

WINTER 2014-15

# COLUMBIA

MAGAZINE



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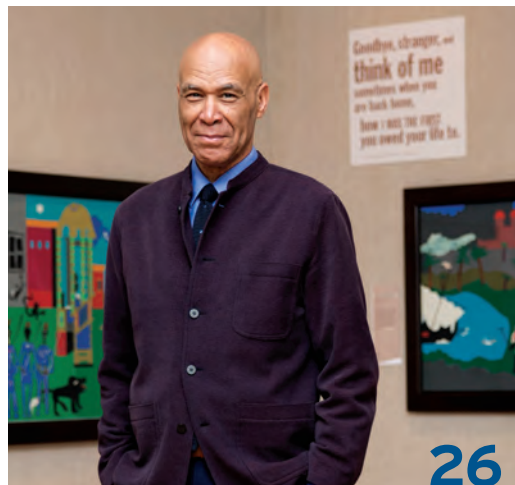
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## IN THIS ISSUE



**Katherine Dieckmann** is an associate professor of film at Columbia's School of the Arts. Her fourth feature as a writer-director is *Strange Weather*, starring Holly Hunter and shooting in 2015. Dieckmann has directed music videos for R.E.M., Wilco, Aimee Mann, and Vic Chesnutt. >> **Page 11**



**Richard Ford** is the Emmanuel Roman and Barrie Sardoff Roman Professor of the Humanities at Columbia. He is the author of four collections of stories and eight novels, including *Independence Day*, the first novel to win both the Pulitzer Prize and the PEN/Faulkner Award. >> **Page 60**

GRETA RYBUS



**Caleb Scharf** is the director of the Columbia Astrobiology Center and an adjunct associate professor of astronomy. He writes *Scientific American's Life, Unbounded* blog and is the author of several popular books on astronomy, including, most recently, *The Copernicus Complex*. >> **Page 34**



**Sudeep Sen** '89JRN is a poet, translator, artist, documentary-film director, and editor living in New Delhi and London. He has written, edited, and translated more than thirty books and chapbooks. >> **Page 38**



**Andrea Smith** '05DM is the director of the Lancaster Cleft Palate Clinic, in Lancaster, Pennsylvania, where she practices maxillofacial prosthodontics. She is one of only 350 maxillofacial prosthodontists in the world. >> **Page 13**

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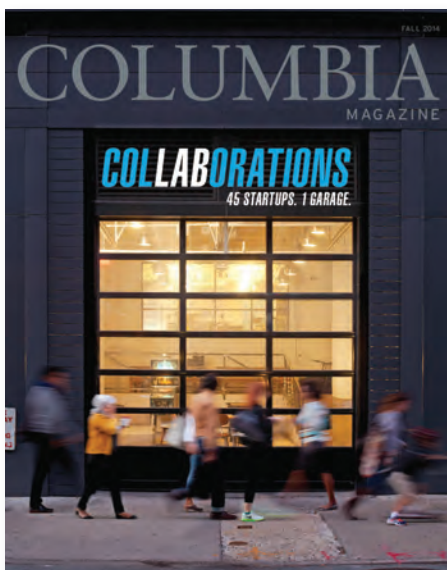
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# letters

## HEART SONGS

James McGirk's fine article on John Berryman '36CC ("Heavy Heart, Empty Heart," Fall 2014) reminded me of when I met the poet as a freshman at Columbia College in 1966. He came to Ferris Booth Hall and read his work to a group of forty students.

What I remember most was his discussion of being a rather unhappy undergraduate at Columbia who was not doing well with his grades. Things got so bad that he received a note from a dean that he should come to the dean's office to discuss his grades "at your earliest convenience." Berryman interpreted this phrase to mean when he had the time, if he had the time. Berryman said that he concluded he didn't have the time and never set up an appointment with the dean despite subsequent notes, all of which ended with "at your earliest convenience." Finally, the dean showed up at his dorm room, knocked on the door, and a meeting was scheduled, which he kept.

Berryman was a lively and humorous speaker. I was shocked when I learned he had taken his life six years later.

**George Baker '69CC, '73LAW**  
New Canaan, CT

I sent a copy of James McGirk's article to Peter W. Dowell, my Princeton college

roommate and a longtime professor of English at Emory University. Peter is bed-ridden and suffering from a number of disabilities, but he sent the following response and asked me to share it with you.

"One of my favorite memories of my graduate-school days at the University of Minnesota is the lecture John Berryman gave on figurative language to the freshman English course for which I was a teaching assistant. The course had hundreds of students, so the lecture was given in the huge auditorium where both the Minneapolis Symphony and the Metropolitan Opera performed in those late days of the 1950s. The lecture was given shortly after lunch and, as was not unusual, Berryman was slightly inebriated. He was articulate, but he couldn't seem to stay at the podium and stop weaving about. At one point he stumbled backward and disappeared into the giant stage curtain."

**Robert K. Hornby '63LAW**  
Stockton, NJ

In his fine article on the sad life of John Berryman, James McGirk makes only a passing reference to Columbia English professor Mark Van Doren '21GSAS, '60HON as helping Berryman with his studies. This is accurate: Van Doren insisted that Berry-

man do makeup work and encouraged him to graduate.

Not mentioned is the lifelong friendship between the two. Berryman wrote in the 1960s, "I have loved Mark Van Doren's poetry all my life, or for thirty years. He was the first modern poet I seriously read; and I have never recovered, or tried to recover." Referring to T. S. Eliot's and John Crowe Ransom's early praise of Van Doren's poetry, Berryman said, "It is delightful to join these high judges by saying that his very recent 'Dunce Songs' are beautiful, too. Beautiful and weird. Among his middle splendors are the violent 'Winter Tryst' and the pensive 'This Amber Sunstream,' but under his hand the needs and fears are the same. Like that's writing, man."

The teacher and the student never stopped a highly productive and creative friendship that began at Columbia in the 1930s.

**William Claire '58CC**  
Naples, FL

## CROSSING A LINE

The Primary Sources item "I Am Also a Black Man" (Fall 2014) quotes remarks made by outgoing US attorney general Eric Holder '73CC, '76LAW during his August 20, 2014, appearance in Ferguson, Missouri. In those quoted remarks, Holder

## LETTERS

projects his negative experience as a young, black federal prosecutor stopped by police in Georgetown onto the regrettable shooting incident in Ferguson this past summer. I would characterize Holder's personal comments about an incident from his own past during an ongoing investigation by local, state, and federal law-enforcement officials as unprofessional, prejudicial, and inappropriate for the US attorney general to make.

**William L. Robbins '88BUS**  
Los Angeles, CA

### COVER YOUR MOUTH

In his review of book-jacket designer Peter Mendelsund's *Cover* and *What We See When We Read*, Joshua Friedman quotes Columbia creative-writing professor Ben Marcus as saying of Mendelsund, "I was struck by how carefully he'd read [my] book. He fucking seemed to have *studied* it." I think that Marcus could have found a more suitable adverb than "fucking" to convey his meaning. Perhaps he is trying to relate to his students by being "hip."

**Robert C. Gamer '72GS**  
Franklin Lakes, NJ

### MINING THE PAST

Many thanks for the Fall 2014 issue of *Columbia Magazine*, with its 150th-anniversary article on the School of Mines, established in 1864 ("Miracle of the Mines," Finals). Accompanying the article is a photo showing the school's first

building of its own, a converted factory at Columbia's 49th Street campus. However, the view is not of 49th Street but of the south side of 50th Street. The camera is looking roughly westward from Fourth (now Park) Avenue, with its railroad tracks. At the extreme right of the photo is the north façade of what was then Columbia College's main building, the former headquarters of the New York Institution for the Instruction of the Deaf and Dumb, where the College had moved from Park Place in May of 1857. And who is the figure standing on the sidewalk in front of the School of Mines? The photo is somewhat blurry because of its relatively long exposure, but one wonders if it could perhaps be Charles F. Chandler, the founding dean of the School of Mines.

**Francis J. Sypher Jr. '63CC, '68GSAS**  
New York, NY

### ON SEXUAL ASSAULT

I doubt that many alums will bother to read Columbia's new policies to combat sexual violence on campus (News, Summer 2014), but those who value civil rights and due process would be quite concerned if they did.

What is prohibited conduct? The policy says, "For purposes of illustration, the following list sets forth examples of conduct that could constitute gender-based misconduct." We don't know what is gender-based misconduct, only what *could* be but perhaps

isn't. The first example is "Coercion for a date or a romantic or intimate relationship." Where does permissible persuasion become prohibited coercion, and how does one know where that line is?

As for due process, the parties may have attorneys or other advisers, but their counsel cannot question witnesses nor address the hearing board. Although it is not a criminal proceeding with the threat of loss of one's liberty, the potential sanctions, up to and including expulsion from the University, are hardly trivial and can be nearly as life-altering as a criminal conviction.

In its eagerness to demonstrate to the Department of Education that it is serious about sexual assault, the University risks riding roughshod over the civil rights of its members.

**Andrew Terhune '80BUS**  
Philadelphia, PA

*The University's new gender-based misconduct policy for students provides paragraph-long definitions for the following terms, among others: sexual assault, sexual harassment, sexual exploitation, gender-based harassment, stalking, domestic violence, dating violence, intimidation, retaliation, coercion, and consent. The full policy can be downloaded as a PDF or read online at [sexualrespect.columbia.edu](http://sexualrespect.columbia.edu). — Eds.*

After seeing my alma mater excoriated in the news for its management of campus sexual assault, I find myself wondering why everyone is ignoring one important factor and an easily available tool for dealing with it.

While college students may be adults in the eyes of the law, they are actually still young people who have yet to become fully adult. Research in neuroscience has shown that the human brain is not fully developed until the age of twenty-five — and that one of the last functions to mature is the capacity for good judgment. Further, recent research into attachment behaviors has shown that the separation-individuation process once believed to take place



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in early childhood actually continues into early adulthood.

Students need to take responsibility for their own behavior. But we need to acknowledge that they still need adult guidance. A joint study by Johns Hopkins University and the University of Maryland found that when parents limit their children's alcohol consumption in high school, those children are far less likely to drink excessively in college. The resistance to these ideas is not surprising, given the tendency to label any parental involvement in a student's life as overprotective "helicopter parenting." Yet these techniques can help students make a healthy transition to independence and adult functioning.

As a psychotherapist, I have found that college students who reach out to their parents for genuine, age-appropriate guidance are often better able to solve whatever problems have brought them into therapy than those who reject all parental contact. This has been true not only for young people who are dealing with potentially dangerous sexual behaviors and binge drinking, but also with eating disorders, addictions to gambling and pornography, depression, and anxiety. I know that it's asking a lot to expect colleges and universities to go against the popular tide of demanding full separation as part of the freshman entry fee. Yet who better than the purveyors of higher education to alter the very core of our teaching process?

**F. Diane Barth '73GS, '76SW**  
New York, NY

#### WHY WERE WE IN IRAQ?

I would like to address some of the points made by SIPA professor Jean-Marie Guéhenno about Operation Iraqi Freedom ("Define Intervention," Spring 2014).

First, he writes that Operation Iraqi Freedom was about "transforming the Middle East into a zone of peace and liberal democracy." That was not the reason for the intervention in Iraq. Rather, President Bush enforced American law — namely, Public Laws 102-1, 105-235, and 107-243 — to

**Key to Abbreviations:** Each of the following school-affiliation abbreviations refers to the respective school's current name; for example, GSAS — for Graduate School of Arts and Sciences — is used for alumni of the Graduate Faculties, which became GSAS in 1979. The only code not associated with a particular school is HON, which designates that person the recipient of an honorary degree from the University.

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

make Iraq compliant with the UN Security Council resolutions of the Gulf War ceasefire. After Operation Desert Fox in 1998, the last measure that could persuade Saddam was the threat of regime change. When the UN Monitoring, Verification, and Inspection Commission found "about 100 unresolved disarmament issues" in Saddam's "final opportunity" (UN Security Council Resolution 1441) to comply, Bush was compelled to follow through or else risk freeing an unreconstructed, noncompliant Saddam from constraint.

Second, he writes, besides self-defense, "the Security Council itself can make the decision to use force . . . Force may not be used in any other situation." In fact, Bush acted under UNSCR 678, which "authorizes Member States . . . to use all necessary means to uphold and implement resolution 660 (1990) and all subsequent relevant resolutions and to restore international peace

and security in the area." Before George W. Bush, Presidents George H. W. Bush and Bill Clinton acted under UNSCR 678 to enforce the resolutions with Desert Storm, the no-fly zones, and Operation Desert Fox.

Finally, he writes, "Saddam Hussein, awful as he was, was no Hitler." Saddam was awful enough to compel the Gulf War. Thereafter, Saddam's external threat was held in check only by an American-led "containment" that was collapsing. Inside Iraq, according to the UN Commission on Human Rights, Saddam was responsible for "systematic, widespread and extremely grave violations of human rights and of international humanitarian law by the Government of Iraq, resulting in an all-pervasive repression and oppression sustained by broad-based discrimination and widespread terror."

**Eric Chen '07GS**  
New York, NY

## PRIMARY SOURCES



**LA LESBIENNE** by David Altmejd '01SOA, on view at the Art Basel Miami Beach fair in December.

### A Is for Absence

*By Mark Strand, from his 1999 essay "A Poet's Alphabet." Strand was a US poet laureate, a Pulitzer Prize recipient, and a Columbia professor of English and comparative literature. He died on November 29, 2014.*

E is for endings, endings to poems, last words designed to release us back into our world with the momentary illusion that no harm has been done. They are various, and inscribe themselves in the ghostly aftermath of any work of art. Much of what we love about poems, regardless of their subject, is that they leave us with a sense of renewal, of more life. Life, on the other hand, prepares us for nothing, and leaves us nowhere to go. It stops.

### Noises Off

*By Rebecca Alexander '05PH, '05SW, from her 2014 memoir Not Fade Away (Gotham). Born with a rare genetic disorder called Usher syndrome type III, Alexander has been simultaneously losing her sight and her hearing since she was a child.*

Waves washing over my feet, Olive enthusiastically lapping up water in that insatiable way that dogs do. I wonder if I'd love these sounds as much if I hadn't lost them, but, because I have, I remember to appreciate the other ways that I experience things. Slipping into a hot bath, the steam rising around me as I sink in; walking out into the waves in Hawaii, the combined smell of flowers and suntan lotion mixed with salt. The icy water that I chug after my spin class. As much as I miss sounds, though, I have learned to love silence even more. When I think back on all of the noise I grew up with and how comfortable I was with sound, I am amazed at how significantly my circumstances and feelings about sound have changed. If I had a choice, I'd definitely choose to be deaf rather than blind.

COURTESY OF THE ANDREA ROSEN GALLERY



## What Not to Wear

By Heidi Julavits '96SOA, who teaches fiction writing at Columbia's School of the Arts, from the 2014 anthology *Women in Clothes* (Blue Rider Press), written by Julavits, Sheila Heti, Leanne Shapton, "& 639 others."

**OCCASION:** Funeral for a close family friend, rural New Hampshire, February. The bedroom floor displays the following tried and discarded items:

1. Liz Claiborne silk jumpsuit. The woman who died was sexy into her seventies. I want to look sexy in her honor, but also because I'll be seeing her favorite nephew at the service. I've had a crush on him since 1983, i.e., since the year this jumpsuit was produced. I believe she would be happy if I'd married him, so I might dress as though this is still a possibility (even though he and I are happily married to other people).
2. Sixties double-knit wool jersey dress (Karlana) with white leather trim and belt. Last time I wore it was to a wedding and the couple is now divorced.
3. Comme des Garçons black tulle skirt. Too bleak-girl-at-the-prom. Too like I'm trying to perform, before an audience, my sadness.
4. A Détacher kimono-sleeved jacket. I bought this a few years ago at a sample sale thinking, "I'll wear this a lot when I'm older." I guess I am not yet old enough.
5. Vintage B. Altman ankle-length knit wool dress. Also sixties. I wore this with Miu Miu nautical sandals to a literary awards ceremony. I did not win, but Uma Thurman checked me out approvingly and I took that as the greater honor.
6. Sixties French sailor pants. Fear I might look like an extra in Guy Maddin's "Sissy-Boy Slap-Party." Also, the funeral is in the mountains and nowhere near the sea. There will be enough cognitive dissonance with this woman now gone.
7. Another sixties knit wool dress (Cordon of Philadelphia). Black and brown stripes. I feel bouncy like Snoopy whenever I put it on. This is either the best or the worst thing to wear when one plans to cry a lot.

**WORN:** Agnès B. dress, black cardigan, long wool socks, white pleather ankle boots.



COURTESY OF DANA SCHUTZ AND PETZEL, NEW YORK

ASSEMBLING AN OCTOPUS by Dana Schutz '02SOA, on view at Art Basel Miami Beach.

## Early Edition

From the "About College" column in the first issue of the *Columbia Spectator*, published July 1, 1877. The *Spectator* and the University Archives celebrated the completion of the digitization of the Spec's archives in November. View the full archives at [spectatorarchive.library.columbia.edu](http://spectatorarchive.library.columbia.edu).

Eighty-seven new Freshmen to date, and twenty-five more expected in October.

Very few "flunks" and few "conditions" are the result of the examination.

The Seniors are confronted with a very ugly dilemma. They can choose between Greek and Calculus; and, as the latter study is the terror of all "cribbers," they generally choose Greek, but this year Professor Drisler has announced his intention of taking up an author without a "pony" [cheat sheet], thus obliging the class to do something which most of them have not done since they entered College, viz: to "study" Greek. The class have our hearty sympathy.

All hopes for new buildings must be postponed for another year. The committee of the trustees having the matter in hand, recently reported "progress," which means that the present happy state of affairs will continue indefinitely.

The Alumni had a very pleasant dinner at Delmonico's on Friday, June 8th. The Glee club was present by invitation, and sang several popular College airs. Applications for admission to the Glee club are multiplying.

Don't come to College October 1st, without having two dollars ready to pay for your subscription to the *SPECTATOR*. You are not worthy of the name of a Columbia man, if you fail to subscribe for the paper.

Go behind the Primary Sources.  
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ALE+ALE

## Crossover Dribble

**T**roy Murphy '15GS is used to being watched, but I have definitely crossed the threshold into staring. The rest of the lunch crowd at the Deluxe diner on Broadway has, too. It's not every day you see a six-foot-eleven man stoop through a restaurant door, and the purple welt above his right eye only adds to the intrigue.

Murphy is friendly and soft-spoken when he introduces himself, and I resist my temptation to ask about the shiner above his eye. Surely he'll confide in me once he realizes that we share a bond as college athletes turned Columbia students. This common foundation, I hope, will overshadow our minor differences, such as how Murphy played basketball while I played football, or how after college he began a career in the NBA, whereas I moved back to my parents' house and slept in a bedroom with dusty plastic trophies and rocking-horse wallpaper.

We take a seat at a small table in the corner, and I get down to business, athlete to athlete. I ask Murphy, now retired after twelve years in the NBA, whether his strict self-discipline from his playing days has carried over to his new life as a student. Before he can answer, our waiter appears, and I order a deluxe grilled cheese with bacon and a side of fries.

"The usual for me," he tells the waiter. "Six egg whites and a glass of water."

Murphy's fork looks like an oyster fork in his enormous hand, and I wonder if this larger-than-life superstar ever feels out of place in class as he wields a little pencil in front of gawking students. Looking at him, it's as if basketball was invented specifically for Troy Murphy, or vice versa. He can almost reach a ten-foot-high rim without jumping, and his sinewy legs more than make up the difference by effortlessly springing him three feet in the air. His seven-foot wingspan matches his height, and while Murphy

was in high school, college scouts flocked to Morristown, New Jersey, to see if this XXL Vitruvian Man was for real. But what ultimately got Murphy recruited to Notre Dame (where he was twice named a consensus first-team All-American) was a level of agility and body control that is rarely found in someone with so much body. His nimble vectors to the hoop would surprise opponents just as much as the quick release and deadly accuracy of his long-range jump shots. On June 27, 2001, Murphy was selected by the Golden State Warriors with the fourteenth overall pick in the NBA entry draft. The sociology major was still a year away from graduating.

"My parents are both teachers," Murphy says in between giant bites of egg white, "so leaving college early took a little convincing."

Even as he established himself as one of the league's premier rebounders, there seemed to be an unspoken understanding that Murphy, a former selection to the Big East Academic



All-Star Team, would return to school to earn his bachelor's degree. After 729 games of pounding joints on the hardwood, one would hardly have blamed him for taking a much-deserved three- or four-year nap. But just thirteen months removed from his last professional game in 2012, the thirty-three-year-old Murphy walked through Lerner Gate, his next career as blank as the notepad he carried into orientation.

"I'd be hard-pressed to name any professional athletes who know exactly what they want to do after they retire," Murphy says. He doesn't know yet where he'll head after graduating from Columbia, but he's already in a much better position than many of his retired peers: in 2008, an NBA players' association representative estimated that 60 percent of NBA players are broke within five years of their final game. Some of this struggle to adjust can be attributed to truncated educations — while nearly all NBA players attended college, only about 20 percent of them earned degrees — but Murphy suggests the greatest source of post-NBA adversity is the inability to reconcile a new-

found restlessness. To find a new professional outlet comparable to the adrenalized fervor of the NBA is a tall order for young men with decades still ahead of them.

Today, rather than taking free throws in packed arenas, Troy Murphy is taking intro Spanish, where he conjugates *hablar* in front of a dozen college freshmen. But to see this as a downgrade, Murphy explains, is to miss the clear intersection between the NBA and Columbia.

"What I miss most about the NBA is the competition — the feeling that you're going up against the best in the world. But that's also what attracted me to Columbia: the chance to be around some of the best students in the world. I can re-channel my energy to get to the top of something new. It's the challenge — I love it here."

And you can tell he means it. While most students lament difficult assignments, Murphy relishes them. I notice he discusses his victory over a math problem set with the same exuberance, intensity, and pride he uses to explain his man-to-man defensive techniques. And get him going on his essay about

Walker Percy's philosophy of semiotics and you'll get a chance to eat your entire bacon grilled cheese without putting it down.

"And Spanish class," Murphy continues, now grinning and scratching his forehead just above the purple welt that he got, it turns out, from playing in a pickup game. "Spanish — now *that's* a battle."

I ask him what's more intimidating: squaring off against the notoriously competitive NBA legend Kevin Garnett, who head-butts the net post as a means of pre-game invigoration, or his Spanish class.

"Garnett," he answers, finally, after some thought.

Speaking of Spanish, it's time for Murphy to get to class. He loves the course, though he does have a small gripe with his classroom's desks: Murphy's body was made for basketball, after all, not for the tiny wooden chairs of Hamilton Hall. He'll squeeze into his chair, though, and as the ache of an old back injury yields to the even greater strain of a challenging Spanish unit, Murphy will be reminded that Columbia is the right fit.

— Eric Kester

## A Secret History

"They are getting everyone's calls," Edward Snowden told a *Guardian* reporter in his Hong Kong hotel room in May 2013. "Everyone's call records and everyone's Internet traffic as well."

"They," of course, is the United States National Security Agency. And regardless of whether Snowden is a great traitor or great patriot, when he escaped the US with tens of thousands of the NSA's classified documents, the agency's activities were suddenly exposed. Snowden claims that at a certain point, he just couldn't abide the ever-increasing magnitude of the data collection and storage systems he helped create. The whistle was blown; we are being recorded.

Matthew Jones is the James R. Barker Professor of Contemporary Civilization at Columbia. As a historian of science and technology, Jones is working on a "historical and ethnographic account of big data" titled *Data Mining: The Critique of Artificial Reason*. He believes that the NSA revelations of 2013 demand closer inspection in light of their historical context: the decades in which computer use became normal and the amount of information gathered *about* computer users grew exponentially.

In November, Jones, with Harvard historian David Armitage, gave a talk at the Heyman Center for the Humanities called "Great Exploitations: History and the NSA

Debate." The room was filled with humanities students raised in the Internet era and older people who wondered what companies were complicit in gathering their conversations. The history Jones wished to present, he said, was neither a "personality-driven" account (*Dick Cheney did it!*) nor a "classic libertarian tale of government expansion." Instead, Jones would outline a series of recent "transformations," moments between the mid-1990s and today when US government surveillance significantly changed.

The first transformation concerned the volume of data. In the mid-'90s, Jones said, dealing with the volume of information the NSA had collected "was [its] fore-

most problem internally.” To address this, the agency created more and better computer programs to analyze all that it was gathering. This abundance of data allowed the NSA to devise a novel scheme called “contact chaining,” said Jones. “Contact chaining is the idea that I take what’s called a seed, a single person’s telephone, and I connect all of the other telephones that telephone has called. Then I connect to the next step and maybe even another.” The idea was to link domestic numbers to foreign numbers and thwart a possible terrorist attack. But to track information about phone calls made by US citizens without a warrant was, the Clinton DOJ decided, a violation of the Fourth Amendment.

Then, in 2007, a secret Justice Department memo under the Bush administration heralded a second transformation, shining a spotlight on “metadata” — information about information. Gatherers of metadata may not know what you said, but they know whom you said it to. The memo stated that henceforth, “contact chaining and other forms of metadata do not qualify as the ‘interception or selection of communication,’ and are therefore not illegal. President Barack Obama’s new administration upheld this.

Jones’s third transformation occurred between 1997 and 2013, as the United States government developed, in the words of Obama, “mature capabilities” to hack computers for data collection. This, Jones said with some gravity, “is internally referred to as ‘owning the net.’”

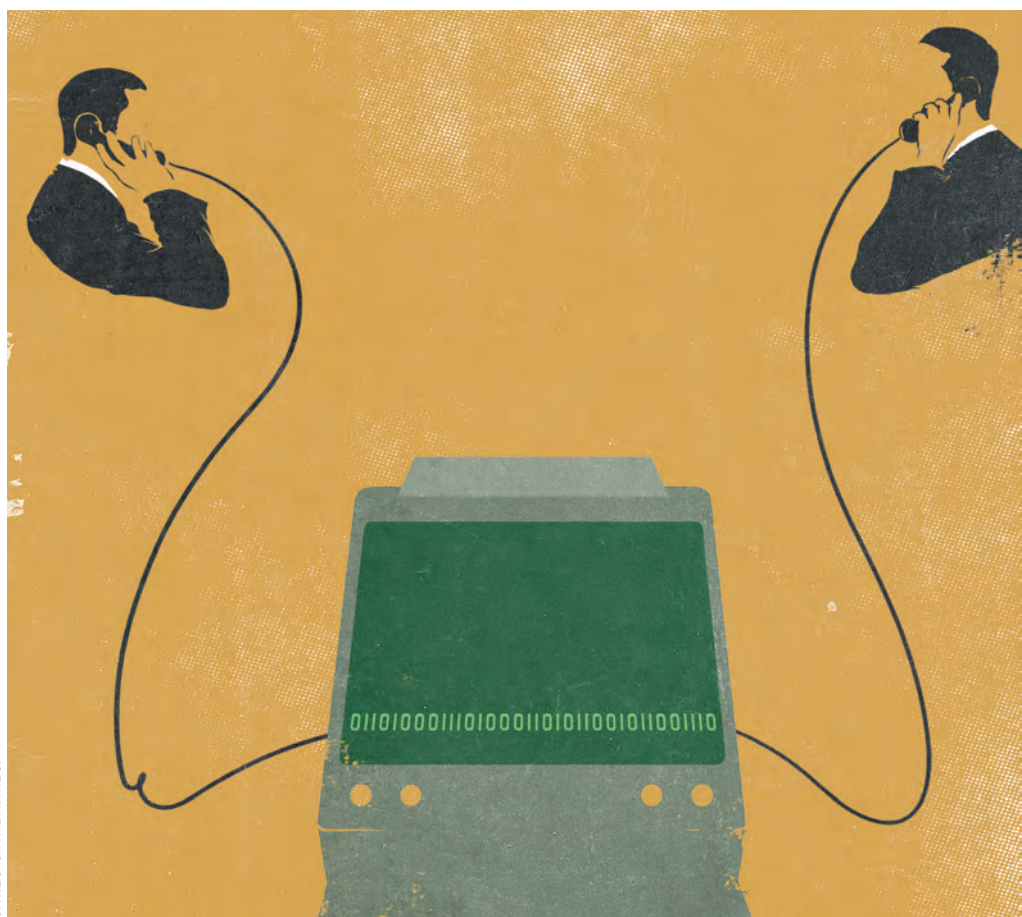
“The argument is made that it’s necessary to modernize surveillance law to keep up with technological developments,” he said. Writing in a new legal category for metadata, for example, is billed as a necessary “update” to existing law, but according to Jones, “that is far from obviously so.” A 1979 Supreme Court decision called *Smith v. Maryland* established that users of telephones have no reasonable expectation of privacy when it comes to the numbers that they dial, even if they expect privacy when it comes to the content of their calls. You don’t need a warrant to legally snoop on

phone numbers a person dials — you only need one to *listen* to phone calls. This decision, Jones pointed out, was made when Americans were calling one another through copper wires. After 9/11, however, the division between dialing information and the content of the phone call became the division between metadata and the content of a phone call, a website, or an e-mail.

Jones called the Patriot Act of 2001 “mostly small emendations of definitions in the law.” *Smith v. Maryland* was about one guy with a landline. The Patriot Act expands the definition of dialing information — which, as decided in 1979, can be legally recorded and tracked — to include a much broader range of wire and electronic communication, such as e-mail. Among Jones’s sources is an FBI fact sheet responding to protests from the ACLU. The fact sheet says that “updating” dialing informa-

tion to metadata in the law is simply keeping up with current technology. Furthermore, it allows law enforcement to defend the homeland by “collecting non-content information from terrorist organizations, regardless of what medium they use to communicate.” But Jones said it actually “takes a law about a landline and changes it to apply to many more technologies.” *Smith v. Maryland* was about “one guy,” said Jones, but here, it was being used as grounds for “wiretapping not you, or me, but everyone.”

As he put it, “no one cares about metadata for one guy.” But if you collect a ton of information about everybody, contrasts within that information take on importance. You can learn a lot, he said, by studying “external communication without content,” similar to looking at the address on the envelope without reading the letter. If you see envelopes, for exam-



CARLO GIAMBARESÌ



ple, “from a family doctor and then an oncologist, you can find out that someone is seriously ill without reading more than an address.” Learning from patterns of communication, without necessarily reading any messages, is called traffic analysis, and it’s something the NSA has done “for decades,” said Jones. “It’s central to their internal identity.” What’s changed is the

target: not military communications, but all communications.

Jones told his audience that he hoped to illuminate “two domains of profound arcana: arcane aspects of telecommunications, and really arcane aspects of national security.” He said they are “incredibly boring,” but shying from them preserves the idea that “people don’t understand and shouldn’t get involved.”

In pondering the transformations we are living through, we might question whether changes in the law truly make our society better. The job of the intelligence community, and particularly the NSA, is to “exploit” communications: to make use of them. Jones argues that the law, and people’s fears, should not be exploited in the process.

— Phoebe Magee

## Talking Heads

Katherine Dieckmann (rhymes with Beekman), a filmmaker who teaches screenwriting at Columbia’s School of the Arts, wanted to make a documentary about a band she loved. She’d shot videos of other, better-known bands. But this band was unusual: an angry, funny, puckish, Pogue-ish, roguish, cerebral, radical, inebriated, haphazard, genre-flouting anachronistic collective started by art students at the University of Leeds in the punk year of 1977. They called themselves the Mekons.

Improbably, the Mekons, named after the Venusian arch-villain of a British science-fiction comic, still exist (singer Sally Timms credits this longevity to a lack of commercial success), and convene now and again to write, cook, eat, drink, and make music. (There is no leader; all songs are generated collaboratively by the six members.) After twenty-six albums, they remain adored by critics and ignored by the masses. As such, they have become, to their devotees, a metaphor, a question, a punch line, a philosophy.

Dieckmann met the band in the early 1990s. She had her ideas about how to make a Mekons movie, and so did the Mekons.

“They were very insistent: ‘We don’t want to do talking heads, we don’t want this to be normal, it should be a performance piece,’” Dieckmann says. “They had all these conceptual ideas about it, which

twenty years later have fallen by the wayside. They became open to making a more conventional documentary, because actually that’s the way to get people to pay attention to the band.” In 2008, another filmmaker, Joe Angio, set out to shoot the Mekons. Angio heard about Dieckmann’s early-’90s brush with the band and contacted her. The two directors met and discussed the project. Dieckmann looked at Angio’s rough cuts, gave him notes. She wanted to support the endeavor any way she could.

Now, on a fall-semester night, as Angio’s *Revenge of the Mekons* played downtown at Film Forum, Dieckmann presided over a full house in the Davis Auditorium in Schapiro Hall. Seated with her onstage were some of the documentary’s talking heads, whom Dieckmann had asked to make brief, Mekons-centered presentations. The panel included novelist Jonathan Franzen, critic Greil Marcus, director Mary Harron (*I Shot Andy Warhol*, *American Psycho*), artist Vito Acconci, and critic Luc Sante ’76CC. Major firepower for any band, let alone one whose members have day jobs. Mekons singer and guitarist Jon Langford was onstage, too, in a husky brown suit, with a dusting of white hair and wide blue eyes that threw live-wire sparks.

Franzen, wearing a cracked leather jacket, collar upturned, spoke first, striking a blow for the Word. “I’m just going to read some lyrics

I like, because you can’t always hear ’em,” he said dryly, drawing chuckles from the crowd. “Apart from their musical and visual-art gifts, the Mekons have literary gifts. From ‘The Curse’: *Call it intuition, call it luck / but we’re right in all that we distrust.*” Silence. “That’s a couplet,” said Franzen. Laughter. “Possibly my favorite of all their songs, ‘Darkness and Doubt’: *The room was filled with flashing lights / they spoke in tongues, whrrrwhrrr-wharr / Darkness and doubt / just follow me around.*” Franzen shared the caustic fatalism of “Hello Cruel World” and the adult poetry of “Dear Sausage,” and finished with lines from “Sympathy for the Mekons,” which began, “*Here’s to a band that deals in the facts of life / in their ten short ugly years,*” and ended, “*I hold the sword, I hold the hammer / at the winter of the world / History has a stutter / It says w-w-w-watch out.*”

Marcus, our foremost rock linguist, said, “I have always felt that the cauldron that made the band was the years of Thatcherism and Reaganism in the 1980s” — it was the UK miners’ strike of 1984–85 that pulled the then-inactive group back to the stage, to play in support of the strikers — “so I’m going to read something from a column from 1986, at the very height, or maybe the bottom, of Thatcherist and Reaganist supremacy, when that was the cloud I think the band was living under. Certainly I was.” Marcus, in this *Artforum* essay, noted that the Mekons, like

the Band before them, provided, through their adoption of folk traditions, an entry point through which the politically alienated could repatriate themselves. “The Mekons, as a small, unstable group of coworkers and friends, may be seeking community through dramatization of what it means to feel like an exile in one’s own country,” Marcus read. “As a listener, as a fan (by ‘one’ I mean myself), one is exiled in one’s own country not when one cannot understand the language, but when one cannot bring oneself to speak it.” The unutterable tongue, for Marcus, was that of US militarism, a language that “can’t develop beyond the syntax of a T-shirt slogan.” The Mekons, he said, “are a reminder that there is something else. In a world ruled by a language one refuses to speak, they are a reminder that there are still people one might want to meet.”

Luc Sante also found reverberation in the past, quoting his *Village Voice* piece from 1999. The Mekons, he read, “have brought poetry, sexiness, and panache to the theme of getting by and making do, an adult theme if there ever was one. Given that the prevailing myth these days concerns the effortless acquisition of insane wealth, with the corollary that anyone without money is dirt, those of us who *are* dirt, and are fated to remain that way, can appreciate having a pop group to call our own, as a kind of home team.” (Jon Langford has long been based in Chicago, where his home team is the hapless Cubs.) “Even furthest down on their luck,” Sante went on, “the Mekons have never broached self-pity; they’ve cursed and muttered and cracked jokes and philosophized, and done all these things rollicking and roaring. Their failure has come to look triumphant, and never more so than in the current climate of vile success.”

When it was his turn, Langford, the rogue Buddha, got up, pulled an acoustic guitar from its case, sat back down, and said, “This song’s about Leeds.”

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Katherine Dieckmann found the Mekons through rock criticism. A piece by Marcus, she thinks, or Robert Christgau. Whenever

those guys wrote an intelligent, admiring review of an artist Dieckmann didn’t know, she’d go buy the record and listen to it.

Maybe you knew someone like Dieckmann at school — the arty English major who was way into indie rock. She didn’t just know the cool bands, she knew their record labels. She had their EPs. She went to shows, was on the guest list. She read obscure zines and film quarterlies, wrote columns for the school paper. She even worked at the radio station. She had a vocabulary of the underground that made you, so well-rounded, feel hopelessly square. Granted, she had been devouring this stuff since she was eleven. You could never catch up. And even if you could, you didn’t have her ear or eye. But hang around her, and you’d learn things.

“The Mekons mean what they say and do what they say,” Dieckmann says of the band, twenty-five years after first hearing them. “There’s not a big window for hypocrisy there. They just do it, but not with a lot of bluster. They all have a really well thought out stance toward the uselessness of egotism. It has to do with their suspicion of power, which is genuine and warranted. At the same time, their suspicion of power has made them a much less visible band than they should be.”

After graduating from Vassar College in 1983, Dieckmann moved to New York and became the youngest full-time staffer on *The Village Voice*. At twenty-four, she was writing about film alongside J. Hoberman ’81SOA, David Edelstein, and Andrew Sarris ’51CC, ’88GSAS. She interviewed Godard, Wim Wenders. But she wanted something more. In 1986, she interviewed Michael Stipe of the band R.E.M. She and Stipe became close, and Stipe saw how frustrated Dieckmann was as a journalist. One day, Stipe asked Dieckmann to direct a video for his band. Dieckmann, whose directing experience was limited to a 16 mm short she’d made during a summer course at Cornell, was so stunned by the offer that it took her a week to say yes. She ended up directing the videos for “Stand” (1988) and “Shiny Happy People” (1991), exuberant dance-filled pieces shot in the edible colors of makeup kits and Jor-

dan almonds. In 1989, at her ten-year Ithaca High School reunion, she ran into a writer named Will McRobb. The two would collaborate with another writer, Chris Viscardi, on the Nickelodeon kids’ show *The Adventures of Pete & Pete* (1993–96), a smart, sweet, rebellious, indie-rock-infused farce set in the suburb of Wellsville (“as good as television has ever been and great in ways few shows ever attempt,” wrote the *LA Times*) and filmed by Dieckmann in candied saturation: Play-Doh blues, safety-patrol oranges, Chemlawn greens, school-locker yellows, superhero reds. “The network never paid any attention to what we were doing, so we just did whatever we wanted,” Dieckmann says. “When I think about it, our approach was sort of Mekons-like.”

Around the same time, Dieckmann set out to make her Mekons documentary. Jefferson Holt, R.E.M.’s manager, put up money for her to shoot the band, which she did, in Atlanta and Athens, Georgia. The project never came together, and Dieckmann, who has taught at Columbia for the past fifteen years, went on to make movies — *A Good Baby* (2000), *Diggers* (2006, starring Paul Rudd), and *Motherhood* (2009, starring Uma Thurman). But she never forgot the Mekons. She would have been happy to give her unused footage to Joe Angio, too, except that somewhere along the way she’d lost it.

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The big sound of Jon Langford’s strumming guitar and brawling vocals filled the Davis Auditorium with a ditty containing spoonfuls of calypso, cowboy, and Celtic drinking song. One could almost hear the accordion and fiddle that so often bring spirits of English folk, American country, and zydeco to the Mekons’ potluck brew.

Afterward, the panel discussed the current relevancy of the Mekons’ political messages. Dieckmann said, “I always think about the lyric ‘the abyss is close to home,’ from ‘The Sorcerer.’ Every time I hear it, I think, ‘Closer. Even closer now.’”

“I think that was taken from —” Langford paused, trying to place the source of the lyric,



leading to a silence that Dieckmann broke by suggesting Langford use the microphone, a wireless and fickle thing. “I’m just thinking,” Langford said. Marcus, seated next to Langford, tried to help. “The sentiment is ‘everything that rises falls to Earth,’” he said, “but those aren’t the words.” Giggles in the audience, more silence onstage. “You know what,” said Langford, “I’m a little lost. Move on, let me think about it some more.” Franzen, enunciating clearly into a functioning mike, said, “This panel is beginning to

replicate a Mekons show.” Marcus’s light bulb went on: “It’s from *The Communist Manifesto*,” he said to Langford. “It’s Marshall Berman’s book *All That Is Solid Melts into Air*.” To which Langford replied, “I introduced Marshall Berman [’61CC] to my mum once. She said, ‘Why are you in town, then?’ And he said, ‘I’m promoting my new book: it’s called *Adventures in Marxism*.’ And my mother said” — Langford pinched his voice to the pitch of English politesse — “‘Ooh, that’s nice!’”

Days later, after the laughter and music had died down, Dieckmann reflected on the value of exposing younger people to *Revenge of the Mekons*.

“I think there are a lot of life lessons to be found in the documentary for anyone interested in the arts,” she said. “The Mekons have a really dedicated and genuine approach to all that they do, and it comes from a compassionate, sincere place. What else does? Not much.”

— Paul Hond

## The Smile Sessions

**T**he baby with the broken face stares wide-eyed and calm, her perfectly round brown eyes floating serenely above the curling hole between her bottom lip and nose. Her image is suspended, larger than life, on a screen in a conference room at the Lancaster Cleft Palate Clinic, in Lancaster, Pennsylvania. Clinical director Andrea Smith ’05DM calls to order the weekly meeting of doctors and therapists, and draws the group’s attention to the girl’s photo.

Cleft lip and palate is a mysterious birth defect that affects one in every 575 children. The condition, which is the result of incomplete fusion early on in pregnancy, makes it difficult for an infant to swallow, clear her ears, and create the suction needed to nurse. Typically, the cleft can be corrected with a series of surgeries during childhood, but complications abound, including hearing impairments, sleep apnea, speech problems, and psychosocial issues. Cleft lip and palate is often associated with developing countries, where organizations like Operation Smile have made great strides in highlighting and combating the problem. But the incidence is the same around the world: Americans simply tend to have better and earlier access to treatment.

The Lancaster Cleft Palate Clinic opened in 1938 — the first such clinic in the world. The

founder, an orthodontist named H. K. Cooper, was fond of saying, “I want to treat the whole child, not the hole in the child.” At the time, there were no other clinics in the world that allowed a variety of specialists to come together in one place — instead, different specialists typically worked in isolation to correct the multifaceted issues associated with cleft palate, often throwing one another’s work out of sync. Today, Cooper’s grandson, Ross “Rusty” Long, is the clinic’s executive director and orthodontist. The nonprofit clinic relies on private donors, many of whom are former patients who name the clinic in their wills.

Smith never intended to work with cleft palate, or even to be a dentist. “When I went to college, I started in engineering because my father was an engineer,” she says. “I liked art and science and working with my hands. My dad told me I couldn’t go to art school, so I stuck with science.” Her family dentist in Reading, Pennsylvania, offered her a job when she was fourteen, and by the time she was in high school she was taking appointments, filing records, and even cleaning teeth. She worked nights and weekends, and full-time in the summers. By her sophomore year at Penn State, she realized she might want to be a dentist and went premed. When it came time to choosing a dental

school, a boyfriend encouraged her to experience New York City. “I remember going for my interview and not even understanding that the dental campus was in a different place from the main campus,” Smith says. “I was so lost, but everything was so busy and exciting. My time at Columbia turned out to be the best experience of my life.”

Smith graduated from Columbia at the top of her class. Afterward, she went to UCLA for a three-year residency in advanced prosthodontics, or teeth restoration, and a consecutive one-year residency in maxillofacial prosthetics, focusing on facial restoration of cancer patients. “Often I would go to the operating room when the surgeons were taking out the cancer and I would fit the implants so they would be there when the patient woke up,” she says. The hands-on making of molds appealed to her creative side. “When I was first learning the craft, I thought — hey, this is art! I’m finally back to art!”

After UCLA, Smith wanted to return to Pennsylvania. “I’m an only child and I wanted to be closer to my parents,” she says. “I interviewed at Penn for a maxillofacial prosthodontist position and moved back, but the job fell through.” Around the same time, her second cousin happened to attend a Kiwanis meeting at which Rusty Long gave

a presentation on the Lancaster clinic. “My cousin approached him after the meeting and said, ‘I have no idea if this is what she does, but my cousin needs a job.’ Rusty politely took my information. Nobody ever knows what maxillofacial prosthodontics really means, but it turned out I was exactly what they were looking for.” The clinic’s prosthodontist was eighty-two and had been trying to retire for a few years, but hadn’t found a suitable replacement. “He was a legend in the business,” Smith says, and the work he did was highly specialized. The cleft work turned out to be very similar to the cancer work Smith had been doing, and through the clinic she still performs reconstructions for cancer survivors and also for trauma victims, including many who suffer from self-inflicted gunshot wounds. The cleft-palate clinic has an onsite lab, and Smith does a lot of her own lab work, like setting teeth for a denture or sculpting facial prosthetics for noses, eyes, and ears. “I find it very satisfying to make something fit, to be able to find a unique solution to a problem,” she says. “I thought I’d have to live in a city to be able to do this kind of work, but now I get to live a few blocks from my family. Like magic, it all fell into place, and I’ve been here five years.”

Cleft abnormalities still occur at the same rate they did in 1938, and although treat-

ment options have grown, the road for a child born with cleft conditions isn’t much easier. “Every child in Pennsylvania is eligible for assistance with a birth defect, but often there are few doctors nearby who know how to treat cleft palate,” Smith says. Insurance presents its own hurdles; some of these procedures are considered cosmetic. “The insurance companies claim patients can lead a normal life, but what constitutes normal?” Smith says. “If you are too embarrassed to go to the corner market for milk, or to school, or to a job, how can you lead a normal life?”

The clinic is committed to serving children regardless of their ability to pay, and its patients come from twenty-five states and more than six countries. They range in age from in utero to eighteen. The clinic has two thousand active patients, including some from local Amish communities, where children with cleft are often accepted without stigma. “There is not the social pressure of mainstream society; the families often feel that their child is known in the community for the person he or she is, and the cleft palate is just a part of that,” Smith says. The Amish don’t have traditional insurance; instead, the community donates money to cover the costs of treatment.

“Many of our patients are from extremely rural areas and drive over four hours to get

here,” Smith says. “We want to provide them with everything we can once they are here.” This is evident in the clinic’s weekly meeting, during which a pediatrician, speech therapist, psychologist, orthodontist, surgeon, and audiologist speak about each patient: the kids who come to get their teeth cleaned, their hearing checked, their speech measured, their ear infections treated, and their bone grafts scheduled. The doctors worry about their patients’ home life, too: bullying at school and poverty that may make it hard for a child to find transportation to the clinic.

Up on the screen, the photo of the baby with the broken face is juxtaposed with one of a ten-year-old girl with long blond hair. Her upper lip has a slight indentation, as though someone pressed a thumb there and the mark stuck. In this second photo, those round brown eyes are still wide, but she is smiling with her whole face.

It is hard to believe that this is the same girl, but as the doctors view more than two dozen patients, the before-and-after pictures are all equally stunning.

“I didn’t know exactly what I wanted to do while I was in dental school, but I knew I wanted to be the end of the line,” Smith says. “I wanted to be able to say: when all hope is lost, come to me. I’ll find a way to fix you.”

— Kelly McMasters ’05SOA

## When Depressed

When depressed,  
My head shrinks —  
A pitted black olive.

When happy,  
My soul blooms —  
A lusty red dahlia.

Yesterday I fell in love  
With a fig,  
And devoured its golden pulp.

Then, at home,  
My orchid, jealous —  
Died of excess water.

Alone, I mused  
On poppies and prunes  
And nights without days.

— Jay Neugeboren ’59CC

*Jay Neugeboren is the author of twenty-one books. His new novel, Max Baer and the Star of David, will be published in fall 2015.*



#### ROBINSON CRUSOE ISLAND

Out of all three islands which make up the Juan Fernández Archipelago, Robinson Crusoe is the only one inhabited. Located in the middle of the Pacific Ocean, the island is 416 miles away from the main continent.

The novel, written by Daniel Defoe in 1719, gave the island Robinson Crusoe its name. It has been a World Biosphere Reserve since 1977, mainly because of its endemic flora and fauna.

With visibility reaching more than 65 feet, the island offers some of the best waters in Chile for scuba diving. Visitors are not only surprised by the plethora of underwater life, but also entertained by the curious sea lions that love to get up close and personal with the divers.

#### CHILOÉ ISLAND

Lonely Planet chose Chiloé as one of the most interesting places to visit in the world. The island has a culture of its own, reflected in its architecture, gastronomy, and mythology.

The "palafitos" — colored houses, built on stilts out on the water — are perhaps what makes the island so very distinctive. Its churches, all built from wood and dating back to the 18th and 19th centuries, also contribute to the island's unique character. As such, 16 of these churches were declared World Heritage Sites by UNESCO.

The area of Puñihuil, 17 miles to the south of Ancud, is home to a unique penguin colony that houses two different species: the Humboldt and the Magallanes penguin.

#### EASTER ISLAND

Easter Island, also referred to as Rapa Nui, was declared a World Heritage Site by UNESCO in 1995. The most remote island on the planet, Easter Island offers a first-hand look into a living Polynesian culture, responsible for the formation of immense stone figures — the Moai.

This cultural and archaeological paradise, of volcanic origins, is a fascinating place. Its ancestral traditions date back to an ancient society which, until its discovery in 1722, had been completely unknown to the Western world for more than a thousand years.

The Rapa Nui National Park spans almost half of the island's total surface area, protecting incredible natural wonders and cultural riches. The park is full of must-see trekking routes, including the incredible climb up the Rano Raraku Volcano, where the famous Moai statues were sculpted.

Chiloé Island, Easter Island, Robinson Crusoe Island

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# The Ebola Web

## Columbians race to stop an epidemic

**SIERRA LEONE** – Three and a half hours from Freetown, in the district of Bombali, a car rolls along a dirt road and stops at a remote village. The entrance to the village is cordoned off with yellow police tape. Two soldiers in camouflage stand in front. Beyond the village lies dense rainforest.

The car doors open, and two women get out. One is Wafaa El-Sadr '91PH, University Professor at Columbia and the director of two centers at the Mailman School of Public Health: ICAP, which works internationally to fight major health threats, and CIDER, the Center for Infectious Disease Epidemiologic Research.

What startles El-Sadr immediately is the silence. She has entered many African villages in her career, and always they are full of life: kids playing, people moving from house to house. But in this village, which has lost dozens of people to the Ebola virus, everyone is indoors. The village — a thousand people, most of them children — is under quarantine. El-Sadr has a word for how it feels: *unnatural*.

The other woman is Susan Strasser, the director of nursing for ICAP. Strasser has lived in Africa for most of her adult life. A Rochester native, she spent the past eight years in Zambia, where she was the director of an AIDS foundation, before coming to Columbia last July. It is late October now.

As a nurse, Strasser has been in some tough spots. She lived in South Africa during apartheid, and worked at a rural hospital in Zimbabwe, delivering babies at a time of rising HIV infections. But what's happening in West Africa is unlike anything she has seen.

From the moment they boarded the plane bound for Sierra Leone, Strasser and El-Sadr had found themselves in a world completely dominated by Ebola. The flight attendants wore gloves and masks. There were vats of chlorinated water at the airport and at the hotel in Freetown. Everywhere they went, health officials took their temperature. Billboards reinforced the “no touch” mantra. It was strange, and very difficult, not

to hug or shake hands. When you met people, you had to check your normal impulses and hold your hands together.

All the schools were closed, including medical schools and nursing schools. Though life continued in the city, there was a notable absence. Usually in developing countries during a humanitarian crisis you saw all the NGOs whizzing around in their logo-marked trucks. Not here. Fear and lack of expertise have kept agencies out. *You know you're watching history*, Strasser would later say. *You know you're watching something very bad play out*.

In Freetown, a port city of 1.2 million, El-Sadr and Strasser had met with local and international agencies to see what ICAP could do to help stop the epidemic. One meeting was with Sierra Leone's chief nursing officer. In Strasser's experience, Africans were very modest about their struggles, and so it was striking when the woman looked at her and said, “It's been really hard.” That was telling. Hundreds of health workers had died of Ebola in West Africa. There were few doctors and nurses to begin with — years of war had seen to that — and now to care for patients was to risk your life.

El-Sadr and Strasser are accompanied to the quarantined village by John Redd '94PH, an epidemiologist from the Centers for Disease Control and Prevention (CDC). Redd has been to this village many times.

The Americans show their IDs to the soldiers, who take their temperatures with a forehead thermometer — all normal — and admit them past the yellow tape. On the other side, the village chief, from ten feet away, greets them. Strasser asks him if the village has received food. Quarantined villages are supposed to get food from the UN World Food Programme, but the food doesn't always make it. To enter a hunger-stricken village could cause unrest. The chief affirms that the food arrived.

El-Sadr and Strasser then meet, at a distance, with the pastor. The pastor's wife died from Ebola. So did all his children.

By Paul Hond







So did all his grandchildren. He is a broken man. *It was horrible*, Strasser will later recall, *absolutely horrible*. In the houses, people sit, just waiting, waiting. Waiting for the twenty-one days to pass, the limit for the virus's incubation period.

There are other visitors in the village: two community-health workers serving as contact tracers. Contact tracing is one of the oldest ways to fight outbreaks of direct-contact diseases. The contact tracer's job is to get the names of those who have had contact with a patient, find them, and monitor them for symptoms. The sooner you isolate a sick person, the more new cases you prevent.

Now a woman in a house tells one of the contact tracers that she is ill. This is not an easy thing to admit, given the awful fears: separation from one's family, pariah status, unthinkable pain and suffering, a solitary death, an unsanctified burial. Still, the early symptoms of Ebola — fever, headache, fatigue, sore throat — are similar to other, less extreme diseases.

*It's malaria*, she says. *It's just malaria*.

A common enough malady, but you can't distinguish it without a blood test. The woman's husband, who was sick with Ebola but has since recovered, is with her at the house. The woman refuses to

go to the nearby holding center, where sick people can be isolated, tested for Ebola, and given Tylenol and oral-rehydration salts. Holding centers have a reputation as grim, death-filled places.

The contact tracer speaks with Redd, who then addresses the woman, again from an abnormal distance. He tells her that it's in her best interest, and in the community's best interest, for her to go to the holding center. Finally she agrees to go.

Then the other contact tracer says that he, too, is feeling sick. *I want to go to the holding center as well*.

Many of the complications of the epidemic are on view this day, in this village. El-Sadr and Strasser, standing in the tropical heat, take note of all they see.

**"DON'T BURY THE DEAD. DON'T TOUCH THE SICK."**

Broadcasting from high atop Leicester Peak, above the green hills and corrugated tin rooftops of Freetown as it rambles down to the sea, it's Star Radio 103.5, live on the air. "Wash your hands. Simple hygienic techniques will get rid of Ebola. People are still washing bodies and inviting people into quarantined homes. If this continues, the Ebola still stay." On this Sunday in November, as cases in Sierra Leone soar past six thousand, with 1,500 deaths, some Sierra Leonean journalists are in the studio, discussing the epidemic. "We can stop Ebola only if we change our attitudes," one man says. Another laments how Sierra Leone is portrayed by outsiders. "The international media look for the negativity when it comes to Africa — war, poverty, pestilence. Not everyone is dying in Sierra Leone. People fear the virus because of what they hear in the media. You and I sitting here have nothing to fear from the virus." Rather, he says, it's in the remote villages and the slums that "Ebola caught us pants down."

The same weekend, another voice is heard on Star Radio. Adeyinka "Yinka" Akinsulure-Smith '97TC, a psychologist and associate professor at City College of New York, joins a conversation via Skype. Akinsulure-Smith was born in Sierra Leone and speaks Krio, an English-based creole that is the lingua franca of the former British colony. Her parents taught at a university in the south, and she grew up 120 miles from Freetown. After high school, she lived in England, Canada, and the US. She has been going back to Sierra Leone ever since.

HOST: Dr. Yinka, people go through things. Some people cry. They cry a lot. What would you say to such people?

DR. YINKA: I would say, "You are not alone; others are going through it, too. Yes, cry a little, but understand that you are not alone. Others have similar problems. Reach out, call people on the phone. Don't isolate yourself."

Akinsulure-Smith has long been a voice for Sierra Leoneans. When asylum seekers from Sierra Leone's civil war (1991–2002) began arriving in New York, she cofounded an organization called Nah We Yone, which in Krio means "It Belongs to Us." The group helped people, some of whom had been maimed by diamond-funded reb-



Wafaa El-Sadr and Susan Strasser

PORTRAITS BY JÖRG MEYER



els, find psychosocial and legal services and apply for asylum. Soon, Nah We Yone, assisted by students at Columbia's School of Social Work, extended its outreach to the Sierra Leonean diaspora.

The war destroyed much of Sierra Leone's infrastructure and killed seventy thousand people in a country of less than five million. Still, as time passed, things began to improve. Schools reopened, expatriates returned. People were regaining their foothold. Then, last spring, Ebola came.

The new crisis, piled atop the old one, spelled catastrophe. Many people didn't believe the virus existed. Others attributed it to bad witchcraft or foreign plots. The virus spread, and so did fear. Bodies were being dumped because people didn't want others to know that someone in their family had Ebola.

"During the war, we knew where to go and whom to avoid," says Akinsulure-Smith. "Ebola creates a whole other element of avoiding people. Families have been divided. Children are sick and dying, but you can't touch them. I'm a mother. I have two kids. I cannot fathom seeing my kids in distress and not being able to hug, stroke, caress, or comfort them."

Thousands of children have lost one or both parents, causing further social shocks. Children are traumatized by loss, separation, the suffering of family members, the terror of strangers in hazmat suits taking loved ones away, the lack of support services, and a pernicious social stigma.

Akinsulure-Smith is involved with a group of psychologists and psychiatrists in the US and Europe called the Sierra Leone Mental

**"I cannot fathom seeing my kids in distress and not being able to hug, stroke, caress, or comfort them."**

Health Initiative, which studies the country's postwar mental-health needs. When Ebola struck, the group wondered how it could help from afar — how could it reach the wider population, give people a place to talk about their experiences, their emotions?

Because Sierra Leone has low literacy rates and scant Internet access, most people get their information by radio. And so the group decided to produce a radio show: four hourlong segments on the independent Star Radio. Akinsulure-Smith could call in, and people throughout the country could listen.

DR. YINKA: We've been talking about adults, but children also can have these mental-health challenges, these stressors. We have to remember that their reactions, the way they feel, the way they behave, can be different from adults. So we have to adjust for them, too. Crying, nightmares, regressive behaviors — it's not that they are choosing to behave badly. You can't just beat them.

Recently, the Christian development organization CBM trained twenty-one psychiatric nurses to help the public cope with the

myriad mental-health problems caused by the epidemic. Now, Akinsulure-Smith is looking into another use for telecommunication: the long-distance supervision of these nurses.

"Unfortunately," she says, "one of the nurses just died of Ebola."

**GUINEA** — The outbreak began in December 2013 in a village in Guéckédou, in southern Guinea, near the border of Liberia and Sierra Leone. Months later, investigators traced the source of the epidemic to a two-year-old boy named Emile. It appeared that Emile had contact with a fruit bat, the animal widely thought to be the virus's natural host. After four days of fever, vomiting, and bloody diarrhea, Emile died. Then his sister got sick and died, then his mother, then his grandmother. The bodily secretions of Ebola victims are most infectious at the time of death, and anyone handling a body for burial is at risk of catching the virus. This is what seems to have happened in Guéckédou.

By April, eighty people had died in Guinea, and the virus had gotten into the capital, Conakry, a city of 1.7 million — a grave event, as previous Ebola outbreaks had been confined to sparsely populated areas. Picture, then, the branching patterns of transmission, the points and lines multiplying and crisscrossing, going from village to town to city to village, in a widening meshwork of out-of-control contagion. Flung into this web is the contact tracer, who must follow the lines, untangle them, and cut them off. The obstacles are dizzying: huge geographic expanses, bad roads, poor infrastructure, meager resources, and, among the populace, a fierce distrust of foreigners.

Anne Liu came to Guinea with a plan. Liu is the lead manager of the community-health worker program of the Millennium Villages Project at Columbia's Earth Institute, where she sets up health systems for maternal and child health. Now she and her team (five from Columbia, two in Guinea) are building a system to help stop an epidemic of global range, using a technology that is commonplace in much of the world: smartphones. "Our goal is to prevent further transmission by being able to track the entire chain of response once you identify an Ebola case," Liu says. "We'd be able to see if there were any gaps."

The chain of response is this: contact identification, contact tracing, diagnosis (lab results), treatment (outcomes at the tent-based Ebola treatment units, or ETUs), burials (safe or unsafe?), and community awareness. The phones would allow all the partners — contact tracers, doctors, lab technicians, NGOs, and the government — to share data instantly in a region where it can take days just to transport a blood sample to the nearest lab. If the enemy is time, the weapon is speed.

"To catch up with and beat Ebola, we need to substantially scale up our response," the Guinean president Alpha M. Condé announced on September 18. Condé had been having discussions with Jeffrey Sachs, the Earth Institute's director. "The immediate deployment of community-health workers," Condé stated, "trained and equipped through an initiative of professor Jeffrey

Sachs from Columbia University, will accelerate and strengthen our national response to Ebola, as well as structure a response at the level of our local communities.”

A month later, Liu is in Conakry, meeting with UN agencies and NGOs in the lobbies of the two hotels where everyone is working and, disappointingly at such a critical hour, squabbling. Liu’s objective is cohesion: to turn a slow paper-based system into a nimble digital one, in which everyone in the response chain can send, receive, and access information in real time. The plan calls for two thousand smartphones for two thousand contact tracers, and another five hundred smartphones for workers in labs, treatment centers, and government and nongovernment agencies.

Ericsson has donated a thousand phones. The phones use the mobile medical-software program CommCare, created by the company Dimagi, which is working with the Earth Institute on customizations for the contact-tracing protocols of this epidemic. Users will need Edge, 3G, or Wi-Fi to submit data. If they’re out of network, the program saves the data, then sends it when they reach a network. Meanwhile, the UN Emergency Telecommunica-

tions Cluster (a group of organizations that works to coordinate communications during humanitarian crises) and companies like Facebook are looking to expand Internet connectivity in Guinea’s forested region.

In early November, Liu, after a short trip to New York, is on her way back to Guinea to train the people who will train the contact tracers in the mobile-phone system. At this point, two thousand Ebola cases have been reported in Guinea, with more than 1,100 deaths.

**LIBERIA** – “Whoa, they just found Ebola in Guinea,” said Ashoka Mukpo’s girlfriend last March. She was reading an article in Mukpo’s apartment in Monrovia, Liberia.

Mukpo ’12SIPA got a little nervous. Guinea and Liberia shared a 350-mile border. *Well, that’s scary*, he thought, *but that’s not going to affect us*.

Mukpo had first come to Liberia in 2011. Columbia’s Center for International Conflict Resolution had hired him to do a research project in Liberia through SIPA’s professional-development program. His job was to work with the UN peacekeeping mission to evaluate how the rush of foreign investment after the country’s 1999–2003 civil war was affecting the peace-building process. Liberia had a long history of turmoil over its natural resources, and there was concern at the mission about how the investment projects were sitting with local communities. Mukpo co-authored a report on investment and community relations, based on field interviews and talks with Liberian officials. In Mukpo’s view, many contracts were being imposed from the top down. Dissenting voices were ignored. Projects ought to be monitored, he felt, to make sure they didn’t stir up regional factionalism, antagonize communities, or bolster perceptions that the government was corrupt and negligent of the poor. There were a few NGOs that did that sort of work. Mukpo approached one group, called the Sustainable Development Institute, and offered his services as a writer and researcher. The group hired him, and Mukpo moved to Liberia full-time.

Now, in March 2014, the word “Ebola” was popping up.

“First we heard that it was under control, and then there were rumors that someone with Ebola traveled to the Firestone hospital from the Guinea border, which is quite a distance,” says Mukpo, thirty-three. “When we heard that, we tensed a little and thought, ‘If someone with Ebola made it all the way to this hospital, even past Monrovia, that could be a problem.’ Then things quieted down. For about a month, we didn’t really hear about any new cases. A few cases had been treated, but the government was very clear: ‘Ebola’s here, you need to watch out for it, you need to observe some safety protocols, but we have it under control.’”

Mukpo’s contract ended in May. When he went back to the US that month, the mood in Liberia was not one of panic. “The expats were afraid,” Mukpo says, “but the Liberians thought the whole thing was a lie. Not all Liberians — obviously there were Liberians who understood that this was a real medical crisis — but most people didn’t worry about it because they felt like it was a





hoax, a scam by the government to get foreign aid. This is where history and the present intersect. There's this historical dynamic of the central government exploiting the rural people — the settlers from America and their descendants ran the country, and there wasn't much opportunity for indigenous people from rural areas, which was one of the main causes of the war. Now you have a government that's been supported by donor organizations, NGOs, and the UN, and which has promised a more egalitarian system of governance. But my experience in Liberia was that the corruption and accountability issues have not been effectively addressed."

In July, Ebola resurged. Mukpo, who was home in Providence, Rhode Island, saw reports that more cases were being found in Liberia — and then it was in Monrovia.

"I watched it on a week-by-week basis go from concerning to very alarming," Mukpo says, "to a point that I started worrying about what it was going to do to the social and political fabric of the country." He wrote articles examining the sociopolitical effects of the crisis and why things were spiraling. "I think if people had had more of a sense that their government was honest and had their best interests in mind," he says, "they probably would have adopted preventative measures much quicker." Mukpo saw a lot of discontent with the government of Ellen Johnson Sirleaf, Africa's first female head of state and a Nobel laureate who was first elected in 2005. "If you look at the 2011 elections, the first round, she didn't even win

the majority of the votes. This is already a government that's not terribly popular, and suddenly there's this medical crisis that many are blaming on the government."

Mukpo's worst fears started to be realized in August, when he read about what happened in the Monrovia neighborhood of West Point. The balcony of Mukpo's Monrovia apartment overlooked West Point, and Mukpo knew some of the seventy thousand people who lived in that maze of tin-roofed shanties. He knew their level of political mistrust. When some residents looted an Ebola treatment unit, resulting in the escape of seventeen patients and the theft of bloody bed sheets and medical equipment, the army placed the entire neighborhood under quarantine. Mukpo watched from afar as troops opened fire on Liberians "who didn't understand why they'd even been quarantined in the first place," he says. "They still felt that the threat wasn't real."

Mukpo had a media-studies background, and with a disaster unfolding in a country he loved, he considered returning to Liberia to report on it. "Professionally and personally, it was difficult for me not to want to go back when there was this massive crisis," he says. "I just made that decision and said, 'I'm going back.'"

His family tried to dissuade him, but Mukpo felt he had no choice. He landed in Monrovia in early September, to a situation that he was unprepared to see firsthand.

**NEW YORK** — "I want us to be on the ground tomorrow," says Wafaa El-Sadr, seated in her office at the Mailman School of Public Health on West 168th Street. "I'm convinced we can actually make a difference. That makes it very hard to sit here."

It is mid-November. El-Sadr and Strasser have been back from Sierra Leone for two weeks. Like anyone coming to the US from West Africa, they are required by the CDC to take their temperature twice daily and answer questions from the health department. Since neither of them worked inside an ETU, there is virtually no chance of their having caught the virus. In Sierra Leone, meanwhile, Ebola is spreading.

One big problem of the epidemic has been a lack of holding centers. In response, the British government, through the UK Department for International Development (DFID), is funding the building of "community care centers" — multi-bed units located near villages and staffed by laypersons rapidly trained by the British army. The idea is that patients will be more inclined to self-isolate if they know they'll be closer to their families while awaiting their lab results. People who test positive for Ebola would be transferred to an ETU, like those run by Médecins Sans Frontières (Doctors Without Borders). There is talk about ICAP evaluating these centers for safety and efficacy once they are functioning.

El-Sadr and Strasser, based on what they saw in Sierra Leone and on their experience fighting HIV/AIDS, have also drawn up a proposal to the CDC for a long-term strategy to improve the tracking of cases, expedite the turnaround of lab results, and — most ambitiously — find and train nurses.



“The number of health-care workers who have died in this outbreak is substantial, and particularly nurses,” El-Sadr says. “Nurses are very precious — they provide the care.” Many on the frontlines have died, and those who haven’t died have watched their colleagues die. Even before Ebola, there were about two nurses for every ten thousand people in Sierra Leone.

Yet ICAP found that the prevailing assumption — that there were too few nurses to staff the new care centers — was incorrect. Organizations working in Sierra Leone could identify nurses who were ready and willing to respond, including unemployed and retired nurses.

“As we rush to find trained health workers, it is essential that we keep them safe,” Strasser says. “Buddy systems and on-site supervision are helping, but we need more. We’ve seen a situation spin out of control due to poor health systems. Nurses are at the forefront of these systems, and they’re the ones most at risk.”

On February 26, 1969, John Frame ’66PH, a doctor in the Division of Tropical Medicine at Columbia’s school of public health and the medical director of a network of Christian hospitals in East Africa, received a call from Nigeria. The caller was Jeanette Troup, a doctor at the missionary hospital in the town of Jos. Troup told

Frame that a mysterious illness had broken out at the hospital. Two American nurses, Laura Wine and Charlotte Shaw, had developed fevers that progressed to nausea, hemorrhaging, organ failure, and death. Antibiotics were ineffective. Troup had performed an autopsy on Shaw, with help from the hospital’s head nurse, Penny Pinneo. The autopsy revealed multi-organ devastation.

Now, a week later, Troup said, Pinneo had a fever and mouth ulcers.

Frame ordered Pinneo flown to New York immediately. The fifty-two-year-old nurse was evacuated from Nigeria, along with blood specimens from her fallen colleagues. While Pinneo was being transported, Frame contacted virologist Jordi Casals at Yale, and told him to expect some blood samples.

At JFK Airport, Frame met the ailing Pinneo and drew her blood. An ambulance took Pinneo to Columbia-Presbyterian Hospital. There, she was placed in isolation. Frame sent all the blood samples to the Yale lab, where Casals and his colleagues set to work to identify the pathogen. Pinneo was acutely ill. At one point, her temperature reached 107 degrees. Somehow, she survived. By early May, after nine weeks in the hospital, she was released.

A month later, Casals, who lived on Manhattan’s Upper West Side, began to feel sick. He thought his symptoms were unrelated

## An Unusual Virus

“One striking feature of Ebola is that, unlike most viruses, it replicates in a lot of tissues,” says Vincent Racaniello, a Columbia professor of microbiology and immunology who runs *Virology Blog*. “You can take the virus in through your mouth, nose, eyes, or skin, and it can spread throughout your body and grow in many different types of cells — in your respiratory tract, gut tract, skin, muscle, liver. That’s unusual for viruses. Usually, they’re restricted to just a few places, like influenza [respiratory tract] or polio [intestinal tract and nervous system]. We call that tropism: the cells and tissues where the virus replicates. Ebola is interesting because its tropism doesn’t seem to be regulated in any way.”

Like many scientists, Racaniello thinks that Ebola’s natural host is a fruit bat.

“All the viruses that we recognize in humans originated in animals,” says Racaniello, who in 1981 was part of the team at MIT that sequenced the poliovirus genome. “Influenza originates in birds, for example. Polio originated in animals, but now it’s

strictly a human infection: it goes from person to person. But Ebola is not a human virus: every outbreak starts with the virus going from an animal to a human, and then it goes human-human-human, until we’re able to stop the transmission. The virus is then gone. When another outbreak happens, it’s from another animal entry,” probably from touching or eating an infected animal.

Once inside the human body, the virus works by entering a cell and then taking over the cell’s machinery to reproduce itself, making more Ebola proteins, which then break out of the cell and infect other cells.

“This is an RNA virus,” explains Columbia epidemiologist Stephen Morse. “Many viruses — Ebola, influenza, polio — have RNA genomes, and they all need their own special enzymes to copy themselves, because our body doesn’t know what to do with them. That’s why there are so many mutations in RNA viruses — those copying mechanisms are very sloppy. We don’t normally copy over RNA in our own bodies. DNA viruses like



herpes simply use the DNA-copying machinery of our own cells.” Despite the profuse mutations caused by the RNA-copying process, neither Morse nor Racaniello see any real chance of the virus becoming airborne, as some people fear. “We have been studying viruses for over a hundred years,” Racaniello says, “and we’ve never seen a virus in humans change the way it is transmitted.”

As for the ghastly hemorrhaging — a result of damage to the cells that line the blood vessels — Morse says, “About 40 percent of cases get these dramatic Hollywood effects. So if you’re looking for that, very often you’ll miss the diagnosis.”

to the mystery bug at his lab. But his doctor, Edgar Leifer '42GSAS, '46PS, a professor at Columbia's College of Physicians and Surgeons, convinced him to go to Columbia-Presbyterian. Like Pinneo, Casals was placed in isolation under Frame's care. As Casals's condition worsened, and increasingly resembled the unknown disease he was studying, Frame called Pinneo, who lived upstate, and asked her to fly to New York to donate her blood, which had antibodies. Pinneo did. Casals received injections of Pinneo's serum and recovered.

But in November 1969, Juan Roman, a technician at the Yale lab who hadn't been working on the virus, fell ill with the same symptoms. His sickness, which ended in death, caused great alarm: no one knew how he'd contracted the disease, and even Casals, meticulous in his own laboratory caution, couldn't be sure how he himself had gotten it. The lab was shut down.

That winter, at the mission hospital in Nigeria, Jeanette Troup saw more patients with symptoms like those of nurses Wine, Shaw, and Pinneo. To verify her hunch that it was the same disease, Troup did an autopsy on one victim. In the process, she cut her finger. Days later, she was sick. In New York, Frame, having heard about Troup's illness, asked Pinneo and Casals to fly to Nigeria to donate their antiserum. They agreed to go. Pinneo arrived on February 20, 1970, only to learn that Troup had died two days earlier.

By then, the new virus, whose natural host was the multimammate rat, had been isolated. Frame named it Lassa fever, after the Nigerian town where it first appeared.

It wasn't until 1976, in Central Africa, that another, more deadly hemorrhagic virus emerged.

William T. Close '51PS was living in Zaire at the time. Close had lived there since 1960, when he and his wife came with an American missionary group. The country was called the Belgian Congo then. Just after Close's arrival, Belgium granted independence to its resource-rich colony, and the Republic of the Congo was born. Violence promptly erupted, both against the Belgians and between Congolese political factions. The 1,500-bed hospital in the capital, Leopoldville, had one surgeon. Close heard about this shortage and went there to help. The injured poured in, and Close sewed up a lot of people.

One day, Close was summoned to the home of the army chief of staff, Joseph-Desiré Mobutu. Colonel Mobutu wanted Close to remove a fishbone from his great-aunt's gullet. Close obliged. Soon after, the country's first prime minister, Patrice Lumumba, a strident anti-imperialist, was toppled in a coup led by Mobutu and backed by the US and Belgium, and later executed. Close was made chief physician of the army. He also became Mobutu's personal doctor.

In 1971, Mobutu, as president, pursued a program of Africanization. He changed the country's name to Zaire, the capital's name to Kinshasa, and his own name to Mobutu Sese Seko. By then, Close was growing disillusioned with Mobutu. To his eyes, the president had gone from a charming, compassionate leader to a detached, wealth-amassing tyrant. In the summer of 1976, Close went on

leave to Wyoming, where he planned to set up a rural practice. In October, he got a call from the Zairean health minister, who told him of a strange disease that appeared in August in the northern village of Yambuku, six hundred miles from Kinshasa. Victims died quickly and horribly, with external hemorrhaging. Panic had gripped the capital, and the military was avoiding the hot zone up north. Mobutu was rumored to have fled to France with his family.

Close flew back to Zaire. On the flight from Geneva to Kinshasa, he sat near Joel Breman and Karl Johnson, two epidemiologists sent by the CDC to investigate the disease, which had infected some three hundred people, killing 90 percent of them.

"As we rush to find trained health workers, it is essential that we keep them safe," says Strasser.

The investigators faced towering questions. How was the illness transmitted? How had it spread? How could it be stopped?

Close overheard the discussion and introduced himself. The three men talked through the night. When they landed in Zaire, the charismatic, French-fluent Close began forging order from chaos: as the director of the country's biggest hospital, he secured medical equipment and supplies; and as the president's doctor, he convinced a wary Zairean air force to provide a C-130 cargo plane to take a Land Rover and materiel up to the jungle-bound village of Yambuku. He obtained helicopters, too, so that the investigators could visit the hundreds of neighboring villages in their quest to halt the disease. One of Close's children, the actress Glenn Close, wrote of her father, who died in 2009, "His was the kind of vitality that immediately changed the chemistry of whatever space he entered — a true life force."

The response team reached Yambuku. There, the investigators found that a high rate of infections occurred in young women. Hospital records showed that many of the women had been pregnant. It turned out that the Flemish nuns who ran the local clinic had given the women vitamin injections with reused, unsterilized needles. The case was cracked: Ebola, named for a river near Yambuku, was spread through bodily fluids. Now, under Close's logistical command, the team made its way to villages to find and quarantine the sick, using the medical equipment and protective gear that Close had marshaled. Years later, Peter Piot, the Belgian microbiologist who isolated the virus and who was part of the team in Zaire, referred to Close's role in stopping the world's first recorded Ebola outbreak as "indispensable."

BY DECEMBER 2014, reported cases in the current outbreak approached twenty thousand, with around seven thousand deaths. The death toll of all twenty-four previous Ebola outbreaks combined was 1,590, according to the World Health Organization (WHO). Unlike those outbreaks, this one crossed borders and got

into big cities like Monrovia, Freetown, and Conakry — the capitals of nations still recovering from wars, where public-health infrastructures are almost nonexistent, and where doctor–patient ratios are woefully low. Liberia, for example, a country of 4.3 million, has about fifty doctors.

In some ways, the health infrastructure in parts of Africa hasn't changed much since the 1960s, when Bill Close was one of three doctors at the main hospital in Kinshasa, performing cranial surgery with a carpenter's drill.

**LIBERIA** – Ashoka Mukpo left Providence and flew back to Liberia in September. On his first day in Monrovia, he saw bodies lying in front of a treatment center. One of them was a child.

He listened to parents talk about how they'd spent days driving around in vain to find a facility that would take their son. They were forced to watch the boy die in the car.

People couldn't get treatment. There weren't enough ambulances. Bodies were decaying in homes. "The depth of human suffering was much more than anything I'd ever seen," Mukpo says. "Life in Liberia was already very difficult, and nobody needed this."

In Monrovia, he encountered a city steeped in anxiety. While you could still go to the beach and have a great afternoon and not even discuss Ebola, just tell jokes and drink beer, the underlying energy was concern for the future and an awareness that nobody knew how bad things were going to get.

Mukpo had come this time as a journalist. A friend was working on a documentary about Liberia, and had offered to pay Mukpo's

**"The depth of human suffering was much more than anything I'd ever seen."**

way if he would help her shoot. Mukpo, who had some experience with a video camera, agreed.

The case count swelled. Each day, dozens of sick people were turned away from treatment centers. They could either go to a government holding center and wait in a cot or on the floor with other patients, or they could go home, where they risked infecting family members and neighbors.

On Tuesday, September 30, Mukpo was hired by NBC News to be the second cameraman for Dr. Nancy Snyderman, the network's chief medical correspondent. The next day, he began to feel tired and achy. He took his temperature and saw that he was running a fever of 101.3. Frightened, he quarantined himself, and on Thursday morning he visited a Doctors Without Borders treatment center to get tested. The results came back that night. Mukpo had Ebola.

By Sunday he was on a plane back to the US, to the biocontainment unit at Nebraska Medical Center in Omaha. Like CUMC assistant professor Craig Spencer '13PH, a Doctors Without Borders volunteer who contracted Ebola in Guinea and was treated at New York's Bellevue Hospital, Mukpo benefited from excellent

care. His treatment included serum from an Ebola survivor, the missionary doctor Kent Brantly, who happened to be driving through the Midwest while Mukpo was hospitalized — and whose blood type matched Mukpo's. Mukpo left the hospital on October 22.

Back home in Providence, Mukpo opened up to the press about his experience. He thinks he got Ebola while interviewing patients outside a treatment center. But Mukpo, like Spencer, asks that we focus our attention on West Africa.

"The effects of the outbreak are going to be much larger than just the human toll of the medical crisis itself," he says. He points out that the Sustainable Development Institute, shut down by the crisis, was one of the few groups scrutinizing the practices of foreign investors in Liberia. "There are still logging companies moving logs out of the country, mining companies moving resources out, plantation companies expanding into land that might be customarily owned by local communities," he says. And, of course, small businesses have suffered, health services have evaporated, and basic social structures like the church and the family have been ravaged.

"It's not just how many people die from Ebola," Mukpo says. "It's how the crisis reverberates throughout the whole country. I believe in the strength and resilience of Liberians, but it's very unpredictable how this is all going to pan out in the next couple of years."

**GUINEA** – Anne Liu arrives in Guinea in mid-November to a welcome development: the United Nations Mission for Ebola Emergency Response (UNMEER) has collected thousands more mobile phones from donors. Liu has all the phones she needs: her long-range goal of building a comprehensive national information portal for Ebola response is becoming tangible. Liu and her team begin training the people who will train the contact tracers in the mobile-phone software. The November visit sees the first seventy-seven new contact tracers trained in Conakry, and some five hundred contacts entered into the database — people who have been exposed to Ebola patients, and whose health can now be tracked in real time.

Though news reports say that the spread of Ebola in Guinea has stabilized, November turns out to be a bad month: five hundred new cases, the highest monthly total yet in a country of twelve million — about the size of Ohio. By late December, a year from when little Emile Ouamouno got a fever in Guéckédou, the virus has killed more than 1,600 Guineans.

Still, Liu, back in Guinea for a third time in December, does not see a country turned upside down. In Conakry, kids play soccer in the streets. The markets are busy. People are "living as normally as they can," Liu says. On the work side, there is a greater UN presence because of UNMEER; and interagency coordination, though not devoid of tensions, is stronger than it was in October. By late December, 130 contact tracers and twenty-seven supervisors have been trained and deployed; Liu anticipates another 650 contact tracers to be trained by January. The number of contacts being monitored has grown to nearly 1,300.



On December 24, WHO reports that more than three hundred new cases have been confirmed in the last three weeks, with “intense transmission” in Conakry.

To catch up with and beat Ebola will take valuable time. Liu’s wireless dragnet has been cast, and the race will go to the swift.

**SIERRA LEONE** – Across the border, the situation is far worse. By year’s end, the number of cases in Sierra Leone has climbed past nine thousand. Nearly three thousand people are dead (the true toll is thought to be much higher, due to unreported deaths). Hot zones have flared up in the western area of Freetown and in the eastern district of Kono, where eighty-seven bodies have been discovered, many of them piled up in a cordoned-off corridor of a hospital.

It is during this upsurge that ICAP sends a five-member team, led by Susan Strasser, back to Freetown. The British government has asked ICAP to evaluate the community care centers that have been going up. The original plan was to train laypersons to run the centers. But as the British military deployed these workers, it became clear that the severe conditions called for professionals. And so health workers from other African countries — Zimbabwe, Kenya, Ethiopia, Uganda — have been recruited to supplement the local workforce.

Out in the field, Strasser is encouraged by what she sees. The centers are up and running, and some have more beds than patients — “a good indicator that services are available and meeting the needs,” Strasser says. Still, in some places, “patients are dying in their homes, which is a separate issue of people not wanting to go to *any* health service.” At the units Strasser visits, she sees a caring treatment environment, where patients can be brought outside to see their family members. There is a growing perception, she says, that going to such a place is not necessarily a death sentence.

Strasser is heartened, too, by the sight of much more international activity than she’d seen in October. She tempers her optimism with caution: “The follow-on quality, support, supervision, and oversight of these units are things that need to be focused on,” she says. “You always have tension between quantity and quality.”

In a country with little more than a hundred doctors, outside help is vital. The foreign workers, says Strasser, “are doing an amazing job.” But they, too, will need help. On December 18, Sierra Leone took another hit: the country’s most senior doctor, Victor Willoughby, sixty-seven, succumbed to Ebola, five days after testing positive. He is the eleventh doctor to die.

BY YEAR’S END, the programming on Star Radio is wall-to-wall Ebola: public-service announcements are shouted out. There are pop songs about Ebola, and discussions about the economic, political, social, and cultural effects of the epidemic.

Yinka Akinsulure-Smith wants to do more shows on Star Radio. People in Sierra Leone “are reeling,” she says. “To say the situation is upsetting is a total understatement. What’s particularly disturbing, in addition to all the deaths of the nurses and others,



Adeyinka Akinsulure-Smith

is that we’re losing doctors. That has been really, really upsetting. The feeling is, if doctors are dying, what hope do we have?”

A week before Christmas, Akinsulure-Smith stands in the offices of the African Services Committee on West 127th Street. About twenty people, some dressed in African clothing, sit before her. Minutes earlier, the audience heard committee attorney Kate Webster ’10LAW discuss the “temporary protected status” designation for Liberia, Guinea, and Sierra Leone that was made law by executive order on November 20. Now, Akinsulure-Smith prepares to lead a conversation on the Ebola-related problems faced by West Africans in New York: stigmatization, bullying, financial strain due to loss of business, and psychological hardship. But first, she has a small request.

“We have people back in our countries — in Sierra Leone, in Liberia, in Guinea — who are dying,” she says. “Who are infected. Who are ill. We have lost so many professionals — nurses, doctors. We’ve lost parents and children. And so what I believe is very important for us to do, to continue the conversation, is to observe a few seconds of silence in their memories.

“Please, rise, and let’s take a few seconds to remember those who are going on as a result of this horrible, horrible circumstance.”

There is a rustle of papers as everyone stands.

Silence. Seconds go by, and the speaker’s voice enters in a soft, clear tone, just above a whisper: “May their souls rest in perfect peace.” 🕯

# A MAN OF TWISTS AND TURNS

One Greek poet.  
One African-American artist.  
One intrepid professor.

How Robert O'Meally brought  
Romare Bearden back to Harlem.



**T**he gods came down from Olympus in a line, nearly a thousand strong: Athena with an Afro, Poseidon as a dragonfish, Circe and the Cyclopes. Each was a burst of color in the darkness — vibrant blues, greens, yellows, and reds, painted on crackling paper and mounted on a boxy frame, illuminated from the inside. They were carried by students, professors, parents, and children, making a spectacular parade as they marched from Morningside Park through College Walk on a warm Saturday night last September.

For many participating in the third annual Morningside Lights festival, that evening was a culmination. They'd spent hours over the course of a week spread out on the stage of Miller Theatre, constructing the lanterns in an experiment in collective art-making. Schoolchildren came in class groups; undergraduates stopped by between classes; faculty and community members brought their families. In a creative game of telephone, people started projects and then handed them off to the next group when they left, with notes that said, "Hi. Can you please transform me into a dragonfish?" or "Please finish this in rainbow colors. Extras: Has a monocle; also a moustache."

But this year, the parade was also a beginning. Called *Odysseus on the A Train*, it marked the first official campus event in *Homer in Harlem*, a yearlong series of concerts, films, readings, symposiums, and classes honoring Harlem artist Romare Bearden. As a campus-wide programmatic focus, it is nearly unprecedented. And at its center is one remarkable art exhibit.

BY REBECCA SHAPIRO



VICTORIA HELY-HUTCHINSON



[illegible]



*Romare Bearden: A Black Odyssey* brings together the artist's 1977 series of collages and watercolors based on Homer's great epic. Six weeks after the parade, the exhibit opened at Columbia's Miriam and Ira D. Wallach Art Gallery. Like Odysseus, the works had been on their own long journey, touring the country for the last two years as a part of a Smithsonian Institution traveling exhibition — Winston-Salem, North Carolina; Memphis, Tennessee; Fort Worth, Texas; Madison, Wisconsin; Atlanta, Georgia; Manchester, New Hampshire; and finally the Wallach Gallery in New York, on the edge of Bearden's beloved Harlem.

For Robert O'Meally, Columbia's Zora Neale Hurston Professor of English and Comparative Literature, the founder of its Center for Jazz Studies, and the curator of the Smithsonian's *A Black Odyssey*, this was more than just the final stop on a museum tour. As he wound his way through Harlem, up Amsterdam Avenue and onto College Walk, he gazed at the procession and smiled.

"Finally," he thought, "they're coming home."

"SING TO ME OF THE MAN, MUSE," begins Homer's *Odyssey* in Robert Fagles's translation, "the man of twists and turns." This phrase — in the Greek, *polytropos* — is Homer's first description

of the hero Odysseus. It alludes to his wayward journey home, delayed by battles and vengeful gods. But it also sums up his character: complex and changeable.

"He was a shape shifter," O'Meally says, "and that's something that Bearden could relate to. The range of his interests and his influences was just incredible."

Born in North Carolina and raised in Harlem, Bearden was a cartoonist, a social worker, a writer, an activist, and a prolific painter and collagist. He drew inspiration from Western masters like Matisse and Picasso, but also from African sculpture and masks, and from Byzantine mosaics, Japanese prints, and Chinese calligraphy. His bright collages, watercolors, oils, and photomontages layered together history, literature, music, and many other art forms.

"I once met an art-history professor who said that she could teach an entire survey course just from the influences in Bearden's paintings," O'Meally says.

O'Meally was a graduate student at Harvard in the early 1970s, working on a dissertation on Ralph Ellison, when he first met Bearden, and the artist has fascinated him and been a focus of his research ever since. An amateur saxophonist who founded Colum-

## BATTLE WITH CICONES

ART COURTESY OF MIRIAM AND IRA D. WALLACH ART GALLERY



On their way home from Troy, Odysseus and his men take a detour to attack Ismarus, the city of the tribe of the Cicones. They're enjoying their spoils when Ciconian reinforcements arrive and drive Odysseus and his men back to their ships.

"One of them seems to be in a Native American headdress. What does that mean?" asks O'Meally. "Bearden is making us wonder about questions of race and of nation, of colonial exploitation and of leadership. Homer lets us know here that Odysseus is flawed, just like the rest of us. He's heroic in so many ways. He's a terrific athlete, he's a wonderful storyteller. He's a military strategist. He's a fanciful lover, with goddesses fighting over him. And yet he's impulsive and foolish."



## POSEIDON, THE SEA GOD

Poseidon is Odysseus's great enemy. After Odysseus gouges out the eye of Poseidon's son, Poseidon is enraged and vows to keep Odysseus away from the seas for ten years.

"Bearden is as concerned about family as he is about heroism and war," says O'Meally. "Why is Poseidon angry? Because Odysseus put his son's eye out. Let's put it in context. This is 1977. African-American children have been mistreated. Bearden seized on the idea that there's a black father that's mad about the mistreatment of his family. I think that's what gives part of the force and the fierceness to this particular image."

bia's Center for Jazz Studies, O'Meally was drawn to Bearden's colorful, jazz-inspired collages, some depicting musicians or musical instruments, and others more abstractly embodying the music's rhythm and spirit of improvisation.

"Bearden said you have to begin somewhere. So you put something down, and then you put something else with it. Once you get going, all sorts of possibilities open up, and things fall into place like fingers on piano keys," O'Meally says.

In 1977, Bearden made a series of twenty collages based on Homer's *Odyssey*. Many of the artist's fans saw this as a thematic departure: at the time, Bearden's best-known works were street and music scenes. But it wasn't his first time illustrating the

classics: in the 1940s, when he was only in his thirties, Bearden completed a series of pen-and-ink drawings based on *The Iliad*, Homer's epic poem of the Trojan War.

"Bearden was stationed in New York City during World War II, and it was clear that this was on his mind when he was making these drawings. The brutality of war is just so evident," O'Meally says. "It's a story that tears you apart, because you're rooting for the heroes and then you realize that the heroes are bloodthirsty and they're killing the people and destroying the ones that we also love. It's a great tragic epic."

In 2007, the New York gallery DC Moore united for the first time Bearden's *Iliad* and *Odyssey* series, as well as smaller, water-





## CIRCE

Circe is an enchantress who transforms Odysseus's men into swine. Odysseus makes a deal with her: turn his men back into men, and he will stay with her for a year as her lover. She agrees, and after a year of feasting, Odysseus and his crew leave her.

"There are more images of Circe in the series than of any other figure from the epic, including Odysseus," says O'Meally. "Here she's depicted like an African queen, which could evoke the 'conjure woman,' a priestess who carried on West African traditions. I think Bearden loves her for her special allure, and also because she is so unpredictable in her powers."

## THE SIRENS' SONG



Circe tells Odysseus that as he sails away from her island, he must bypass the beautiful but deadly Sirens, because any man that hears their song will die from its sweetness.

"Odysseus is so curious and so much in love with the world as we have it, the good and the bad, the enticing and the forbidding, that he wants to hear that song," says O'Meally. "And so he has his men tie him to the mast of the ship. He makes them plug their own ears so they will not hear the song and be killed by it. Our love for him is increased, because he is so human, after all. He's not so big and magnificent. He's like us. This might be my favorite piece in the series. There's just so much joy here."

color versions of the *Odyssey* collages. O'Meally, who had been teaching Homer for years as a part of Columbia's Core Lit Hum classes, wrote the catalogue for the show. When a representative from the Smithsonian got the idea to turn it into a traveling exhibit, she turned to him to curate it.

"It was the most seamless thing in the world," he says. "I was teaching Homer every morning and Bearden every afternoon. It felt like a confluence of everything."

At Columbia, it was also an exciting time for the Wallach Gallery. After years on the eighth floor of Schermerhorn Hall, the gallery is preparing to move to the Lenfest Center for the Arts on the Manhattanville campus. Guiding that move is director and curator Deborah Cullen, who joined the Wallach Gallery in 2012 after sixteen years as curatorial director of El Museo del Barrio in Harlem.

"We're able to use the gallery as a classroom, both for Columbia students and for K-12 neighborhood school groups," Cullen says. "As we prepare to expand and be more public-facing on the

Manhattanville campus, this is definitely the direction we want our program to go in."

Once the Wallach Gallery was established as the show's final domestic stop, O'Meally started thinking about the larger implications for the University. This exhibit, he thought, brought to life a story that every Columbia College student was reading. Students were thinking about Homer in Lit Hum classes, about modernism in Art Hum, and about jazz in Music Hum; the exhibit was the embodiment of the Core Curriculum. He went to President Bollinger with the idea of creating additional programming around the exhibit, and *Homer in Harlem* was born.

Beginning with the Morningside Lights parade in September, the campus has been packed with events, lectures, screenings, concerts, and readings dedicated to exploring the themes that Bearden brings to life in his work. Rosanna Warren and Alice Oswald have done poetry readings inspired by the work. Families have gathered in the gallery to read Bearden-inspired children's books. Scholars have convened for panel discussions



on gender in Bearden and Homer, and on the meaning of the mythology. At one all-day symposium on improvisation, attendees were encouraged to bring instruments in the hopes of forming an experimental band.

Devyn Tyler '13CC, an actress who has appeared in *The Curious Case of Benjamin Button* (2008) and *12 Years a Slave* (2013), is working with O'Meally on developing some of the campus programming, which will continue through the spring. In November, she took the lead coordinating a staged reading of *The Odyssey*, in which she performed with two other actors.

"It's not a text that you really think of as being performed today," she says, "but I was surprised at how powerful it was to

read it out loud, with images of the Bearden works in the background. I'd read *The Odyssey* as a student at Columbia, of course, but Bearden really brought it to life for me."

Tyler, who majored in French, first became acquainted with Bearden while studying abroad in Paris, where she took a class with O'Meally, who was then teaching at Columbia's Global Center at Reid Hall. "It made such an impact that a group of us still gets together to talk about it two years later," she says. "It's exciting to see the rest of the campus joining the conversation."

Events will continue on campus through the spring, with a film discussion featuring Bearden's niece, Diedra Harris-Kelley, a string-quartet performance, several seminars and sympo-



## THE SEA NYMPH

Poseidon summons a storm that knocks Odysseus into the sea. Ino, a sea goddess, rescues him with a magical veil.

"Here's the black woman again," says O'Meally. "She's the one that goes down when the black man is seeing nothing but deadly trouble and manages to gently bring him to the surface. There's a kind of angel of salvation that's presented by this voluptuous figure."

"The influences from Matisse's cutouts are evident. It's as if Bearden is saying, 'I saw your series, and I'm not going to do anything like it. But I will honor it in this little way.' I love the confidence with which Bearden uses his influences. He knows it looks like Matisse. But it's not. It's wholly Bearden."



## HOME TO ITHACA

In Homer's story, Odysseus is fast asleep when his ship arrives home in Ithaca. But Bearden reimagines the scene as a moment of triumph, with Odysseus standing heroically at the ship's bow.

Bearden believed that *The Odyssey* was an epic that embodied the African-American experience.

"I think it was important to him as a black painter to say that this story belongs as much to us as to everyone else," says O'Meally. "Part of the reason that he chose *The Odyssey* was that the story of the African-Americans' journey from Africa through slavery toward freedom is as great an epic story as there is."

siums, a performance by Mike Ladd and Jean Grae, and a student-led staging of *The Odyssey*.

After the Wallach show closes in March, the original artwork will go back to its owners. Meanwhile, a series of reproductions, along with six Bearden lithographs owned by Columbia, will have begun their own journey, heading abroad for exhibits at Columbia's Global Centers in Paris and Istanbul, where each will be paired with other region-specific works. The Paris show, which opened on January 19, features reproductions of Henri Matisse's *Odysseus* series, originally made to illustrate James Joyce's *Ulysses*. The Istanbul exhibit, opening on April 15, will feature works by the Turkish artist Bedri Rahmi Eyüboğlu.

"If you look around the exhibit, there are Christian crosses and references to the Hebrew Bible, and even one painting with an Islamic crescent. I think Bearden layers it in that way to make it clear that the home that he's talking about is a global space. We wanted to celebrate that," O'Meally says.

It's likely that the exhibit will continue its tour, perhaps to Columbia's Studio X in Johannesburg — O'Meally says that possibility is getting more certain every day — and even beyond. He has lofty dreams of taking it to the Columbia Global Center in Beijing, noting that Bearden was a master at lettering and once even studied with a Chinese calligrapher.

For the time being, though, Bearden has reached his Ithaca. And so has O'Meally.

"I had tears in my eyes the first time I saw the exhibit hanging here," he says. "And when I saw schoolchildren with those beautiful lanterns. Bearden has said that all of us are on an odyssey. For me, that means making sure that our students and that people in our community think that Romare Bearden is someone to know about. If that happens, I'll be the happiest man in New York." 🗽

See upcoming Bearden events and more.  
[www.magazine.columbia.edu/bearden](http://www.magazine.columbia.edu/bearden)





# WHOSE GALAXY

As astronomers discover a universe flush with potentially life-supporting planets, it seems more and more likely that we are not alone.

By Caleb Scharf

For the past six years, a van-sized NASA spacecraft called *Kepler* has been orbiting the sun, following the same elliptical path as Earth but trailing a few million miles behind us. This two-thousand-pound hunk of aluminum and electronics, carrying one of the most sensitive telescopes ever built, has been drifting off our tail, rather than orbiting us the way many space observatories do, so that it can enjoy an unobstructed view of the heavens. Its mission is to spot previously unknown planets orbiting distant stars — an extraordinarily difficult task for the simple reason that planets are small and dark, while stars are big and luminous. *Kepler* pulls this off by sensing a planet when it passes in front of its star, momentarily blocking a tiny amount of light, like a moth flitting across a porch lamp. Many astronomers, including me, believe that this planet-hunting expedition is providing us clues to one of the greatest mysteries that humans have ever pondered: whether extraterrestrial life exists.

The possibility that we are not alone in the universe, and that other intelligent creatures are strolling around on their own Earth-like planets somewhere, has been a subject of serious speculation among astronomers since at least the sixteenth century. That is when Nicolaus Copernicus triggered an intellectual revolution by suggesting that Earth is not the center of the universe. His insight inspired jaw-dropping discoveries by Galileo Galilei and others who realized, over the following centuries, that the sun is merely another star, that the stars we see in the nighttime sky are a tiny fraction of those that exist, and that the universe has no center. By the late eighteenth century, many scientists subscribed to a view that remains popular among both laypeople and astronomers today: that given the immensity of this decentralized cosmos, life

Illustrations by Davide Bonazzi



IS IT?







*must* exist somewhere else. The alternative — that our sun, among the unfathomably large number of stars out there, is the only one supporting life — seemed faintly ludicrous.

Until very recently, though, we lacked the technology to see if other Earth-like planets were indeed orbiting any of the hundreds of billions of stars surrounding us. This effectively stalled scientific progress in learning whether we are unique, obscuring the true nature of our existence. No amount of philosophical reasoning could overcome this ignorance.

That veil may be lifting. In the past year alone, astronomers have identified nearly one thousand planets in other star systems — or exoplanets — based primarily on *Kepler's* observations. These discoveries have more than doubled the number of known exoplanets, bringing the total to about 1,900. This number is expected to increase steadily over the next couple of years as scientists pore over *Kepler's* vast trove of data.

Both the number and variety of exoplanets found so far have astounded even seasoned scientists. Whereas the first exoplanets discovered back in the mid-1990s were massive gaseous beasts with a passing resemblance to Jupiter — these behemoths were the easiest to spot — we've since identified exoplanets of nearly every conceivable size and character. Some are orbiting stars so closely that their surface temperatures are likely to be more than a thousand degrees, causing heavy iron-rich rock to gasify, forming clouds and then condensing as metallic raindrops. Others are likely to be icy snowballs plunged into permanent winters so deep that their atmospheres have frozen and fallen to the ground. Still others follow orbital patterns that suggest they may have atmospheric conditions that resemble Earth's. In fact, based on our observations to date, we can extrapolate that roughly one out of every two stars in our Milky Way galaxy has an Earth-sized planet orbiting it, and that almost 30 percent of these planets orbit their stars at distances that could perhaps allow for surface environments with liquid water — that marvelous enabler of known biochemistry. This suggests that there are *tens of billions* of such worlds in the Milky Way alone.

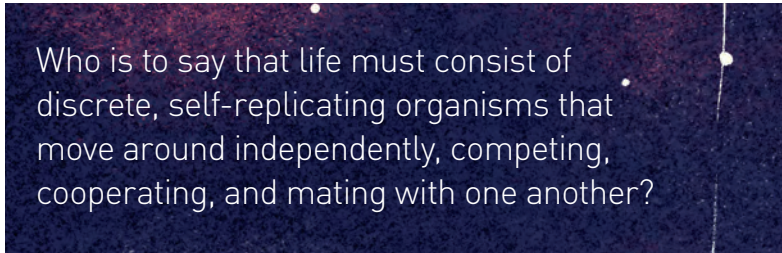
The idea that our galaxy is teeming with other Earths is thrilling just to think about. But we can now do more than that. Today, many astronomers, biologists, chemists, physicists, geologists, and others are coming together to share data, ideas, and analytic techniques in hopes of answering questions that just a generation ago were not considered valid lines of scientific inquiry — questions like: How *much* life is out there? If life exists elsewhere in the universe, what form might it take? Is it likely to follow the same rules as life on Earth? Might it be reflecting intelligently on its own existence as we are?

Like many scientific revolutions, the one occurring now in this interdisciplinary field of astrobiology is fueled by technological innovation. Yet the next challenge we face puts us in a cosmic Catch-22. If we are to ascertain whether life exists on one of these

distant planets, we need to build even more sensitive telescopes. And yet to design the right telescopes, we need to learn more about what we're looking for. We need to figure out ahead of time what kinds of clues are indicative of an active biosphere.

To address this question, astrobiologists and astrophysicists are now collaborating with climate scientists, whose computer models of Earth are being adapted to create virtual alien worlds. Some of this work is being pioneered at Columbia, where researchers led by Anthony D. Del Genio, an adjunct professor of earth and environmental sciences and a member of the NASA Goddard Institute for Space Studies, are building simulations of hypothetical planets replete with pulsing atmospheres, oceans, and starlight to provide them with energy. To test their methods, they are creating simulators of ancient Mars, ancient Earth, and ancient Venus. Millions of lines of computer code are being scrutinized and updated. Soon the scientists will build ice worlds, ocean planets, bigger Earths, smaller Earths, some spinning rapidly and others slowly, some frothing with biological activity and others barren. Hopefully these models will help teach us how to detect life's fingerprints: atmospheric imbalances of compounds like oxygen or methane, or perhaps the infrared energy leaking from technological civilizations. As these virtual worlds are permitted to take their imaginary course, Del Genio and his colleagues will learn how to build tools to discriminate between habitable and uninhabitable worlds.

In searching for life outside our solar system, astrobiologists have until now focused mainly on observing planets that orbit stars similar to our sun in age and composition. But many of us believe that we could be limiting ourselves unnecessarily. To get a better idea of what star systems are worth investigating, we are now working with scientists who study the chemistry of both the



Who is to say that life must consist of discrete, self-replicating organisms that move around independently, competing, cooperating, and mating with one another?

ancient universe and the frigid interstellar regions where stars and planets form. Among these researchers is Columbia astrophysicist Daniel Wolf Savin '85CC, who has built a sophisticated experiment at the University's Nevis Laboratories in Irvington, New York, in which he re-creates the harsh conditions of interstellar space and then tries to coax delicate molecules like water and carbon compounds into being. By measuring the ease with which these reactions take place, he is giving us a better idea of what environments might sustain the full range of elements and organic materials necessary for life as we know it.



What might extraterrestrial life be like, should we find it? The truth is that we have absolutely no idea. If the study of distant planets has taught us anything so far, it is that diversity rules. A rainbow of cosmic conditions exists: variations in chemistry, climate, and the vagaries of each planet's unique history. Even if life here on Earth is built from a universal toolkit, it seems possible that life could turn up in altogether unfamiliar forms elsewhere. Who is to say, for instance, that life must consist of discrete, self-replicating organisms that move around independently, competing, cooperating, and mating with one another? Might it instead be a dispersed web of organic material that metabolizes energy, processes sensory information, and thinks as a unified entity — not unlike a biological version of our vast Internet? The ideas of science fiction could yet turn out to be reality. It is useful to remember that life on Earth is the result of a particular chain of evolutionary events that, in hindsight, seem miraculously serendipitous. If this story were written on another world, around another star, beginning at another moment in the universe's history, the outcome might shock us.

Some surprises may come from environments right here in the solar system. Icy moons like Jupiter's Europa and Saturn's Enceladus erupt with geyser-like plumes of salty water, offering a taste of what must be immense interior oceans. There is now intense interest in whether the bases of these abyssal realms, where water meets rock hundreds of miles down, might create analogs to the hydrothermal systems we find on Earth. Are these places where cave-dwelling life can flourish? Some scientists have suggested that life on Earth could have originated in parts of the deep terrestrial

biosphere, which calls into question whether the same could have happened in a moon like Europa. Meanwhile, some of us are wondering if life on Earth might have originated elsewhere, perhaps on Mars or some nearby icy moon, and migrated here — or alternately, if simple Earth organisms might have at some point colonized a neighboring planet or moon. We're dreaming up experiments to test the ability of microbes to survive transfer between worlds on chunks of material chipped from planets by asteroid impacts, tests that could one day fly on the International Space Station.

It may also be the height of conceit to think that terrestrial life couldn't originate multiple times from scratch, perhaps even rewiring the basics of biology each time. Some scientists today are searching Earth for evidence of what is commonly called "weird life," or life forms that utilize alternative biochemistries and thus evade our normal tools for studying living things. A few years ago the possibility of arsenic-based life in a California lake made headlines, and although it turned out to be spurious, many astrobiologists continue to believe there is value in challenging the status quo.

Preparing for the unexpected in astrobiology isn't just a psychological exercise; it's a critical part of the scientific process. We've only had one history, one living planet, to work with so far. Change this and you change the rules of the game. [↗](#)

*Caleb Scharf, the director of the Columbia Astrobiology Center, is the author of several popular books on astronomy, including, most recently, The Copernicus Complex: Our Cosmic Significance in a Universe of Planets and Probabilities.*











## Indra Sinha

As a small boy, I had the good fortune to spend four years living near Lonavala in the Western Ghats, a range of jungle-covered mountains that run down the west coast of India.

It was 1957, and the road up into the hills wove in a series of steep hairpins past a small temple to Hanuman, the monkey god. Car wrecks were common milestones, and the truck drivers who ground up and down the road all day in first gear always left flowers as insurance. The garlands were promptly torn to bits and eaten by long-tailed langurs, who sat on the roof nibbling roses and marigolds, and watching the passing world with shrewd eyes.

When you reached the top, what a view. To the west was a forty-mile blur of coconut groves, tribal forests and swamplands, and a distant glint of salt marshes and creeks dotted with tiny shark-fin sails. Eastward, the escarpment rose still higher, with the mountains assuming fantastic shapes: vast rearing domes of rock wearing

The hills where my friends and I roamed are mostly deforested, and the pockets that remain are full of tourists' litter.

the sky like a wide blue hat. A basalt cliff jutting out three thousand feet was called Duke's Nose, in memory of the Duke of Wellington's famous snout. The last tiger in the area had been shot only fifteen years earlier by Mrs. Atkinson, a hunting, fishing Englishwoman.

In the jungles that covered the hills lived small men who hunted bandicoots and porcupines with bows. At night, leopards came down to take village dogs, and as I lay in bed, huge green moths with tails like teaspoons came flap-tapping at my window. Each morning I knocked my shoes on the floor to dislodge scorpions. When the rains came, the parched hills turned green in a night. A six-inch-high rainforest sprang up, roamed by red-and-black-striped centipedes whose fangs could split shoe leather. My five-year-old sister was bitten by a nine-inch specimen and nearly died.

It was a very particular place.

A few days ago, my wife reminded me of a short story I had written in the 1970s called "Gentleman, UK—Returned," one of a group of tales set in the Lonavala of half a century ago. Reading it through again, I was struck by how much has changed. Today's

landscape is dotted with ugly villas and garish hotels. The hills where my friends and I roamed are mostly deforested, and the pockets that remain are full of tourists' litter. The people in the story neither knew nor thought about much beyond their small world. The big city, Bombay, was a far off, unreal place. England was still the heart of empire, and my Anglo-Indian friends (I mean the creole community as opposed to those English who had stayed on) continued to refer to it as home.

I dug out some more of my old stories. "Kallisto," set on a Greek island in the mid-seventies, was essentially the complaint of an old lady whom my wife and I had met on the island of Poros. The war, the defining event of her life, was powerfully alive in her memory. Again, reading pages written nearly forty years ago, I sensed a particularity of place and sensibility that is now gone.

The early eighties found me sitting at a table under a plum tree in France, not far from the famous painted cave of Pech Merle. On the table was a typewriter and a glass of dark Cahors. In the typewriter was my first attempt at a story called "The Man in the Tomb." I was smoking a Gitane, thinking — I'd been reading too much Lawrence Durrell — "Ah, this is what it is to be a writer."

"The Man in the Tomb" was set mostly along a road from Galilee to Jerusalem. I had never been to Israel, but imagined a track lying like a white whip-lash across limestone hills.

Six years ago, my wife and I visited Israel to research the novel of which my old story was the seed. We left Tel Aviv on an evening of filthy weather to drive to Galilee. As it grew dark, my wife, map reading, said, "We're in the plain of Armageddon." Armageddon, where a final cataclysmic battle will bring the world to an end.

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RIGHT: A poster in Paris advertising the festival.





**ABOVE:** A branch of the global bank HSBC in South Mumbai.

The horizon ahead was silhouetted by a weird golden mist out of which emerged the two huge yellow arches of a McDonald's.

I don't like visiting Lonavala and the desecration of my childhood, but I was thrilled to read recently about a group of digital marketers who had gone there "to enjoy nature and fresh air." One of them was in the garden of his hotel siphoning the scenery into his iPhone for future Facebooking when an enormous red-and-black-striped centipede rushed up and fastened its fangs in his calf.

O glorious invertebrate!

I never imagined I could feel such pure, intense joy as when I learned that *Scolopendra hardwickei* survives in my beloved hills, venomous and bad-tempered as ever.



## Sudeep Sen

Over the past thirty years, writes my friend Olu Oguibe, a Nigerian-born American poet, painter, and academic, "globalization has left a signature imprint on architecture in poor and developing nations." Structural security fixtures such as steel bars across doorways and windows have proliferated, he says, as have high walls, tall metal gates, and barbed or razor

wire around businesses and residences. These fixtures have sprung up in response to a rise in crime that has followed spikes in unemployment, inflation, and cost of living brought on by the IMF and World Bank development-loan programs of the 1980s and 1990s.

In literature too, the impact of globalization has been mixed. One of the most obvious impacts has been in the area of mainstream multinational publishing and distribution, which is increasingly in the hands of very few houses — with various imprints and publishing arms fused and owned by a clutch of holding companies — who are increasingly the kingmakers of the literary scene. This has, in many cases, led to homogenization and a narrowing of publishing plans for the sake of profit. We all know there are various shades and kinds of hierarchies here: popular or genre fiction versus literary fiction, self-help and cookbooks versus serious non-fiction, with drama and poetry being the poor cousins.

The area of translation in world literature has suffered the most. Most contemporary non-English literatures (barring those of a few major world languages) hardly cross the linguistic boundaries within which they are written. Only after a major lifetime prize like the Nobel does a José Saramago or a Wisława Szymborska get any global attention, translation, and therefore wider readership. This is not how things would be in an ideal world; but the world, as we know, is not ideal or democratic or a level playing field. In



this profit-driven environment, it is the smaller, local, “glocal” players that have the courage to experiment and encourage new writing, and still continue to publish experimental and cutting-edge writers.

On the other hand, by removing boundaries of geography, globalization has enhanced the flow of world literature — thereby enriching the literary world. Today it is not unusual to find Indian writers on European shelves and Afro-Caribbean writers on Indian shelves. Writers of merit now have the opportunity to access a world audience. And as writers, we have the opportunity to inhabit different landscapes without really being affected by access to the traditional literary cosmopolitan centers — I myself have lived for long periods of time in New York, and London, and also Dhaka and Delhi — and the literature that is being produced in these different places is creating subgenres of its own.

We also need to give credit to the liberation provided by one of the biggest drivers of globalization itself: the Internet. These are the days of high-speed broadband access to information — albeit mostly an overload of binary slush. Still, widespread Internet access has made literary reading, writing, and sharing more democratic. High-quality publications are now unlocked from the constraints of the print media. Of course, not everything out there makes the grade, but the floodgates are open, and that can only be good.

There will be arguments for and against globalization; our perceptions of its impact will change color

and texture over time. What will remain unchanged, however, is the ability of literature and poetry to enrich, inspire, and create joy in the quietest, most passionate, and most intimate ways.



## Salma

Tamil is among the oldest Indian languages. Poems and epics that are considered the zenith of traditional literature have been written in it. *Tirukkural* in particular can be celebrated as a scripture for the whole world for the way it presents a comprehensive code for living.

Globalization is a term that we hear often in third-world countries, particularly in countries like India that are home to such ancient traditions. But while people often complain about how globalization is transforming or destroying our culture, there is another side of the issue.

We cannot underestimate the alternative philosophies and literatures that globalization has brought to our doorstep. Ideas that were completely alien to traditional Indian thought have reached us through the doors it opened. Every writer can now read — at least in translation — about these ideas, creeds, and concepts — including feminism. These works have begun to influence our modes of creative writing, as well as our language, in the most natural way.

We had previously refused to think about matters that are a routine part of Indian and Tamil life, such as homosexual relationships and sex workers, or completely rejected them in the name of protecting our culture. Contemporary Tamil works that have appeared as a result of globalization now compel us to debate the living conditions of those who have been neglected or rejected.

During the nine-year period when I lived in my tiny, backward village in a state of exile from the outside world, it was only the information carried to me by globalization that helped me widen my perspective. Especially in a village that hid the very word “menstruation” and deemed it a shameful secret, these reading experiences created a language with which I could call attention to the violence perpetrated against women.

It was globalization that familiarized me and other Indian writers with concepts like structuralism, post-modernism, and deconstruction, and the writers who

**BELOW:** Novelist Akhil Sharma speaks at the World Writers' Festival.



JACK LLEWELLYN-KARSKI

experimented with these concepts in their books, such as Orhan Pamuk, Sartre, Camus, and Foucault.

Countless contemporary writers are proving the truth that knowledge does not belong to individuals. An essay written in some corner of the world is uploaded to the Web, immediately kicking off a worldwide debate. Owing to the globalized relationship between writers and readers, the world is indeed becoming very small.

For me, globalization is a happy development. In my youth, when my beliefs were shaped by God and the rules of society, it was Karl Marx and Marxist philosophy that liberated me. Books like Dostoevsky's *White Nights and Other Stories* and *The Brothers Karamazov* engendered a philosophical quest in me. The fighting spirit that I had imbibed from the great works of Russian literature and the poetry of great writers like Anna Akhmatova gave me the impetus to liberate myself from the demeaning existence that patriarchal society had ordained for women.

Reading Leo Tolstoy's *War and Peace* and Alexei Tolstoy's *The Ordeal* made me experience the tragedy of wars that had been fought long ago as well as those being fought today. The philosophical quest that was instilled in me through works like Camus's *The Stranger* and Sartre's *No Exit* destroyed some of my illusions about life. The poems of Bertolt Brecht and Anna Akhmatova instilled a combative spirit in me, and Mayakovsky's words significantly affected my poetic diction.

And Western ideas of feminism came to me through the works of Rosa Luxemburg, reinforcing my own.

How could all this be anything other than the serious impact of globalization on a writer?



## Akhil Sharma

I have had a lucky life and been loved by many people: by blacks and whites, by Muslims, Jews, and Hindus. Once when I was having difficulties with my parents, a black woman told me about her brother whom she had not spoken to for many years, always thinking that things between them would eventually get fixed. He died suddenly, she said. Another time, because I feel bad about how little I earn, a friend who makes millions told me that he had started an affair with a woman who knew famous people, largely because he wanted to be near fame. For me, books offer the same responses to my deepest fears that close friends do.

Whether I am reading about Russians in the 1800s or a man hunting androids, books show me that I am not the only one who feels alone, who has feelings of uselessness, who has trouble controlling his emotions.

I believe that we are all the same, and that we have always been the same, and that we will always be the same. Because of this, the idea of globalization has always struck me as being like the sweet silly things that young people say to make their generation different from the generations that have come before.

I consume culture from around the world. In China a woman's long fingers are described as scallions and in India they are described as flutes. But what does this matter compared to the desire that the writer has to cel-

I believe that we are all the same, and that we have always been the same, and that we will always be the same.

brate the woman, or his love for the woman, and also indirectly himself by using attention-getting language?

I am not saying that I am unaffected by the fact that I consume culture from around the world. What I learn from works of other cultures, though, are either attitudes — Mo Yan's cheerful satire against the state — or techniques. Tolstoy, for example, creates the effect of a godlike point of view by describing a character from the detached third person in one paragraph, switching to an internal point of view in the second paragraph, and switching to an external one in the third. The rapidity of this shuffle of perspectives discombobulates the reader. Attitudes are not original the way that technique is. Mo Yan is extraordinary, but he is not as delightful as Tolstoy.

The primary effect of globalization, aside from practical systems such as global supply chains, is to take information out of context and thus give our fears more justification. While before we were only afraid of the things that we brushed up against on the streets or maybe saw on TV, now with the Internet almost hooked directly into us, we feel that ISIS is two blocks away, and that any day now somebody on our street will have Ebola.

I am an example of globalization. I immigrated to America when I was eight, and I publish in French and Italian and Spanish. To me, though, the value of my work is not what it reveals about me, but what it reveals about you. 🙏

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[www.magazine.columbia.edu/india](http://www.magazine.columbia.edu/india)





# NEWS

## Amelia J. Alverson chosen to lead development and alumni relations



Amelia J. Alverson

JORG MEYER

Amelia J. Alverson, who has overseen the fundraising efforts of the Columbia University Medical Center for the past five years, has been chosen to lead the University's central development and alumni-engagement operations.

Alverson was named executive vice president of University development and alumni relations in October, after filling the position on an interim basis since last spring. Her job puts her in charge of some of the University's most visible efforts to connect with its 313,000 graduates, including the Columbia Alumni Association — a worldwide umbrella organization for all University alumni — and *Columbia Magazine*. She also oversees what has become one of the most successful fundraising operations in all of higher education, which in recent years has helped Columbia renew the strength of its faculty, increase the amount of financial

aid available to students, and bankroll long-needed construction projects.

"Amelia has a unique ability to motivate and inspire both colleagues and volunteers to achieve exceptional results," wrote President Lee C. Bollinger in an October 17 e-mail announcing Alverson's appointment. "She brings to her new position great energy coupled with a strategic creativity honed by the experience of having worked effectively with the faculty, leadership, and alumni of all four schools at our Medical Center. I can think of no better person to help steward this great institution and to build upon the sense of loyalty and enthusiasm now seen throughout the extended Columbia community."

Alverson came to Columbia in 2009 from the Stanford University Hospital and Clinics, where she was vice president for development. She previously held fundrais-

## NeuroTechnology Center will create new tools for studying the brain

Brain scientists say their field is in a critical period of transition: after a half century of progress made in understanding how relatively small numbers of neurons communicate with each other, researchers are now preparing to investigate how billions of neurons coordinate their electrical pulses to encode our memories, thoughts, and emotions.

To make sense of the brain at this level, though, will require new technology. Researchers say they need more powerful imaging tools to observe what's happening inside the living brain. And they need more sophisticated software to analyze the enormous amounts of data that such investigations will generate.

At Columbia, a group of scientists and engineers with experience designing advanced research tools has come together in an effort to help neuroscientists make this leap forward. The group, led by Rafael Yuste, a professor of biology and neuroscience who builds his own imaging equipment, recently formed the NeuroTechnology Center, whose mission is to invent new tools in partnership with brain scientists who want to conduct experiments that cannot be done with commercially available laboratory tools. The center is expected to foster collaborations between faculty in

Columbia's natural-science and engineering departments and neuroscientists at the Mortimer B. Zuckerman Mind Brain Behavior Institute, an interdisciplinary research unit the University created two years ago to address the most complex, seemingly intractable questions now facing the field.

"I don't think it's an exaggeration to say that the Zuckerman Institute now represents one of the best neuroscience-research groups in the world, if not *the* best," says Yuste. "And the big questions that neuroscientists are asking can only be answered with input from others. They need physicists, chemists, computer scientists, engineers, and statisticians to help devise revolutionary new methods of observing the brain and analyzing what they see there."

The NeuroTechnology Center will host faculty retreats, symposiums, and other events where neuroscientists and academics from other departments will meet to discuss matters of common interest. The center's inaugural symposium was held in November, drawing hundreds of participants.

"If we get the best toolmakers and the best tool users together in the same room on a regular basis, collaborations are going to

ing positions at the Mayo Clinic's Scottsdale campus, Northwestern University's Feinberg School of Medicine, and the University of Illinois.

When Alverson arrived at Columbia, the University was in the midst of a fundraising campaign that would become the most successful in Ivy League history, raising \$6.1 billion by the time it ended in December 2013. CUMC would raise about one-third of that total, attracting \$2.2 billion in gifts from alumni, friends of the University, and grateful patients and their families. Among the highlights of the CUMC campaign were the receipt of more than \$100 million for a fourteen-story Medical and Graduate Education Building — which, when it opens in 2016, will represent the first major update of the medical campus's educational infrastructure in nearly fifty years — and gifts in support of new research programs in neuroscience,

genomic medicine, cardiovascular medicine, infectious diseases, systems biology, cancer, diabetes, ALS, Alzheimer's, and many other areas.

"Supporting academics who devote their lives to helping people and improving the world is extremely rewarding to me," says Alverson. "The reason I've chosen to do this at Columbia is because the University is in a period of remarkable growth and accomplishment. In the past decade, President Bollinger has articulated a bold vision for how scholars from across the institution can come together as part of large interdisciplinary initiatives that address some of the most profound challenges that we face — such as confronting climate change, harnessing genetic information to treat disease, and investigating the brain — as well as define Columbia's increasing global presence. These are the kind of ambitious goals that

have inspired alumni and others to support Columbia in record numbers over the past few years, and they are the kind of ambitions that will continue to mobilize the University community as we move forward."

Among Alverson's goals as executive vice president, she says, is to involve more alumni in the life of the University — not just as donors, but also as participants in regional alumni clubs and interest groups, as mentors to students, and as members of the dean's councils and other advisory groups that help set the direction of Columbia's schools and colleges.

"One of the reasons for Columbia's fundraising success in recent years is that alumni have become more deeply connected to the University," she says. "They're inspired by the work they see our faculty and students doing, and they want to be a part of their success."

naturally take shape," says Yuste. "Maybe a neuroscientist will describe a technical obstacle he's confronted that a physicist already has a solution for. Or maybe a computer scientist will describe an analytic technique he's developing that gives a neuroscientist an idea for a new study they could do together."

The center's founding faculty, who, in addition to Yuste, are chemist Virginia Cornish, statistician Liam Paninski, and electrical engineer Ken Shepard, plan to establish a fellowship for graduate students and postdoctoral researchers who would split their time between a tool-building laboratory, such as one of their own, and a neuroscience laboratory at the Zuckerman Institute. The center, which was launched this past fall with a \$150,000 seed grant from the Kavli Foundation, is now seeking additional gifts for the fellowship.

"The goal of the training program would be to place one or two technically inclined researchers in every neuroscience lab at Columbia that could use their contributions," says Yuste. "This could eventually have a major impact on the way neuroscience is done, not just at Columbia but throughout the field."

>> To learn more, visit [ntc.columbia.edu](http://ntc.columbia.edu).



EILEEN BARROSO

Members of the NeuroTechnology Center include, from left, research scientist Darcy Peterka, electrical-engineering professor Ken Shepard, biology and neuroscience professor Rafael Yuste, research scientist Julia Sable '10TC, chemistry professor Virginia Cornish '91CC, and statistics professor Liam Paninski.



## Goldberg named EVP for university life

Suzanne Goldberg, a Columbia law professor and a nationally recognized expert on gender and sexuality law, has been appointed executive vice president for university life, a new position that is intended to be a primary point of contact between students and the University administration on issues that affect the entire student body; to provide a focal point for engagement in the University's intellectual life; and to promote participation and citizenship in the University community.

"I make this appointment with great enthusiasm," says President Lee C. Bollinger, who announced Goldberg's appointment in January. "This newly created position fills an important need at the University and will elevate the quality of life of students, faculty, and staff — indeed, everyone in our community — for years to come. Suzanne Goldberg is an exceptional leader and colleague, and precisely the right person to realize the promise of the new office. We are fortunate she has agreed to take on the responsibility."

According to Columbia officials, the executive vice president for university life will facilitate campus-wide conversations on a wide variety of issues, whether involving people's experiences on campus or their thoughts about events taking place in the broader world. This could pertain to gender-based and sexual misconduct; race relations; civil rights and policing; terrorism and counterterrorism efforts; and many other topics.

The creation of the new EVP position, say University officials, was inspired partly by the intense debate that has taken place on US college and university campuses over the past year about how higher-education institutions ought to be dealing with sexual assaults.



AVI SCHWARZSCHILD /  
COLUMBIA DAILY SPECTATOR

Suzanne Goldberg discusses sexual-violence prevention efforts at a University Senate meeting last fall.

Columbia instituted many changes to its own sexual-misconduct policies last year in response to student criticisms; Goldberg served as a point person in discussing those changes with students, having been appointed a special adviser to the president on sexual-assault prevention and response last summer. (To learn about the University's updated sexual-violence policies, visit [sexualrespect.columbia.edu](http://sexualrespect.columbia.edu).)

"Students deserve a lot of credit for prompting the University to examine how we address gender-based and sexual misconduct on campus," says Goldberg. "The University is now devoting an extensive amount of attention and resources to combating sexual violence, and our efforts are being undertaken in close partnership with students."

Moving forward, Goldberg says, the newly created Office of the Executive Vice President for University Life will work with students to learn of any similar concerns that arise and develop strategies for addressing them.

"It all starts with communication," she says. "My goal is to coordinate conversations across as many different groups of students, faculty, and staff as possible, in order to ensure that Columbia is maintaining an optimal learning environment for all of its students."

## Students respond to racially charged grand-jury decisions



COURTESY OF COLUMBIA DAILY SPECTATOR

More than two hundred students of color lay down on College Walk on the evening of December 4, 2014, in a peaceful demonstration during Columbia's annual tree-lighting ceremony. A day earlier, a grand jury in Staten Island had declined to indict a white police officer whose chokehold led to the death of an unarmed African-American man, Eric Garner.

Organizers of the protest asked students to dress in black and asked that white allies refrain from participating in the "die-in" because "your bodies are not targeted by the system in the ways Blk&Brown bodies are," according to the "official Die-In Mission Statement" obtained by *Bwog*, Columbia's student-run news website.

Across campus, students reacted with strong emotions, both to the Garner verdict and to a recent grand-jury decision in Ferguson, Missouri, in which another white police officer had not been indicted for killing an unarmed black man. In a letter to faculty and administrators that was posted online, a group

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## University names precision-medicine director

Tom Maniatis, a pioneer of modern molecular biology who has taught at Columbia since 2009, has been chosen to direct the University's new initiative on precision medicine. The goal of the initiative, which was established by President Lee C. Bollinger last fall, is to position Columbia at the forefront of the development of genetics- and genomics-based approaches to medical care, and to support research on the ethical, legal, and economic implications of such advances.

"Since the human genome was sequenced a decade ago, remarkable progress has been made in learning how we might diagnose and treat diseases more effectively by considering each person's unique genetic blueprint," says Maniatis. "There is a lot more work to be done before physicians will be able to offer patients individually tailored treatments on a routine basis. However, that day is approaching, and the mission of the precision-medicine initiative is to ensure that Columbia emerges as a leader in this impending revolution in medical care."

In one of his first ventures as director, Maniatis is working closely with Michael Purdy, the executive vice president for research, to lead

a faculty task force that convened last year to assess Columbia's strengths in the still-nascent field of precision medicine, as well as to identify academic departments that might contribute to this multidisciplinary effort but which need more resources to do so. The task force, whose forty members represent dozens of departments on both the Morningside and medical-school campuses, will publish their findings later this year.

"A successful outcome of the initiative will require the coordination of intellectual efforts across the University," says Maniatis. "Most obviously, this will require the creation of a structure that effectively translates advances in basic science to medical practice, a process that includes close communication of the basic-science departments at the medical school and the Morningside campus with clinical departments and the hospital. An important component of this effort will be strong programs in mathematics, data science, and computer science, which are necessary to analyze and interpret the enormous amounts of data required to effectively connect human genomic data to health-care outcomes."



Tom Maniatis

According to Maniatis, the initiative on precision medicine will also promote research on a broad range of related social and policy issues. For example, the question of who has affordable access to genetic screening, which is often not covered by health insurance, is of increasing interest to bioethicists, health-care economists, sociologists, and public-health scholars.

"There are many complex issues that need to be addressed before precision medicine becomes the standard of medical care," Maniatis says. "And these issues touch virtually every part of the University."

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called the Columbia Law School Coalition of Concerned Students of Color wrote, "We have been traumatized over and again by the devaluation of Black and Brown lives. We are falling apart . . . We have struggled to compartmentalize our trauma as we sit and make fruitless attempts to focus on exam preparation." The coalition requested that deeply affected students be allowed to postpone their exams. The law school, in a move that prompted lively public debate, honored the request.

"The grand juries' determinations to return non-indictments in the Michael Brown and Eric Garner cases have shaken the faith of some in the integrity of the grand-jury system and in the law more generally," wrote interim dean Robert E. Scott. "For some law students, particularly, though not only, students of color, this chain of events is all the more profound as it threatens to undermine a sense that the law is a fundamental pillar of society designed to protect fairness, due process, and equality."

On Wednesday, December 11, students at the Mailman School of Public Health held a forum to talk about the Garner case and racism in general. "For a moment, imagine holding your breath, wanting to breathe but not allowing yourself to, and then finally exhaling," wrote Mailman student Brittany Brathwaite on the *Columbia Public Health: Student Voices* website, describing the feelings of release afforded by the forum. "I, and so many other students of color, allowed ourselves to stop suffocating in our truths. Wednesday, I felt held by the institution I chose to attend. We created a space where people could voice their trauma and pain, have it listened to and affirmed." Another Mailman student, Cheyanda Onuoha, wrote, "Before the forum, I felt a sense of isolation at Mailman as a black body; seeing so many of my peers courageously go deep within themselves and speak the truths I've been feeling related to race, racism, and social injustices, not only brought about a new level of connectedness but started the process of healing."





Construction workers prepare the final beam for placement atop the Lenfest Center for the Arts.

## Straight to the tippity top

On October 2, construction workers put in place the final steel beam of the Lenfest Center for the Arts during a “topping off” ceremony that marked the completion of vertical construction for the facility on Columbia’s Manhattanville campus. The six-floor, 53,000-square-foot building, which is supported by a \$30 million gift from University Trustee Emeritus H. F. “Gerry” Lenfest ’58LAW, ’09HON, is scheduled to open in late 2016. The Lenfest Center will be used for showcasing

the works of students and faculty, as well as those of visiting artists. It will contain a gallery; a film-screening room; a versatile dance and performance space; and a presentation area for readings, symposiums, and seminars.

“It’s going to be a fabulous venue that will benefit not just our students but the surrounding neighborhood and the entire city,” says Carol Becker, dean of the School of the Arts. “We’ll host many events that will be open to the public.”

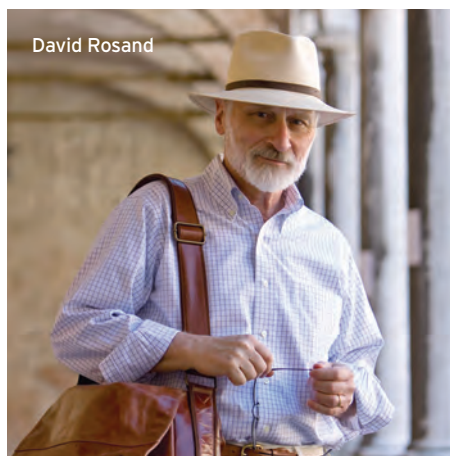
## Third Giving Day raises \$11 million

The third annual Columbia Giving Day raised a record-breaking \$11 million on October 29, drawing 10,452 gifts from alumni and friends in all fifty US states and fifty-three countries. The twenty-four-hour University-wide fundraising drive, in which twenty-five schools and programs compete for matching gifts, raised \$3 million more than the previous year’s event. Columbia College, the athletics department, and the Fu Foundation School of Engineering and Applied Science were the top overall performers, raising \$3 million, \$2.3 million, and

\$1.2 million, respectively; the School of Continuing Education, the College of Dental Medicine, and Columbia College saw the highest percentage of their graduates take part. Schools and programs also became eligible for matching funds by recruiting the most Giving Day “advocates” — alumni and friends who committed to give and spread the word about the event on social media in the days leading up to Giving Day. The School of General Studies, the athletics department, and Barnard College topped that list.



Columbia Business School students write thank-you cards to those who donated on Giving Day.



David Rosand

## Fund created to honor David Rosand, 1938-2014

Columbia lost one of its most celebrated scholars last summer when David Rosand ’59CC, ’65GSAS, ’14HON, the Meyer Schapiro Professor of Art History Emeritus, passed away. His family, in collaboration with the art history and archaeology department, has established a fund in his memory. The David Rosand tribute campaign will support the establishment of a professorship in Italian Renaissance art history, programs at Columbia’s Casa Muraro in Venice, and the hiring of a faculty director

of art humanities. More than \$1.5 million has so far been pledged for the professorship, which is the first priority of the campaign and will require a total of \$3 million.

“This professorship will ensure that there will always be a distinguished scholar and teacher devoted to the Italian Renaissance at one of the world’s most eminent departments of art history,” says Holger A. Klein, the chair of the department.

For more information, contact Shalini Mimani at [sm2486@columbia.edu](mailto:sm2486@columbia.edu).

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# NEWSMAKERS

## Frankly Noted

Six Columbians appear on the *New York Times*' list of the 100 Notable Books of 2014. The selections include *All Our Names*, by **Dinaw Mengestu '05SOA**; *American Innovations*, by writing professor **Rivka Galchen '06SOA**; *Let Me Be Frank*



Rivka Galchen '06SOA

*With You*, by humanities professor **Richard Ford** (see page 60); *Little Failure*, by writing professor **Gary Shteyngart**; *Panic in a Suitcase*, by **Yelena Akhtiorskaya '09SOA** (see page 56); and *Nora Webster*, by humanities professor **Colm Tóibín** (see page 57).

## Aid for AIDS

Five faculty members from the Columbia University Medical Center have joined New York governor Andrew Cuomo's AIDS task force. They are **Robert Fullilove**, a professor of sociomedical sciences and the associate dean for community and minority affairs; **Alex Carballo-Diéguez**, a professor of medical psychology and a research scientist in the HIV Center for Clinical and Behavioral Studies at the New York State Psychiatric Institute; **Stephen Ferrara**, an assistant professor of nursing and the executive director of the Nurse Practitioner Association of New York State; **Kalvin Leveille**,

the community-outreach associate for the Department of Sociomedical Sciences at the Mailman School of Public Health; and **Robert Remien**, the director of the HIV Center for Clinical and Behavioral Studies. The task force will implement a three-point plan to reduce the rate of new HIV infections to 750 per year by 2020.

## Let's Dance

Forty-three School of the Arts filmmakers had their work showcased at the Sundance and Slamdance film festivals in Park City, Utah, this January. At Sundance, twenty-three alumni, faculty, and current students worked on sixteen films that were invited to the festival. Additionally, adjunct professor **Eliza Hittman** and **Olivia Newman '12SOA** were selected for the Sundance Screenwriters Lab, and **Mayuran Tiruchelvam '13SOA** and **Gerry Kim '11SOA** won Sundance Creative Producing Fellowships.

## Knockout Production

**Carl Cofield '14SOA** won the NAACP Theatre Award for best director in the local category for his premiere production of *One Night in Miami*. Written by Kemp Powers, the play envisions what took place



Carl Cofield '14SOA

between friends Cassius Clay, Malcolm X, Sam Cooke, and Jim Brown after Clay defeated Sonny Liston in February 1964.

## UN PR VIP

United Nations secretary-general Ban Ki-moon appointed **Cristina Gallach '86SIPA** the undersecretary-general for communications and public information. Gallach

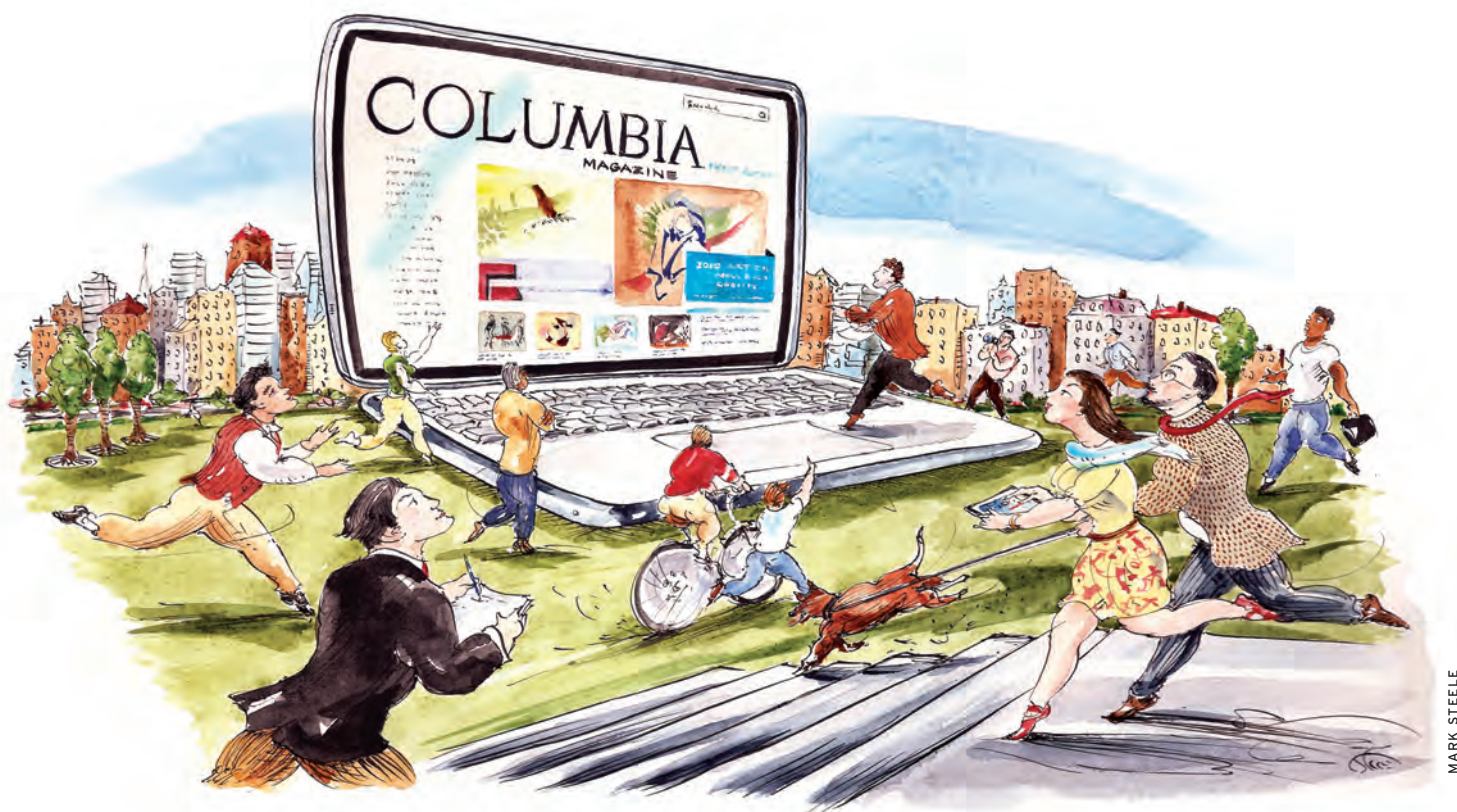


Cristina Gallach '86SIPA

is a Spanish journalist who has served as the head of the public-relations unit of the Council of the European Union since 2010.

## Good Fellows

The American Association for the Advancement of Science named four Columbia College of Physicians and Surgeons professors as new fellows, recognizing their contributions to "innovation, education, and scientific leadership." **Oliver Hobert** was selected for his work in neurobiology; **George Yancopoulos '80CC**, **'86GSAS**, **'87PS** and **Charles Zuker** were selected for their neuroscience research. **Gordana Vunjak-Novakovic**, who has a joint appointment with Columbia Engineering, was selected for her tissue-engineering work. She was also recently named one of *Foreign Policy*'s 100 Leading Global Thinkers of 2014.



MARK STEELE

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# EXPLORATIONS

## Necessity's inventions: design challenge takes aim at Ebola

On a Thursday evening in early October, as the Ebola outbreak in West Africa was starting to make international headlines, nearly two hundred students and professors gathered in an auditorium at Columbia's engineering school to learn how they could help. Earlier in the day, Mary C. Boyce, dean of Columbia Engineering, and Linda P. Fried, dean of the Mailman School of Public Health, had sent an e-mail to all members of their schools, inviting anyone interested in developing "low-cost, technology-driven" solutions to the crisis to come out and learn more. Those who received the e-mail were encouraged to spread the word to anyone else at the University who might want to help.

"We weren't sure if anybody would come," says Boyce. "It was during midterm exams, after all. But we wanted to move fast."

The organizers ended up getting an enormous response, with students and faculty from across the entire University turning out. The Columbia Design Challenge was on.

The meeting began with W. Ian Lipkin, an epidemiologist at the Mailman School of Public Health, describing a few ideas he had for inventions that might help field workers in West Africa do their jobs

more safely and effectively. Lipkin, who is one of the world's leading microbe hunters, had firsthand experience working in such situations, having been on the ground in Asia during the SARS epidemic and in Saudi Arabia during the outbreak of the respiratory virus MERS; he knew many people now risking their lives in the fight against Ebola. Over the previous few weeks, he told the audience, he had heard from his colleagues that much of the equipment they were using was ill-matched to the conditions. The polyethylene-coated suits they wore to protect themselves from infected bodily fluids, for example, became excruciatingly hot in the tropical sun, forcing them to disrobe and cool off every forty-five minutes or so. They were consequently changing out of several contaminated suits each day, increasing their risk of touching infected fluid. Their method of disinfecting the suits — spraying one another with bleach before disrobing — was also problematic, since they could easily miss spots.

"Maybe you could build some sort of cubicle they could step into and get sprayed down more thoroughly," said Lipkin. "They'd have to be able to breathe the whole time, of course. I don't know if that's feasible. You're the engineers."

Participants in the Columbia Design Challenge brainstorm inventions to be used in the fight against Ebola.



Another challenge facing the field workers was how to disinfect their cell phones and handheld diagnostic tools. The current strategy was to put them in ziplock bags, pour in chemical powders and water to produce chlorine gas, and then run away before the bags burst open.

“You need to get out of there so you don’t inhale the toxic gas,” Lipkin said. “This is insane.”

He imagined a solution: a sturdier container, perhaps made of thick plastic, into which electronic devices could be placed for safe disinfection. “This would be extremely helpful,” he said. “Health-care workers are dying because they don’t have good decontamination procedures.”

Rachel Moresky, another Mailman faculty member in close contact with people working in West Africa, brought the conversation back to the hazmat suits. The suits were problematic not just because they couldn’t be worn for long periods of time, she said, but also because they hampered health-care workers’ ability to perform even simple tasks while wearing them.

“Imagine trying to insert an IV into a patient’s arm when you’re wearing this space suit with three pairs of gloves in 120-degree heat and your goggles are fogging up with sweat,” she said.

Lipkin piped up again: “Maybe we could devise some way to keep them cool inside the suit. That would be *huge*.”

The attendees, after listening to descriptions of these and other logistical challenges, were told they had twenty-four hours to come up with solutions. Anyone wishing to participate in the design challenge, sponsored jointly by the engineering and public-health schools, was invited to pitch ideas to a panel of professors and safety experts the next afternoon. Those who brought the most promising ideas would receive small seed grants to create prototypes, which would need to be ready for testing within a month. Along the way, Lipkin and others would solicit feedback on the inventions from colleagues in West Africa.

Lipkin’s parting instruction: keep it simple. Think twice, he said, before trying to develop new diagnostic tools, therapeutic drugs, or other complex technologies that major companies were already working on. Focus instead on quick-and-dirty inventions that companies were unlikely to develop for a lack of potential profit.

“Think to yourself,” he said, “what can I achieve in a short time frame, on a very small budget, that will save lives?”

### Quick thinking

At 1 p.m. the next day, eighteen teams showed up with ideas. One group of undergraduates, led by engineering junior Jason Kang and College juniors Katherine Jin and Kevin Tyan, said they had come up with a better way to decontaminate hazmat suits. They proposed



Members of the New York City Fire Department test a blue-colored bleach spray that Columbia engineering students created to help emergency workers cleanse hazmat suits of infectious agents.

adding a blue dye to the bleach that field workers were using. Spraying a garment would temporarily turn it blue, thus helping workers determine when every square inch of a suit had been cleaned.

“The trick will be figuring out the right combination of chemicals so that the pigment isn’t broken down by the bleach right away,” said Kang, who is studying to be a biomedical engineer.

Ponisseril Somasundaran, a professor of mineral engineering, came with a different way to decontaminate hazmat suits: he suggested that a sprayable bleach foam would work better than a liquid spray, since it would more effectively cling to the suits’ waterproof surface. The



foam, he said, would also be ideal for decontaminating entire hospital rooms, ambulances, and airplanes, because less bleach would be required in relation to the liquid spray to do the same job.

“The bleach runoff from a liquid spray is not an insignificant environmental issue,” Lipkin said later. “This makes good sense.”

Seven more teams, most of them led by students, received the panel’s support, along with preliminary grants of \$150 each to begin working on prototypes. Among their ideas was to create an “inverse” personal-protection suit that Ebola patients would wear while being transported and which would comfortably contain and absorb their bodily fluids so as not to infect others; a folding wooden cot with a plastic underbelly to catch bodily fluids during sickness; a cooling vest that health-care workers could wear beneath a hazmat suit; and a text message–based communication system that would alert health-care workers to the latest outbreaks.

Some teams hewed closely to the suggestions Lipkin had made the previous day. A group led by Jun Guo and Kay Igwe, both engineering students, took up the challenge of creating a fumigation chamber for electronics devices. They proposed building an eighteen-inch acrylic cube with a drawer for putting in chemical powders and a valve for adding water; objects as large as desktop computers could be placed inside. Its walls would be translucent so that sunlight would break down the resulting chlorine gas, thus allowing the chamber to be opened safely within minutes.

“It looks like a good preliminary design — just make sure the resulting gas pressure doesn’t cause the chamber to explode,” said Jeffrey Kysar, the chair of Columbia’s mechanical engineering department, who, along with Lipkin, Boyce, biomedical engineer-

ing professor Aaron Kyle, and several other faculty and staff members, sat on the review panel.

Other teams went in unexpected directions. One group proposed making aprons with West African–inspired prints that could go over hazmat suits to make health-care workers look less intimidating. The project was inspired by media reports about some West Africans being reluctant to visit treatment centers in part because their staffers looked so frightening. “This is an anthropological approach to the issue,” said Daniel Taeyoung ’09CC, ’13GSAPP an adjunct assistant professor at the School of Architecture, Preservation, and Planning. “We want to help alleviate the reticence or hostility that some people might feel when encountering the workers.”

### In a “maker space”

Over the next few weeks, the sixty or so design-challenge participants worked long hours, somehow balancing their jobs and class schedules with the drive to create new sprays, foams, suits, apps, and cots. Much of the work was done at the engineering school’s “maker space,” a facility that combines elements of the machine shop, wood shop, and design studio.

The team led by Guo and Igwe used the maker space to build their fumigation chamber — first designing it with AutoCAD software and then manufacturing a prototype with a laser cutter. “We solicited help from lots of friends in working out the design,” says Eric Tong, a key member of their team. “A classmate who is studying materials engineering was instrumental.”

Jin, Kang, and Tyan, in order to make their colorful bleach-spray additive, spent many late nights teaching themselves about chemical dyes and disinfectants. They soon decided that adding a surfactant, which is a chemical that helps liquid adhere to surfaces, would make a bleach spray even more effective on waterproof hazmat suits. The team spent \$650 on various dyes, surfactants, and other additives in search of the right combination.

Along the way, the judges offered guidance. They reminded the students to consider how the West African heat would affect chemical reactions, for instance.

By early November, the new concoction was ready for testing. In a preliminary trial conducted in a biosafety level 3 laboratory at Columbia University Medical Center, a team of professional hazardous-material experts sprayed it on garments covered in West Nile and influenza viruses.

“The beautiful thing about bleach is that it kills all viruses and bacteria,” says Lipkin. “So as long as the bleach could still be sprayed with these new additives in it, it would kill Ebola — or anything else. And it worked fine.”

### New tools for emergency workers

The first invention likely to be deployed in West Africa is the fumigation chamber. In December, its creators received \$2,000 from the engineering and public-health schools to produce five units. The team, which has grown to include engineering undergradu-



PHOTOS BY TIM LEE / COLUMBIA ENGINEERING

Christopher Aston, the University’s senior biological safety officer, and W. Ian Lipkin, the John Snow Professor of Epidemiology, listen to design proposals on October 15.



**INSPIRED INNOVATIONS:** Engineering students William Smith, Joshua Bazile, and Michael Maloney display a hazmat suit they created (left); and fellow engineering students Jun Guo and Kay Igwe demonstrate a fumigation chamber they built for disinfecting electronics (right).

ates Jumari Robinson and Ajit Singh, is now working to finish the chambers; Lipkin plans to send them to colleagues at the National Institutes of Health and the Centers for Disease Control and Prevention who are overseeing Ebola-response efforts in both West Africa and the United States.

“It’s an extremely simple invention that we’ve tested and demonstrated is safe,” he says. “It’s a no-brainer that people in the field will want to use it.”

At least three more inventions from the Columbia Design Challenge appear to have a good chance of being widely deployed. One is the blue bleach spray. The New York City Fire Department

**“Disinfecting hazmat suits has always been a challenge for us. The solution that these kids came up with is phenomenal.”**

– FDNY chief medical officer David Prezant '77CC

recently purchased two hundred units of it from Jin, Kang, and Tyan. The chief medical officer of the department, David Prezant '77CC, contacted the students after reading a *New Yorker* article that described their project. The FDNY performed its own tests using their mixture of additives in December and subsequently decided that its hazardous-materials emergency teams could use it in responding to any of a variety of viral or bacterial outbreaks.

“Disinfecting hazmat suits has always been a challenge for us,” said Prezant. “Imagine it’s a windy night in New York and you’re working in the dark. In conditions like that, it’s especially tough to

know if you’ve sprayed the suit well. The solution that these kids came up with is phenomenal.”

Also likely to make a real-world impact, Lipkin says, are the foam bleach spray created by Somasundaran and an ingenious hazmat suit with internal cooling pouches and a camel-style hydration pack for sipping water through a straw — the work of engineering undergraduates Ritish Patnaik, William Smith, Joshua Bazile, and Sidney James Perkins. Both of these inventions were finalists in a national design contest organized by the US Agency for International Development this winter. While neither Columbia team won that competition, the resulting media exposure piqued the interest of potential collaborators. DuPont, one of the world’s largest manufacturers of hazmat suits, for instance, recently contacted Patnaik and his classmates about incorporating some of their innovations into the company’s products.

“We think our suit could be worn comfortably for up to three hours,” says Patnaik, who is studying to be a biomedical engineer. “And in the hands of the right manufacturer, each could be produced for a few dollars.”

As far as dean Mary Boyce is concerned, the success of these projects demonstrates not only the social consciousness of Columbia students and faculty, but also their entrepreneurial and collaborative spirit.

“From the beginning, I looked at this primarily as an educational project, one in which young engineers would learn how to work with public-health experts and others to deliver real-world tools in a rapid-fire atmosphere,” says Boyce. “We hoped that some of their designs would be useful in the field. But I don’t think any of us could have predicted the level of success that we’ve actually seen.”

>> See video at [magazine.columbia.edu/eboladesignchallenge](http://magazine.columbia.edu/eboladesignchallenge).



# REVIEWS



Brighton Beach boardwalk, February 1992.

## Brighton Beach Bound // By Rebecca Shapiro

### ***Panic in a Suitcase***

By Yelena Akhtiorskaya (Riverhead, 308 pages, \$27.95)

Much excitement has been generated recently about a young writer named Yelena Akhtiorskaya '09SOA and her debut novel, *Panic in a Suitcase*, which the *New York Times* named one of its hundred best books of the year. But perhaps the most telling endorsement comes from the writer Aleksandar Hemon, who selected Akhtiorskaya for the National Book Foundation's "5 Under 35" award: "I'd read a take-out menu written by Yelena Akhtiorskaya," he writes.

Indeed, though there is plenty of interest in the plot of *Panic in a Suitcase*, which follows two generations of a Ukrainian family as they immigrate — or don't — to Brooklyn, Akhtiorskaya's glorious, hilarious prose is very clearly the star of the show. With an almost Nabokovian flair and efficiency, Akhtiorskaya manages to convey more in each sentence than most writers can in a chapter, and in such a pleasing way that it's difficult not to dog-ear each

page and highlight every paragraph for revisiting. Even casual descriptions are memorable: "Headaches were like electronics-store flyers — you had one before you realized you had one," for example, or "the trouble with cherry pits was their clotted bloodiness and that they carried the ugly secrets of mouths."

The book centers on around the Nasmertovs, a Jewish family who migrated from Odessa to Brighton Beach just before the fall of the Soviet Union. Robert and Esther, who were both physicians in Odessa, aren't practicing in New York, which seems to affect them both viscerally: Esther gains a great deal of weight; Robert becomes gaunt. Their daughter, Marina, cleans houses for Hasidic families who "wouldn't have hired [her] were she not Jewish, but neither did they consider her Jewish." Son-in-law Levik disappears into a cave of computers and public-television programs. Every-

one's hopes are pinned on Marina's daughter, Frida, a sturdy nine-year-old preoccupied with her "recently activated nipples."

The family has been in Brooklyn for 715 days ("they were still counting, though it was getting less clear to what end") when Esther is diagnosed with cancer. Marina sends a ticket home to Odessa for her brother, Pasha, a promising poet languishing in indecision and inertia: "If he'd been smart, he would have been born at least half a century earlier into a noble family and spent his adult life hopping between tiny Swiss Alp towns and lakeside sanatoria." Rather than emigrating, Pasha had taken the if-you-can't-beat-them-join-them route, converting to Christianity to "stifle his genetic tendencies before they stifled him."

Still, Marina and her parents are hoping to convince Pasha to follow them to Brooklyn. "You can sit on the sofa in the corner," says Esther in the most spot-on Jewish-mother plea of all time, "No one will bother you. We just want to look at you." But Pasha is in no hurry, and not just because he can't face the mountain of paperwork. He doesn't see America in the same way his family does. Or, at least not the pseudo-America that they inhabit in the Russian-speaking enclave of Brighton Beach, as he explains in a passage that perfectly sums up the strange paradox of immigration:

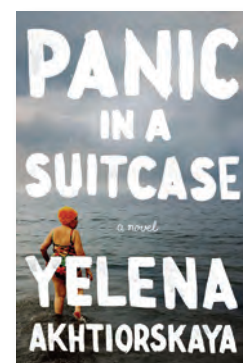
His fellow countrymen hadn't ventured bravely into a new land, they'd borrowed a tiny nook at the very rear of someone else's crumbling estate to make a tidy replication of the messy, imperfect original they'd gone through so many hurdles to escape, imprisoning themselves in their own lack of imagination, forgetting that the original had come about organically and proceeded to evolve, already markedly different from

their poor-quality photocopy. Such a bubble, no matter how enthusiastically blown, would begin to deflate in no time.

Pasha's convictions about America don't stick — he even submits his visa paperwork — but he never actually moves, and his sense of displacement, despite the fact that he never lives anywhere but Odessa, is one of the distinctions that set the book apart from the archetypal immigrant novel.

Sixteen years later, divorced from his first wife, who has commandeered the family's seaside dacha, he's resigned himself to life in Odessa, "land of ambiguous lung disease," with a new lover, the perpetually nightie-clad Sveta, and a rotating cast of visiting relatives. One of those relatives eventually turns out to be his niece, Frida, now grown and seeking refuge from the medical-school career — and the country — that was forced on her.

Like Frida, Akhtiorskaya was a young girl when her family came from Odessa to Brooklyn. With this novel, she joins an elite group of writers from this new wave of Soviet immigration of the 1980s and 1990s, including Lara Vapnyar and Gary Shteyngart, both of whom write about similar themes with similar dark humor. It's a thought-provoking and deeply entertaining subgenre, and with her imaginative prose, Akhtiorskaya is already proving herself integral to its future.



## A Woman in a House // By Kelly McMasters

**Nora Webster**

By Colm Tóibín (Scribner, 384 pages, \$27)

In the opening pages of Colm Tóibín's crushing new novel, *Nora Webster*, we find the title character in her small house in Wexford, Ireland, trapped by grief. Her husband, Maurice, has recently died, and she is beset by emotional pressures: by her neighbor across the street, who wants to know if Nora will be selling her beach house; by the weight of responsibility for her two adult daughters far away and her two small sons in the next room; by her quickly emptying bank account; and by her loneliness.

Every evening Nora endures formal condolence visits from neighbors, which Tóibín captures in the unadorned style that is his trademark: "Nora said nothing. She wanted May to leave." This is grief rendered not in Technicolor but in the muted grays familiar to those of us who have experienced such loss.

For most of the book, Nora walks as if in mist, moving through denial, anger, nostalgia, and acceptance, sometimes within a single day. The intensity of Tóibín's gaze is astounding, and under his



scrutiny we watch Nora's emotional repression stretch and buckle until she caves.

Before that cathartic moment, though, we watch as Nora struggles to take care of her family and remain in the world, alone. Maurice had been a schoolteacher, a gentle and intelligent man. His partnership with Nora was solid, their roles clear, but everything has been blown to oblivion in his death, and with it Nora's own identity. At one point, she reflects that she is often happy to keep her thoughts to herself, but "she wondered now that Maurice was dead if this would change, if she would have to start saying more." Nora clearly misses Maurice, but more than that she misses the world with Maurice in it; staying over at her sister's one night, she muses, "It was a mistake to lie here in a strange bed when her own bed at home was strange, too." Nora had had her perfect life — a learned man for a husband, a home full of children's voices, even a beach house. Now all she has is longing.

After losing her husband and, shortly thereafter, the beach house, next to go is her independence, when she gets a job offer from her former employer, the town's biggest flour mill. "Never once, in the twenty-one years she had run this household, had she felt a moment of boredom or frustration. Now her day was to be taken from her . . . Her years of freedom had come to an end; it was as simple as that." She needs the money and takes the job, leaving her two sons to look after one another between the time they get out of school and the time she returns home from work. The way she handles this gap in their supervision is akin to the way she's been handling the subject of their father's death: she is vaguely aware that she should be there for her sons, but she simply cannot make herself available. For much of the book she remains a prisoner to her sadness, and it is only when she sees her sons beginning to seal themselves off in the same way that she begins to rouse.

Those who've read Tóibín's work will recognize his Wexford, and there is something in Nora's quietly combative nature that is reminiscent of his portrayal of the mother of Christ in his most recent novella, *The Testament of Mary*. But there is also something new here: written over the course of more than ten years, *Nora Webster* is Tóibín's most personal novel. His own father died when he was a child, leaving behind a household aching with his absence, and the complex intimacy with which Tóibín considers Nora is deeply moving.

Nora's older son, the cerebral and sensitive Donal, who manages his grief by losing himself in photography and the moon landing (the book takes place in the 1960s), is Tóibín's surrogate. Donal develops a debilitating stutter after his father's death, after

his mother leaves his brother and him at her aunt's for months as his father is dying, never bothering to call or check in until he has died. And it takes a painfully long time — indeed, nearly till the end of the book — for Nora to finally reach out to Donal. When she does, on a walk to discuss his changing of schools, his complete devastation is revealed. Nora asks of his current school:

"Has it been bad?"

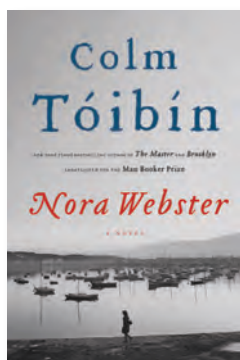
"The rooms are all the rooms he taught in. I sit in the classroom he came into every day."

His tone was direct and hard; he did not stammer. She held him as he began to cry.

And then the walk was finished.

When Nora finally reaches her own emotional peak, it is in response to her unreasonable and shrill boss at the mill. After the altercation, she leaves clutching a pair of scissors. She finds herself in her car on her way to the sea, close to the family's old beach house. Suddenly she realizes that she is trying to get to Maurice.

Monastery in Wexford, Ireland.



© RICHARD CUMMINS / CORBIS



It was the world filled with absences. There was merely the hushed sound of the water and stray cries of seabirds flying close to the surface of the calm sea. She could make out the sun as it glowed through the curtain of haze. It was unlikely that Maurice was anywhere except buried in the graveyard where she had left him. But nonetheless, the idea lingered that if he, or his spirit, was anywhere in the world, then he would be here.

Only when Nora is confronted on that shore by salty Sister Thomas, a longtime family acquaintance, do we understand that we've been submerged deeply within her experience, forgetting what she must look like to the rest of the world: a woman mad with grief, staring at the shore with scissors in hand. Sister Thomas sees her all too clearly, and counsels her: "So turn back now before the fog comes down so hard that you won't be able to drive home." Nora's anger flashes, her real feelings bubbling up, even if just for a moment.

Sister Thomas accepts the rage, recognizes it, and gives Nora the rough push back into life that she needs.

*Nora Webster* is spare and subtle, but ruthless in its depths. Tóibín renders the experience of one woman so intensely, so convincingly, and with such heartbreaking beauty, that stepping back out of this world is like walking out of a sea with the undertow pulling at your feet. It is Donal who unlocks the novel's simplicity and possibility early on when Nora first suggests the boys watch a film with her.

"What's the film?" Conor asked when he heard about it.

"It's about a woman in a house," she said.

"Is that all?"

"Maybe something h-happens to h-her in the h-house,"

Donal said.

*Kelly McMasters '05SOA teaches journalism and creative writing at Columbia. She is the author of Welcome to Shirley.*

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## Shock Exchange // By Lauren Savage

### ***Impolite Conversations: On Race, Politics, Sex, Money, and Religion***

By Cora Daniels and John L. Jackson Jr. (Atria Books, 320 pages, \$25)

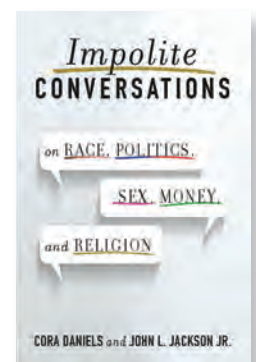
As police killings and protests dominate the headlines, I've had many candid discussions about race with my inner circle. But with other friends, I've avoided the subject entirely, instead trusting Facebook and Twitter to shed light on their views. *Impolite Conversations* challenges us to put down our devices and communicate more directly and honestly on topics that are generally considered off-limits.

Journalist Cora Daniels '94JRN and cultural anthropologist John L. Jackson Jr. '00GSAS lead the way in this effort with alternating essays on, as the subtitle suggests, "race, politics, sex, money, and religion." Rejecting the point-counterpoint format, Daniels and Jackson stage not a debate but rather an open dialogue. When, for example, Daniels dissects the myth of social mobility and how it particularly affects African-Americans, it doesn't seem strange that Jackson responds with musings on his disdain for jazz (really more a disdain for class warfare between middle- and lower-class blacks). These shifting topics successfully mirror what Jackson and Daniels call "a natural conversation." At times, reading their honest, passionate, and often personal exchanges feels like eavesdropping.

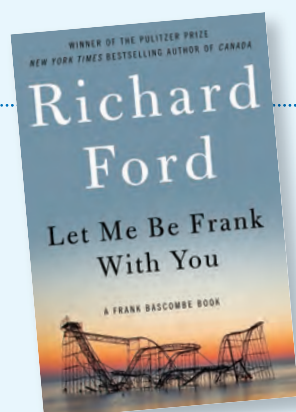
As Daniels and Jackson share their views, they also give us a glimpse into their lives. Consider Daniels's argument in favor

of a less confined, more straightforward attitude toward female sexuality. She closes her point by admitting that unlike many parents, she doesn't dread the day her daughter will have sex. Instead, this mother of two hopes her daughter will have "enjoyed an orgasm before her wedding night."

That Daniels and Jackson can't discuss sex — or politics, money, or religion, for that matter — without also discussing race suggests that at its core, *Impolite Conversations* is about race relations in America. Written just after George Zimmerman was acquitted of all charges in the murder of Trayvon Martin, this collaboration is strikingly timely. Jackson's musings on how difficult it is for black men to "negotiate exchanges with 'the law' — even to survive them," seem to point directly to Eric Garner and Michael Brown. And yet they manage to thoughtfully address serious subject matter without letting tragedy overshadow their ideas. Jackson deserves much of the credit for this, as he skillfully inserts satire and humor throughout their talks. One of







## BOOKTALK

# Jersey Boy

The book: *Let Me Be Frank With You* (Ecco)

The author: Richard Ford, Columbia humanities professor

**Columbia Magazine:** How did the book's title come about? It seems straight from the mouth of Frank Bascombe, and it's the rare protagonist who gets to title his novel.

**Richard Ford:** Ah, the title. I love the title. My publishers decidedly did not love it, and tried to persuade me to come up with another one. However, I stood my skinny ground. I do think the title grows on you if you read the book, and I always thought it was both funny and true to the book that followed. As to its being in Frank's voice, I'd say it's "our" voice — Frank's and mine.

**CM:** You've spent a lot of time with Bascombe — he appears in *The Sportswriter*, arguably your critical and popular breakthrough; in *Independence Day*, which won the Pulitzer Prize; and in *The Lay of the Land*. What is your relationship with your protagonist? Are there places where he speaks for you?

**RF:** There are some specific occasions when Frank and I agree, although I'm made uncomfortable by any ways that he's seen to speak for me. He doesn't. I can speak for myself. What a character such as Frank shares with me is that we both consider the same things to be important — marriage, children, vocation, humor, outrage. But he's almost never in agreement with me about specifics. If I can't make him more interesting than I am, then I'm not doing a good enough job. I have a much wider array of material to install in his character than I have in my own. That's freer and better, if you ask me.

**CM:** What is it about Frank that resonates so strongly with the reader, and with you?

**RF:** I'm not sure, as far as readers are concerned. As far as I'm concerned, he appeals

to me by having a supple nature: that is, he's corporeal and instinctual and reflexive and bawdy (sometimes ninth-grade bawdy), and yet doesn't sacrifice his instinct to take the serious world seriously, and to try to be smart about it if he can be. I was happy that I could come up with some stories that could utilize Frank Bascombe's narrative allures. My goal as a writer has been to make these seemingly disparate human characteristics joinable in one character. I hope that's what readers like, too.

**CM:** What was the book's genesis? Did you envision it as a novel, or did it start with a story or two?

**RF:** I envisioned it always as four novellas. I didn't want to undertake a great behemoth of a novel, having just finished one [*Canada*, which came out in 2012] and worn myself out trying to get all its words into their right places. In other words, I guess you could say novellas seemed easier and more pleasurable. You do have to enjoy yourself sometimes. Everything that's good doesn't have to be hard.

**CM:** Frank's New Jersey suburb is devastated by Hurricane Sandy, which becomes a cornerstone of the book. Did the hurricane inspire you to bring back the character? Or had you already envisioned another Bascombe book?

**RF:** Hurricane Sandy — and my visit to its aftermath along the Jersey Shore — was the direct instigation for this book. I saw all that destruction in what had been Frank Bascombe's old stomping ground as a real-estate agent, and just realized that he (for reasons I've said above) was the instrument to tell stories about the particular conse-

quences of the storm, consequences the mass media wouldn't notice.

**CM:** Some reviewers have compared your Bascombe books to John Updike's Rabbit novels. Do you see any validity in the comparison?

**RF:** Only insofar as they're both sets of connected novels about a man who lives in the suburbs. I've only read *Rabbit Is Rich*, and it's wonderful. But it's also told in the third person, whereas these books of mine are told in the first person, with present-tense verbs. To me this difference in narrative mode bespeaks a very different moral underpinning — by which I mean a different way of approaching matters of good and bad, and different ways that readers are drawn closer and ultimately implicated. John and I talked about this once; it was a pleasure to get to talk to him on this subject. That said, if he hadn't written connected books, I might not have had the temerity to try to do it.

**CM:** Most people assumed that the Bascombe books would stop at the trilogy, particularly after you published *Canada*. How do you see this book in relationship to your previous Bascombe novels?

**RF:** It's just more. But I also hope it's an improvement. There's no use going on writing fiction if you don't think you're getting better at it.

**CM:** Will we hear any more from Frank?

**RF:** I'll hear more from Frank. But I'm seventy years old; I don't have any idea if there'll be time in life for me to pass along to a readership what I'm hearing. But thanks for asking.

— Don McLeese

many funny lines comes in the section on religion, when he notes that even black porn stars winning awards begin their speeches by thanking Jesus.

Though at times over-the-top, their deliberate provocations — see section titles like “Are black people still overchurched?” and “Obama makes whites whiter”— are thought-provoking even, or perhaps especially, if you disagree. Some might take issue, for example, with Daniels’s opinion that even black people should not use the word “nigger,” or her assertion that the one-drop rule still defines black identity today. Still, Daniels and Jackson succeed in the mission they set out for themselves in their introduction: creating a frank discourse that digresses and lulls at times, but keeps you engaged.

In spite of this, I can’t help but wonder if Daniels and Jackson fall short of one of their most critical goals — to encourage people to speak with one another across racial, ethnic, and ideological lines. I concede that the “problem of race in America starts with the fact that most people’s most intimate relationships are racially homogenous.” Ironically, the authors reinforce this notion as two successful, Ivy League-educated black people, who have been friends for more than twenty years. As a black woman guilty of discussing the book mainly with black friends, I share Daniels’s fear — notably expressed to Jackson via text message in the book’s conclusion — that people won’t read *Impolite Conversations* “because they think it is just about black folks.” That would certainly be a shame, since it is such a candid and thorough discourse on subjects that affect us all.

## Mystery Girls // By Jennie Yabroff

### ***The Unspeakable: And Other Subjects of Discussion***

By Meghan Daum (Farrar, Straus and Giroux, 256 pages, \$26)

It would be a stretch to say that Meghan Daum ’96SOA was the whole reason I went to Columbia, but I did enter the MFA program with the express desire to be turned into a writer as near in style, brio, and, yes, success, to Daum as possible. And it is also fair to say I wasn’t the only one there with that ambition.

Daum’s writing is so elegant, intimate, and ticklishly satisfying that you want to claim her as your own. Discovering a shared affinity for her work can create an instant bond with a stranger; you can also feel a jealous resentment when a reader you deem not quite up to snuff claims to love her as well.

It is fitting, then, that the most effective essays in Daum’s new collection, *The Unspeakable*, are about those possessive, infatuated, largely theoretical relationships a woman can have with an alluring other woman — what Daum terms “the mystery girl.” She may be your age, but she is probably older; she may be plain, but she is probably esoterically beautiful; you may know her, but she is probably a stranger; and, most importantly, she does the thing you most want to do in exactly the way you most wish you could do it. Daum’s mystery girls include Joni Mitchell, Nora Ephron, Joan Didion (about whom she has written elsewhere), and, for a while, a coven of lesbians she hung out with while she was in the Columbia MFA program.

The collection opens with a breath-stealing, gut-kickingly candid essay about the death of Daum’s mother, described here as a performative narcissist unable to cede the spotlight to her daughter. The piece, which is tender, fierce, rueful, and even funny about the loss of an unloved parent, a topic it seems impossible to even think

about without lapsing into sentimentality or childish rage, introduces the theme of the search for a more appropriate surrogate maternal figure. The most resonant subsequent essays describe Daum’s relationships with other women: the way they, like all mothers and mother surrogates, enchant and disappoint her, the way they seem to promise “a life in which there was time for a hundred different versions of myself.” The sorrow that accompanies the realization that there is only one version of yourself, and you are not Joan Didion or Nora Ephron or even, in the reader’s case, Meghan Daum, is a subtle, bittersweet undercurrent throughout the book.

After publishing her first book of personal essays, *My Misspent Youth*, in 2001, Daum wrote a novel, *The Quality of Life Report*, which was optioned for a film; to write the screenplay she moved to Los Angeles, where she lives now and works as a columnist for the *Los Angeles Times*. The film was never made, but because of Daum’s elbow-brushing relationship with Hollywood and the entertainment industry, she has gotten to meet some of her mystery girls in the flesh. “I realize the clause ‘Joni and me’ has been written upwards of 10 million times, mostly in diaries with flowers drawn in the margins and in sonnets written in galloping pink cursive,” she acknowledges in “The Joni Mitchell Problem.” But how many of those fangirls get





to have dinner with the songwriter, who is forty-five minutes late, chain-smokes throughout, talks about a multinational conspiracy to disrupt the energy fields of humans and the sonar of marine mammals, and compares herself to St. Augustine and Mozart? Perhaps not surprisingly, though still smitten with Mitchell at the end of the evening, Daum manages to lose the notebook containing Mitchell's phone number and address, and her notes from the interview.

For some, like Daum, after Joni came Nora. As Daum writes in "Invisible City," "When [Nora Ephron] died unexpectedly in 2012, we all seemed to come out of the woodwork like mistresses at the funeral of a raging yet irresistible philanderer, churning out paeans to her in any publication that would let us and sizing one another up as if saying, 'She took *you* to lunch, too?'" She's not quite as daffy as Mitchell, though Ephron, while a willing and eager mentor, proves herself slightly removed from reality as lived by the non-famous, inviting the writer to a game of "running charades" at her house, where the guests include Nicole Kidman, Meg Ryan, and Steve Martin, none of whom want anything to do with a nonentity like Daum. After insisting that Daum can, with one phone call, set

herself up with a *When Harry Met Sally*-sized career, Ephron concludes that her protégée is actually a columnist, not a screenwriter.

Daum is too gracious to come right out and say that Mitchell was a kook and Ephron was a flake, but it's hard not to feel disappointed on her behalf. Even in early middle age (Daum is forty-four), you're not too old to want a more perfect mother figure — someone who will champion your gifts, teach you how to be a person and a writer. In the essay "Difference Maker," Daum comes to terms with her decision not to have children, writing, "for every way I could imagine being a good mother . . . I could imagine ten ways that I'd botch the job irredeemably." The book, then, functions as a sort of older-but-wiser examination of the ways the roles of both daughter and mother can fail to fulfill our desire to live "a hundred different versions" of our lives. Daum may never find the surrogate mother figure who will transform her life, but for many of us, she remains the ideal mystery girl.

*Jennie Yabroff '06SOA is a writer and editor in New York City. Her work has appeared in Newsweek, the New York Times, and Salon.*

## Stuffed // By Rebecca Shapiro

### **The Culinary Imagination**

By Sandra M. Gilbert (Norton, 404 pages, \$29.95)

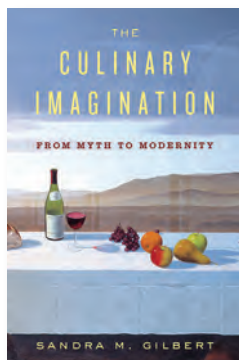
Here's a curious paradox: Americans have never spent less time in the kitchen preparing the daily meals that feed our families. And yet culturally, our interest in food has never been stronger. Some 24,000 cookbooks are published annually. Food television, which once began and ended with Julia Child's half-hour on PBS, now sprawls across multiple cable channels, offering twenty-four hours of programming. New genres of food writing have emerged and thrived — the food memoir (or "foodoir," to the cognoscenti) and the food blog. We may not be cooking it, but we're eating it up.

This obsession runs deep, writes poet and critic Sandra M. Gilbert '68GSAS in her new book, *The Culinary Imagination*. Food, as a primal human need, has always held a place in the canon: from "the six portentous pomegranate seeds Persephone nibbles" in the Greek myth, to the ancient Roman poets who "invited friends to dinner in verse," to

Proust's resurrection of "the whole world of his *temps perdu* from a morsel of madeleine."

Gilbert is a skilled researcher of sweeping topics (her last book was on our relationship with death), and in this culinary history she sets out to chronicle not how we've eaten over the years, but how we've represented our diet across several genres. Moving far beyond the expected quotations from M. F. K. Fisher and Michael Pollan '81GSAS, she analyzes Roald Dahl's whimsical descriptions of sweets, the horror of recipes imagined by a group of starving women imprisoned in concentration camps, the Pixar-Disney cartoon *Ratatouille*, and, in the most engaging passages, memories from her own Sicilian-Niçoise-Russian immigrant table.

Gilbert sets up the book by musing on the recent wave of culinary fetishization, asking, "Why have our kitchen fantasies changed so radically?" But even after taking readers on a journey spanning thousands of years and dozens of art forms, the best answer arguably comes in the first line of the foreword. There, Gilbert quotes Ernest Hemingway: "There is romance in food when romance has disappeared from everywhere else." Gilbert captures that romance well, and food lovers will delight in the buffet.



# CLASSIFIEDS

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## Vacation Rentals

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**PARIS:** Sunny, furnished apartment for rent at [Nation.kirstenbittellicson@gmail.com](mailto:Nation.kirstenbittellicson@gmail.com).

**PARIS, SAINT-GERMAIN-DES-PRÉS:** Lovely studio apartment on rue Jacob. 212-463-8760; [www.lefanion.com/paris.html](http://www.lefanion.com/paris.html).

**PARIS 7th:** Fifth floor, quiet, 45 sqm studio. View Eiffel Tower. [www.parisgrenelle.com](http://www.parisgrenelle.com). 207-752-0285.

**ROME:** Bright, quiet, spacious apartment. Wi-Fi. Elevator. Walk to major tourist sites, Metro San Giovanni. 2 double bedrooms, 2 baths. \$850/week. [www.casacleme.com](http://www.casacleme.com). 212-867-0489. [Lm603@columbia.edu](mailto:Lm603@columbia.edu).

**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 (PH '90): 404-371-8287, [info@imagesoftuscany.com](mailto:info@imagesoftuscany.com), or see photos/details at [www.imagesoftuscany.com/apartment.htm](http://www.imagesoftuscany.com/apartment.htm).



## FINALS

# Bake, Lion, Bake!

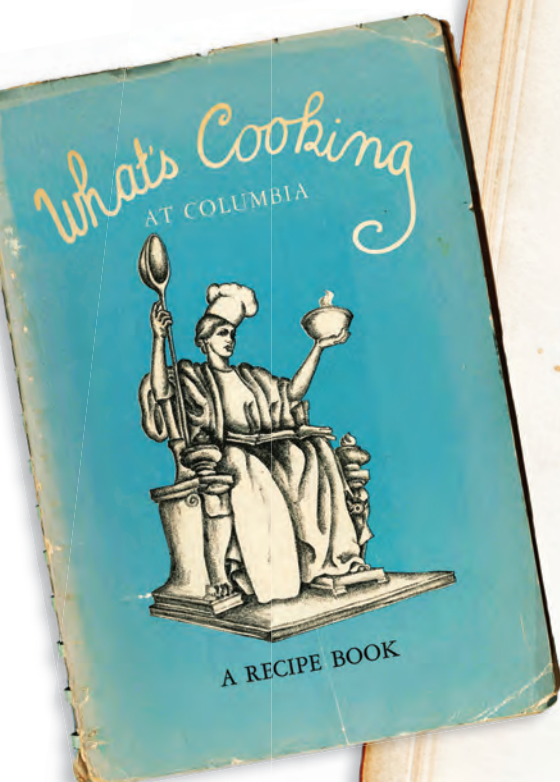
John Dewey, the great education reformer, liberal philosopher, and Columbia professor, frowned upon patriotism and nationalism. But when it came time, in 1942, to volunteer a personal recipe to a cookbook whose sales would support the war effort, Dewey's offering was unimpeachably red-blooded.

Or was it blue-blooded? For this was a Columbia cookbook — a copy of which has recently surfaced on eBay, like some culinary time capsule. The book, a 1948 reprint of the wartime edition, is filled with dishes that largely evoke a mid-century, Anglo-American cuisine stuffed with nut breads,

ham loaves, and upside-down cakes, and exotic fare such as Mrs. N. M. McKnight's "tropical stew." The recipes were submitted not by faculty and administrators so much as by their wives, like Mrs. Merle Curti ("Auntie Holden's cherry cake"), Mrs. Nicholas Murray Butler (egg croquettes), Mrs. L. Carrington Goodrich ("chop suey for children" — Professor Goodrich was a scholar of Chinese history), Mrs. Enrico Fermi ("chocolate dessert"), and Mrs. George T. Renner (beef stew with dumplings) — more "Mrs." than hits, you might say, assuming you are watching your trans fats.

Professor Dewey was one of the few male gourmets represented, joining the likes of Columbia president and World War II general Dwight D. Eisenhower (his vegetable soup leads off the revised edition) and dean Harry Carman (griddle cakes). Below is Dewey's recipe for his favorite dish, which, in the spirit of his progressive-education philosophy, you can learn by *doing*. That is, if you don't mind a little lard.

Watch Columbia chefs cook the book.  
[news.columbia.edu/cookbook](http://news.columbia.edu/cookbook)



### RICHMOND'S FROZEN LEMON PIE

3 eggs  
½ cup sugar  
¼ cup lemon juice

¼ rind of lemon  
1 cup whipping cream  
½ cup vanilla wafers

Beat yolks well in top part of double boiler. Add all but 1 tablespoon sugar with lemon juice, strips of rind. Cook over water, stirring until thick. Remove rind. Chill. Beat egg whites stiff—not dry—add remaining sugar until whites hold peak. Fold into custard. Add whipped cream. Butter refrigerator tray, coat with wafer crumbs. Pour in mixture. Top with crumbs. Place in freezing unit with control at highest. Cut in pie wedges. Serves 6-8.

*Mrs. L. Thomas Hopkins*

### PRIZE NEW ENGLAND APPLE PIE *John Dewey's Favorite Dish*

⅔ cup of lard  
2 cups flour, not sifted  
1 cup sugar  
2 tablespoons butter  
1½ teaspoons salt

¼ cup cold water  
6 to 8 tart apples  
Cinnamon  
2 tablespoons heavy cream

Mix lard, flour, and salt, leaving a few lumps the size of a pea in order to make crust flaky. Pour water over mixture gradually, working in with a fork. With hands shape mixture into a ball. Divide into two parts for upper and lower crust. Pare, core and slice apples; fill pan to slightly rounding. Pour sugar on top of apples. Add a shaking of cinnamon. Cut butter into small pieces and dot the top. Shake a little additional salt over all. (If apples are juicy, a sift or two of flour and a little additional sugar on lower crust should be added before apples are placed in pie.) Moisten edges of crust and put top crust in place. Press and crimp edges. Gloss crust with heavy cream. Bake in a hot oven (450°) for 15 to 20 minutes. Reduce heat to 350° and bake 30 to 40 minutes longer.

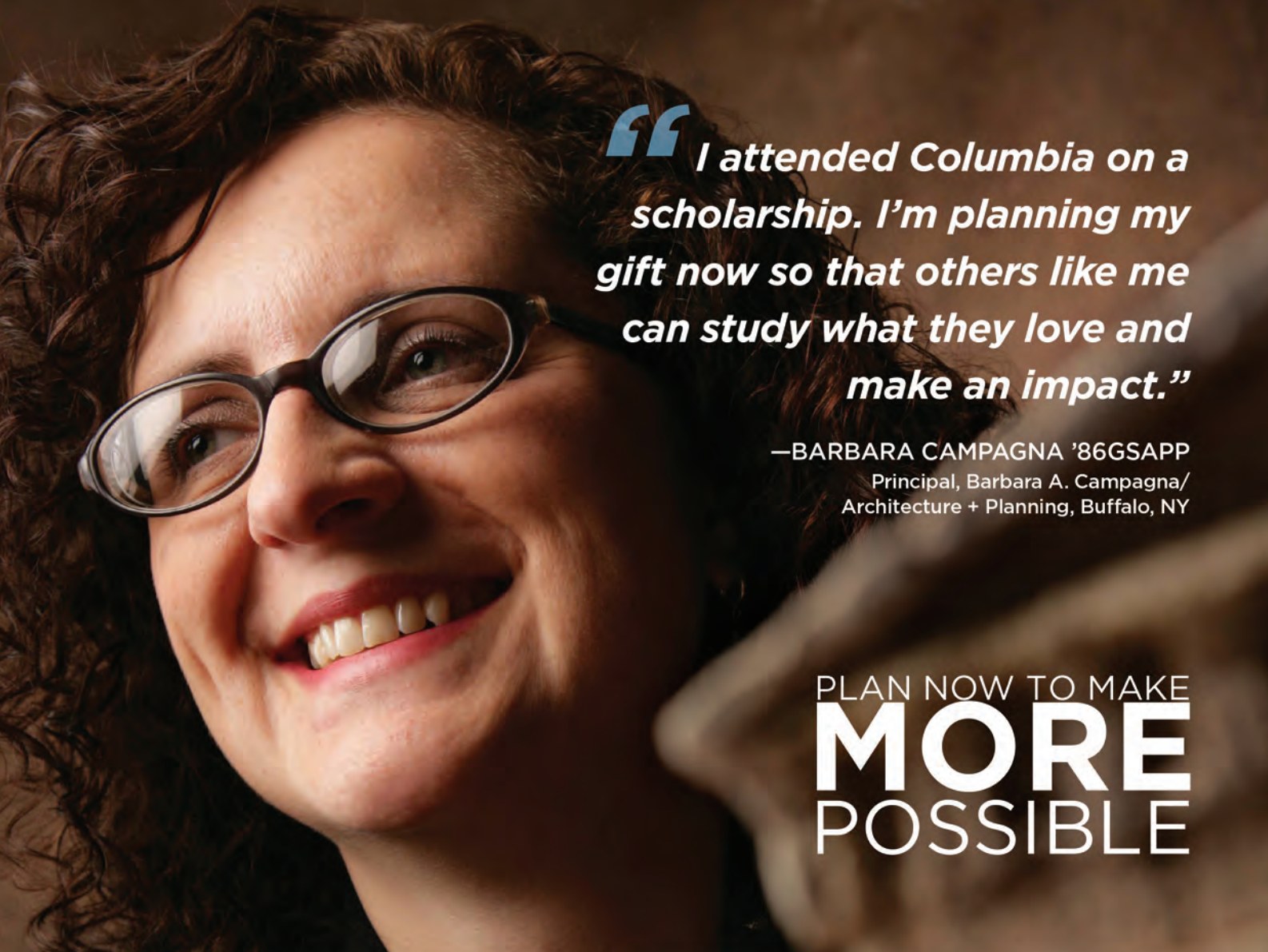
*John Dewey*

### CHERRY PIE

4 cups pitted cherries  
1½ to 2 cups sugar  
½ teaspoon salt

4 tablespoons...



A close-up portrait of Barbara Campagna, a woman with curly brown hair and glasses, smiling and looking upwards. The background is a soft, out-of-focus brown.

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