. It is also home to the Zuckerman Mind Brain Behavior Institute, which has brought hundreds of world-renowned neuroscientists to Manhattanville. Bring the kids to a Saturday Science event (the next one is April 19), where Zuckerman Institute researchers organize hands-on activities to make brain science fun. Or sign up for one of the institute's public seminars. You can learn about upcoming events at [zuckermaninstitute.columbia.edu/our-events](http://zuckermaninstitute.columbia.edu/our-events).

The Greene Science Center also hosts a Community Wellness Center that offers free blood-pressure and cholesterol checks and other health resources. For a different kind of physical activity, buy a day pass to the Steep Rock West climbing gym on the building's first floor. East Harlem favorite Dear Mama Coffee also has an outpost in the building and plans to offer live music and other events.



## Rediscover the Neighborhood

We asked Michelle Young '12GSAPP, an adjunct professor of architecture at Columbia and the founder of *Untapped Cities*, a website dedicated to urban exploration in New York, to share a few Manhattanville landmarks and tell us why they deserve a repeat visit.

### RIVERSIDE CHURCH

Known for its inclusivity, the interdenominational church has historically been a gathering place for activists, particularly during the LGBTQ-rights and civil-rights movements. Rising 392 feet into the air, Riverside is the tallest church in America, and at the top of its twenty-two-story tower is a carillon of seventy-four bronze bells, including the heaviest and largest carillon bell ever cast. Riverside Church's gothic limestone façade is built over a steel frame, much like the Woolworth Building. Don't miss the stained-glass panels, imported from a sixteenth-century cathedral in Bruges, Belgium.

### WEST HARLEM PIERS PARK

West Harlem Piers Park, which opened to wide acclaim in 2013,



West Harlem Piers Park



is an excellent example of water-front reclamation for public use. Once a vibrant recreational pier that served the local community from 1897 until its demolition in 1965, the site spent the next half century as a municipal parking lot, cutting Manhattanville off from the Hudson River. Today the park features scenic views, grassy lawns for lounging, and plenty of space for sports and fishing. Spend some time with the exhibit on West Harlem history that has been installed along the water.

### GRANT'S TOMB

It's hard to miss Grant's Tomb. The domed neoclassical structure that rises above the Hudson River at 122nd Street and Riverside Drive is the second-largest mausoleum in the Western Hemisphere. The building, whose architecture was inspired by the chapel at the Invalides in Paris, where Napoleon is entombed, opened to great fanfare in 1897 and was once one of the most visited destinations in New York City. Time took a toll on the marble, but a centennial restoration in 1997 brought the monument back to its original glory. But who is buried in Grant's Tomb? Stop by and see for yourself — the interior is open to visitors during select hours each week.



ALISON CARTRIGHT

## Best Eats

### LA SALLE DUMPLING ROOM

3141 Broadway  
Destination-worthy dim sum and fast, friendly service. Make sure to order the kimchi-and-pork dumplings and the crab xiao long bao (soup dumplings).

### FLORIDITA

2276 Twelfth Avenue  
This Cuban restaurant has been a neighborhood favorite for more than twenty years. Check out the daily happy hour for strong mojitos and spicy empanadas.

### KITCHENETTE UPTOWN

1272 Amsterdam Avenue  
A retro diner (complete with a pink-polka-dotted countertop)

serving classic comfort food. Expect lines for weekend brunch — few can resist the siren song of cherry-vanilla French toast.

### DINOSAUR BAR-B-QUE

700 West 125th Street  
An outpost of a beloved upstate New York chain, this is the perfect place for a big group gathering. Warning: the wood-fired wings are addictive.

### PISTICCI

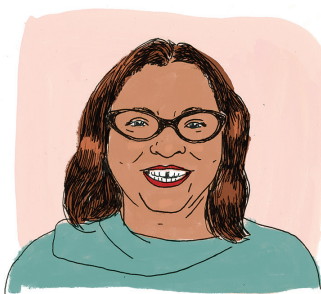
125 La Salle Street  
This civilized little Italian spot, which offers homemade pastas, fresh salads, and classic cocktails, is a faculty favorite. Head here if you don't mind running into your former professors.



### JIN RAMEN

3183 Broadway  
Ramen has long been the dinner of choice for broke college students. But this Manhattanville noodle joint puts the fifty-cent packaged kind to shame. At Jin, the rich bone broth is simmered for six hours, and topped with hand-cut noodles, buttery roast pork, and pickled vegetables. For many scholars, a bowl of this belly-warming soup is integral to the workday. As Zuckerman Institute CEO Rui Costa says, "This cozy restaurant provides warm ramen all day and into the evening, helping to fuel our lab."

## Faves and Raves



*I'd recommend a visit to the community garden at 138th and Twelfth. It was planted by my mom, eighty-six-year-old Harlem activist Jenny Benítez, more than forty years ago.*  
— Victoria Benítez, assistant vice president for communications

*Dear Mama in the Greene Science Center has some of the best coffee and croissants in New York City and the friendliest baristas.*  
— Andrés Bendesky, principal investigator at the Zuckerman Institute



*Gavin Brown's Enterprise on 127th Street is definitely worth a visit. He has created an incredible gallery in an old industrial building and seems fearless in his choices of artists.*  
— Carol Becker, dean of the School of the Arts









# A TERRIBLE BEAUTY

Cy Gavin '16SOA creates luminous paintings that tell dark stories — and the art world is taking notice

By Rebecca Shapiro

Photos by Nathan Perkel

**T**ucked away in an old barn off a winding country road in upstate New York, Cy Gavin's studio is easy to miss. There are no street signs or numbers — just instructions to turn onto a gravel road at the blue dumpster and then to find your way on foot across the grass.

In 2016, when Gavin '16SOA decided to leave Harlem to live and work in Dutchess County full-time, the two-thousand-square-foot barn was a mess of car parts and old junk. Today, though, it's cozy and serene. The shelves are lined with books and neat rows of potted plants, an old record player hums in the corner, and a tabby cat tiptoes across the big L-shaped sofa.

Upstairs, where Gavin creates the work for which he's quickly becoming famous, the room is alive with color. Tubes of paint and coffee cans filled with brushes cover tabletops, stand in precarious pyramids on the floor, and are shoved into the barn's rafters. Spotlights shine on a huge painting — perhaps six feet by eight feet — propped against one wall. The canvas is ripe with sparkling turquoise and palm-frond green, punctuated by striking patches of deep purple. Across the room, a

smaller work, in various shades of orange and red, demands equal attention. On a cold afternoon, with a heavy fog blanketing the windows of the barn, these lush landscapes feel worlds away.

Gavin likes being in nature; he likes the silence of winter and the cheerful birdsong of spring and summer. The barn sits at the edge of 130 acres of wild oak and evergreen forest, and he relishes the solitude. "When I moved here after living in New York, I could practically feel my lungs filling with air again," he says. "It helps to have a quiet place, especially since the last few years have been really busy."

Warm and soft-spoken, with a salt-and-pepper-flecked beard, Gavin is clearly a master of both humility and understatement; things have certainly gotten more than a little busy for him recently. In 2015 and 2016, while he was still a student in Columbia's visual-arts MFA program, Gavin had two sold-out solo shows at the Sargent's Daughters gallery in Manhattan. In her review of the first show, Martha Schwendener '89CC of the *New York Times* compared him to Kara Walker, Kerry James Marshall, and even Gauguin. He spent the summer and fall of 2016 in



Miami, as the artist-in-residence at the Rubell Family Collection, with a solo exhibition there following the residency. In 2018, he had another solo show, at Paris's VNH Gallery, and then exhibited work at Mass MoCA and at the Whitney Museum of American Art. Now, at just thirty-three, Gavin is preparing for his fifth solo show, which opened in March at Gavin Brown's Enterprise in Harlem.

**“I felt free to try everything and find my own way. I could discover my own purpose without thinking about what had already been done.”**

“So this is kind of the calm before the storm,” he says, gesturing around the wide expanse of the barn's second floor, taking in the two canvases that are in progress. Gavin says that when he's preparing for an exhibit, he's often working on up to six pieces at a time. And though he always has a general idea of what the paintings will be, what stories they'll tell, he says that he likes to leave room for improvisation.

“I don't want my work to be predetermined and static,” he says. “I want there to be space for the painting to assert itself.”

GAVIN WAS BORN and raised in Pennsylvania, in the Rust Belt town of Donora, twenty miles south of Pittsburgh. “It was a ghost town at that point. It had been founded a century ago to support the steel industry, but by the time my family arrived in the 1980s, it was totally economically depressed,” he says. “I actually sort of enjoyed living there, though. There was a stillness in the industrial wasteland.”

Gavin's parents, who were Jehovah's Witnesses, worked in a glass factory and moonlighted as missionaries. “It was a fundamentalist, repressive way of life,” Gavin says. His parents' calling meant that Gavin was on his own a lot of the time. While they traveled around the region “spreading the Lord's word,”

Gavin and his older sister were in the car, sketching or reading, or they were deposited at the Donora Public Library, where they spent long days exploring the stacks.

“We basically spent every day at the library. It turned out to have a profound impact on both of our lives,” he says. Gavin's sister is now a high-school librarian, working in the Bronx. And Gavin credits the library with introducing him

to the visual arts. “There was this series of vintage *Horizon* magazines and a handful of monographs on the Old Masters, and I'd spend hours sketching, trying to copy the images,” he says. “I think that I liked drawing when I was a kid because it was a skill where I could readily notice marked improvement. When I got better at it, there was evidence.”

Pittsburgh's famous Carnegie Museum of Art was just a thirty-minute drive from his house, but Gavin says that the thirteen-dollar student entrance fee was more than he could afford. He discovered a way to sneak in through the building next door, which connected to the museum through the basement. “Once I figured out how to get in, I basically never left,” he says. But the fact that he essentially had to break into the museum to access art bothers him.

“It still really irritates me. High admission prices effectively prevent working-class people from being able to visit museums,” he says.

Gavin says that money concerns initially kept him from considering art as a career, or even something to study when he got to college. “There is an inherent privilege in thinking of art as a career,” he says. “Growing up poor meant that making art for a living never felt like an option.”

Gavin says that a fluke landed him in Carnegie Mellon's prestigious undergraduate art program. He had planned to go into science, but thanks to an art teacher who took a special interest in him, Gavin ended up attending an event with admissions officers from several college art programs.

“There were all these kids coming from magnet high schools with professional portfolios and slides. I had a garbage bag full of canvases and sketchbooks,” Gavin says. “But so much of their work looked the same. It was technically proficient, but not personal or imaginative.”

The representative from Carnegie Mellon immediately connected with Gavin's work and essentially promised him admission and a generous grant on the spot. “It was a chain of random events that led to the right person. I think I knew even then that it would change my life.”

At Carnegie Mellon, Gavin had a lot of catching up to do. “Everyone else in the program had a baseline knowledge of art history, which I didn't have. I felt like I was entering the conversation for the first time,” he says. But he also felt an urgent need not to follow the pack, a sensibility that he says has stayed with him throughout his career. Instead of just focusing on art, Gavin also minored in history, becoming immersed for the first time in the study of the American colonies and the Caribbean slave trade, both of which would go on to inform much of his work. And while his classmates seemed more concerned with where they fit in the art-history continuum, Gavin says that he was prone to experimenting. “I felt free to try everything and find my own way. I could discover my own purpose without thinking about what had already been done.”

After graduating in 2007, Gavin spent a few years in San Francisco working in video postproduction before starting to think more seriously about trying to make it as an artist. He moved to New York in 2011 and got a job as a website manager for Participant Inc., a nonprofit alternative art space on the Lower East Side. “I was, and still am, drawn to finding different spaces and contexts for art,” he says. From there, he worked as an assistant to the







feminist photographer and filmmaker Ellen Cantor and as an archivist for the video and installation artist Vito Acconci. With their encouragement, he decided to apply to MFA programs.

Gavin says he picked Columbia in part because it was a university rather than a conservatory. “I wanted a program with a lot of freedom, and Columbia offered that,” he says. He supplemented his studio instruction with coursework in history, film, and literature, which turned out to be equally formative to his artistic work, he says. And when he wasn’t in class, he was in the studio, sometimes for twenty-four-hour stretches, just making art.

Gavin relished the freedom that Columbia afforded him and pushed it to

its limits; he started storing his paintings in a Columbia-owned building in West Harlem and found an empty space there that he turned into a secret art gallery. “It hadn’t been used in at least twenty years,” he says. “But it had this wonderful natural light. It felt like a crime that it was sitting empty.” Gavin cleared cobwebs, painted the walls, and even installed electricity and air conditioning. He named the gallery The Can and recruited Lia Gangitano, founder of Participant Inc., to curate a show of work by sculptors Michael Blake and Ektor Garcia. Visitors would book a slot on Gavin’s website, and he would meet them at a nearby McDonald’s and walk them through the space.

The website of the magazine ARTnews published a review of the show, praising not just the work but the unusual experience of seeing art in such a raw, unexpected space: “Even if you know what you’re getting into, walking through the building’s subterranean corridors to get to The Can is an adventure. You know you shouldn’t be there, but you’re too intrigued to turn back.”

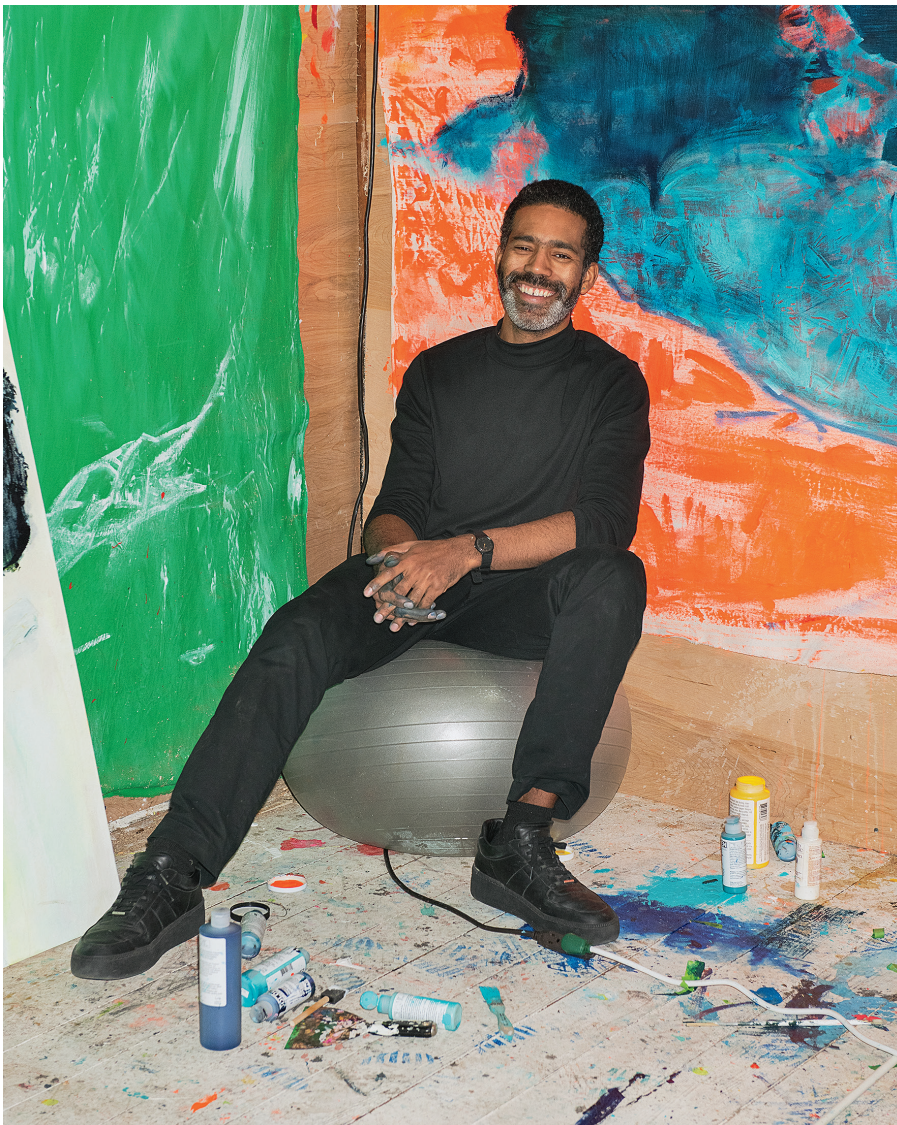
Unfortunately, the gallery was short-lived, and when an official visiting the building discovered the show, Gavin was served a notice to vacate immediately. “I removed all traces of the exhibition, but for a while, I would quickly re-install it on an ad hoc basis for everyone who had booked an appointment,” he says.

The gallery shutdown notwithstanding, Gavin thrived at Columbia. For the first time in his life, he didn’t feel like he was playing catch-up with a cohort that was more prepared than he was or had more resources than he did. “If you worked hard and honestly, you were noticed by the right people,” he says. For Gavin, those people were faculty members like art historian and curator Kellie Jones (“I’m still working through stacks of materials that she gave me to read”) and sculptor and installation artist Sarah Sze.

“Cy is the kind of student you never forget,” Sze says. “He’s open, generous, and inspired as a person and intense, focused, and completely immersed as an artist.”

Video artist Joan Jonas ’65SOA, who guest-lectured often at Columbia, also had a profound impact on Gavin and his work by encouraging him to travel to Bermuda for the first time and reckon with the legacy of his father. Though Gavin’s father was born and raised on the islands, he had immigrated to the United States as a young man and had only been back to his native country once in Gavin’s lifetime. “It’s this tragedy of being born poor in a place that is, essentially, a luxury playground,” Gavin says. “Even if my father had wanted to go back, or bring his family to visit, staying in a hotel there would have been out of reach.”

Gavin’s father died in 2009; it was a complicated relationship, and in the years that followed, Gavin found himself





obsessing over the man and the place that made him. “I was sanitizing my memories of him. He was becoming less of a person and more of a myth. That was compounded by the fact that Bermuda was, at that point, a totally imagined place for me.”

Jonas suggested that Gavin bring camping gear and sleep on the beach, an idea that allowed him both to skirt the islands’ high hotel prices and also to connect with the land in a deeper way. The trip was initially meant to be a personal one; Gavin hadn’t intended to make art about Bermuda. But he was intoxicated by the islands’ natural beauty and complex history.

Bermuda, Gavin explains, is unique even to its region, in that it has no indigenous population and almost no native agriculture, so it relied heavily on the slave trade to import both goods and workers. Gavin found that history to be almost erased from present-day society on the islands. “There’s an odd culture of denial about Bermuda’s role in the slave trade and the residual impact socially there. It’s both omnipresent and not mentioned at all.”

On the last day of Gavin’s trip, he found himself having drinks with a friend — a Black woman who had grown up in Bermuda and was now working as a professional golfer. “She made a comment about having to compete on top of her grandparents’ graves, and I realized that she wasn’t speaking figuratively,” Gavin says. Bermuda was one of the earliest island destinations in the Atlantic or Caribbean to attract American tourists, and to accommodate and appease the mass of visitors in the early twentieth century, the governor formed a commission to essentially hide the archipelago’s Black residents in two remote communities. “The government seized all of their land using eminent domain, and in two years they had removed all trace of the community except for a cemetery,” he says. Though the cemetery had historic-preservation status, Gavin says, it was largely destroyed in 2012 by the owners of a luxury resort.


Gavin knew then that he needed to learn more to understand his family’s

history and the history of Black people in Bermuda, and that he needed to make art about it. Over the next several years, he took several trips back to the islands, where he would camp and study the rocks, the wildlife, the plants. He brought back natural materials — pink sand, blue irises, agave flowers — and incorporated them into his work, mixing them directly into the paint along with more macabre materials, like his own blood and his father’s ashes. He studied traditional Bermudian dance and used the movements to influence how he drew and placed the figures on his canvases.

Gavin also set out to learn and tell the stories of little-known figures of

also found himself gravitating toward the natural elements of the islands for that show — an abstract sunset, a manchineel tree, an underwater reef.

Having settled into his barn upstate, Gavin finds himself ready to explore new themes. “I think I’ll always make work about Bermuda; it’s a part of me, in many ways,” he says. “But I was using it as a lens to look at bigger structures. Now I’m widening that lens.” Gavin says that since the 2016 election, the deep racial and class divides in America have been weighing heavily on his mind, and he expects that much of his work for his upcoming show will be informed by those issues.



“I’ll always make work about Bermuda; it’s a part of me, in many ways.”

resistance in Bermuda. He slept in a limestone grotto where a runaway slave named Jeffrey had once sought refuge, an incident that inspired his painting *Jeffrey’s Cave*. In another piece, *Sally Bassett, Laughing*, Gavin immortalized the titular Bermudian slave, who was burned at the stake for poisoning her owners. In accordance with a legend that the Bermudian iris sprouted from Sally Bassett’s ashes as a sign of her innocence, Gavin mixed seeds of that plant with his paint.

After graduating from Columbia, Gavin moved to Miami for a six-month fellowship with the Rubell Foundation. There he continued to immerse himself in Afro-Bermudian history. He painted Gibbet Island, a now-private island in Bermuda where slaves were once executed publicly; and he painted a portrait of his great-grandfather Lewis Smith, who had lived in a thriving Black community that was razed to make room for a luxury resort. The works that he created for the VNH Gallery in Paris dealt with similar subjects, though he

Gavin has also been seeking new inspiration from the landscapes of the Hudson Valley. For a recent show at Mass MoCA, he created a nearly twelve-foot-tall rendering of Bash Bish Falls, a waterfall near his home.

“It was considered a sacred spot to the Native American population here,” Gavin says. “Also, it’s incredibly beautiful at night. The moonlight is so bright when it reflects off the falls that you can read a book by it.”

But the beauty, he says, is beside the point. “People have told me before that they think my paintings are beautiful. And I only care about that insofar as I think it helps people spend more time with the work,” he says.

“Susanna Coffey, a painter and mentor from Columbia, once told me that when people see something they perceive as beautiful, it becomes difficult for them to unsee it,” he continues. “I want people to linger on my work, to have their own experiences with it, even when it deals with things that are challenging and unsavory.”



# >>> MEET HAL:





# HE'S ONE SICK ROBOT

At Columbia's School of Nursing, a medical simulation center exposes students to the emotional and practical challenges of patient care



Hal the robot boy doesn't sound good. He is wheezing, coughing, and gasping for air, and when a young woman approaches his bed, he calls out feebly for his mother.

"You don't need to be scared," says the nursing student, Terri Phan.

"But I can't breathe," Hal groans, eking out a staccato computerized sob.

"We're going to help you with that, don't worry," another student, Erin Pratt, assures him.

Glancing down at Hal's hospital intake form, Phan and Pratt read that he is a six-year-old asthmatic who has been admitted to the hospital after struggling to breathe for nearly two days. They quickly come up with a plan: they will give him oxygen, check his vital signs, make sure that he gets x-rays and blood tests to determine if he's suffering from a respiratory infection, and administer a medication to open up his airways. In the meantime, they will continue to speak soothingly, hoping to ease his anxiety. It's exactly what they've been taught to do.

They know all the protocols, but what no one could have prepared them for is how difficult nursing can be when a child is crying, complaining, and peppering you with questions the whole time.

"What is *that*?" Hal asks at one point, when he sees Phan coming toward him with an air mask.

"It's just oxygen to make you feel better," she whispers.

"What's *oxygen*?"

"It's in the air we breathe."

"But I don't even want to be here anymore!" he protests, squirming to avoid her touch. He's unhappy, and he's not going to make this easy.

A few years ago, aspiring nurses or physicians would have had to wait until their clinical rotations to have an experience as intense as this. Today, however, with the availability of highly realistic medical training robots like Hal — whose silicone body mimics a wide variety of disease symptoms and can be hooked up to medical monitoring equipment — even first-semester students are able to hone their skills in simulated hospital settings.

"It's one thing to read about asthma in a textbook and quite another to treat someone who is frightened and confused," says Annie Chan '15NRS, a licensed nurse practitioner who, on a recent Friday afternoon, was controlling Hal from behind a one-way mirror in a mock examination room at the simulation center. "We're helping students bridge that gap, from the very first month they arrive here."

For decades, nursing and medical students have used simple plastic manikins to practice inserting needles, suturing wounds, and administering CPR. But with a new generation of advanced medical robots now on the market, teaching hospitals are increasingly running simulation exercises to immerse students in high-pressure situations where they must think critically and make complex decisions in real time.

"When I was a student, back in the 1990s, our manikins didn't do much," says Kellie Bryant, an assistant professor of nursing who directs the simulation center. "They weren't particularly realistic, and they certainly weren't interactive. Now we have robots that cry, bleed, breathe, blink, urinate, respond to

By David J. Craig  
Photos by Jörg Meyer





medications, talk back to you, and make all sorts of facial expressions — it's eerily similar to treating a real person.”

Columbia Nursing's sixteen-thousand-square-foot Helene Fuld Health Trust Simulation Center, which occupies two whole floors of a new seven-story building on the University's medical campus in Washington Heights, is one of the largest and most advanced of its kind. It features fourteen mock hospital rooms, each furnished with all the equipment one would find in a real clinical setting: blood-pressure cuffs, thermometers, instruments for checking eyes and ears, oxygen supplies, disinfectants, EKG monitors, and laptop computers for maintaining electronic health records. Synthetic body parts abound, for practicing skills like drawing spinal fluid, performing tracheotomies, and inserting urinary catheters. And then there are the state-of-the-art robots. In addition to Hal, there is a female robot that delivers a baby and is prone to myriad postpartum complications, an infant robot that suffers everything from low blood sugar to respiratory distress, and an adult robot that is designed specifically to be sedated and anesthetized for surgery. These marvels of computer and mechanical engineering, built by companies like Gaumard Scientific, CAE Healthcare, and Laerdal Medical, can cost anywhere from \$40,000 to \$220,000.

The simulation exercises that take place at Columbia Nursing are run by faculty instructors who, in addition to manipulating the robots' vital signs and movements, can control their speech by talking into a computer that alters their voice. They record their students'



Chris Bustamante and Katie Chen, both master's degree students, listen for signs of lung congestion.



Nursing professor Kellie Bryant observes the students from behind a one-way mirror.





“Now we have robots that cry, bleed, breathe, blink, urinate, respond to medications, [and] talk back to you.”

At left, students oversee the birth of a four-pound plastic baby. Jenna Wetzel, below, a doctoral student in the nurse-midwifery program, would later describe the experience as “amazing and a little nerve-racking.”







Students in the school's nurse-anesthesia program prepare to sedate a robot for surgery.



The robot's breathing, heart rate, and neurological activity are monitored to make sure he is receiving an appropriate amount of anesthetic. "If you don't give him enough, he'll wake up in the middle of the surgery, which is unpleasant for everyone," says the instructor.

performance on video so that they can later review and critique it.

"You can throw all sorts of complications into a scenario by tweaking a robot's pulse, respiration rate, and other vitals as you go," says Bryant. "It's incredibly dynamic."

The exercises often incorporate role-playing, as teaching assistants take turns pretending to be patients' family members. This can add a messy interpersonal dimension to what is already a tense situation; one team of students was recently evaluated for their response to overhearing Hal's parents discuss who should step out to buy cigarettes.

"So the challenge there is: how do you talk to them about smoke being a trigger for asthma without undermining them in front of their child or making them feel judged?" says Bryant. "At the same time, the students are still juggling a million clinical things happening. It's a lot to handle."

The advantage of simulation training, educators say, is that it provides a safe place for students to make mistakes, ask questions, and reflect on their strengths and weaknesses. They note that in the past, when young nurses and doctors learned most of their clinical skills during a residency, they tended to downplay the gaps in their knowledge for fear of frightening patients or being blamed for medical errors that might occur. In a mock examination room, on the other hand, the worst thing that can happen when a robot gets a botched IV line, urine catheter, or tracheotomy is that it has to have one of its replaceable body parts swapped out before the next student takes a crack.

"I tell my students that whatever happens in the simulation center stays in



the simulation center — it's Vegas rules," says Chan. "We embrace the mistakes, because every mistake that happens in this place is one that probably won't be committed by that student again."

Bryant says that simulation training became popular in medical and nursing schools after 1999, when a report by the Institute of Medicine (now the National Academy of Medicine) revealed that medical errors are a leading cause of death in the US. Since then, research has shown that medical simulation can improve patient safety.

"One study found that when nurses and doctors used simulation exercises to practice treating children who experience cardiac arrest, survival rates for the condition increased from 33 percent to nearly 50 percent," Bryant says.

For students, the benefits of simulation can be summed up in one word: experience. "There are so many aspects of this work that you can't learn in a classroom," says Katie Chen, a master's degree student. "Like, how do you translate medical terminology into everyday language without sounding patronizing? How do you communicate with someone who's fading in and out of consciousness? How do you efficiently update other nurses about a patient's condition when your shift ends? It's just practice, practice, practice."

And when a student has mastered one challenge, Hal the robot boy is ready with another. Next time he could be suffering from anaphylactic shock, appendicitis, or any of dozens of other conditions. He always makes a full recovery. Just don't expect him to be a model patient. 🐞



A synthetic wrist with fake blood pulsing through a plastic artery helps students perfect their needle skills.



Students discuss their performance following a simulation exercise.



# Losing at Monopoly

Tim Wu, the Julius Silver Professor of Law, Science, and Technology at Columbia Law School, argues that big pharma, big banks, and big tech are not only bad for the economy: they also undermine democracy. Here the expert who coined the term “net neutrality” explains why we need greater enforcement of antitrust laws.

By Sally Lee



**Your latest book, *The Curse of Bigness: Antitrust in the New Gilded Age*, got a ton of press because it criticized big tech and called for the breakup of Facebook. Can you outline your argument?**

The premise of the book is that the US has become reluctant to enforce antitrust laws to their fullest extent and that, after forty years of allowing the unrestricted growth of certain industries, we are facing the consequences of excessive corporate power. As for Facebook, many of its acquisitions were, I suggest, in violation of the law. It bought its most dangerous main competitors, Instagram and WhatsApp, and should be dissolved.

**Were you surprised by the reaction to the book?**

Yes. I wouldn't say that the word “antitrust,” at least in this century, is one that usually makes people's hearts beat with excitement. But then again, trusts and antitrust were once central to American politics. There were entire political parties organized around antitrust. The notion that power should be limited so

that no person or institution can enjoy unaccountable influence is at the very root of our democracy.

**Can you give us a brief history of trusts?**

In the late nineteenth century there was a movement to reorganize the US economy into trusts, or monopolies. Proponents of trusts believed the economy should be centralized, free from government interference, and run by “great men,” like J. P. Morgan and John D. Rockefeller. But the rising power of trusts, and the income inequalities they created, caused some concern, which led to the passage of the first antitrust law, the Sherman Act of 1890. That law was broad and wasn't really enforced, so I would say the true trustbusting tradition starts in 1901 with Theodore Roosevelt. He became president after the assassination of William McKinley, and he abruptly took the country in a very different economic direction. Within a year of his assuming the presidency, he filed suit against J. P. Morgan to prevent a merger that would have created a single



western railroad. Roosevelt wanted to demonstrate the power of the federal government over a corporation and prove that the people were in charge. The case was close but, in the end, he won 5-4 in the Supreme Court and profoundly changed the course of American history.

Roosevelt then went after John D. Rockefeller and broke up the monopoly of the Standard Oil Company. In many ways, he was like the sheriff riding into town to protect the little guy. Since then we've had other people take up the anti-trust mantle, including Taft — Roosevelt's successor — and Assistant Attorney General Thurman Arnold, who was an aggressive trustbuster at the height of the Great Depression. Most recently we had Joel Klein '67CC, '10HON, who was the lead prosecutor in the antitrust case against Microsoft in the 1990s. But it's been twenty years since there's been a case of real consequence. It's a powerful tool of American policy that we've lost.

**Many think of antitrust laws as a way to protect consumers. You consider them essential to a functioning democracy.**

Absolutely. One of the goals of my book is to restore political and social understanding of the intent of the antitrust laws and to reinforce the idea that extreme corporate concentration is not only a threat to the economy but to the founding ideas of the American republic. One of the heroes of this book is Supreme Court justice Louis Brandeis, who, as a lawyer in the 1890s, saw the evils of monopolies and railed against the effect of what he called "excessive bigness" on small-business owners. He had a distinct vision for the economy, one rooted in his belief that America is the land of opportunity for the little guy, a place where everyone gets a fair shake. He saw the fight against the trust movement as a battle for the country's democratic soul.

Brandeis prompts us to think about what kind of country we want to live in and what kind of environment we want our government to provide for its citizens. I think those questions



Tim Wu

are more relevant than ever. Today we have massive income inequality, with the top 1 percent earning 23.8 percent of the national income and controlling 38.6 percent of the national wealth. I don't think it's the only contributor, but it stands to reason that industry concentration, with its greater shareholder returns and higher pay for executives, only widens the income gap. The workers' lack of bargaining power in these industries is another issue. Many people face the reality of being poorer than their parents. They're angry because they feel left behind. There's a general consensus that the extremist politics of our time, in the United States and around the globe, is tied to this sense of economic discontent.

**And there's historical precedent for your concerns about extremism.**

There is. I think the history of the 1930s and the example of Italy, Germany, and Japan should not be forgotten. Economic dissatisfaction creates dangerous opportunities for political extremism. In the face of financial crisis, Germany turned to the Nazi Party, and German monopolists and industrialists played an important role in consolidating the power of Adolf Hitler and his hold over the German state.

**“The notion that power should be limited so that no person or institution can enjoy unaccountable influence is at the very root of our democracy.”**



### **So should we consider ourselves warned?**

I hesitate before comparing President Trump to the dictators of the thirties, but there's no question that we are in a similar time. Trump rode a wave of economic dissatisfaction and anti-corporate populism to the presidency. He promised to make the country great again, to fight enemies foreign and domestic. In power he has shown a different stripe. He's erratic, random, and personal, which doesn't make him the greatest candidate to be a trustbuster.

### **In your book you say Facebook has managed to string together sixty-seven unchallenged acquisitions, Amazon ninety-one, and Google 214 (a few of which had conditions). Why do these companies get a pass when it comes to buyouts?**

I think we are just coming to the end of a period in which many felt tech could do no wrong. Tech companies' business models did look different from those of, say, the cement industry, and so there was a feeling that they should be exempt from the normal rules. This rosy view of the industry, along with a fear that government interference in new technologies might kill the golden goose, motivated about ten years of softer treatment of tech both in the United States and in Europe.

### **Are other industries enjoying this laissez-faire economic climate in a way that concerns you?**

Yes, absolutely. Tech has the highest visibility, but there are many industries that are far worse in my view. I can list four or five that have managed to consolidate in a way that I consider against the spirit of the antitrust laws. We have the US airline industry, where four companies control about 85 percent of traffic, leading to smaller seats, crowded planes, excessive fees, consumer abuse, you name it. We have the pharmaceutical industry, with its price-gouging practices. We have the global fertilizer and chemical industry, which has been allowed to merge down to just a few actors, and we have cable

and telecom, where sixty-eight million Americans face a broadband monopolist. So many sectors have benefited.

### **Let's focus on broadband. The FCC repealed net-neutrality rules in 2018. Maybe you could remind us what's at stake.**

Net neutrality stands for the proposition that the broadband networks, arguably today's most important infrastructure, should be subject to basic rules ensuring fair competition. Without net neutrality, carriers like Comcast and Verizon could restrict content and possibly block, speed up, or slow down traffic to impede competitors and to increase profits through paid prioritization. I'm sort of astonished that the FCC has eviscerated even those basic rules. This is one of the ways the Trump administration has been so disappointing.

**“I once heard someone say that if a corporation were a person, it would be a sociopath.”**

### **Recently Bayer, a huge European company, acquired Monsanto, a huge US company. How do antitrust laws work in a global economy?**

I think this is one of the most pressing challenges for the law over the next decade. Right now, the laws are not global: they're national or, in the case of Europe, regional. I don't see an easy answer. I think we have to figure something out or risk antitrust becoming a race to the bottom. There's no doubt that this is the fight of our times.

### **Senator John Sherman, the author of the Sherman Antitrust Act of 1890, said, “The law of selfishness,**

### **uncontrolled by competition, compels [the trust] to disregard the interest of the consumer.” Must big business, by its nature, be bad?**

Well, it's designed to put its own interests over human interests, to grow like a cancer, and to never die. I once heard someone say that if a corporation were a person, it would be a sociopath. Which brings us to the real question: who is this country for? For humans or these artificial entities?

### **And sometimes antitrust action is good for business, yes?**

The old has to make way for the new. The breakup of the Bell System monopoly in the 1980s might have created chaos in the short term, but it did kickstart innovation. Without it we might not have gotten modems and home computing and the Internet revolution. And government scrutiny of IBM in the 1970s helped accelerate the personal-computing industry and the birth of independent software. I'd also say that Microsoft is a much more humanistic company than it once was, because it was policed by the government in the 1990s and went through a process of maturation. That's another benefit of antitrust actions: they play an important role in reasserting that people matter and people are in charge.

### **You're a former adviser to the FTC, you were on President Obama's National Economic Council, and you ran for lieutenant governor of New York in 2014. Do you have another political run in your future?**

Let me think how to answer that. (*Laughs.*) I have no immediate plans to run for any office, but I do think that this is a time when academics should be engaged in the public discourse. It's also an important time for those in the academy, particularly in law and economics, to carefully examine our own work over the last forty years and ask whether we have made some serious mistakes. The academy plays a significant role in influencing elite opinion, and it can have a profound effect on the public good. ♣





***At some point in your life,  
you have to take what  
you've built up and share  
it in meaningful ways."***

—PHILLIP SMITH '61CC, '69GSAPP and  
DOUG THOMPSON '70GSAPP,  
1754 SOCIETY MEMBERS



THE 1754 SOCIETY  
COLUMBIA UNIVERSITY

## A gift to honor what brought them together

Architects Phillip Smith and Doug Thompson met as students at Columbia, sparking a partnership in life and in work that flourishes to this day.

In 2016, they included a gift in their wills to Columbia for scholarships at the Graduate School of Architecture, Planning, and Preservation. They then chose to activate their gift early to begin seeing the impact during their lifetimes.

**What will your gifts make possible?** Contact the Office of Gift Planning at 800-338-3294 or [gift.planning@columbia.edu](mailto:gift.planning@columbia.edu) to learn more about giving through your will and other creative ways to support Columbia.



# EXPLORATIONS

## FRONTIERS OF RESEARCH AND DISCOVERY

Columbia Engineering dean Mary Boyce, at front left, and Governor Andrew Cuomo, at far right, lead an inspection of New York City's 14th Street tunnel.



## Engineers avert L train “apocalypse”

It was going to be one of the worst-ever disruptions to New York City's subway system: for fifteen months beginning in April, the L train, which carries a quarter of a million riders between Brooklyn and Manhattan every day, would shut down completely. Transit officials said the closure was necessary to make major repairs to the 14th Street tunnel, which carries the L train beneath the East River. Brooklynites for whom the train is a commuter lifeline called it the “L-pocalypse.”

And then, in early December, New York governor Andrew Cuomo got in touch with the deans of Columbia's and Cornell's engineering schools and invited them to review the renovation plans drawn up by the state's Metropolitan Transportation Authority (MTA), with an eye toward finding a more expedient solution.

“He said that he wanted someone from the outside to come in and take a fresh look to make sure that the MTA's plan was absolutely the best one possible, or to see if there was another, better way to rehabilitate the tunnel,” says Mary Boyce, dean of Columbia

Engineering. “In particular, he was interested to know if the tunnel's shutdown could be shortened or perhaps avoided altogether — although he didn't seem particularly hopeful about the latter being achievable.”

For the next three weeks, Boyce, together with Cornell engineering dean Lance Collins and a number of their schools' top faculty members, spent hundreds of hours scrutinizing the MTA's plans. They pored over stacks of tunnel blueprints, demolition and construction proposals, and safety and environmental-impact assessments. They interviewed dozens of transit officials and private contractors working on the project; they climbed down into the 14th Street tunnel to inspect the damage firsthand; and they studied the designs of newer subway systems in London, Riyadh, Singapore, and Hong Kong.

By the end of December, the professors had come up with a new strategy for fixing the tunnel, which had been damaged by flooding during Hurricane Sandy in 2012. And their solution would drastically reduce the amount of work required, allowing the L train to continue operating normally on weekdays,



with only minor adjustments to its nighttime and weekend schedules. Their key insight was that a series of narrow concrete platforms that run alongside the tracks in the tunnel, which function both as emergency walkways and as protective encasements for power and communication cables, did not, as the MTA had assumed, need to be entirely demolished and rebuilt. Rather, the professors determined that ultrasound equipment could distinguish between those platform sections that had been irreparably damaged by the floodwaters and needed rebuilding and those that were still structurally sound or could be made so by reinforcing them with ultra-strong fiberglass. Furthermore, they said that the MTA didn't need to remove

old electrical cables from the platforms and weave new ones back in, as it had planned to do. Instead, the old cables could simply be abandoned and new ones hung on the tunnel's walls.

As an insurance policy against future degradation, the Columbia and Cornell professors also proposed installing fiber-optic sensors on the concrete platforms to detect any structural problems that might arise; mounting lidar, or light-detection, sensors on L train cars to spot any obstructions ahead; and installing submarine-style doors at both ends of the tunnel to prevent flooding.

On January 3, the academic team, which included Columbia civil-engineering chair George Deodatis '87SEAS, electrical-engineering chair Peter Kinget, and civil-

engineering professor Andrew Smyth, joined Cuomo and other state officials at a press conference where the governor announced that the MTA had accepted the professors' recommendations.

"No L-pocalypse," attested MTA chairman Fernando Ferrer. "Instead, we'll conduct all repairs on nights and weekends and will only need to close one tube at a time for repairs, allowing the second tube to run trains in both directions."

Cuomo praised the academics' strategy, predicting that it might one day be used to shore up other subway tunnels, in New York City and beyond. "This is really a unique design," he said. "It could be a national model, because it is a totally different way to reconstruct a tunnel. It's faster, it's cheaper, it's better."

Boyce later said that her team's eleventh-hour intervention to avert what could have been a major transportation nightmare for the city exemplified what engineering is all about: the coming together of people with diverse technical expertise to generate novel solutions to problems.

"I think one of the reasons we were able to find a better approach is that some of us hadn't actually worked on subway tunnels before," she said. "So we didn't have any preconceived notions about what would or wouldn't work. We utilized proven technologies from lots of different contexts and combined them in new and effective ways. In the end, we hope that we've helped position New York City as a leader in infrastructure maintenance, restoration, and overall innovation."



## The great rain robbery

A drought that has been punishing the American West for the past two decades is among the worst dry spells there in 1,200 years, and it's been made 38 percent more severe by global warming, finds Columbia climatologist Park Williams. He says that as climate change increasingly spurs extreme droughts, the region can expect even more wildfires, invasions of destructive bark beetles, and shortages of drinking water. Pictured at left is Lake Mead, on the Nevada-Arizona border, where water levels have dropped more than one hundred feet since 2000.



# Let's talk about sex

High-school students who are taught to communicate with their peers about sex are less likely to be sexually assaulted in college, a new study finds. Led by John Santelli, a professor of population and family health at the Mailman School of Public Health, the study is based on a confidential survey of 1,671 Columbia and Barnard students and in-depth interviews with 150 more. It found that when high schoolers are taught how to decline unwanted sexual advances — a form of sex education known as refusal-skills training — they are half as likely to be assaulted in college compared to students whose sex education is limited to issues of birth control and STD prevention or those who receive no sex education at all.

Currently, just twenty-four states require sex-education programming of any kind. Meanwhile, the Trump administration has taken steps to roll back sex-education programs of the sort that the Columbia researchers found prevent sexual assaults, instructing public schools to prioritize abstinence-only education over programs that it says “normalize” teenage sex.

“Our research shows that we need to start sexuality education earlier,” says Santelli, whose study appears in the journal *PLOS One*. “We need a life-course approach to sexual-assault prevention, which means teaching young people about healthy and unhealthy sexual relationships before they get to college.”

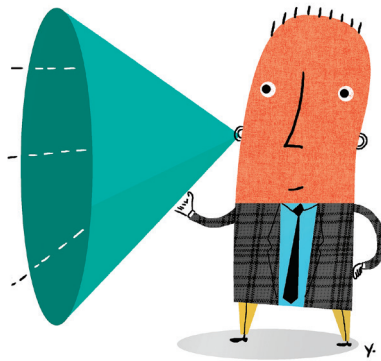
## How Congress misreads public opinion

It has often been said that Congress is out of touch with the American public, but a new paper by Columbia political scientist Alexander Hertel-Fernandez provides evidence that the criticism is warranted. It shows that senior congressional aides who help set their offices’ legislative agendas have wildly inaccurate perceptions of their constituents’ views.

Hertel-Fernandez, along with political scientists Matto Mildenerger and Leah C. Stokes ’09SIPA of the University of California, Santa Barbara, surveyed the chiefs of staff and legislative directors of ninety-one congressional offices. They asked the staffers to estimate the amount of public support in their districts for five policy proposals: repealing Obamacare, raising the federal minimum wage to twelve dollars, requiring background checks for gun sales, regulating carbon dioxide as a pollutant, and investing \$300 billion in infrastructure improvements. They then compared the aides’ responses to actual polling data.

The researchers found that aides to both Republican and Democratic members of Congress overestimate voters’ conservatism. On the whole, the Republican staffers performed worse, estimating that public support for the conservative position on each of the five policy propos-

als was anywhere from 20 to 49 percent higher than it really was; the Democrats overshot by 5 to 11 percent. (Democrats underestimated the public’s conservatism on only one issue, assuming, on average, that support for Obamacare was 24 percent higher than it was.)



The study also provides an explanation for the staffers’ misperceptions, revealing that those who report meeting more frequently with corporate interest groups have the most skewed views of citizens’ opinions and priorities. In fact, the researchers learned that congressional aides routinely rely on information received from special-interest groups to help them gauge public opinion, since there is a dearth of district-level data on voters’ attitudes

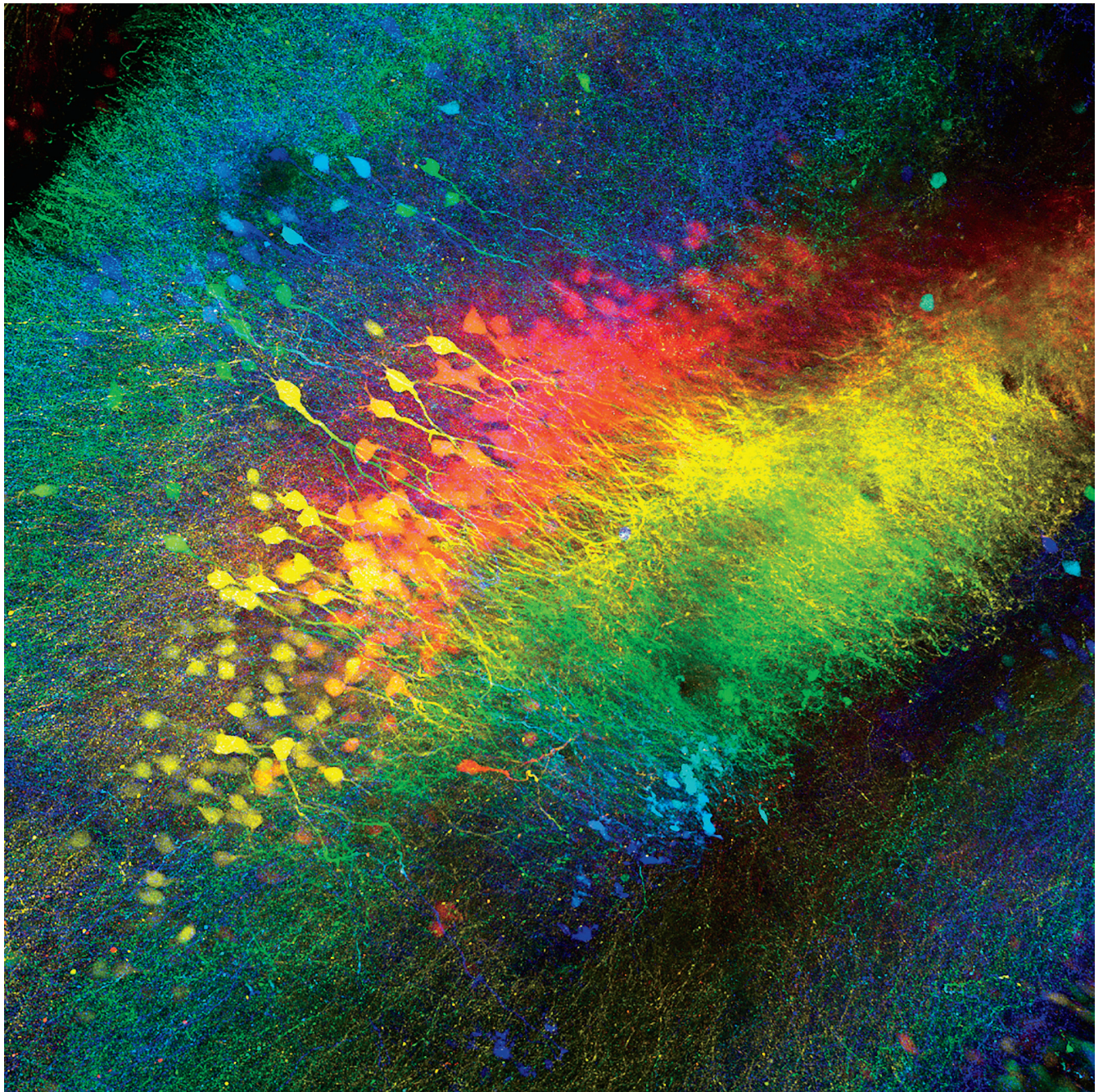
toward specific legislative proposals. (Republicans favor pro-business groups; Democrats favor labor unions and social-advocacy organizations.)

“To get good district-level numbers, we had to conduct pretty sophisticated statistical analyses of national polling data, and that’s something that’s too time-consuming and expensive for congressional offices to do regularly,” says Hertel-Fernandez, an assistant professor at the School of International and Public Affairs. “Lobbyists, knowing that congressional staffers are looking for shortcuts to understanding their constituents’ views, step in to provide them with information that purports to help.”

Hertel-Fernandez hopes that his team’s findings, which were published in a recent issue of the *American Political Science Review*, will motivate members of the public to do more to ensure that their voices are heard. He notes that congressional staffers do tally the telephone calls, e-mails, and letters they receive from constituents and present them to their bosses when making policy recommendations.

“When ordinary citizens don’t communicate directly to members of Congress,” Hertel-Fernandez says, “special-interest groups hold sway.”





**ARE YOU THREATENING ME?** This arresting image created in the lab of Steven A. Siegelbaum, the chair of Columbia's neuroscience department and a principal investigator at the Zuckerman Institute, shows a mouse's brain cells in an area of the hippocampus called CA2. Siegelbaum and his colleagues have discovered that CA2 plays a role in social memory, or the ability of individuals to remember encounters with others, and in aggressive behavior toward strangers. They suspect that manipulating CA2 activity could help people with psychiatric disorders such as schizophrenia and autism.





Thousands of mothers and children starved during the Hunger Winter.

### Dutch famine of 1944 provides window into natural selection

In the fall of 1944, as Dutch citizens began to rise up against their Nazi occupiers, German forces tried to quell the unrest by blockading cities and cutting off food shipments. By the time the Netherlands was liberated the following May, some twenty thousand people had died of starvation.

Those who survived the famine, known as the Hunger Winter, have been the focus of numerous studies led by Mailman School epidemiologist L. H. Lumey '88PH over the past quarter century. A Dutch-born scientist, Lumey is an expert on the long-term public-health effects of severe food shortages. By analyzing the medical records and genomes of thousands of his aging countrymen, he has made some major discoveries, showing, for example, that children born during the Dutch famine were more susceptible to diabetes and obesity as adults.

Now, in a new paper in the journal *Cell Reports*, Lumey sheds light on a biological mechanism behind this phenomenon, revealing that naturally occurring variations in how our genomes are programmed in the womb gave some babies conceived during the Hunger Winter a survival advantage, only to later harm them.

"We know that the famine caused many, many miscarriages, and we can see now that the babies who survived have distinct patterns of gene expression," says Lumey, who conducted the research with Dutch and Swedish colleagues. He hypothesizes that the babies' genetic profiles might have given them slow metabolisms, thus enabling them to thrive on few calories. "Later on, in times of plenty, this would contribute to weight problems and more diabetes."

Lumey's discovery has surprised many public-health researchers, since previous studies have shown that malnutrition during pregnancy can inflict lasting damage on infants, leading to a wide array of health problems in adulthood. But the wave of obesity and diabetes seen among survivors of the Dutch famine, Lumey argues, is simply the result of natural selection, as people predisposed to needing little food survived the famine in greater numbers and now are overrepresented in the general population.

"We don't dispute that adverse conditions in the womb can have long-term health effects," he says. "But to assess the true impact, scientists should also consider natural selection."

### Spot a tick? Snap a pic.

Lyme disease has been reported in unexpected places over the past few years, with many Americans contracting the tick-borne illness in densely populated suburban areas and even in some cities, including New York.

What's causing the disease to spread, and what can be done to stop it?

To find answers, a group of Columbia researchers is turning to ordinary citizens, by creating the Tick App, a free smartphone application that asks people to document where and when they spot ticks and allows them to upload photos of the blood-thirsty arachnids. The researchers say that this information will enable them to map in unprecedented detail where people are encountering dangerous tick species and thus better understand any ecological factors driving up rates of Lyme disease, whose prevalence has more than doubled since 2000.

"Once we identify an area where lots of people are seeing ticks, we'll look at what changes have been occurring in the local environment, as well as how people might be using the land differently than in the past," says Maria Diuk-Wasser, a Columbia associate professor of ecology, evolution, and environmental biology,



HISTORY AND ART COLLECTION / ALAMY



who developed the Tick App in collaboration with ecologists at the University of Wisconsin–Madison. “This should tell us why tick exposures are increasing, which is important to know for designing effective disease-prevention efforts.”

Users of the Tick App who submit photos of ticks they see in the wild will receive feedback from entomologists about whether the species are dangerous and how to protect themselves.

Scientists already know that warming temperatures are leading deer ticks, which are the main vector for Lyme disease, to migrate out of their traditional habitats in northeastern and midwestern woodlands. They suspect that in some regions a loss of biodiversity is allowing tick-carrying vermin like mice, chipmunks, and raccoons to thrive.

In other areas, human encroachment into previously forested land is exposing more people to tick bites. The relative influence of these factors on rates of infection is unknown.

“Today, most of what we know about human–tick interactions is based on telephone surveys,” says Diuk-Wasser. “And you can’t collect enough data that way to get very good geographical specificity. At best, you might be able to determine the relative number of ticks in one county versus another.”

Diuk-Wasser and her colleagues hope to paint a much more detailed picture of Lyme-disease risk, identifying specific towns, neighborhoods, and even parks where large numbers of ticks are present. They say that location data, combined with information that app users share about their outdoor activities, could help local health authorities prevent outbreaks.

“One of the big questions we want to answer is, what are people typically doing when they come across ticks? Are they hiking in the woods? Walking their dog in a park? Or simply mowing their lawn?” says Maria del Pilar Fernández, a Columbia postdoctoral researcher working on the project. “This can provide clues about what kinds of control methods are needed.”

*To learn more, visit [thetickapp.org](http://thetickapp.org).*



PHOTO: FLIN / SHUTTERSOCK

## STUDY HALL RESEARCH BRIEFS

**Stop that superbug** Big-data researchers Sen Pei and Jeffrey Shaman '03GSAS, both of the Mailman School of Public Health, have developed a computer model that could help to control outbreaks of the antibiotic-resistant infection MRSA by revealing the hidden dynamics of how the disease is transmitted throughout populations.

**Confidentially speaking** Most teenagers in the US never see their doctors without their parents in the room, which may make them reluctant to discuss sensitive topics such as sexual activity or drug use, according to research by Stephanie Grilo '13CC, a doctoral candidate at the Mailman School of Public Health.

**Brain-cancer breakthrough** Although immunotherapy, which boosts the body's natural defense system, has to date proved ineffective against brain cancers, a new study led by Columbia medical researchers Anna Lasorella and Antonio Iavarone finds that certain brain cancers caused by a hereditary condition called neurofibromatosis type 1, or NF1, may be vulnerable to the treatment strategy; clinical trials are now being planned.

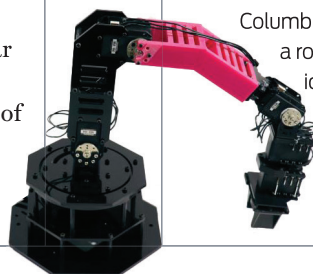
**Gone in a flash** A strange burst of light observed in deep space by NASA telescopes last summer was probably a supernova, or a dying star collapsing in on itself, according to a research team that includes Columbia astronomer Brian Metzger. The scientists say that the stellar implosion, named AT2018cow, is the first ever witnessed in real time.

**He squirms, she squiggles** A team of researchers led by Columbia biologist Oliver Hobert has identified a group of genes that induce subtle differences in male and female roundworms' brains, which, in turn, affect how they crawl. They say the discovery opens up new questions about whether behavioral differences between men and women are hardwired into our brains.

**Give your butt a break** Middle-aged and older people who spend several hours a day sitting down can reduce their risk of early death by as much as 35 percent by exercising moderately to vigorously for thirty minutes a day, or by 17 percent simply by taking a half-hour leisurely walk, according to research by Keith Diaz, a Columbia assistant professor of behavioral medicine.

**This mission is too important to jeopardize, Dave**

Columbia engineers led by Hod Lipson have created a robotic arm that can figure out its own physical capabilities and teach itself to perform simple tasks like picking up a ball. They say the breakthrough is a major step toward building self-aware machines.





# NETWORK

YOUR ALUMNI  
CONNECTION



## Eater's Digest

**L**inYee Yuan '02CC knows that the title of her magazine, *Mold*, isn't exactly a crowd pleaser. It's unusual, even off-putting. And that's exactly how she likes it. "I wanted it to be very clear that this publication is not going to be full of recipes or photos of perfect-looking dishes," she says. "Mainstream magazines treat food as a commodity, or as a luxury. That's the opposite of what I wanted to achieve with *Mold*."

Rather, *Mold* is focused on the future of food, covering innovative ideas from the design and tech worlds that have the potential to change the way we eat. In the most recent issue, which is organized around the theme of waste, she highlights designers who are using food byproducts to create new materials, like a bioplastic made entirely of artichokes that will be used to package fruits and vegetables. Another article features a startup that has created a plant-based coating that delays spoilage in produce, literally using waste to reduce future waste.

There's plenty of fodder for foodies, including a report from the fermentation lab at the legendary Copenhagen restaurant Noma. But these articles are less concerned with gourmet fare than with the creative ways the proprietors are finding to be responsible food producers. At Noma, for example, fermentation experts

talk about how their job "often begins in the garbage bin." They use the scraps that might be discarded in another kitchen and turn them into vinegars, pickles, and other condiments.

The ethos of respecting food was ingrained in Yuan from the time she was a child growing up in Houston. "No one talked about it in environmental or even explicitly economic terms, but I was taught that food was not to be squandered," she says. Yuan's mother was a dietitian and her father an amateur gardener and fisherman. "We were eating seasonally and locally before it was cool," she says.

At Columbia, Yuan majored in Asian-American studies and also interned at *Harper's Bazaar* and Asian Avenue, a very early social-networking site. After a short stint teaching in Asia, Yuan landed her dream job at the *Fader*, a magazine covering music, style, and culture. "Working there showed me that magazines have the potential not only to comment on but to change society," she says.

From there, Yuan bounced around — working for a streetwear company, then at a magazine devoted to Asian-American culture, and even running her own barbecue pit at a Brooklyn flea market — before she was hired in 2010 as an editor at a design website called Core77. "Working there was basically a crash course in industrial design,"



she says. Through Core77, Yuan started attending design conventions and was inspired by several projects on food design — everything from refrigerators that alert you when your food is about to spoil to edible food packaging made from seaweed.

Yuan had already been thinking about starting her own website devoted to food design when in 2012 she heard a statistic that stopped her in her tracks. “The UN released a report saying that if we continue to produce and consume food the way we do now, we’ll essentially run out by 2030.” Yuan says that the terrifying prediction gave her magazine an organizing principle. “There was this huge and obvious problem, and it seemed like no one was looking to the design world to solve it,” she says.

Though Yuan had initially conceived of *Mold* as a website, she realized that there was value in the print medium. In 2017, she launched a Kickstarter campaign to help her fund six biannual issues. She raised more than \$35,000, which allowed her to print five thousand copies of each issue and to hire a freelance designer, though she remains the only full-time staff member.

“In industrial design, a mold is an object that gives things a new form. In food production, mold is an agent for change — it’s how we get things like cheese. We turn what’s old into something fortifying and delicious,” Yuan says. “I think my magazine does the same thing, except with ideas.”

— *Rebecca Shapiro*

## ASK AN ALUM: THE SCIENCE OF SLEEP

**Tzivia Gover '96SOA** is a writer, mindfulness expert, and dream therapist who directs the Institute for Dream Studies, an online training program in dream analysis.

### **COLUMBIA MAGAZINE: Can you explain your work?**

**TZIVIA GOVER:** I offer classes, workshops, and one-on-one sessions that help people reconnect with their sleep experiences in an active, conscious way. Understanding our dreams can have a positive impact on our health, happiness, and relationships.

### **CM: How, exactly?**

**TG:** Our lives are often run by subconscious urges and beliefs, which affect our mental health on a daily basis. Dreams can uncover these beliefs and give us fresh insights into dealing with people and situations. Dream work can be a practical short-term therapy for everything from dealing with grief to navigating transi-

tions, such as divorce or job changes, to healing from posttraumatic stress.

### **CM: Are dream archetypes real? For example, if you dream about being naked in public, does it mean you must be insecure?**

**TG:** Unfortunately, that’s a common misconception. There’s no reliable codebook when it comes to dream interpretation. We can’t say, “A chair means this; a bird means that.” That doesn’t work, because everyone has their own unique experiences.

### **CM: Isn’t sleep supposed to be a time to rest, not a time to fix problems?**

**TG:** People see sleep as “doing nothing,” which is funny, because we’re learning more and more how important sleep is for our health, for the building of memory, and for learning. In fact, the brain is very active while we’re asleep. But we go around thinking that sleep is just this big void at the end of our day. It’s the opposite. It’s such a productive, beautiful, and rich time. — *Julia Joy*



**LION IN THE SUBWAY** A new series of glass mosaics in the 167th Street station on the B and D lines honors famed Bronxites, including Audre Lorde '60LS, the poet, writer, and lesbian feminist activist. A crusader against racism, sexism, and homophobia, Lorde, who died of cancer in 1992 at age fifty-eight, called poetry “part of my weaponry.”





## Game Changer

Marcellus Wiley '97CC on life after football

When Marcellus Wiley '97CC was a senior in high school, he had to make a decision that he knew would shape the trajectory of his life. As a star athlete and

California All-Conference standout in both track and football, he had scholarship offers from some of the country's top collegiate sports programs. But Wiley was also an A student and

a member of the National Honor Society ("I was even a national typing champion," he says. "Eighty-two words per minute!"). An acceptance letter from Columbia College sat on top of his pile.

"I thought very hard about going to one of those football factories, the schools churning out professional players," Wiley says. "I mean, let's face it: Columbia doesn't exactly have a yellow-brick road to the NFL."

The stakes were high for Wiley. He grew up in Compton, California, a city notorious for gang violence. His first concussion came not from football but from teenagers jumping him on the playground when he was in elementary school. He was lucky to have supportive, present parents who encouraged his interest in athletics, but money was tight, and he says his family bought most of their groceries with food stamps.

"Like other athletes from the inner city, I knew that playing professionally could change my family's circumstances," he says. "But I also knew that the average NFL career only lasts three years.

I needed a degree that was going to work for me when I was done playing football."

Wiley's football career ended up lasting significantly longer than most — he spent ten seasons in the NFL and was twice named one of the league's top fifty players. Since he retired from the Jacksonville Jaguars in 2006, he has become a successful television sports commentator and author. For eleven years, Wiley cohosted ESPN's *SportsNation* and the network's radio show *Afternoons with Marcellus and Travis*. In 2018, he left ESPN and joined Fox Sports as cohost of the daily sports talk show *Speak for Yourself*. "I've had a career that I didn't even know how to dream about when I was a kid," he says.

This past October, Wiley released his memoir, *Never Shut Up*, which chronicles his unconventional path to the NFL and how his sociology degree from Columbia set him aside from his peers in the league. The book is also an unflinching look at the darker side of professional athletics. In 2014, Wiley added his name to a lawsuit that accused NFL



RED SAVANNAH

VILLAS

ITALY • FRANCE • SPAIN • GREECE • CARIBBEAN

The ultimate portfolio of hand-picked vacation rental homes.

+1 855 468 5555

redsavannah.com



Wiley plays for the Lions on November 12, 1994.

TOP: TOMMY GARCIA; BOTTOM: COURTESY OF COLUMBIA UNIVERSITY ATHLETICS



teams of illegally providing narcotics and other controlled substances to players, in the hopes of keeping them on the field through injuries. Wiley, like thousands of other players, was left battling an addiction to painkillers long after he stopped playing.

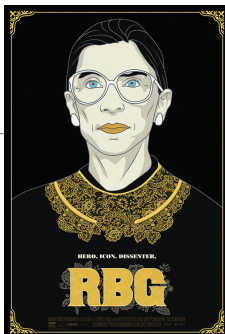
“People always ask me if I hope that my three-year-old son will play football like I did. That’s definitely not my first choice,” Wiley says. “And if he gravitates there, I want him to understand that it comes with a price.”

Wiley has devoted significant time and money to education and philanthropy. He runs a charitable organization, Project Transition, which provides leadership training to teens in underserved communities, and works as an ambassador for several other organizations devoted to similar causes.

Recently, Wiley also partnered with Columbia’s School of Professional Studies to develop Sports Industry Essentials, an online certificate program designed to help people launch careers in sports management. Wiley established a scholarship fund for the program, which he hopes will help expand access to people from places like Compton.

“So many people dream about being a professional athlete,” Wiley says. “That’s not always realistic, but there are other ways into the industry. I had the foresight when I was eighteen to understand what a Columbia degree could do for me. Now I’m able to extend that opportunity to other people.”

— Rebecca Shapiro



## 8 Documentaries to Add to Your Streaming Queue

(All with Columbians in the credits)

**RBG** Directed and produced by J-school professors Julie Cohen '89JRN and Betsy West, executive-produced by Amy Entelis '79JRN This documentary about Ruth Bader Ginsburg '59LAW, '94HON was an unexpected box-office hit before it grabbed Oscar nominations for best documentary feature and best original song. **Stream on: Hulu, Amazon, Google Play, YouTube, iTunes**

**SHIRKERS** Directed by Sandi Tan '00SOA, produced by Jessica Levin '02SOA In 1992, a teenager set out to make a cult-classic road flick, only to have the footage stolen by her collaborator. Sandi Tan revisits her youth in Singapore and the trauma of that creative loss, but in the end it's her attempts to fathom the motives of the mysterious thief that prove the most compelling. **Stream on: Netflix**

**WILD WILD COUNTRY** Produced by Juliana Lembi '17SOA This docuseries about a controversial Indian free-love guru and his desire to establish a massive commune of followers in a tiny city in rural Oregon raises questions about cultism, tolerance, and the limits of religious freedom. **Stream on: Netflix**



**THREE IDENTICAL STRANGERS** Executive-produced by Amy Entelis '79JRN What happens when you separate identical triplets at birth? This incredible story of nature vs. nurture (and a nefarious adoption agency) chronicles the story of three long-lost brothers who reunite as adults and discover a disturbing secret about their past. **Stream on: Amazon, Google Play, YouTube, iTunes, Vudu**

**CRIME + PUNISHMENT** Produced by Ross Tuttle '00SIPA This acclaimed documentary centers on the “NYPD 12,” a group of predominantly Black and Latino police officers who fought illegal, racially discriminatory arrest quotas. **Stream on: Hulu**



**CHASING CORAL** Produced by Larissa Rhodes '14SOA In this visually striking film, a team of scientists and divers survey the perilous state of Earth's most diverse underwater ecosystems. **Stream on: Netflix**

**MAKING A MURDERER** Written, directed, and produced by Laura Ricciardi '07SOA and Moira Demos '96CC, '08SOA This true-crime series about a Wisconsin man who was freed from prison after serving eighteen years on a wrongful rape and murder conviction, only to be arrested for a second murder, sparked public outrage over the case's flawed investigations. Now the hit show is back for a second season to follow the continuing appeals in this complex case. **Stream on: Netflix**

**REMASTERED** Co-executive-produced by Stuart Sender '87JRN Notorious events in the lives of famous musicians take center stage in this series, with episodes dedicated to icons such as Bob Marley and Johnny Cash. Sender directs an episode about the 1975 Miami Showband killings in Northern Ireland, and Bent-Jorgen Perlmutt '07SOA directs an episode that introduces us to the 1970s Chilean activist and folk singer Víctor Jara. **Stream on: Netflix**

— Julia Joy





## Curating the Legend of Troy

Deniz Ünsal '04GSAS is a cultural anthropologist, a lecturer at the University of Victoria in British Columbia, and an expert in heritage and museum studies. She recently curated the permanent exhibitions of the Troy Museum in Turkey, which opened in October 2018. We asked her to tell us more about the treasures on display there and what they reveal about the five-thousand-year-old city immortalized in Homer's epic poem *The Iliad*.



The museum, which is within walking distance of the archaeological site of Troy in the northwestern province of Çanakkale, houses some two thousand artifacts. Troy is considered a major archaeological center, with a history of excavation dating back 150 years. I've been working on the exhibits for more than five years, using objects that have been sourced from other museums in Turkey or repatriated from collections around the world.



During the late Bronze Age in the 1300s BC, Troy was a rich and busy city at the crossroads of bustling trade routes. The variety of burial objects found in nearby Beşik Bay, including urns and other ceramics, indicates that the graves belonged to people of different cultures. The Bronze Age objects are my favorite artifacts in the museum — they're crude but interesting, because they offer clues about life thousands of years ago.



Of particular interest is a collection of gold jewelry from approximately 2400 BC. The items were discovered in the late nineteenth century by archaeologist Heinrich Schliemann, who smuggled many of them out of Turkey and into Germany. Most of the treasures disappeared during World War II and resurfaced in the 1990s in Moscow, where they still reside. The Troy Museum has an assortment of jewelry that remained in Turkey after Schliemann's excavation, in addition to twenty-four pieces that were returned by the University of Pennsylvania in 2012.



This larger-than-life statue is of the Roman emperor Hadrian, who visited the city in AD 124 and commissioned new public works, including an aqueduct.

TOP: PINAR GEDIKOZER; CENTER/LEFT: MURAT GERMEN; ALL OTHERS: EMRE DORTER



## NEWSMAKERS

● **William Barr '71CC, '79GSAS** was confirmed as US attorney general in February. This will be Barr's second time in the job — he also served from 1991 to 1993, during the George H. W. Bush administration. Afterward, Barr spent fourteen years as executive vice president and general counsel of Verizon before going into private practice.

● Six Columbia filmmakers, writers, and directors were nominated for Academy Awards this year. **Nicole Holofcener '88SOA**, a cowriter of *Can You Ever Forgive Me?*, was nominated for best adapted screenplay. *Green Book*, which was cowritten and directed by **Peter Farrelly '86SOA**, was nominated for five awards, including best picture. *If Beale Street Could Talk*, produced by **Dede Gardner '90CC**, was nominated for three awards. *Ralph Breaks the Internet*, codirected and cowritten by **Phil Johnston '04SOA**, was nominated for best animated feature. And *RBG*, directed by Columbia Journalism School professors **Julie Cohen '89JRN** and **Betsy West** and executive-produced by **Amy Entelis '79JRN** was nominated for best documentary feature and best original song (see our list of Columbia documentaries to stream on page 51).

● **Robert Kraft '63CC** won the 2019 Genesis Prize — often called the “Jewish Nobel” — which recognizes professional achievement as well as commitment to Jewish values and Israel. Kraft, a prominent philanthropist and businessman, is the owner of the New England Patriots. Kraft says he will use the \$1 million award “to fight anti-Semitism, attempts to delegitimize Israel, and other forms of prejudice.”

● **Barbara Lagoa '92LAW** was named to the Florida Supreme Court, becoming its first Hispanic female justice. Lagoa was also the first Cuban-American woman to serve on Miami's court of appeals, and she previously worked on several high-profile cases as an attorney, including the Elián González custody case in 2000.

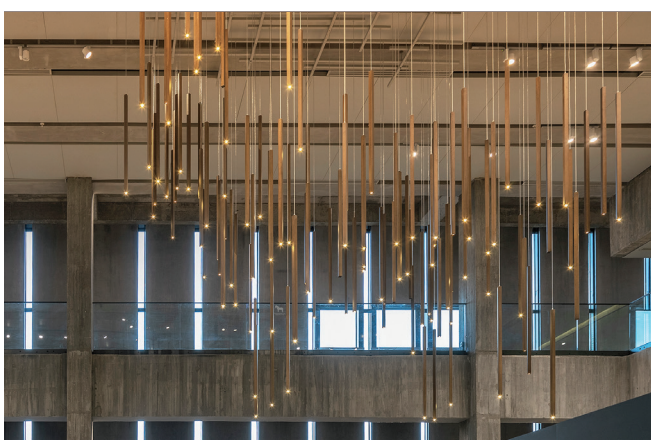
● Entrepreneurs **David Parker '04SEAS** and **Joanna Parker '05CC** successfully pitched their kid-friendly meal-delivery service Yumble on the ABC reality series *Shark Tank*. The company got a \$500,000 investment from TV personality Bethenny Frankel.



One of the museum's most famous artifacts is the Polyxena sarcophagus, from the sixth century BC. It depicts the mythological scene of the sacrifice of Polyxena, the daughter of King Priam, at the end of the Trojan War. You can see warriors holding her down as one of them cuts her throat. The sarcophagus is so heavy that it had to be carried in by crane during the museum's construction, before the walls were built.



A bronze seal inscribed with Luwian hieroglyphics is the only known example of writing from the late Bronze Age in Troy. It was found in 1995 and is believed to have belonged to a scribe.



There is — so far — no material evidence of the wooden “Trojan horse” from *The Iliad*. But it is the first thing that comes to mind when one thinks of Troy. To acknowledge this, a seemingly abstract wooden light installation hanging from the ceiling of the top floor of the museum reveals the shape of a horse from two vantage points.





Farah Jasmine Griffin

### UNIVERSITY CREATES DEPARTMENT OF AFRICAN AMERICAN AND AFRICAN DIASPORA STUDIES

Columbia recently established its first academic department dedicated to African-American studies. Farah Jasmine Griffin, a professor of English and comparative literature and an expert on African-American culture, history, and politics, has been named the inaugural chair.

The University has long offered courses in African-American studies through its Institute for Research in African-American Studies, which administers bachelor's and master's degree programs in the subject. But the new African American and African Diaspora Studies Department will have more autonomy to hire professors and grant tenure, and greater influence over the University's intellectual agenda.

"We're institutionalizing a lot of work that was already being done in the field of African-American studies here in the form of a depart-

ment, because departments have the most power at universities, and the most longevity," says Griffin.

The new department has a core of eight faculty members who were already affiliated with the Institute for Research in African-American Studies and who have joint appointments in departments such as history, sociology, philosophy, music, anthropology, religion, and English. Expanding their ranks, Griffin says, is among her first priorities.

"In particular, we would like to bring in more academics with expertise studying the African diaspora, or peoples of African descent in the Caribbean, Latin America, Europe, and other places, in addition to the United States," Griffin says. "We're also looking at creating new positions in the humanities and perhaps bringing an economist to the department."

Beyond that, Griffin is developing a proposal to

create Columbia's first PhD program in African-American studies. "Right now, our master's program is basically preparing our students to get doctorates elsewhere," she says.

With the new department in place, Griffin says that the Institute for Research in African-American Studies, which was founded in 1993 by the late Manning Marable and which Griffin also directs, will focus on building bridges between scholarship and public life by developing conferences, symposia, and exhibitions. "One of our plans is to build public programming around a multi-year celebration of the Harlem Renaissance 'New Negro' movement of the 1920s, because so much of the institute's identity is its connection to Harlem," she says.

By bringing a fresh approach to the study of Black history and culture, Griffin hopes that the new department will inspire Columbia students to become engaged in social-justice issues both in the US and around the world.

"Columbia has a deep commitment to creating just societies, and African-American and African-diaspora studies have always been at the forefront of pursuing questions like: What does a just society look like? And what has life been like for people who haven't experienced our country as a just society?" Griffin says. "We need to understand our history — both its ugly parts and its potential — to achieve a vision of America that might not be predominant right now."



## CALLAMARD LEADS INQUIRY INTO SAUDI JOURNALIST'S DEATH

**A**gnès Callamard, a Columbia human-rights scholar who is also the United Nations special rapporteur on extrajudicial, summary, or arbitrary executions, has launched an independent international investigation into the death of Saudi journalist and US resident Jamal Khashoggi.

Khashoggi, a highly respected political commentator whose writings in the *Washington Post* and other publications frequently criticized the Saudi government, was killed at the Saudi Arabian consulate in Istanbul on October 2, 2018. Saudi officials have acknowledged that secret agents from their country murdered him, but they insist that the agents went rogue.

Callamard says that her investigation aims to determine “the nature and the extent of states’ and individuals’ responsibilities” for the killing and to “assess the steps taken by governments to address and respond to” it. Her team will issue a report to the UN Human Rights Council in June.

Since 2014, Callamard has directed Columbia’s Global Freedom of Expression project, which promotes free speech around the world.



Agnès Callamard



A new museum in downtown Beirut will feature dozens of balconies for exhibiting artwork outdoors.

## GSAPP DEAN TAPPED TO DESIGN BEIRUT MUSEUM OF ART

**A**male Andraos, the dean of Columbia’s Graduate School of Architecture, Planning, and Preservation and a prominent Lebanese-born architect, has been chosen to design a new museum in downtown Beirut. The Beirut Museum of Art will house a permanent collection of modern and contemporary artwork from Lebanon and the Lebanese diaspora and is scheduled to open in 2023. The design proposed by WORKac, an architectural firm led by Andraos and her husband, Dan Wood ’92GSAPP, calls for a six-story concrete and stone building with a network of balconies and open-air galleries enveloping its façade. It will be built on land that was once the dividing line between Muslim and Christian areas in the Lebanese civil war. Andraos says she hopes the museum will contribute to Beirut’s “creative and resilient life as well as to its optimism and confidence in a united future.”

## CRAIGSLIST FOUNDER GIVES \$10M FOR NEW CENTER OF JOURNALISM ETHICS

**C**olumbia Journalism School has announced plans to establish the Craig Newmark Center for Journalism Ethics and Security, which will advance journalism-ethics education in the digital age.

The center is made possible by a \$10 million endowment gift from Craig Newmark Philanthropies, an organization led by the creator of the classified-advertisements website Craigslist. The endowment will also create a new faculty position, the Craig Newmark Professorship, whose recipient will serve as the center’s director.

The center will support research on journalistic practices and prepare students and experienced journalists to address ethical and security dilemmas faced by reporters in modern newsrooms. In particular, it will strengthen the school’s ethics curriculum and expand instruction in topics such as digital and physical security, algorithmic bias, image manipulation, and the protection of sources in a high-surveillance era.

“At a time of disinformation campaigns and attacks on journalists online and offline, the center and faculty chair will send a powerful message and will bolster a free and ethical press that secures our democratic society,” says journalism dean Steve Coll.

The center is expected to collaborate with other institutions, including the Poynter Institute, a nonprofit journalism school based in St. Petersburg, Florida, which also received a \$5 million gift from Craig Newmark Philanthropies.

“It’s critical to modernize journalism ethics so that the industry keeps pace with the ever-changing digital landscape,” says Newmark, who is also a member of *Columbia Journalism Review’s* Board of Overseers. “Both Columbia Journalism School and Poynter are already helping journalists do just that, and with these gifts, I hope they’ll become the industry’s go-to resources for the challenges journalists face in a data-driven world.”





READY TO SPRING

With the smell of grass and leather in the air, the reigning Ivy League baseball champions, the Columbia Lions, under Coach Brett Boretti, are sharpening their claws and licking their chops — again. Winners of four Ivy League crowns in the past six years, the Lions defend their latest title in the Ivy League opener against Cornell on March 23. You can track the Lions on WKCR-FM 89.9 or WKCR.org.

A ROYAL PAIR

Queen Elizabeth II of the United Kingdom recently knighted two Columbia professors who are also British citizens: Alex Halliday, a geochemist and the director of the Earth Institute, and Simon Schama, a historian and University Professor.

Halliday, who has conducted pioneering research on the origins of our solar system, the evolution of Earth's oceans, and climate change, will attend an investiture ceremony at Buckingham Palace on May 9. Schama, the author of eighteen books on topics ranging from the French Revolution to the artist Rembrandt, was honored at a ceremony on February 5.



FENCERS REPEAT AS IVY CHAMPS

Columbia fencers skewered the competition at the Ivy League championship tournament once again this year, with the men's squad notching its sixth-straight league title and the women's squad its second in a row. College sophomore Sylvie Binder won the individual crown in the women's foil division and was one of nine Lions to receive All-Ivy honors, alongside Iman Blow, Nora Burke, Andrew Doddo, Sidarth Kumbala, Calvin Liang, Cedric Mecke, Sam Moelis, and Nolen Scruggs.

NAVABS GIVE \$6M FOR STUDENT INTERNSHIPS



Mary Kathryn and Alexander Navab

Columbia College has received a \$6 million gift from Alexander Navab '87CC and his wife, Mary Kathryn Navab, for a program that will fund student internships with a variety of nonprofit and for-profit organizations beginning this summer.

The Navab Fellowship Program will support forty full-time internships annually and cover travel and living expenses. The program will connect College students with alumni seeking student interns via the University's alumni network; it will be administered by the Center for Career Education. The aim of the program is to provide students equal access to highly competitive internships regardless of their financial circumstances.

A University Trustee since 2017, Alexander Navab is the founder and CEO of the private-investment firm Navab Holdings.

"Our goal with this fellowship program is to provide supplemental means for students who are interested in pursuing internships that truly interest them and help them make a real impact on society," he says.

TOP LEFT: CU ATHLETICS; TOP RIGHT: COURTESY OF ALEXANDER AND MARY KATHRYN NAVAB; BOTTOM: THE IVY LEAGUE





UP WITH ALUMNI

ON

**Linked**  **in**®

JOIN THE 53,000+ ALUMNI  
WAITING TO SHAKE YOUR HAND.

GET CONNECTED AT  
<https://cualu.ms/linkedin>



## How to Hide an Empire

By Daniel Immerwahr '02CC (Farrar, Straus and Giroux)

Early in *How to Hide an Empire*, historian Daniel Immerwahr '02CC shows us the “logo map” of the United States — the familiar representation of the forty-eight contiguous states. Never mind that the map snubs Alaska and Hawaii; what it never even hints at are the many overseas territories that, at their high-water mark (the end of World War II), were home to a staggering 135 million people and constituted a land mass equal to almost one-fifth that of the United States.

With its attenuated reach, the logo map affirms one of the cherished myths of American identity: that the world’s greatest democracy doesn’t “do” empire. Laying waste to this comforting notion, Immerwahr knits together dozens of disparate, often harrowing stories into a larger, eye-popping narrative of American imperialism; his exhaustive account of this hidden history is a revelation.

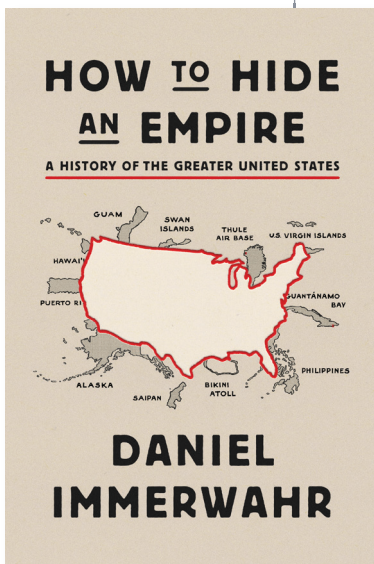
The urge to expand, of course, goes back to the country’s founding, although Immerwahr — a professor of history at Northwestern — points out that racism may have acted as a check on early expansionism. When, for example, the US military prevailed in the Mexican-American War, in 1848, many in Congress wanted to annex all of Mexico. In the end, the victor limited its spoils to the most northerly, least populated areas (including the current states of California, Nevada, and Utah) — “all the territory of value that we can get without taking the people,” as one newspaper editorialized. Or as John C. Calhoun, the pro-slavery senator from South Carolina, put it: “We have never dreamt of incorporating into our Union any but the Caucasian race.”

*All the territory without the people.* That, bluntly stated, was America’s preference, making the ninety-four uninhabited “guano islands” that the country began acquiring in the nineteenth century — for the express purpose of harvesting the bird droppings

there for fertilizer — nearly ideal possessions. Populated territories required harsher measures. Immerwahr’s most shocking accounts concern the territories the US acquired in 1898 — the Philippines, Puerto Rico, and Guam — after defeating Spain in what was dubbed the Spanish-American War, but which in fact began as a war of independence from Spain by those colonies. The Philippines in particular suffered deeply. Expecting independence after the Spanish were vanquished, this archipelago of more than seven thousand islands instead endured an American takeover that led to fourteen years of warfare, with more deaths than the Civil War, including the worst massacre by Americans in recorded history (the Battle of Bud Dajo, in which nearly one thousand Filipino Muslims were slaughtered). The country’s anguish, and American indifference to it, persisted into the mid-twentieth century: Immerwahr’s descriptions of how the Filipinos experienced World War II — caught between the Japanese occupiers and an American government much more focused on the war in Europe — are especially disturbing.

Puerto Rico, too, withstood one ordeal after another. The island’s uneasy relationship with the US mainland came into stark relief recently in the aftermath of 2017’s Hurricane Maria, but Immerwahr delves into earlier, uglier chapters, including a mind-blowing account of the deadly medical experiments performed on unwitting residents by Cornelius P. Rhoads, who went on to become a world-renowned cancer researcher. He also writes movingly about Pedro Albizu Campos, the Puerto Rican-born, Harvard-educated attorney who led a doomed fight for his homeland’s independence.

Immerwahr provides a riveting breakdown of the latest phase of American empire — the post-World War II era. With decolonization sweeping Africa and Asia, the optics of the world’s triumphant democracy holding on to its possessions would have been abysmal. So the four largest territories all got decolonized in some fashion: in 1946 the Philippines



received its independence; in 1952 Puerto Rico was granted what Immerwahr calls the “nebulous status” of commonwealth; and in 1959, Alaska and Hawaii became states.

Since the mid-twentieth century, the name of the game has been “domination without annexation.” America has aspired toward a global hegemony built on technological prowess, linguistic supremacy, and increased military presence. In Immerwahr’s telling, the military has been particularly crucial to the enterprise. The US strategy of establishing foreign military bases (at least eight hundred by 2019) has replaced the necessity and expense of building actual colonies.

Regrettably, pursuing this highly militarized, “pointillistic” empire has had some dire consequences for the US. The most dramatic of these is probably al-Qaeda’s “planes operation” in 2001, better known stateside as 9/11. “Your forces occupy our countries; you spread your military bases throughout them,” Osama bin Laden wrote in his message to Americans after the attacks. While there were other grievances on his list, “September 11 was, in large part, retaliation against the United States for its empire of bases,” Immerwahr concludes as the reader’s heart sinks.

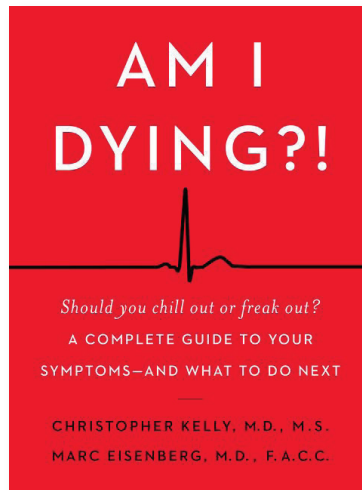
The US is routinely called out for its “original sins” of slavery and genocide (which Immerwahr duly notes). But as this essential book makes clear, there are many more sins yet to be reckoned with.

— Lorraine Glennon

**Bedbugs, in case you were wondering, “are about the size of Lincoln’s face on a penny.”**

# Am I Dying?!

By Christopher Kelly ’06CC, ’11PS, ’18PH and Marc Eisenberg ’91CC, ’95PS (William Morrow)



**S**o you’ve got a bellyache that won’t go away. Is it food poisoning? Acid reflux? Are you lactose intolerant? Or is it something more serious? Of course you could consult Dr. Google (type “stomach pain” into the search bar and reveal a mere 328 million results), but if you want expert advice without leaving your living room then this new book from two Columbia cardiologists is probably the better prescription.

Christopher Kelly ’06CC, ’11PS, ’18PH a senior clinical fellow at Columbia University Irving Medical Center, and his colleague Marc Eisenberg ’91CC, ’95PS, an associate professor of medicine, combine credentials with comedy to deliver a medical guidebook that is as entertaining as it is informative. When it comes to bellyaches, they’ll tell you when you should relax and “take a chill pill” and when it’s time to get to the ER. In other words: “Is this just a bad case of food poisoning that needs a few more hours to

work itself out? Or are you and your appendix enjoying your final evening together?”

The book, which covers about forty different symptoms, answers questions including, “Does that cut need stitches?” “When should you worry about chest pain?” and “What to do if you have ‘more gas than ExxonMobil.” A chapter on back pain opens, “If you’re a human not currently serving in Congress, you have a spine. And if you have a spine, you are almost certainly familiar with back pain.” On the subject of hair loss, the authors’ musings include, “Here’s one more reason to use protection: sexually transmitted infections can cause hair loss. Maybe its nature’s way of decreasing your sex appeal until your business is back in order.”

The guide is free of medical jargon. In fact, the doctors go out of their way to make information highly accessible: “The average adult body contains about five liters of blood, enough to fill nearly a dozen Snapple bottles.” Bedbugs, in case you were wondering, “are about the size of Lincoln’s face on a penny.”

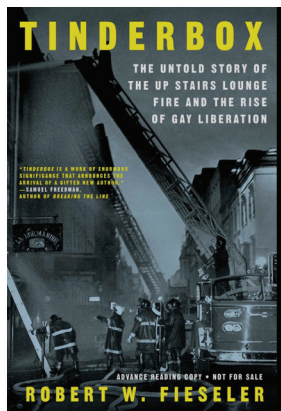
In 2019, publishing a symptom finder and medical guidebook may seem anachronistic, but Kelly and Eisenberg have reinvented the format, providing an important resource not only for health nuts, or hypochondriacs, but for everyone with a pulse. That pulse, incidentally “should be between 60 and 100 beats per minute ... though an extra or skipped beat every now and then is okay.”

— Sally Lee



# Tinderbox

By Robert W. Fieseler '13JRN (Liveright)



Few dared be out during the seventies. Try it and likely you'd lose your job, your family, and maybe your life. Even in New Orleans — where anything goes, supposedly — staying on the down low was best. But at least there was the Up Stairs Lounge: the ramshackle gay bar on the outskirts of the French Quarter, where “friends and lovers could exhale and be themselves,” writes journalist Robert W. Fieseler '13JRN, author of the exquisitely and exhaustively reported *Tinderbox*. “It was just the kind of neighborhood place that seemed to welcome all.”

Opening in 1970 on Halloween night with a jukebox and dancing license, the Up Stairs had “kind of a sweetness.” Hustling and drugs were forbidden. Impromptu sing-alongs commenced next to the baby grand. A super-sized copy of the notorious Burt Reynolds *Cosmopolitan* centerfold smirked from a wall. Red swathed the interior — red wallpaper, red carpet, red barstools. But the gaudy

decor belied a discreet exterior, says Fieseler: “The place was somewhat concealed, and only those in the know entered.” That included the polyester-clad gay doctors, lawyers, and politicians who climbed the saloon’s creaky steps to commingle with the drag queens and blue-collars. Surely a safe space — or so they thought.

Until the Sunday night of June 24, 1973: “Fire flew down the length of the bar in a backdraft that resounded like a cannon,” Fieseler writes. Thirty-two died. Arson was the cause. The author’s chronicle of the carnage is unsparing. “The floor became embers beneath them, burning through the soles of shoes,” he recounts. “Ceiling tiles dripped molten Styrofoam on their heads like napalm.” The only way to identify some of the bodies was by their jewelry and hotel-room keys. Eight of the survivors spoke to Fieseler; they recollect escaping a “holocaust” with only seconds to spare. Some found the hand of the lounge’s heroic bartender, Buddy Rasmussen, who led more than twenty patrons to safety. Others somehow stumbled out, badly burned: “Blinking, they screamed and gagged, alive with ashen faces, their clothing scorched and hair vanished.” A reader will feel the heat.

The fire made front-page news all over the world. (Almost none of the papers

would print the word “homosexual.”) But locals hardly seemed to care about the catastrophe. A joke about “flaming queens” tore through the city. Recalled one shopkeeper in the quarter: “Most of the people were glad ... the feeling was they had it coming.” The gay community, whipped and disorganized, remained silent.

Investigators, discovering the lounge was torched, soon found a suspect — a sexually conflicted drifter. He was never prosecuted. Instead, political expediency was honored, sensibilities were served; like the bodies of the dead, the trauma was buried. Within days, New Orleans was ready to move on. “Mass amnesia,” says Fieseler. “Like a veil dropped over the memory of a city.”

Nearly five decades would pass before Fieseler reclaimed the story. “As a queer person, I was hooked and obsessed,” he says. *Tinderbox*, his first

book, took four years to write and research. Until he started, he had never spent a day in New Orleans. Now he and his husband are moving there.

Nearly a half century after the fire, much has changed. Gay marriage — unthinkable in 1973 — is law. Yet Louisiana does not offer job protections to LGBTQ citizens; a homophobic boss can fire gay employees just because they’re gay. Even small progress, *Tinderbox* reports, is often achingly slow. In 2003 — after thirty years of struggle — the New Orleans LGBTQ community, no longer defeated and silent, succeeded in placing a bronze plaque at the site of the Up Stairs Lounge tragedy. The City of New Orleans cooperated. There for all to see are the thirty-two names of those who died in the fire. Passersby may leave flowers; many do. The fight is hardly over. But amidst the scent of bitter ashes, hope blossoms.

— Bill Retherford '14JRN



A survivor is led by firefighters out of the Up Stairs Lounge. He had been singing at the bar’s piano when the fire started.

## READING LIST

### New and noteworthy releases

**AMERICAN SPY** by Lauren Wilkinson '13SOA It's 1987 and Marie Mitchell is one of the few Black, female agents at the FBI. Plum assignments rarely come her way, but one day the CIA invites her to join an exciting new covert operation in West Africa. Sent to Burkina Faso, Mitchell is tasked with undermining the regime of the country's new Marxist leader, Thomas Sankara. Mitchell is drawn to the charismatic Sankara, but she has to stay focused because the assignment is also personal — the project's lead investigator could hold clues to the mysterious death of her sister. It's a searing, sophisticated debut novel, infused with complex racial politics and plenty of heart-stopping suspense.

**HONORABLE EXIT** by Thurston Clarke '72BUS Hubert van Es's iconic 1975 photograph of the fall of Saigon — a group of desperate people on a rooftop, lining up to escape on one of the last American helicopters — seems to symbolize US failure and shame. But historian Thurston Clarke contends that the image is actually one of American heroism. His inspiring new book tells the little-known story of the American soldiers, journalists, diplomats, and others who risked their lives helping more than 130,000 South Vietnamese citizens escape to US mili-

tary bases in Guam and the Philippines during the last days of the war.

**HARK** by Sam Lipsyte Hark Morner makes his living working the crowds at business seminars with empty spiels about boosting productivity. But then people start to take him seriously. After he develops a focusing technique he calls "Mental Archery," Morner becomes an accidental guru. His antidote to the stress, distraction, and overstimulation of our culture involves an absurd mix of yoga, mindfulness, and — amusingly — some actual archery. Lipsyte, a Columbia professor of writing, has cheeky prose and a sardonic wit, but he treats his characters with empathy and warmth.

**MORE THAN WORDS** by Jill Santopolo '03CC Jill Santopolo's first novel, *The Light We Lost*, about two Columbia students who meet on September 11, 2001, became a massive bestseller and was picked for Reese Witherspoon's book club. Now Santopolo is back with her second, and it's equally smart and romantic. Her protagonist, Nina, heir to a New York hotel empire, is forced to confront uncomfortable family secrets after the death of her father — secrets that make her second-guess her own personal relationships.

**THE WAR BEFORE THE WAR** by Andrew Delbanco In the century leading up to the Civil War, the issue



of fugitive slaves fleeing the South and seeking refuge in the North became increasingly divisive in the new republic. In addition to losing labor, Southern states worried that the runaways would expose the true injustices of slavery, contradicting the myths that they'd sought to perpetuate, and therefore further inciting Northern abolitionists. In his fascinating new book, Columbia American-studies professor Andrew Delbanco looks at how these brave fugitives played a major role in creating the cultural chasm that prompted the Civil War and eventually led to emancipation.

**AN ANONYMOUS GIRL** by Greer Hendricks '94JRN and Sarah Peckanen Jessica Farris, a struggling makeup artist, signs up to participate in a psychological study in exchange for a much-needed five hundred dollars. But the questions quickly get weird, and Farris finds herself at the mercy of the study's director, a mysterious doctor with ulterior motives. Hendricks and Peckanen, the authors of the

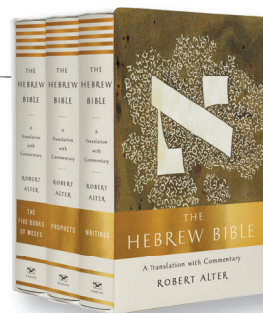
mega-best-selling thriller *The Wife Between Us*, once again subvert expectations and conventional narrative structure, making it impossible to know who to trust.

**THE FREE SPEECH CENTURY** edited by Lee C. Bollinger '71LAW, '02HON and Geoffrey R. Stone Though the right to free speech was written into the Constitution in 1791 it was for over a century seen more as an ideal than as enforceable law. That changed in 1919 with the seminal Supreme Court decision *Schenck v. United States*, which laid the groundwork for a society that Columbia President Lee C. Bollinger calls "the most speech protective of any nation on Earth." On the hundredth anniversary of the decision, Bollinger and University of Chicago law professor Geoffrey R. Stone present sixteen essays from fellow First Amendment scholars on the evolution of free speech over the last century and the challenges it faces in the modern era.



# A Feat of Biblical Proportions

After twenty-four years of labor, Robert Alter '57CC, a professor of comparative literature at UC Berkeley, has produced a 3,500-page translation of the Hebrew Bible



**Columbia Magazine:** What was the genesis, if you will, of this project?

**Robert Alter:** In the mid-1990s an editor from W. W. Norton approached me about doing one of those Norton Critical Editions on a section of the Hebrew Bible. I said I could provide some really neat material on the book of Genesis but that I didn't like the existing translations and would want to do my own. I figured it was a one-off, but it was well received, so I did a translation of the David story from the books of Samuel. One thing led to another, until I had done quite a few books of the Hebrew Bible. Four years ago I thought, "If I can get through the Prophets, I can actually do the whole ball of wax."

**CM:** What was wrong with the existing English translations?

**RA:** In the second half of the twentieth century there was a spate of translations by various ecclesiastical committees, and I concluded that they were all disasters. The scholars were bright people with degrees from Harvard and Oxford, but they had a tin ear for English. They ran roughshod over the poetry of the Hebrew text.

**CM:** Why did academia ignore the literary features of the Bible for so long?

**RA:** Traditionally, Jews and Christians thought of the Bible simply as divine revelation, so they looked at it for theological truths, moral instruction, and so on. And the academic enterprise, which began in early-nineteenth-century Germany, sought a scientific understanding of the Bible: analyzing the disparate components of the text, figuring out how it evolved, and deciphering difficult words by reference to other Semitic languages. That study is very important, but it's limiting.

**CM:** How does the 1611 King James Bible rate for fidelity to the Hebrew?

**RA:** Although readers associate the King James Bible with great poetry, it's more consistently faithful in the prose narrative. That's because it follows the Hebrew syntax of parallel clauses connected by "and," which is important in many ways. And because the King James translators were literalists, they reproduced the plain terms of the Hebrew writers. For example: "and the flood was forty days upon the earth"; "the ark went upon the face of the waters." You have the simple verbs "was" and "went" in that little report. That's part of the beauty and dignity of the Hebrew narrative. The moderns figured that was too simple. So they have the rain *pounding* or the ark *drifting* on the water, which suggests that Noah's ark was rudderless, though we're never told that.

**CM:** What are the King James Bible's shortcomings?

**RA:** In the poetry, some lines are just perfect, but others go out of rhythm: the translators weren't *listening* to the Hebrew; they were deciphering it.

They also overlooked the compactness of Hebrew poetry, which is key to its power. A passage of three words and six syllables in Hebrew becomes ten words and twenty syllables. Another problem is that many translation choices reflect a Christian view. For example, there's a Hebrew word, *yeshuah*, meaning "rescue" — getting someone out of a tight fix. In the King James Bible, it's translated as "salvation," which sends a different message: images of the sky opening up and angels descending.

**CM:** How did you become fluent in biblical Hebrew?

**RA:** I'd studied it as a kid growing up in Albany, and by the time I came to Columbia I had a good background. I was an English major, and I got a great education with brilliant teachers like art historian Meyer Schapiro '24CC, '35GSAS, '75HON and the literary critic F. W. Dupee. But I wanted to continue my Hebrew studies, so twice a week and on Sundays I went to the Jewish Theological Seminary to take courses in the Bible and Talmud with H. L. Ginsberg. That's where I got a really good handle on biblical Hebrew.

**CM:** Do you have any favorite biblical stories or passages?

**RA:** For poetry, the book of Job is astounding. For narrative, Genesis is wonderful, especially the patriarchal tales. The story of David is extraordinary in its study of a man as a political animal, and in following the evolution of a life from a beautiful and heroic young age to a doddering old age. You don't find this anywhere else in ancient literature. In Homer, nobody ages and changes in this way.

— Paul Hond

# CLASSIFIEDS

## PROFESSIONAL SERVICES

**BUSINESS ASSISTANCE P/T:** Billing, collections, bookkeeping, bank reconciliations, marketing. I'll help build your business foundation so YOU can build your business. Please call 212-239-6680 or e-mail [june@mindingyourbusiness.info](mailto:june@mindingyourbusiness.info).

**CAREER AND JOB-SEARCH COUNSELING:** Nada Beth Glick, MEd, EdD, Columbia grad. Experienced career counselor will guide you to a satisfying career path and successful job search. No situation is too difficult! To schedule an appointment, call 914-381-5992 or 914-646-6404, or e-mail [nadaglick@verizon.net](mailto:nadaglick@verizon.net).

**COLUMBIA JEWELRY:** Fine handmade cufflinks, pendants, pins, etc. Official designs. 917-416-6055. [CUJewelry.com](http://CUJewelry.com), [Etsy](https://www.etsy.com/shop/ColumbiaJewelry).

**CREATIVE GHOSTWRITER:** MFA 2000. [creativeghostwriter1@gmail.com](mailto:creativeghostwriter1@gmail.com).

**INTERNATIONAL CAREER EXPERT:** Judith Gerberg, MA, LMHC (quoted in *NY Times*, *WSJ*, *NPR*) built her reputation coaching highly educated individuals to find careers they love. See what she can do for you. 212-315-2322, [judith@gerberg.com](mailto:judith@gerberg.com), [gerberg.com](http://gerberg.com).

**MEDICAL-DECISION SUPPORT:** Expert, professional guidance on how to safely navigate the medical system to find the right and best care for anyone from the premature infant to the homebound senior who wants to age in place. Call Barbara Abruzzo, RN, BCPA, at 212-473-4157. [livingwellcarenavigation.com](http://livingwellcarenavigation.com).

**PERSONAL HISTORIAN:** Preserve your life story for family and friends in a beautiful keepsake book crafted by a published memoirist. [historian@carmitroslyn.com](mailto:historian@carmitroslyn.com), [carmitroslyn.com](http://carmitroslyn.com).

**PROFESSIONAL ORGANIZER:** Streamline your space, maximize your potential! I customize a plan from various organizational methodologies to help you consciously declutter. You will simplify, let go, and learn skills to stay organized. [ilana@ilanagabrielle.com](mailto:ilana@ilanagabrielle.com).

## EDUCATION PROGRAMS

**YALE WRITERS' WORKSHOP 2019:** Top teachers will motivate and help advance your work. Apply 1/22/19–3/15/19 for June. Admission limited, sample required. [summer.yale.edu/academics/yale-writers-workshop](http://summer.yale.edu/academics/yale-writers-workshop).

## REAL ESTATE

**BROOKLYN, NY:** Near museum/botanical garden. Share lease. 2BR furnished duplex with part-time alumnus. Doorman/first floor/terrace. \$2,000/month, available immediately. [wat2@mindspring.com](mailto:wat2@mindspring.com).

**IMAGINE** a 5BR, 3.5BA, 5,442-square-foot home on 6.6 wooded acres in a private Westchester setting for \$929,000! Guest/rental quarters, 3-car garage, pool. 4.3 miles to Metro-North train, excellent schools. Serious inquiries: [wordsmitt@erols.com](mailto:wordsmitt@erols.com) for info/photos.

**SPRING LAKE, NJ:** Ocean-view condo. Upscale, over-55 community. 1 bedroom, \$425,000. Call Deb MacArthur, 732-915-4011.

## VACATION RENTALS

**AMAGANSETT:** Shingle cottage, perfect writer's retreat, winter getaway. Walk to everything. [jsilin@optonline.net](mailto:jsilin@optonline.net).

**BERKSHIRES:** Spacious 2BR, 2BA condo in Lenox, MA. Walk to Tanglewood. All amenities. E-mail: [nlan11728@gmail.com](mailto:nlan11728@gmail.com).

**PAROS ISLAND, GREECE:** 5-bedroom/4-bath townhouse close to a great sandy beach with amazing views, including sunset and moon over ocean. Contact John, 732-332-8847, or [jkalafatides@yahoo.com](mailto:jkalafatides@yahoo.com).

**ROME:** Spacious, stylish, renovated apartment near St. John Lateran. Two double bedrooms, two baths, Wi-Fi, elevator. \$850/week. [lm603@columbia.edu](mailto:lm603@columbia.edu), 212-867-0489. [casacleme.com](http://casacleme.com).

**SCOTTISH HIGHLANDS:** Whisky & castles. Luxury vacation rental. [castleonthehill.co.uk](http://castleonthehill.co.uk).

**TUSCANY:** Gorgeous apartment in lovely hilltop village of Casole d'Elsa near Siena. 2BR, 1BA, sleeps 4–6. Beautifully appointed. Wi-Fi. Large eat-in kitchen, private garden overlooks 11th-century church. \$650–750/week. Columbia alum owner Lyn '90PH: 404-274-8287, [lyn.finelli@gmail.com](mailto:lyn.finelli@gmail.com), or see photos and details at [imagesoftuscany.com](http://imagesoftuscany.com).

## PERSONALS

**NYC MATCHMAKER** looking for eligible bachelors for attractive women clientele. Complimentary membership offer. Contact 212-877-5151, [fay@meaningfulconnections.com](mailto:fay@meaningfulconnections.com).

**PRETTY BRUNETTE,** Manhattan professional, seeks a guy, 55+, to do things in NYC. You are good company, thoughtful, funny, warm. [livingwellpartners@gmail.com](mailto:livingwellpartners@gmail.com).

WANT TO ADVERTISE IN OUR NEXT ISSUE?

• Contact: [jj2900@columbia.edu](mailto:jj2900@columbia.edu) • Rate: \$6 per word • Deadline: May 1, 2019



# RARE FINDS

## WHAT IS IT?

*Yoke thé* marionette,  
13 inches tall

## WHERE'S IT FROM?

Burma (Myanmar)

## WHERE CAN I FIND IT?

Rare Book and Manuscript  
Library; Dramatic Museum  
Realia, 1700–1966



## The World on a String

**W**hen he wasn't penetrating the genius of Sophocles, Shakespeare, and Molière, Brander Matthews 1871CC, 1873LAW liked to go slumming in the purlieu of magic, pantomime, and puppetry — "aspects of the theater rarely considered to be worthy of criticism," as he wrote in his 1916 volume *A Book about the Theater*.

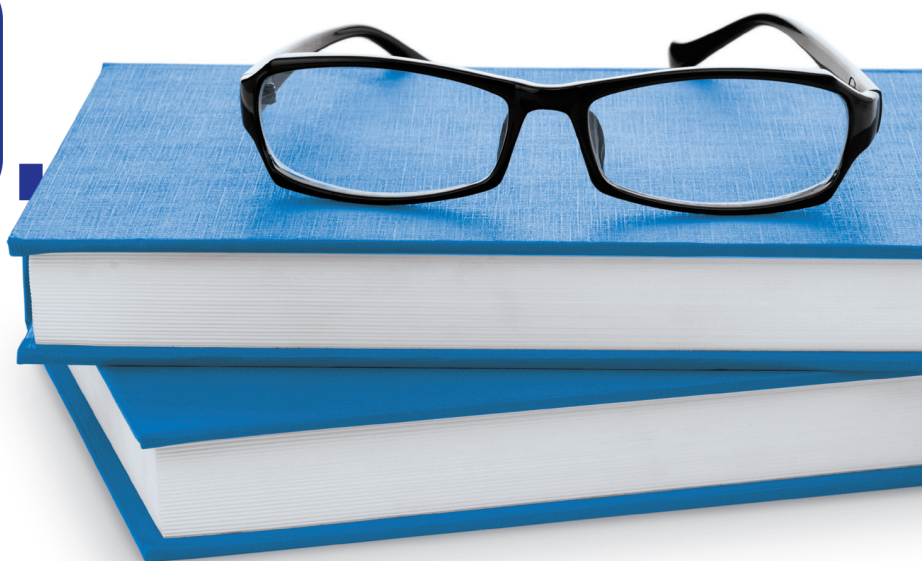
Matthews, who taught at Columbia for thirty-three years and was the first professor of dramatic literature in the US, saw artifacts as tools of instruction. In 1911 he created a "dramatic museum" at Columbia built around a collection of playbills, manuscripts, posters, masks, and the two types of doll-like entertainers, "both of which are carelessly called puppets in English, and marionettes in French." The first he described as "empty and flexible figures which are animated by the thumb and two fingers of the

performer," while the second are "manipulated by one or more performers overhead, who give life to these figures by jerking the various strings."

The collection, which was housed in Low Library until 1971, included hundreds of puppets and marionettes from Italy, Japan, Mexico, India, China, Turkey, Burma (Myanmar), and elsewhere. In Burma, marionette theater, or *yoke thé*, was a popular entertainment of the royal court in the eighteenth and nineteenth centuries. It dwindled after 1885, when Burma fell completely under the rule of the British Raj.

The marionette shown here was purchased in Singapore in 1926 by John Mulholland, who taught at Teachers College and later became a famous magician. Matthews, a skilled conjurer himself, retired from teaching in 1924. He died five years later, leaving his papers — and puppets — to Columbia. 🎭

# INVEST IN YOUR CLASSMATES. WE DO.



**FISSION  
VENTURES**

We are a private venture capital fund exclusively for Columbia alumni investing together in promising venture-backed companies founded or led by fellow alumni. If you are an accredited investor and looking for a smart, simple way to add VC to your portfolio, join us.

This year's fund is accepting new investors through April.

**LEARN MORE**

Visit [www.fissionventures.com/alumni](http://www.fissionventures.com/alumni)

Email [invest@fissionventures.com](mailto:invest@fissionventures.com)

Call **877-299-4537**

Each of the various funds of Fission Ventures is a different series of Launch Angels Funds, LLC, doing business as Alumni Ventures Group Funds (AVG Funds). Each of the Fission Funds involves a different investment portfolio and risk-return profile. The manager of each fund of Fission Ventures is Launch Angels Management Company, LLC, doing business as Alumni Ventures Group (AVG), a Massachusetts-based venture capital firm. AVG is a for-profit company that is not affiliated with, officially sanctioned or endorsed by Columbia University or any other school. This advertisement is for informational purposes only, and no offering of securities is made with this advertisement. Offers are made only pursuant to formal offering documents, which describe risks, terms, and other important information that must be considered before an investment decision is made. Past performance may not be indicative of future results. Different types of investments involve varying degrees of risk, and this fund involves substantial risk of loss, including loss of all capital invested. This advertisement is intended solely for accredited investors who accept the responsibility for conducting their own analysis of the investment and consulting with their professional advisors to receive personalized advice with respect to their analysis of this potential investment. Contact Rob Bibow at [Rob@FissionVentures.com](mailto:Rob@FissionVentures.com) with questions, or requests for additional information on AVG or this fund may be sent to [info@avgfunds.com](mailto:info@avgfunds.com).

**Fission Ventures is not affiliated with, officially sanctioned, or endorsed by Columbia University.**



“The Columbia Commitment is more than  
a commitment to the University.

It is a renewal of our bonds with the world  
and our shared future.”

— President Lee C. Bollinger

