

Who Lost Libya? / Summer Festivals Guide

Newsweek

08.07.2016

THE GREAT UNRAVELLING

BORIS JOHNSON,
FRONT-RUNNER
TO BE BRITAIN'S NEXT
PRIME MINISTER

**HOW THE
POLITICS OF
PARANOIA
IS RESHAPING
THE WORLD**





London Review
OF BOOKS

Subscribe Now

12 issues for £12

Connect with the
world's most
entertaining
writers and critics.

Subscribe today and you will receive:

- The *London Review of Books* magazine delivered **direct to your door**
- FREE unfettered access to the searchable online **digital archive**
- The latest issues FREE on your iPad, iPhone or Android device through the **LRB app**, so you can take the LRB everywhere you go

Subscribe now to become part of the conversation.

www.myldb.co.uk/nsoffer

Newsweek

JULY 8, 2016 / VOL. 167 / NO. 1



FEATURES

22 **Your Office Is Killing You**

And so is your home. But breathe easy—an indoor pollution revolution is in the air.

by Douglas Main

30 **You Can't Stop 'Em All**

Washington, D.C., is no less vulnerable to a terrorist attack than any other city—and that's the problem. *by Jeff Stein*

DEPARTMENTS

BIG SHOTS

- 4 **Headington, England**
New Leaf
- 6 **Baghdad**
Outside Looking In
- 8 **Bogotá, Colombia**
Rebel Rehab
- 10 **Washington, D.C.**
Supreme Disappointment

PAGE ONE

- 12 **Politics**
Brexit Wounds
- 17 **War**
Looking for a Fight

COVER CREDIT: PHOTOGRAPH BY RICHARD SAKER/CONTOUR/GETTY

Newsweek (ISSN2052-1081), is published weekly except one week in January, July, August and October. Newsweek (EMEA) is published by Newsweek Ltd (part of the IBT Media Group Ltd), 25 Canada Square, Canary Wharf, London E14 5LQ, UK. Printed by Quad/Graphics Europe Sp z o.o., Wyszow, Poland. For Article Reprints, Permissions and Licensing www.IBTreprints.com/Newsweek

+ BAD AIR DAYS: Almost no one is tracking how many schools, homes and offices are being filled with toxins seeping in from outdoor sources of air pollution.

18 **Libya**
Who Lost Libya?

NEW WORLD

42 **Innovation**
Mail Model

44 **IPO**
Let My People IPO!

46 **Health**
Praying for No Signal

50 **Drought**
Down to Option Pee

DOWNTIME

54 **Festivals**
Field Days

58 **Animals**
Wags to Riches

61 **Graffiti**
Creepytings Must Die

62 **Style**
A Fair to Remember

64 **To-Do List**
Your Week Made Better



FOR MORE HEADLINES,
GO TO NEWSWEEK.COM

Newsweek

EDITOR-IN-CHIEF

Jim Impoco

DEPUTY EDITOR
Bob Roe

MANAGING EDITOR
Kenneth Li

EUROPEAN EDITOR
Matt McAllester

CONTRIBUTING DESIGN DIRECTOR
Priest + Grace

INTERNATIONAL EDITOR
Claudia Parsons

CO-FOUNDER, CHIEF EXECUTIVE OFFICER
Etienne Uzac

CO-FOUNDER, CHIEF CONTENT OFFICER
Johnathan Davis

MANAGING DIRECTOR, EMEA
Dev Pragad

EUROPEAN EDITION

EDITORIAL

ASSOCIATE EDITOR **Naina Bajekal**
TRAVEL EDITOR **Graham Boynton**
CONTRIBUTING EDITOR **Owen Matthews**
DIGITAL EDITOR **Serena Kutchinsky**
DEPUTY ONLINE NEWS EDITOR **Graham Smith**
SUB-EDITOR **Siobhán Morrin**
SOCIAL MEDIA PRODUCER **Valeriia Voshchevska**
REPORTERS **Tufayel Ahmed**
Lucy Clarke-Billings **Anthony Cuthbertson**
Teddy Cutler **Conor Gaffey**
Mirren Gidda **Josh Lowe**
Jack Moore **Tom Roddy**
Damien Sharkov
SPECIAL CORRESPONDENTS **Nicholas Foulkes**
Adam LeBor

ART + PHOTO

ART DIRECTOR **Michael Friel**
ASSOCIATE ART DIRECTOR **Dwayne Bernard**
DESIGNER **Jessica Fitzgerald**
PHOTO DIRECTOR **Shaminder Dulai**
PHOTO EDITORS **Jared T. Miller**
Jen Tse
PRODUCTION MANAGER **Helen J. Russell**
CONTRIBUTING DIGITAL IMAGING SPECIALIST **Katy Lyness**

CONTRIBUTING WRITERS

Ryan Bort	Max Kutner	Roberto Saviano
Jonathan Broder	Seung Lee	Zoë Schlanger
Nina Burleigh	Douglas Main	Zach Schonfeld
Janine Di Giovanni,	Leah McGrath Goodman	Jeff Stein
Kurt Eichenwald	Alexander Nazaryan	John Walters
Jessica Firger	Bill Powell	Lucy Westcott
Michele Gorman	Winston Ross	Taylor Wofford
Abigail Jones	Josh Saul	Stav Ziv

CONTRIBUTING EDITORS

Joanna Brenner	Cady Drell	R.M. Schneiderman
Grant Burningham	Nicholas Loffredo	John Seeley
Matt Cooper	Margarita Noriega	Teri Wagner Flynn
Kevin Dolak		Elijah Wolfson

PUBLISHED BY
Newsweek LTD,
A DIVISION OF
**IBT Media
Group LTD**

CHIEF OPERATING OFFICER
Gregory Witham

GENERAL MANAGER
Dave Martin

GENERAL COUNSEL, EMEA
Rosie McKimmie

PUBLIC RELATIONS DIRECTOR, EMEA
Sharon Ezzeldin

ADVERTISING

COMMERCIAL DIRECTOR
Jeremy Makin

SENIOR SALES DIRECTOR
Chantal Mamboury

GROUP ADVERTISING DIRECTOR
Una Reynolds

SALES DIRECTOR
Gemma Bell

SENIOR COMMERCIAL MANAGER
Pierce Cook-Anderson

MARKETING + CIRCULATION

SUBSCRIPTION MARKETING MANAGER
Tom Nichols

SUBSCRIPTION FULFILMENT MANAGER
Samantha Rhodes

NEWSSTAND MANAGER
Kim Sermon

Newsweek

is back in print and it's better than ever!

SPECIAL SUBSCRIPTION OFFER



SUBSCRIBE TODAY AND SAVE €130, PLUS CLAIM YOUR COMPLIMENTARY €20 AMAZON.CO.UK GIFT CARD

ANNUAL COVER PRICE	SPECIAL OFFER PRICE
€300	€65 EVERY 6 MONTHS

- Save €130 on an annual subscription
- Claim your complimentary €20 Amazon.co.uk Gift Card if you return your order in the next 7 days
- Free access to the website archive
- Free access to digital editions if you choose to buy the print and digital package – read Newsweek anywhere on any device including your computer
- Exclusive access to additional subscriber only content
- Guaranteed future savings – our subscribers always get the best possible prices

3 EASY WAYS TO SUBSCRIBE

 ORDER ONLINE HERE:
WWW.NEWSWEEK.COM/GIFT

 CALL US TODAY ON
+44 203 040 4383

 OR COMPLETE AND RETURN THE
ORDER FORM ON THE RIGHT

SUBSCRIPTION ORDER FORM

Please return to: Newsweek SUBS, 24th Floor,
25 Canada Square, London, UK E14 5LQ

Please tick one: Charge my Visa Mastercard Amex

Card No:

Expiry Date: CCV:

Price: €65 every 6 months – Save €130 + free gift

Name on Card

Signature Date

Address

Email

To receive an email confirmation and other information please provide your email address.

Payment enclosed (cheques made payable to Newsweek)

Invoice me later (rates will vary to this offer)

*Amazon.co.uk is not a sponsor of this promotion. Amazon.co.uk Gift Cards ("GCs") may be redeemed on the Amazon.co.uk website towards the purchase of eligible products listed in our online catalogue and sold by Amazon.co.uk or any other seller selling through Amazon.co.uk. GCs cannot be reloaded, resold, transferred for value, redeemed for cash or applied to any other account. Amazon.co.uk is not responsible if a GC is lost, stolen, destroyed or used without permission. See www.amazon.co.uk/gc-legal for complete terms and conditions. GCs are issued by Amazon EU S.à r.l. All Amazon,™ & © are IP of Amazon.com, Inc. or its affiliates.

Please allow up to 28 days for delivery of the gift, which will be sent on a signed for service after payment has been received. We reserve the right to substitute the gift advertised for one of equal or greater value if circumstances require. We also reserve the right to provide an alternative gift of an 8 issues extension if stocks are exhausted of the original gift. Should you wish to cancel your subscription it will be cancelled on expiry of the current term and will not be refundable unless in exceptional circumstances and where the gift has been returned in good condition. When arranging your subscription over the phone or via post, we will understand that you have read and accepted our terms of sale - <http://europe.newsweek.com/terms-service>



Please use rubbish bins provided

NO DYEING

ALL MACHINES ON THESE PREMISES ARE EMPTIED DAILY

SECURITY CAMERAS IN OPERATION

BALLOT BOX

COLLECT BALLOT PAPERS HERE

NO Mobile Phones or Photographic equipment to be used in the Polling Station



ADRIAN DENNIS/APP/GETTY

BIG SHOTS

ENGLAND

New Leaf

Headington, England—In a result that confounded pollsters, the U.K. voted 52 to 48 percent on June 23 to leave the European Union after a divisive campaign that drew on fears about immigration and the economy. The pound fell to its lowest level against the dollar since 1985, and stock markets around the world took a major hit as investors worried about at least two years of uncertainty while Britain renegotiates its trade deals and other ties with the EU. Prime Minister David Cameron said he would resign, leaving the task of implementing the Brexit to his successor.



ADRIAN DENNIS

IRAQ

Outside Looking In

Baghdad—Children who fled Fallujah during an assault by Iraqi forces to retake the city from the Islamic State militant group (ISIS) wait outside a Baghdad restaurant on June 22 to receive free food distributed during the holy month of Ramadan. According to the United Nations, around 85,000 civilians have fled the fighting in Fallujah, overwhelming desert camps where displaced people are living in the open with little food or shelter, in searing summer heat that has come close to 120 degrees Fahrenheit. The Iraqi government said its forces had liberated Fallujah, but it may take months to clear explosives and make the city habitable again.



AHMED SAAD





COLOMBIA

Rebel Rehab

Bogotá, Colombia—A police officer takes a picture of flowers commemorating victims of five decades of conflict with the Revolutionary Armed Forces of Colombia, or FARC. After three years of negotiations in Cuba, Colombia's government signed a cease-fire deal with FARC rebels on June 23, opening the way to a final deal expected in July to end a war that has killed at least 220,000 people and driven millions from their homes. The FARC rebels agreed to demobilize and hand over their weapons to the United Nations, and the government agreed to guarantee the ex-rebels' safety as they are reintegrated into society.



JOHN VIZCAINO



JOHN VIZCAINO/REUTERS



†
Q.E.P.D.
LA GUERRA
EN COLOMBIA
1964 - 2016





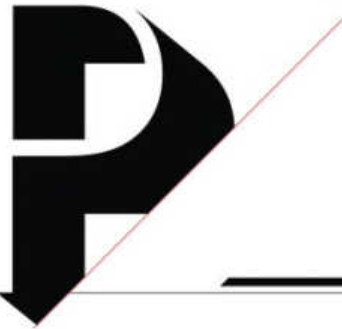
USA

Supreme Disappointment

Washington, D.C.— President Barack Obama steps away from the podium after speaking to the press on June 23 about the deadlock in the Supreme Court over his controversial immigration plan. A 4-4 tie left in place an appeals court ruling that had blocked Obama's executive action to prevent the deportation of millions of immigrants without documentation who are the parents of citizens or of lawful permanent residents. The divided court's decision dealt a major blow to the president's legacy and the hopes of many immigrants, but the decision could further mobilize Hispanic voters and help Hillary Clinton's campaign for president. As one Latino immigration activist told *The New York Times*, "This election is personal."



MARK WILSON



P A G E O N E

LIBYA

POLITICS

WAR

MEDICINE

BOOKS

ECONOMY

BREXIT WOUNDS

The decision by British voters to leave the EU is unlikely to be the last anti-establishment uprising in the West

BRITAIN'S BREXIT VOTE was a victory of the old over the young, of the less educated over the educated, of nationalism over internationalism. No wonder the presumed U.S. Republican presidential nominee, Donald Trump—who happened to be visiting one of his golf courses in Scotland when the result was announced on June 24—was delighted. Polls show that both Brexit voters and Trump's grassroots supporters are motivated by a similar mix of fear and fantasy: a yearning to control immigration, reverse globalization and restore national greatness by disengaging from the wide, threatening world.

"People want to take their country back," said Trump as news of the vote broke. "They want to have independence...all over Europe, they want to take their borders back."

Trump is right: The Brexit vote is just the latest and clearest manifestation of the populism and nativism that's uniting the have-nots of Europe and America against the political establishment. The first victim of this political primal scream

from the disenfranchised is likely to be the United Kingdom itself. In the wake of the Brexit vote, Scotland's first minister, Nicola Sturgeon, announced that a new referendum on independence was "highly likely" after Scottish voters resoundingly backed remaining in Europe. Sturgeon said she would not stand for Scotland "being taken out of the EU against its will." Northern Ireland's deputy first minister, Martin McGuinness, called for a vote on reuniting with the Republic of Ireland, calling it "the next logical step...for all of us who believe in the EU and want to remain part of Europe."

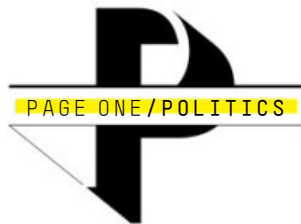
London, home to over a million European migrants and Britain's economic powerhouse, is also pushing back. London's new mayor, Sadiq Khan, called for the city to have "a voice at the table" during the U.K.'s renegotiations with Europe—and within hours of the result, over a hundred thousand people had signed an online petition calling for London to declare independence from the rest of the country.

BY
OWEN MATTHEWS
[@owenmatt](https://twitter.com/owenmatt)



KEVIN COOMBS/REUTERS

+
DOWN AND OUT:
An overwhelming
73 percent of
voters aged 18
to 24 wanted to
remain in the EU,
while the majority
of voters over 45
wanted to leave.



“There are times, not very often, when you can feel history being made,” wrote historian Dominic Sandbrook in the pro-Brexit *Daily Mail* newspaper. “An archduke falls, a wall comes down, a plane hits a building, and in that moment you can feel the ground shifting beneath your feet.”

And it not just British ground Sandbrook feels shifting. It’s all of Europe. The European Union has been the boldest political experiment of modern times—one that helped bring peace and prosperity to a fractious and divided continent. As recently as the 1970s, Spain, Portugal and Greece were ruled by fascist dictators or military juntas, and until 1989 all of Eastern Europe was effectively under Soviet military occupation. The EU has absorbed most of those countries; many of those still on the outside want in. And yet, at the same time, the EU finds itself under sustained attack from within.

Swaths of voters across the union have begun clamoring to leave not just the EU but—in the case of Scotland, Spain’s Catalonia and Belgium’s Flanders—their own countries. In France, National Front leader Marine Le Pen hailed the vote as a “victory for freedom.... I’ve been saying for years that we must now have the same referendum in France and other EU countries.” Dutch anti-immigration politician Geert Wilders said it was time for a Netherlands Nexit vote, while Matteo Salvini, the leader of Italy’s Northern League, tweeted that “heart, brain and pride defeated lies, threats and blackmail. THANK YOU UK, now it’s our turn.” The anti-immigration Sweden Democrats declared that they were “waiting for Swexit!” while Beatrix von Storch of Germany’s Eurosceptic Alternative für Deutschland party wrote that “the EU has failed as a political union.” Euro-skepticism also runs deep in Poland—where the new right-wing prime minister, Beata Szydlo, ordered EU flags be removed from the podium where she gave her first press conference, in November. In Hungary, Prime Minister Viktor Orban is frequently critical of the EU.

Lest anyone be in doubt of the power of this populism, consider this bitter Brexit irony: Britain actually has a far more flexible, independent arrangement with the EU than most other member states—yet it still voted to leave. The U.K.

is outside the eurozone and retains control of its own currency. It’s also outside the visa-free Schengen Area and has kept more control over its borders. Britain’s economy grew almost 3 percent last year, compared with a nearly stagnant eurozone. In the U.K., youth unemployment is running at just 13 percent, according to the Office for National Statistics, compared with 45 percent in Spain and a staggering 48 percent in Greece. Britain’s prosperity has attracted a wave of migrants—witness hundreds camped in Calais, France, waiting for a chance to jump on a truck to Dover—but according to Eurostat, 14 other EU countries actually accepted more migrants per capita last year than the U.K. did.

“France has possibly 1,000 more reasons to want to leave the EU than the English,” Le Pen told a gathering of far-right parties in Vienna in May, blaming the euro and the EU’s rules of free movement for high unemployment and failing to keep out “smugglers, terrorists and economic migrants.” (Le Pen is expected to do well in next year’s French presidential elections.)

Nonetheless, Britain has become the first Western nation to succumb to the populist, anti-immigration revolution. Others appear to be close behind. On May 23, Norbert Hofer of Austria’s far-right Freedom Party—founded in the 1950s by former Nazis—was beaten in his bid for his country’s presidency by just 30,000 votes. Hofer’s message was essentially the same one Nigel Farage, leader of the United Kingdom Independence Party (UKIP), has been pushing for years: Immigration, radical Islam, the EU and

“FRANCE HAS POSSIBLY
1,000 MORE REASONS TO
WANT TO LEAVE THE EU
THAN THE ENGLISH.”

the forces of globalization threaten to destroy the future of Austria and the U.K.—and by extension, most other Western nations.

UKIP’s campaign posters featured a photograph of thousands of refugees lining up at the EU’s borders, captioned, “Breaking Point: The EU Has Failed Us All.” Twitter users quickly pointed out the similarity to Nazi propaganda footage of migrants—as well as to Trump’s alarmist vision of an America overrun by Muslim terrorists and Mexican rapists. Even that ill-disguised racism

+
ISLAND OF PROSPERITY: Relatively prosperous London voted to remain and hundreds of thousands of people signed an online petition calling for the capital to declare independence from the rest of the country.



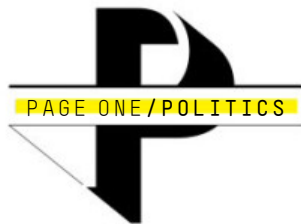
didn't put off the majority of British voters.

The Brexit result and the broader rise of a new nationalism have surprised many because they have come at a time of great stability and prosperity in Britain and Europe. But while globalization has been good to educated, urban elites, the West's traditional working classes have not shared in the growth in income and opportunities enjoyed by the middle class. It's no coincidence that the heartlands of both Brexit and Trump-mania are the Rust Belt areas of America's Midwest and what was once Britain's northern industrial heartland. These areas have been hit hard by manufacturing jobs going offshore and immigrants competing for low-paying jobs and state-provided education, health care and welfare. It's the same story in France: The areas most likely to back Le Pen are in the economically depressed Nord-Pas-de-Calais-Picardie and Provence-Alpes-Côte d'Azur—both former strongholds of the French Socialist Party.

Those voters, in both Europe and the U.S., have developed a particularly strong sense of mistrust. Their targets are, generally speaking, people who wield influence—even if those people are not themselves allies. Clumped together in this per-

ceived enemy camp are bankers, journalists and their bosses, and career politicians—though the journalists and politicians themselves whipped up much of the mistrust in the first place. In Britain and some other countries, many working-class voters nurture particular scorn for politicians and media figures on the left whose liberal, metropolitan values are seen as increasingly at odds with the underprivileged they once claimed to represent. “The tempest that broke across England [was] a gigantic revolt against a political elite who, for far too long, had taken working-class voters for granted,” argues Sandbrook. “This will be a victory for real people, a victory for ordinary people,” declared Farage, himself a former banker. “We have fought against the multinationals. We have fought against the big merchant banks. We have fought against the big parties.”

The unelected bureaucrats of Brussels have also become particular hate figures—not least because they have repeatedly ignored Europeans' democratic will. Denmark voted against both the Maastricht Treaty that sketched out monetary union in 1992 and the European Constitution in 2005; France rejected the Constitution at the same time. Irish voters refused



to ratify the Lisbon Treaty, which updated the enlarged EU's institutions in 2008. The EU plowed on with its integration plans regardless.

It's possible that the EU's leaders will respond to Brexit by introducing reforms—for instance, by returning more powers over labor laws and asylum to nation-states—in a bid to stop the spread of euro-skepticism. But Brussels's initial reaction to the vote was anything but humble, suggesting to the U.K. that it hurry up and leave the European club. The presidents of the European Council, Commission and Parliament issued a joint statement calling for the U.K. to be cut loose “as soon as possible, however painful that process may be.” (Many continental politicians have long found their stubborn, reluctant British counterparts unbearable.) As they tried to give Britain a shove, EU leaders at the same time tried to dissuade other countries from heading for the exit by pointing out that the U.K. is likely to suffer economically. “Britain has just cut its ties with the world's biggest market,” warned European Parliament President Martin Schulz. “That'll have consequences, and I don't believe other countries will be encouraged to follow that dangerous path.... The chain reaction being celebrated everywhere now by euro-skeptics won't happen.”

The political chaos could get much worse. Many Britons—especially under-24s, who voted by 75 percent to remain in the EU, compared with just 39 percent of over-65s—are pushing for a second referendum. An online petition on the U.K. government's official site gained over 3.5 million signatures in three days, meaning Parliament will have to at least consider the idea. Soon after the vote, #Bregret began trending on Twitter. Technically, the referendum result is not binding on Parliament, which must ratify a final deal to leave the EU, and an overwhelming majority of members of Parliament backed the Remain campaign.

In his resignation speech, British Prime Minister David Cameron said that it would be up to his successor—to be chosen by the ruling Conservative Party by October—to trigger the formal two-year countdown to leaving the EU outlined in Article 50 of the Lisbon Treaty. That was a significant departure from Cameron's pre-referendum position—and leaves a poisoned chalice for the

next Tory party leader who will face flak for not only going ahead with Brexit but for almost certainly setting in motion a sequence of events that could lead to the breakup of the United Kingdom. That leaves plenty of room for chickening out in the chaotic months and years ahead as the allure of Brexit fades and voters realize that it's not going to reverse either immigration or the policies of austerity Cameron's government introduced. Boris Johnson, former mayor of London and the favorite to succeed Cameron, initially campaigned on the idea of having two referendums. The opposition Labour Party, currently undergoing an internal leadership battle, may also eventually unite around an anti-Brexit position.

Any new agreement with the EU is likely to look pretty much like the old one, except with the U.K. robbed of any say in European policy-making. In exchange for access to the single market, Britain will likely have to accept the principle of freedom of movement for EU citizens—just like other associated nonmember nations, such as Switzerland and Norway.

Brexit leaders talk of a civilized reordering of the U.K.'s trading and political relationships with Europe. “Our partners in the EU should know that we will remain engaged,” tweeted Daniel Hannan, a member of the European Parliament

“BRITAIN HAS JUST CUT ITS TIES WITH THE WORLD'S BIGGEST MARKET. THAT'LL HAVE CONSEQUENCES.”

who has been one of the leading intellectual lights of the Leave campaign. “Taking back control of our laws doesn't mean walking away from our allies.... The task now is to unite the country, to move in a measured and phased way to a status that both Leavers and Remainers can accept.”

That's a highly optimistic view. In fact, Brexit is a symptom of powerfully disruptive political forces that are far bigger than British politics. Britain's vote was not so much about Europe as about a globalized future—a future that globalization's losers are rejecting all over the world. The next rounds of the battle promise to be far more bitter and could possibly unleash some of the darkest forces of European nationalism. Over to you, Marine le Pen. Donald Trump, you're up in November. ■



Looking for a Fight

WHY THE U.S. SPENDS MORE ON WAR THAN IT DOES ON DIPLOMACY

President Barack Obama has long insisted that force alone can't resolve America's toughest challenges abroad. But if budgets are a window into a nation's priorities, the U.S. values its soldiers far more than its diplomats.

For fiscal 2016, the Pentagon has had nearly \$600 billion. That's twice the size of its budget before the 9/11 attacks. For fiscal 2017, Obama has asked Congress to increase Pentagon spending by \$22 billion, while his State Department request is flat at \$50 billion. In fact, the Pentagon has more members of the armed forces serving in

marching bands than the State Department has career diplomats.

Congress has always provided more money for defense than diplomacy; weapons, after all, cost more than foreign aid. But the gap has widened dramatically, says Charles Stevenson, a former State Department policy planner who teaches at the Johns Hopkins School of Advanced International Studies. After World War II, he notes, Congress passed the Marshall Plan and during the Cold War, Congress funded programs like the U.S. Information Agency. Back then, the State

Department's budget was half the Pentagon's.

Pork plays a role. Lawmakers appropriate money for obsolete weapons employed. Meanwhile, Lockheed Martin is making the next-generation F-35 fighter jet in nearly all 50 states. That guarantees the program, which has cost more than \$500 billion so far, maintains strong support.

The result has been that the military and the intelligence community increasingly perform diplomatic tasks. For instance, knowledgeable sources tell *Newsweek* that the CIA, not the State

Department, is midwifing secret negotiations between Saudi Arabia and Houthi rebels in Yemen.

Some lawmakers are trying to address the gap between Pentagon and State. One idea: cutbacks in the number of military marching bands. But opponents argue band reductions will increase the Pentagon's costs because the remaining military bands will have to travel more often. "Pentagon programs don't die," quips a House Armed Services Committee aide. "They don't even fade away."

BY
JONATHAN BRODER
 @BroderJonathan

SOURCE: PRESIDENT OBAMA'S FISCAL 2017 BUDGET REQUEST

ILLUSTRATION BY COKE NAVARRO



WHO LOST LIBYA?

Obama's 'smart power' doctrine turned out to be not so smart when it came to toppling Muammar el-Qaddafi

"A MORE DEMOCRATIC region will ultimately be more stable for us and our friends. Even if someone wants to be dictatorial, it's going to be difficult."

—An American diplomat, after the overthrow of a Middle Eastern dictator

That quote sounds as if it came from what the foreign policy elite in the Obama administration would call some "neocon nut job," with an eerie echo of the blindly confident rhetoric from the early days of the U.S. occupation of Iraq in 2003. Except this time the speaker wasn't a neocon nut job, and it was May 2012. Denis McDonough, then Barack Obama's deputy national security

adviser, was taking a victory lap in a speech at a Washington think tank. And he wasn't boasting about Iraq; he was crowing about Libya.

The Obama administration, "leading from behind" (a term used by an Obama adviser quoted in *The New Yorker*), had allowed NATO to bomb Colonel Muammar el-Qaddafi's army to oblivion, and the Libyan dictator had been killed by rebels on October 20, 2011, in his hometown, Sirte. Then, in 2012, in Libya's first post-Qaddafi election, a secular party called the National Forces Alliance won the largest bloc of seats and gained 48 percent of the vote. All that

BY
BILL POWELL

MAHMUD TURKIA/AFP/GETTY

+
FREE REIN: Nearly five years after Qaddafi's death, Libya is a chaotic and dangerous place, with a hodgepodge of Islamic militia groups overseeing vast swaths of territory.

was missing was video of beaming first-time voters dipping their thumbs in blue ink, Iraq-style. Democracy was on the march in Libya!

How did it all happen? The Obama administration's foreign policy team has, throughout the seven and a half years of its life, touted its use of "smart power." This, of course, was meant to stand in contrast to the preceding president, whose policies this administration viewed as the very definition of "dumb power." In 2011, just a few months after the so-called Arab Spring erupted, the smart power crowd had a critical decision to make. Demonstrations and mounting violence in Libya against the regime had rattled Qaddafi, but he was determined to end the uprising, using overwhelming force against his own people if necessary. The U.S., France and Britain persuaded the United Nations to declare a no-fly zone in Libya that they would enforce, and on March 11, 2011, the French carried out the first strike. "We cannot stand idly by when a tyrant tells his people there will be no mercy," Obama said.

The language was striking and, for Obama and his team, important. It implicitly invoked a doctrine known as "the responsibility to protect." That doctrine was created by diplomats in the Canadian foreign ministry at the beginning of this century, but its most prominent champion is Samantha Power, Obama's ambassador to the United Nations. Power, as a freelancer for this magazine, covered the war in Bosnia in the 1990s. Outraged by what she saw there, she eventually wrote a Pulitzer Prize-winning book, *A Problem From Hell*, in which she describes the ethnic cleansings in Bosnia and Rwanda and argues passionately that it is the obligation of the world's foremost powers to prevent such genocides.

With Qaddafi promising a brutal crackdown, the conflict in Libya looked like a possible genocide in the making. D.C. was determined that this could not be a repeat of 1991, when U.S. forces left Iraq after driving Saddam Hussein out of Kuwait and the dictator turned his helicopter gunships on a Shiite uprising in the south and murdered thousands. When the U.S.-led coalition left, the world had turned its eyes away from Iraq. The Obama administration was determined to make sure that would not happen now, in Libya, where the conflict was presented by a mostly credulous Western media as a struggle between a tyrant and those who sought freedom and democracy.

Obama decided to intervene in Libya, but he would let the French and the Brits take the lead. And after Qaddafi was gone, the U.S. would pull back. Obama had been conflicted in his decision, given his commitment to reducing U.S. engagement in the Middle East. A plan that did not



involve large numbers of troops would conform with that, implying no long-term commitment of U.S. forces. And it enabled the Obama team to send a message: See, we're so much *smarter* than the Bushies, who committed huge armies to Afghanistan and Iraq for years after those invasions, at a massive cost in lives and resources. Then Secretary of State Hillary Clinton would later call it an exercise of "smart power at its best."

The military strategy involved heavy use of NATO air power from above, while the coalition would arm groups to take the fight to Qaddafi's well-equipped army on the ground. Qatar, with the Obama administration's blessing, flew in 20,000 tons of weaponry and handed it out to a variety of militias—many led by hard-core Islamic jihadis. That they were the heart of the

“RESIDENTS DESCRIBED SCENES OF HORROR—PUBLIC BEHEADINGS, CORPSES IN ORANGE JUMPSUITS HANGING FROM SCAFFOLDING.”

opposition was inevitable: Salafist Sunni jihadis had been Qaddafi's principal opposition for more than three decades. But as these militias became stronger, regional intelligence agencies became increasingly concerned. A significant number of the jihadis receiving arms and training were members of the Libyan Islamic Fighting Group (LIFG), hard-core Al-Qaeda fighters and veterans of the U.S. war in Afghanistan, including several who had been scooped up on the battlefield or abroad and sent back to do prison time in Libya or at Guantánamo Bay.

There are significant differences of opinion now as to whether administration officials were warned in 2011 about the consequences of arming LIFG fighters—and others like them. A senior

Middle Eastern intelligence officer says, “We had real concerns specifically as to who the Qataris were working with and giving weapons to.... We raised them [with Washington]. We didn’t get much response.” But a former senior U.S. intelligence official shrugs this off. “It wasn’t like the CIA didn’t know who these guys were,” says the official. “Who else was going to do the fighting?”

Qaddafi had contributed to the problem. In 2005, after reaching a deal with the West to give up weapons of mass destruction and during a rapprochement with Washington, his son, Saif al-Islam Qaddafi, persuaded his father to try to reach an accommodation with his Islamist opponents. In return for signing a document saying they would no longer oppose the regime, scores were released from Libyan jails, and dozens more who had been living in exile returned to Libya. These men happily returned to the battle once the regime was threatened in 2011.

A senior Arab intelligence official says he believes Qaddafi sought a deal with his Islamist enemies because he thought he was dealing from a position of strength. He had given up his nuclear and chemical weapons programs, as Washington had demanded, and had begun sharing intelligence with the U.S. “He had made his peace with Washington, he thought, and felt emboldened by that. That turned out to be a mistake,” the official says.

The same source—who works in a government whose relations with the Obama administration have been rocky but whose intelligence service still works closely with the CIA—says he and his agency were puzzled by Washington’s decision to turn on Qaddafi. “Wasn’t the core national interest of the United States regarding Libya—that it not possess weapons of mass destruction and not be overtly hostile—basically secured?”

He adds that backing the rebels was short-sighted for many reasons. “Did they really think it was going to go smoothly in the aftermath? Why would they think that? Simply because they weren’t going to occupy the country? Not a lot of it made sense to us.”

Sure enough, Qaddafi’s death did not bring stability. A hodgepodge of Islamic militia groups oversee vast swaths of territory; some, loyal to Al-Qaeda, have operated in Libya for decades and, like the LIFG, were critical in the fight to overthrow Qaddafi. Others are new.

In Sirte, on Libya’s northern coast, southeast of Tripoli, the black flag of the Islamic State militant group (ISIS) now flies. Some 6,000 ISIS fighters have flowed into Libya over the past two years. According to a recent Human Rights Watch report, the group has diverted food and medicine



BATTLE FOR SIRTE: Forces loyal to Libya’s U.N.-backed government made some gains against the Islamic State militant group in an operation to recapture Sirte in June, but they still face fierce resistance.

to its fighters and carried out dozens of executions of civilians since August of last year. “Sirte residents,” the report says, “described scenes of horror—public beheadings, corpses in orange jumpsuits hanging from scaffolding in what they referred to as ‘crucifixions’ and masked fighters snatching men from their beds in the night.”

In January of this year, as Libya teetered, a U.N.-backed administration, the Government of National Accord, formed in exile, in Tunisia. In March, that government moved to Tripoli and is now gamely trying to end the anarchy. Militias loyal to it—aided by a handful of U.S. and U.K. special operations forces—started a month or so



ago to take the fight to ISIS in Sirte. The militias have made gains, seizing land around the city, and fighting has been fierce—34 pro-government militia members were killed on January 21 and another 100 wounded. But so far, the assault has been inconclusive.

The Government of National Accord has asked that the arms embargo on Libya be lifted, and NATO has agreed to begin training Libyan government troops—though exactly when and where is still undecided. Three intelligence sources in the region tell *Newsweek* they expect, at some point, an increase in NATO troops on the ground in Libya. “It’s inevitable,” says one. “Libya is a

strategic beachhead for them, a dagger aimed at Europe. NATO can’t tolerate that.”

In the meantime, more and more Libyans take what an International Office for Migration spokesman called “the preferred route” out of the country: boarding any vessel they can, no matter how flimsy, to cross the Mediterranean to Italy. More than 1,300 such migrants died trying in the first four months of this year.

Obama, to his credit, admitted in a recent interview with *The Atlantic* that his biggest mistake as president was Libya—specifically, failing

“LIBYA IS A STRATEGIC BEACHHEAD FOR THEM, A DAGGER AIMED AT EUROPE. NATO CAN’T TOLERATE THAT.”

to plan for the aftermath. He has also blamed U.K. Prime Minister David Cameron for getting “distracted” and the French for not following through to secure the country.

But his owning up to the mistake was nonetheless breathtaking, for a very obvious reason: Obama was elected in part for his opposition to a dumb war run by an administration that had no clue what would happen once Saddam was gone. That *his* administration—the purveyors of “smart power”—would forget Colin Powell’s famous “Pottery Barn” rule—you break it, you own it—is beyond ironic.

It also poses a problem for Clinton, and forces her to answer for her role in the debacle—something the presumptive Democratic presidential nominee has not yet had to do in detail, in part because Republicans became obsessed with the four deaths at the U.S. diplomatic outpost in Benghazi, Libya. That tragedy, it turns out, was but a harbinger of a much bigger, far more dangerous problem, whose menace grows by the day. ■

YOUR
OFFICE



A photograph of an office cubicle with light blue walls and a blue carpet. On the right, there is a desk with a light-colored top and a grey metal cabinet with three drawers. On the desk, there is a clear plastic tray with several compartments. The text is overlaid on the left side of the image.

IS KILLING YOU

BY DOUGLAS MAIN

**AND SO IS
YOUR HOME.
BUT BREATHE
EASY—AN
INDOOR
POLLUTION
REVOLUTION IS
IN THE AIR**

AN INVISIBLE
KILLER HAD INFILTRATED
STO-ROX HIGH SCHOOL.
WHEN WORKERS INSTALLED
A CELL TOWER ON
TOP OF THE SCHOOL OUTSIDE
PITTSBURGH, NO ONE
REALIZED THE EXHAUST
SPEWED BY ITS DIESEL
GENERATOR WAS BEING
SUCKED INTO THE
BUILDING'S VENTILATION
SYSTEM AND INHALED BY
EVERYONE INSIDE.

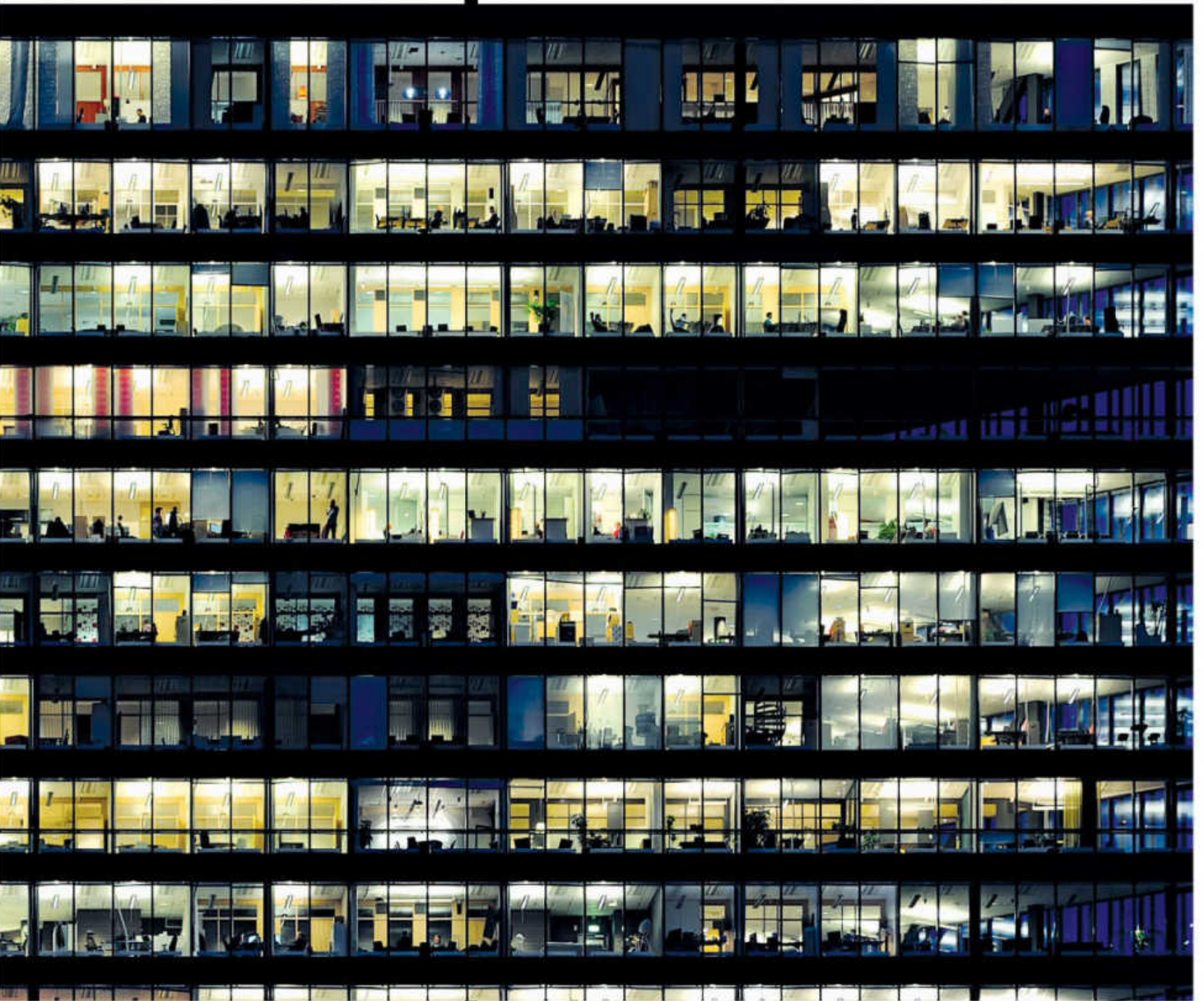
This is stuff you really do not want in your teen's homeroom: Diesel fumes contain particulate matter and chemicals like benzene and arsenic, which in the long term increase the risk of lung cancer and in the short term cause breathing problems and dull the mind. But luckily for the Sto-Rox students, they had Joe Krajcovic—and a Speck.

Krajcovic had installed this new device in his science classroom as a school project. The Speck measures airborne particulate pollution, which increases the risk for and exacerbates symptoms of respiratory problems like asthma. Krajcovic's class was analyzing the data gathered by the sensor to learn about indoor air quality when they noticed spikes in particle levels every few hours. Those coincided with the generator's daily schedule: Whenever it kicked on to power the tower's battery, particulate pollution increased, says Speck developer Illah Nourbakhsh, a robotics researcher at nearby Carnegie Mellon University. After parsing this unnerving data, Krajcovic filed a grievance, and the tower was moved.

But that is just one school, in one corner of Pennsylvania. Right now, there's essentially no way of knowing how many schools and homes and offices are being filled with pollutants from diesel generators on rooftops, highway overpasses down the block or some other source spitting out invisible killers in your face all year long.



Your life depends on good air. Every year, air pollution causes the premature deaths of between 5.5 million and 7 million people, making it more deadly than HIV, traffic accidents and diabetes combined. The majority of these deaths—about 4 million—are caused by indoor air pollution, primarily in developing countries. But it takes a toll in developed countries as well. In Europe, for example, air pollution shortens the average life expectancy by nearly one year. Worldwide, more than 80 percent of people living in urban areas breathe air that exceeds pollution limits advised by the World Health Organization (WHO).



OLASER/GETTY; PREVIOUS SPREAD: CHANG SZELING/GALLERY STOCK

Particulate matter is the prime villain. The most lethal are the smallest particles (also known as PM_{2.5}, for particulate matter smaller than 2.5 microns in diameter, about one-third the diameter of a red blood cell), which are produced by combustion and household activities like cooking. These specks can get deep into the lungs, tarring the airways and weathering the heart, disrupting its ability to beat properly: Many studies have linked exposure to PM_{2.5} with heart attacks, cardiac arrhythmias, strokes, chronic obstructive pulmonary disease, worsened symptoms of asthma and an increased risk of respiratory illness.

Worldwide, particulate matter contributes to about 800,000 premature deaths each year, according to the WHO, making it the 13th leading cause of death worldwide. Other pollutants also cause major problems, especially indoors—radon, a gas produced naturally in the Earth, is the second leading cause of lung cancer in the U.S., and additional gases like carbon monoxide and volatile organic compounds (VOCs) cause myriad health effects.

Poisonous indoor air is almost completely ignored by the press, the public and those who bankroll scientific research—it gets about 100 times less research funding than outdoor air, even though the average American spends about 90 percent of the time inside. “Outdoor air is a political hot topic,” but it means less for public health than indoor air, says professor Jan Sundell, a researcher at the Technical University of Denmark. “You get sick due to indoor air. You die due to indoor air.”

While the federal government has a nationwide network of sensors perched atop towers that sniff for particulate matter, these cost around \$100,000 each and aren’t exactly mobile—there’s simply no way the

program could be expanded into schools, homes and offices, even if we could overcome all the red tape preventing that from happening.

The Speck, however, costs \$150 and is the size of an alarm clock. It's just one example of a new generation of devices that measure air quality, many of which are priced at \$200 or less and can quantify levels of particulate matter, VOCs, carbon dioxide, carbon monoxide and other gases. Although many of these devices aren't yet 100 percent accurate (and certainly aren't as precise as the fed's monitors), they have already allowed people to improve the air they breathe in ways that would've been impossible even a few years back.

CHOKES POINTS

Air quality was never a primary concern for building developers, but the past few generations of construction have been particularly problematic; since the 1950s, buildings have increasingly been constructed to be more airtight, mostly for energy efficiency, says Joseph Allen, an environmental health researcher at Harvard University. But often that trend wasn't offset by increased ventilation, leading to a common problem: buildup of carbon dioxide and various pollutants. This leads to "sick building syndrome," a term coined in the 1980s to describe the increasingly common maladies caused by improperly designed and ventilated buildings. By 1984, a WHO Committee reported, "up to 30 percent of new and remodeled buildings worldwide may be the subject of excessive complaints related to indoor air quality." Since that time, standards improved, and now some architects are specifically designing buildings with air in mind, Allen says.

Architectural firm CookFox is a good example. The company designed One Bryant Park in New York City, also known as the Bank of America Tower, which was the first in the state to receive the highest rating for occupant health set by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification program. Special filters remove more than 95 percent of the particulate matter, and occupants can individually control the flow and ventilation of air in their offices or cubicles, says CookFox partner Brandon Specketer. The firm is now designing a residential building in Manhattan with indoor and outdoor particle monitors that advise residents whether it's safe to open their windows.

Increasingly, new buildings contain sensors like these that sniff the air for pollutants. Carbon dioxide monitors have become commonplace in buildings, Specketer says. In offices, these are often coupled with the ventilation system to ensure that the latter automatically starts running when carbon dioxide concentrations get too high. A few companies are also experimenting with more exotic sensors, like those that measure VOCs, says Valentine Lehr, a partner at Lehr Engineering, which consults on mechanical and electrical engineering projects. Lehr is currently working on a building that will incorporate VOC sensors to decide when to draw in outside air and whether to clean it using new chemical filters. These kinds of add-ons are still relatively uncommon, though, mostly because tenants are not aware of the health benefits—and if they are, they are often (and unwisely) unwilling to pay for them, Lehr says.

The San Francisco-based company Aclima has made headlines by setting up a system of air quality sensors measuring things like carbon dioxide and particulate matter at 21 of Google's buildings and handling "half a billion data points per day," an enormous amount of information that

just a few years ago would have been completely inaccessible, says Aclima CEO Davida Herzl. The company uses sensors in its own building to optimize ventilation and will cut short a meeting if carbon dioxide levels in the conference room get too high, Herzl says.

Herzl believes this vast amount of new air quality data will guide construction and design of the future. The potential impact is enormous, considering that 70 percent of the infrastructure that will be around in 2050 has yet to be built. India and China—where air pollution is already particularly destructive—are projected to add another 700 million urban dwellers by 2050. As hordes of people move to cities in those countries, more cars and power plants are inevitable, adding up to more emissions and dirtier air. But that doesn't have to be the case, Herzl says. If these millions of structures are designed with new data in mind, they could save many lives.

Improvements in filtration and ventilation in older buildings are equally important to global public health. And it's wrong to assume that "only new buildings can be clean," Allen says. A soon-to-be-published study led by University of Illinois researcher Paul Francisco looks at the health of people in 81 low-income houses in the Chicago area before and after installing a ventilation



system that is up to federal standards. Francisco's team found that six months after installation, children living in the homes reported fewer headaches and respiratory problems, and adults reported significantly less "psychological distress" than previously.

Indoor air quality is a bigger problem for the poor and underprivileged. According to the WHO, 56 percent of cities with more than 100,000 inhabitants in high-income countries do not meet its guidelines. In low- and middle-income countries, that rises to 98 percent. The problem is particularly severe in East and South Asia, says Kirk Smith, an air quality researcher at the University of California, Berkeley. Smith and his team designed a device they called the UCB (UC Berkeley) Particle and Temperature Sensor to map air pollution in India. Using the device, Smith and other researchers found that smoke and particulate matter from household cooking fires create one-quarter of the country's air pollution—more, even, than the notoriously noxious and pervasive vehicle exhaust there. Cooking indoors with wood and other solid fuels leads to millions of cases of pulmonary disease and deaths each year. Smith has helped quantify the misery caused in India by this pollution; he hopes that data will lead to systemic changes to

DON BAYLEY/GETTY



ease it. Already, there are projects underway in many areas to replace wood stoves with those using cleaner-burning materials like natural gas.

The technology necessary to convince people their air is killing them is improving and dropping in price. Recently, Smith and colleagues created a new monitor called the UCB Particle and Temperature Sensor Plus, which should cost several hundred dollars (about half the price of the original model) and will be available to buy in mid-2016. The Plus is lightweight and durable, and it can measure extremely high levels of fine particulate pollution, sometimes surpassing 50,000 micrograms per cubic liter of air in Indian villages. That's about 1,000 times worse than the dirtiest American city and 30,000 times higher than levels the U.S. Environmental Protection Agency considers safe. Because Smith's devices measure higher PM2.5 levels, they aren't that useful in places with relatively clean air, like U.S. cities. For that, there are new sensors on the market that can measure lower levels of particulate matter with reasonable accuracy, such as the Speck and the Dylos monitors.

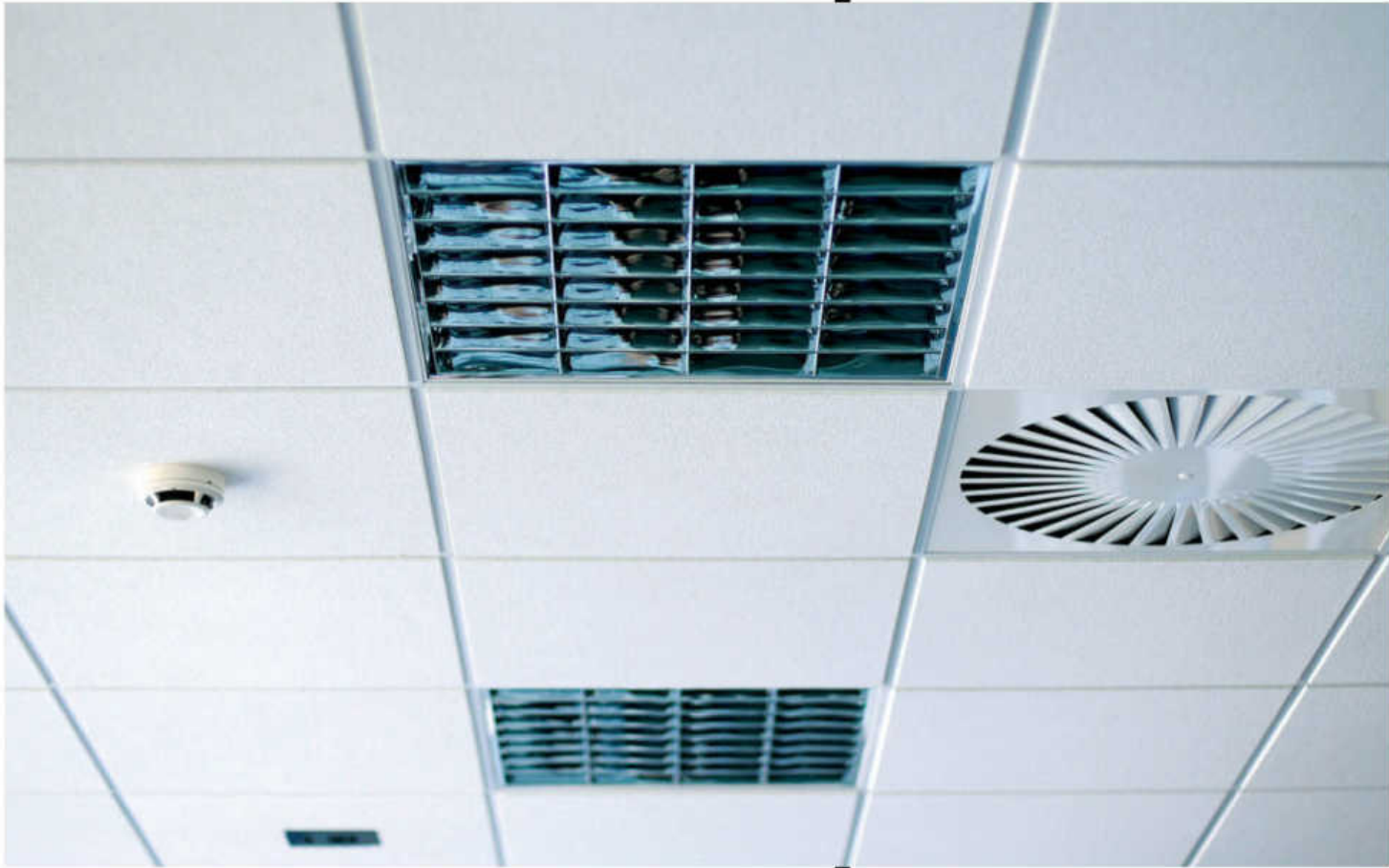
Researchers are already using both types of monitors, along with carbon dioxide, carbon monoxide and radon sensors, in a project to increase awareness of indoor air pollution in southwest Pennsylvania. Known as "Reducing

"YOU GET SICK DUE TO
INDOOR AIR, YOU DIE DUE
TO INDOOR AIR."

Outdoor Contaminants in Indoor Spaces," or ROCIS, the initiative was founded about two years ago with financial support from philanthropic organization the Heinz Endowments. It places monitors in people's homes for three weeks and shows people what activities increase pollution levels, says project leader Linda Wigington. For example, it's vital to turn on the ventilation hood over your oven when cooking, to use the backburner whenever possible (allowing the hood to suck up particles and gases like carbon dioxide) and to put lids on pots, Wigington says. All of these tweaks can greatly reduce levels of poisons produced by cooking, she says. Getting rid of carpets and curtains can also decrease the amount of particles found indoors, as these items store large amounts of these pollutants. And use a vacuum cleaner with a HEPA filter; vacuuming without one increases particulate pollution.

Many people underestimate the amount of particulate matter they are exposed to indoors, Wigington adds. Without taking these precautions when cooking or cleaning, people unnecessarily expose themselves to more pollution and are even shortening their lives. As the WHO notes, there's no absolutely safe level of particulates.

You're not helpless when it comes to dirty air, though. Ryan Allen, an environmental health scientist at Simon Fraser University, has shown that using commercially purchased air filters in your home, even for a few weeks, can significantly improve several measures of health, including levels of inflammation and blood vessel function. In one 2011 study, his team found that people using a filter have about 30 percent lower levels of C-reactive protein, which is linked to inflammation, than those who do not. The preliminary results of a nearly completed study in Mongolia suggest that pregnant women with air filters in their houses give birth to larger babies (generally an indicator of good newborn health) than those without, he says. Yet another study in Nova Scotia, by the Canadian Home Mortgage Department, found that when fans were installed to ventilate and filter air, the number of infectious diseases declined by 75 percent. And other research has shown that



those who work in well-ventilated buildings have lower levels of anxiety.

But not all filters work equally well. David Palmer and Judith Piscione founded a company called Progressive Technologies Inc., which produced a proprietary air-filtering system that removes all particles from the air and is still used in “clean rooms” used to produce many types of electronics, like computer chips and transistors. After selling that company, they decided to start American Innovative Research Corp., which uses the same technology to filter air in houses and buildings. Palmer says the device, which looks like an air conditioning unit, removes all particles from the air. It relies on a special technology that works like a car’s catalytic converter, breaking down contaminants until they turn into carbon dioxide and water, and filtering out any remaining junk using an extremely fine filter.

BAD AIR MAKES YOU STUPID

Air quality also affects the mind. A landmark study published in October 2015 in the journal *Environmental Health Perspectives* found a strong link between air quality and cognitive function. In the paper, the researchers gathered 24 professionals of various stripes and had them work in the same office, where the air quality could be altered and carefully monitored. Each of the participants worked

in the office for six days, during which time they were exposed to differing levels of ventilation, carbon dioxide and the types of VOCs ubiquitous in indoor environments. On each day, the subjects took tests measuring a wide range of cognitive abilities.

One of the parameters tested was the difference between air quality in the average office building compared with that in a “green” building that meets standards for occupant health and energy efficiency set by the LEED council. The scientists found that in the green condition—where air was better ventilated and had lower carbon dioxide and VOC concentrations—participants scored 61 percent higher in cognitive function compared with those in conventional office building conditions. When exposed to air ventilated at twice the rate required in the LEED certification, a condition the authors named “green+,” participants’ cognitive scores jumped 100 percent.

The tests measured various areas

of mental performance, and some were especially improved by better air quality. Scores on “information usage”—the ability to gather and apply information toward attaining a specific goal—went up by 172 percent and 299 percent in the green and green+ conditions, respectively. And when it came to “strategy”—participants’ ability to plan, prioritize and sequence actions—the green and green+ day scores were 183 and 288 percent higher than on the conventional-air day. Better air led people to make better decisions and to be more productive, says Joseph Allen, first author of the study.

To measure carbon dioxide, temperature, sound level and humidity at each cubicle, the researchers used a device called the Netatmo Weather Station that costs just \$150. But to calibrate the device, the scientists used a more accurate, research-grade sensor called the TSI Q-Trak 7575, which would put you back around \$4,000.

This highlights a major problem in this nascent field: Many of the sensors are not very accurate, and every researcher *Newsweek* spoke with was careful to point out the limitations of inexpensive monitors. For now, very few produce data precise enough to be incorporated into studies or to be used by regulators. And in some cases, these monitors may create false alarms—“anxiety is actually a health effect of [some of] these sensors,” Nourbakhsh jokes—or a false sense of security.

On the other hand, even though the affordable sensors don’t generally produce data solid enough for scientific research, many can accurately reveal trends, enabling people to tell when activities such as using a filterless vacuum or frying bacon create problems—or discover an underlying issue (like an air-fouling generator). And getting people to change their behavior often requires showing them the direct effects of their actions in the form of real data. In a 2013 paper published in the journal *PLOS One*, Neil Klepeis, an environmental health scientist at San Diego State University, found that when pollution monitors were installed in the homes of smokers, two out of three people involved promised to quit smoking

indoors or to smoke less after several weeks. “There’s nothing like that real-time feedback to drive the point home,” Klepeis says. So these sensors can make a difference, even if their data aren’t perfect.

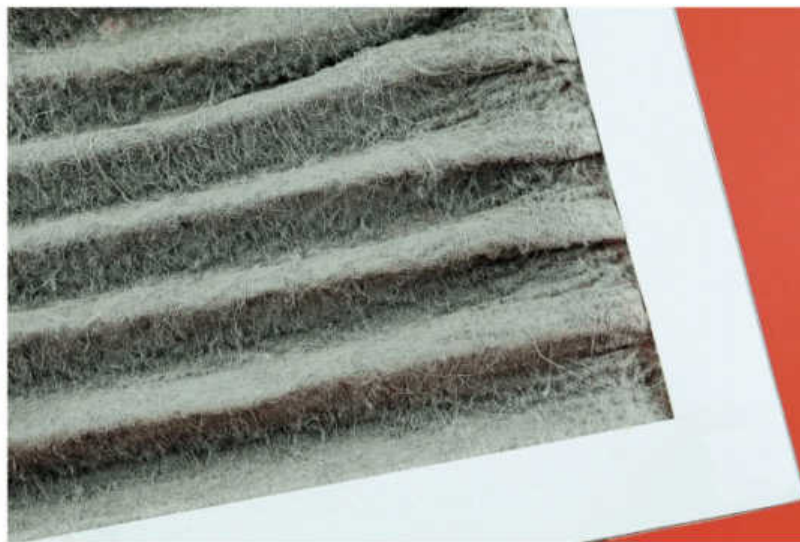
Meanwhile, the accuracy of low-cost technology is only going to improve, because consumers will demand it, Joseph Allen says, pointing out that pension funds are looking to invest in companies with green infrastructure, including those that employ new-generation sensors. Several banks and funds have consulted with Allen and colleagues about “putting

AIR POLLUTION IS MORE **DEADLY** THAN HIV, TRAFFIC ACCIDENTS AND DIABETES COMBINED.

their money on [corporations] that stress sustainability and health,” and sensors are part of that. “When these funds are starting to invest...it will force shifts in how companies prioritize health, particularly real estate companies,” Allen says. “It’s going to be massive, and you can already see the movement happening.”

But before the huge leaps come the small improvements. Besides gifting a Speck monitor to Sto-Rox High, Nourbakhsh also sent one to Quail Hollow Elementary School outside Salt Lake City as part of the company’s educational outreach mission. Quail Hollow used the device to show that particulate matter created by parents idling their cars while waiting to pick up kids produced high pollution levels. That led the parents to sign a pledge to stop running their cars while waiting, and subsequent tests with the monitor showed improved air quality.

Students found that “through an intervention, they could improve the conditions,” Nourbakhsh says. The devices, despite their flaws, are giving people a rough but real idea of what they’re breathing in, and, more important, the information they need to do something about it. At Quail Hollow, Nourbakhsh says, there will be “no more idling.” ■

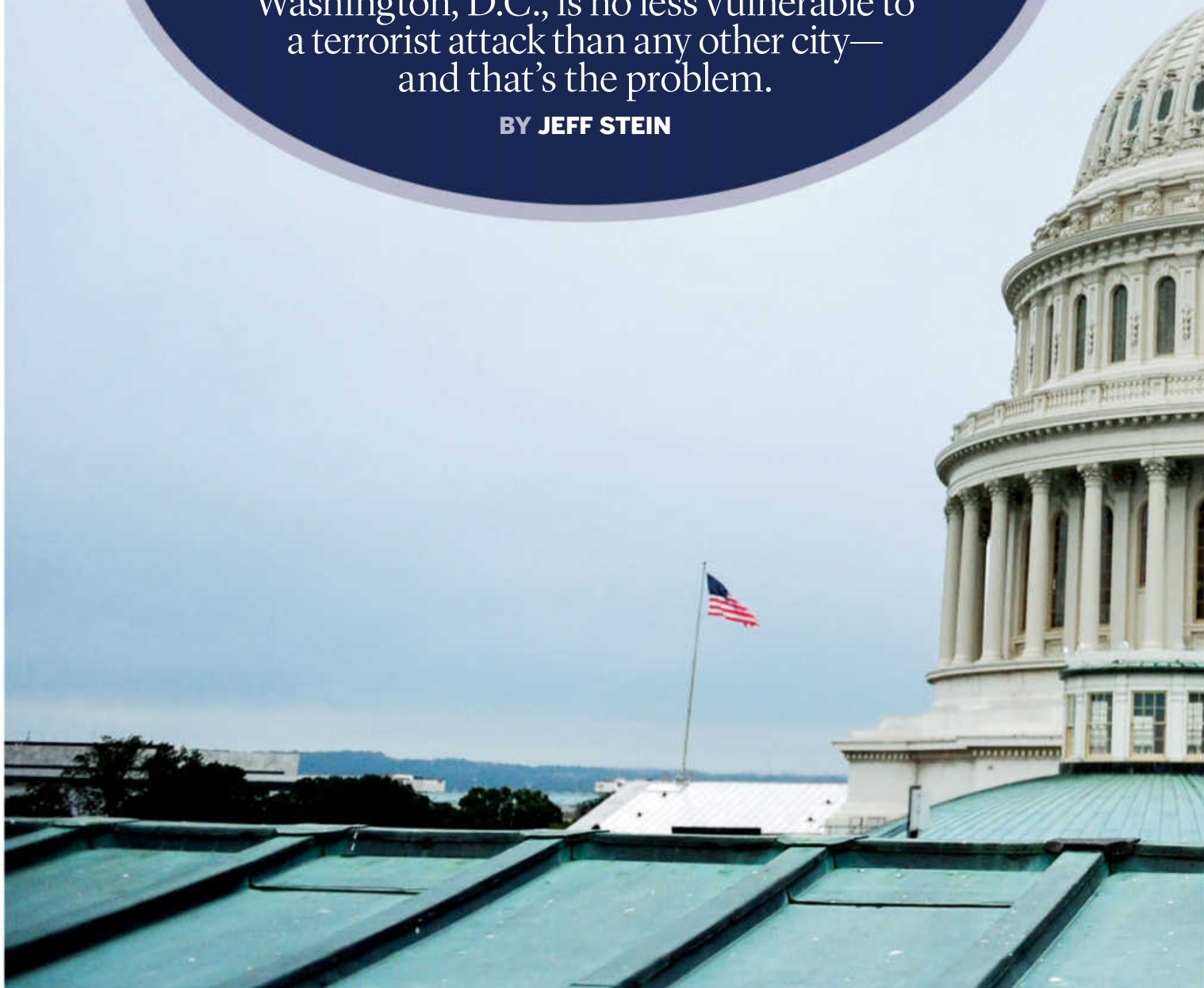




YOU CAN'T STOP 'EM ALL

Washington, D.C., is no less vulnerable to a terrorist attack than any other city—and that's the problem.

BY JEFF STEIN



+

**CAPITOL
CRIME-WATCH:**
Surveillance by
humans, cameras
and computers
has been a 24/7
obsession in D.C.
since 9/11.



T

he cellphones of dead people were still ringing inside the Pulse nightclub on June 12 when Cathy Lanier, chief of the Metropolitan Police Department in Washington, D.C., got a message from her counterparts in Orlando, Florida. First reports were that a terrorist had carried out “the worst mass murder in American history” there.

A famously hands-on and nocturnal leader, Lanier started punching numbers on her cellphone. One call went to the Joint Terrorism Task Force, the FBI-led body that gathers intelligence on threats. Another went to the city’s homeland security ops center. A text message came in from D.C.’s mayor, Muriel Bowser, asking for information. Lanier then set up a conference call with her senior commanders, who were already out in force because of the revelers in town for the city’s annual gay pride weekend. Extra resources were deployed into the nightclub district and venues connected to the day’s march, expected to draw over 250,000 people. As the sun lit up the Washington Monument, D.C.’s Homeland Security and Emergency Management Agency, a 24/7 nerve ganglion of blinking phones, 911 operators, intelligence analysts, computer monitors with incident reports, and banks of TV screens with camera views of the city’s major avenues and bridges, was pulling in data from all over the region. Metro subway managers, struggling with repairs that shut down some lines, were on alert. Everyone from hospital emergency rooms to the power system and business association had been given notice that something bad was going down 850 miles south and could be coming their way.

“What you would expect,” Lanier tells *Newsweek* of her long morning of putting her many pieces in place. Business

as usual for the city’s most high-profile, and perhaps popular, official, an instantly recognizable, 6-foot blonde who’s often seen behind the wheel of her own cruiser in the city’s poorest wards. If the history of terrorism since 9/11 has been a sad litany of “lessons learned,” Lanier, who joined the force as a foot patrolwoman in 1990 and quickly rose through the ranks to head its homeland security and counterterrorism division before becoming chief in 2007, is determined to be ready for any eventuality.

Nightclub shooters, like Omar Mateen? Check. Bombers, as in Brussels last year? Check. Anthrax? Check. Nuclear, chemical or biological weapons? Check, check, check.

Unfortunately for Lanier, the recent attacks in Orlando, Brussels and Paris show that you can plan and train until your budget runs dry, and still you rarely stop a determined attacker. “Lone wolves” come out of nowhere. The urban guerrillas of the Islamic State militant group, or ISIS, use encrypted phoneware. Meanwhile, Lanier knows her city is not just a top-tier target but the greatest unclaimed prize for terrorists. It’s the thriving capital of their archvillain, home to the president who has vowed to destroy them, the Congress that funds the wars against them, the Pentagon that carries out the president’s orders and the Supreme Court that helps keep their brethren in Guantánamo.

“Suffice it to say, the capital remains a target,” Representative Michael McCaul, chairman of the House Homeland Security Committee, tells *Newsweek*. “They like to return to targets they missed” the first time around, like the World Trade Center, whose garage was merely wobbled by a truck bomb in 1993. “We’ve stopped several plots against the Capitol,” he adds. One case involved pipe bombs and AK-47s; another had drones with explosives. There have been other, more recent plots, he says, but “I’d rather not get into that.”

“God willing,” a fighter proclaimed in a typical ISIS video from November 2015, “as we struck France in the center of its abode in Paris, then we swear that we will strike...Washington.”

One day, Lanier knows, they will come. And despite all her tireless training, surveillance and planning, she knows she can’t stop them all.



BILLION-DOLLAR BOONDOGGLE

WASHINGTON was still jittery from the 9/11 attacks in the late spring of 2002 when an unidentified small aircraft showed up on radar



+
HYDRA-HEADED: As head of the D.C. police, Lanier, far left, has to prepare for every kind of terror threat, even the most unlikely, from drone strikes to dirty bombs and lone wolf shootings.

heading straight for CIA headquarters in Langley, Virginia, a few miles up the Potomac River from downtown D.C. “I was on the seventh floor. It was late on a Friday morning,” recalls Joseph Augustyn, then the CIA’s deputy associate director for homeland security. “Somebody runs in and says, ‘It’s at stall speed. It’ll be over headquarters in about eight minutes.’”

Six months after Al-Qaeda hijackers flew airliners into the World Trade Center and Pentagon, officials were on high alert for another such attack, especially since it was only the brave passengers of United Flight 93 who had prevented a hijacked plane from using the National Mall as a big green glide path to fly into the Capitol Building. Washington, D.C., they figured, was Al-Qaeda’s unfinished business. The group had demonstrated its patience when it made sure it destroyed the World Trade Center the second time around, on 9/11. F-16s had been flying regular patrols over the city ever since.



A PASSENGER FLYING INTO D.C. CAN SPOT STINGER ANTI-AIRCRAFT MISSILE BATTERIES AND 50-CALIBER MACHINE GUNS ON THE ROOFS OF GOVERNMENT BUILDINGS.

Now a plane was heading straight for the CIA, another symbol of American might. F-16s scrambled to look for it, Augustyn tells *Newsweek*, but they flew too fast and high to see it. The plane kept coming. “It went right over the agency,” he says of the previously unreported incident. Secret Service agents raced to small landing strips in Virginia, hoping to find the plane and its owner, but neither could be found. And to this day, Augustyn says, “nobody knows where it landed.” (The Federal Aviation Administration tells *Newsweek* it couldn’t find a record of the incident without a firmer date. The Secret Service did not respond by press time.)

The “lesson learned,” Augustyn says, is that “you can’t send F-16s—you gotta send helicopters.” Fourteen years later,

choppers of all kinds—from the police, National Park Service, Marine Corps, Coast Guard, Customs, Drug Enforcement Administration, FBI and more—constantly flit across the city’s skies. In 2013, residents of leafy far northwest Washington got annoyed by loud, unmarked “black helicopters” swirling low and slow over their neighborhoods at night. After much hemming and hawing, officials finally admitted they had been dispatched by the obscure National Nuclear Security Administration to take air samples to help them detect the presence of a future “dirty bomb,” an evil marriage of conventional explosives and radioactive material.

“It’s not likely, but you can’t take that for granted,” says Lanier. “I have to be prepared if the most remote kind of attack does occur, so we can continue our operations here.”

The city has built up air defenses Saddam Hussein would have envied. From the city-side window of an airliner descending into Washington’s National Airport, a discerning passenger can spot some of the Stinger anti-aircraft missile batteries and 50-caliber machine guns potted on the roofs of government buildings around town, including the White House, all of which are backed up by Sentinel phased array warning



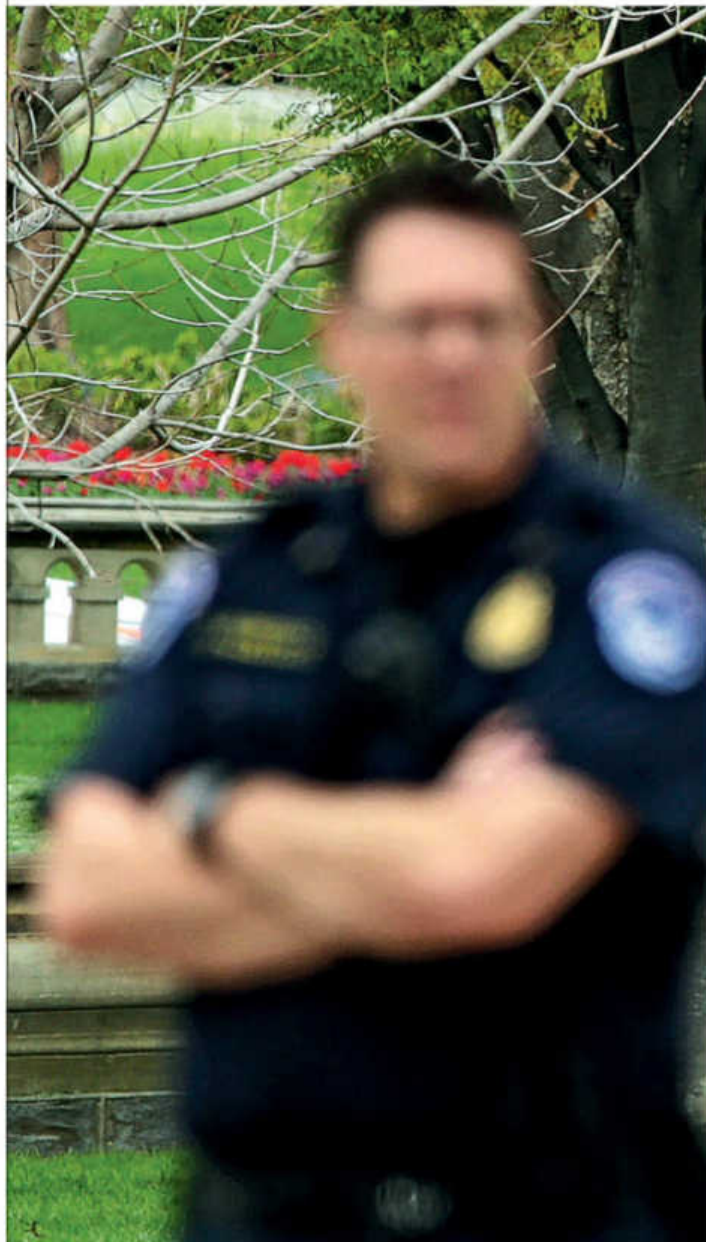
**A VIRUS WOULD BE VIRTUALLY
OUT OF CONTROL AND SEND SCORES
OF PEOPLE TO EMERGENCY
ROOMS BY THE TIME AIR SAMPLES
WERE GATHERED.**

radar. Air Force F-16s also sit “cocked and locked” at nearby Andrews Air Force Base, deployable at an instant’s notice to intercept intruders into D.C.’s Flight Restricted Zone, which extends 15 miles out from downtown.

Yet even with all this high-tech barbed wire, an unhinged postal worker managed to pilot a gyrocopter through the no-fly zone last year, circle the Washington Monument, soar over the National Mall and land on the West Lawn of the Capitol, where millions will gather in January for a presidential swearing-in. His payload? A bag full of petitions for Congress to clean up campaign corruption. Homeland security officials shudder at what else he might have carried. It was yet another “lesson learned.” “We fixed that,” a city security official assures *Newsweek*.

How, then, to explain the incident just a month ago, when a Virginia man parked his pickup truck next to the Reflecting Pool, again on the Capitol’s West Lawn, and told police he was carrying a bucket of anthrax material that had infected him? Hazmat specialists hosed him down, ran tests and found he was just delusional. But what are police to do on the tourist-choked Mall, security experts ask—stop traffic for random checks?

The specter of a biological or chemical attack, in not just Washington but many other big cities across the country, has haunted security officials since 1995, when the Japanese Aum



Shinrikyo doomsday cult uncorked a sarin gas attack on the Tokyo subway that killed 10 people and injured 5,000. (The cult was also experimenting with weaponized botulinum and anthrax.) General Charles Krulak, the Marine Corps commandant, surveyed U.S. defenses and was alarmed to discover that not a single federal agency had a chemical and biological incident response unit, so he ordered the corps to set up its own. His fears were realized in October 2001, when anthrax-laced letters were sent to House and Senate office buildings and several media organizations. Capitol offices were evacuated, and Washingtonians, still terrorized by the 9/11 attacks, were frazzled once again.

If the federal government is good at anything, however, it’s throwing money at threats.



+
WINGED NUT: D.C. has air defenses that would have made Saddam Hussein jealous, yet an unhinged postal worker piloted a gyrocopter through the city's no-fly zone, circled the Washington Monument and landed on the Capitol's West Lawn last year.

By 2014, taxpayers had contributed \$1.1 billion to the feds' BioWatch program, a network of pathogen detectors deployed in D.C. and 33 other cities (plus at so-called national security events like the Super Bowl), despite persistent questions about its need and reliability. In 2013, Republican Representative Tim Murphy of Pennsylvania, chairman of the House Energy and Commerce Committee's Oversight and Investigations subcommittee, called it a "boondoggle." Jeh Johnson, who took over the reins of the Department of Homeland Security (DHS) in late 2013, evidently agreed. One of his first acts was to cancel a planned third generation of the program, but the rest of it is still running.

"The BioWatch program was a mistake from the start," a former top federal emergency med-

icine official tells *Newsweek* on condition of anonymity, saying he fears retaliation from the government for speaking out. The well-known problems with the detectors, he says, are both highly technical and practical. "Any sort of thing can blow into its filter papers, and then you are wrapping yourself around an axle," trying to figure out if it's real. Of the 149 suspected pathogen samples collected by BioWatch detectors nationwide, he reports, "none were a threat to public health." A 2003 tularemia alarm in Texas was traced to a dead rabbit.

Michael Sheehan, a former top Pentagon, State Department and New York Police Department counterterrorism official, echoes such assessments. "The technology didn't work, and I had no confidence that it ever would," he tells *Newsweek*. The immense amounts of time and money devoted to it, he adds,



could've been better spent "protecting dangerous pathogens stored in city hospitals from falling into the wrong hands." When he sought to explore that angle at the NYPD, the Centers for Disease Control and Prevention "initially would not tell us where they were until I sent two detectives to Atlanta to find out," he says. "And they did, and we helped the hospitals with their security—and they were happy for the assistance."

Even if BioWatch performed as touted, Sheehan and others say, a virus would be virtually out of control and send scores of people to emergency rooms by the time air samples were gathered, analyzed and the horrific results distributed to first responders. BioWatch, Sheehan suggests, is a billion-dollar hammer looking for a nail, since "weaponizing biological agents is incredibly hard to do," and even ISIS, which theoretically has the scientific assets to pursue such weapons, has shown little sustained interest in them. Plus, extremists of all denominations have demonstrated over the decades that they like things that go boom (or *tat-tat-tat*, the sound of an assault rifle). So the \$1.1 billion spent on BioWatch by 2014 is way out of proportion to the risk, critics argue. What's really driving programs like BioWatch, Sheehan says—beside fears of leaving any potential

+
POOR TUNNEL VISION: A major hole in D.C.'s emergency response plan was exposed last year when Metro riders were stranded in a smoke-filled tunnel and firefighters had to use cell-phones and relays to coordinate their rescue.

threat uncovered, no matter how small—is the opportunity it gives members of Congress to lard out pork to research universities and contractors back home.

When contacted by *Newsweek*, DHS spokesman Scott McConnell issued a statement calling BioWatch "a critical part of our nation's defense against biological threats." But only on condition of anonymity would a department official claim that BioWatch, "operational 24 hours a day, 365 days a year...has a robust quality assurance program, which includes evaluating and auditing all operational processes from sample collection through final data analysis and results reporting."

The former federal medical emergency official has a succinct appraisal of that sweeping claim: "What baloney."



PONDER THE UNTHINKABLE

THE PROSPECT of a terrorist gang heading for Washington with a nuclear weapon—a dirty bomb or the Hiroshima-like device—has kept many a U.S. official awake and staring at the ceiling since the early 1990s, when reports surfaced that Al-Qaeda was trying to obtain uranium with the help of Sudan. More recently, evidence emerged that ISIS operatives in Belgium were casing a nuclear plant; in 2012, two employees of a nuclear plant in the country left for Syria and joined up with ISIS, according to news reports. Such events have prompted U.S. presidents from Bill Clinton onward to funnel untold billions of dollars into systems to head off such an attack, from uranium sniffers around downtown Washington and its Metro system to seagoing drones prowling the Chesapeake Bay and other major waterways and ports for radiological contraband.

With alarming regularity, reports surfaced that the first generation of technology deployed by DHS to inspect cargo from container ships was a bust. The harshest criticism landed on the radiation screeners DHS deployed to ports. Officials had decided to inspect only “high-risk [containers]...actually only 6% of all incoming cargo,

leaving the great majority of containers and imports unchecked,” the Nuclear Threat Initiative reported in 2007. False positives, from such naturally radiating material as kitty litter, bananas and ceramics, drove operators crazy, “reduc[ing] the sense of urgency among those who respond to them,” the NTI said. “Between May 2001 and March 2005, there were reportedly 10,000 false alarms.”

Despite serious questions about whether DHS was fudging its statistics, Congress allowed it to steer \$1.15 billion worth of new business to contractors “to enhance the detection of radiological and nuclear materials.” Seven years later, the Government Accountability Office, Congress’s investigative arm, found that the new technology was pretty much a bust too. It “did not meet key requirements to detect radiation and identify its source,” the GAO said.

Holes like that mean police, fire and health officials must ponder the unthinkable. Jerome Hauer,

who ran the Public Health Emergency Preparedness office within the U.S. Department of Health and Human Services from 2002 to 2004, says he’s not worried about terrorists getting their hands on a ready-made Nagasaki-style plutonium device; he’s more worried about them obtaining highly enriched uranium from sympathizers in places like Pakistan, India and Iran—or anywhere there’s a nuclear power plant—and fashioning what he calls “an improvised nuclear device,” or IND.

Nobody is ready for that. D.C.’s Homeland Security and Emergency Management Agency, or HSEMA, concedes as much. Its response plan says: “Emergency responders and hospitals may have limited capability to isolate and treat casualties contaminated with chemical, biological, radiological, nuclear, and/or explosive (CBRNE) material.”

Despite years of thinking about such dire threats, however, the city’s mass evacuation plan is still a work in progress, a capital-region emergency planner says. “What they had was only a basic tactical transportation plan. What it showed was all the evacuation routes and basically the stuff they might do in a crisis, such as the police directing traffic,” the source confides on condition of anonymity to discuss such a sensitive issue. “But it didn’t have an overarching authority, like, when everything hits the fan, what their roles and responsibilities are—that this agency does this, this agency does that, how transport will be mobilized.”

A major lapse was discovered in January 2015, when D.C. Metro passengers were trapped in a smoke-filled tunnel and first responders couldn’t communicate by radio with subway emergency officials. Riders waited for 35 minutes to be rescued. One died, and more than 80 were injured. “Firefighters

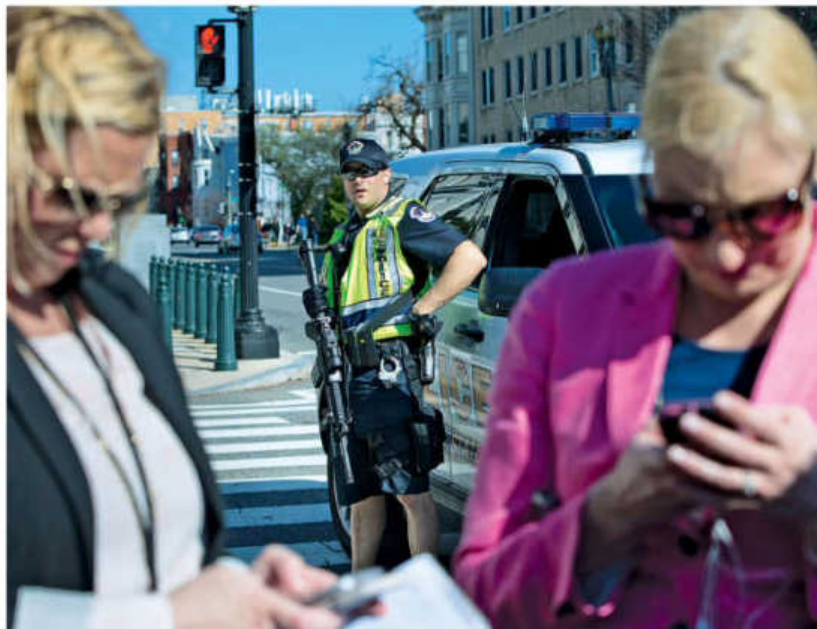


TERRORISTS OF ALL DENOMINATIONS LIKE THINGS THAT GO BOOM.

resorted to cellphones and a chain of runners to relay information during the Jan. 12 incident,” *The Washington Post* reported, calling it “the latest example of the Washington region’s continuing struggles with emergency response, despite spending nearly \$1 billion in federal homeland security grants since the Sept. 11, 2001, attacks in order to be nimble in a crisis.”

Chris Geldart, who took over the HSEMA in 2012, has privately grumbled about the state of D.C.’s preparedness for a major emergency, insiders say, but publicly he claims he’s ready. “We have a mass evacuation plan,” he says. “In the past, we had a couple of different plans. Over the last two and a half to three years, we’ve been making sure that we have a holistic plan. For special events,” like the massive annual Fourth of July gathering on the Mall, “we have a walk-out plan. The surface evacuation plan,” he adds, “has been in place for a while. But how to move people out of their homes to a shelter or a place outside the city, we’re doing a lot of work on that now.”

Metropolitan Police Chief Lanier also insists the city is ready. “The surface transportation evacuation plan...has prob-



+ **BEAT THIS:** Lanier says her department also relies on the massive presence of cops on the street for intel about possible threats, but some dispute how big a presence that is.

ably been revised five times in the last 10 years,” she says. Police will man intersections, synchronize traffic lights and open up “the primary 19 major routes” out of the city.

On June 13, 2008, when Lanier says she had a plan, the combination of a power substation failure that shut off traffic lights and a fire in a Metro station created a massive downtown gridlock that froze D.C. police and emergency crews in the streets. Three years later, when Lanier says the evacuation plan was going through one of its routine revisions, a 5.8 magnitude earthquake rattled the region, casting more doubt on D.C.’s preparations. “Gridlock and confusion” gripped the city, The Huffington Post reported, mostly because the public got mixed messages from federal and local authorities. Longtime D.C.



ISIS OPERATIVES IN BELGIUM WERE CASING A NUCLEAR PLANT.

city Councilman Phil Mendelson complained that emergency officials still hadn’t gotten the memo from 9/11. Their inability to handle even a snowstorm, he said, was “a blueprint for anybody who wants to commit terrorism in this city.” Eight years later, “there’s a lot more work that needs to be done, and it’s way overdue,” says the emergency planner. “There’s still no comprehensive plan to move people out of the city en masse.”

Another “lesson learned” there or, as is usually the case, only partially learned? HSEMA’s Geldart says his agency is tight with counterparts in Northern Virginia and Maryland. Yet some D.C. officials seem unsure who’s in charge of what during a major emergency. Mayor Bowser is nominally in charge, and she has a deputy mayor for public safety and justice, Kevin Donahue. “The mayor is in charge,” his spokesperson says. “Chris Geldart would be coordinating.” In reality, as Geldart and Lanier both

know, whatever agency responds to the scene of a disaster first—depending on the incident, the D.C. police or the city’s Fire and Emergency Medical Services Department—is in charge until local and federal authorities figure out who should take the lead. In the case of a clear act of terrorism, that would be the FBI.

If a dirty bomb were detonated without warning near the White House, there would be “a lot of panic, a lot of chaos,” one of Geldart’s predecessors, Darrell Darnell, told me in a 2008 interview. But “the conventional explosive itself would be more harmful to individuals than the radioactive material,” says the NTL. “Making prompt, accurate information available to the public may prevent the panic sought by terrorists.” But as has been demonstrated again and again during D.C.’s confusion over lesser emergencies, downtown intersections, the major avenues to Maryland and the bridges to Virginia would almost certainly be gridlocked as panicked commuters raced for home. Police, not to mention ambulance crews, would be stuck in the streets, unable to get to the radioactive disaster area, much less ferry the sick and wounded to area hospitals. Depending on the size of the bomb and type of radiological material wrapped to it, parts of the federal district could be uninhabitable for years.

D.C.’s first responders and hospitals are better equipped to handle a radiological explosion than they were in 2004, when a startling BBC-HBO docudrama, *Dirty War*, showed London police and fire crews rushing to the site of a big explosion and soon collapsing from radiation poisoning. D.C.’s emergency units are now equipped with hazmat suits and decontamination equipment. D.C.-area hospitals, according to Dr. Bruno Petinaux, co-director of George Washington University’s Emergency Management Program, conduct regular drills to stay sharp, including one in May mimicking a mass casualty incident. “We have a designated space to decontaminate patients” by hosing them down, he tells *Newsweek*. “Other hospitals are doing same.”

Doctors and nurses are also better prepared to handle chemical and biological attacks from their experience with anthrax, swine flu and Ebola, Petinaux says. “I think the medical community as a whole is so much more attuned to picking up these epidemiological” threats. “The D.C. Department of Health,” he adds, “estab-

lished a watch officer position who's available 24/7 and allows us, at 3 a.m. on a Saturday morning, to notify them of an unusual case."



'YOUR FRONT-DOOR GUY IS BLEEDING OUT'

A **LITTLE** perspective goes a long way in planning, says Sheehan, the NYPD's deputy commissioner for counterterrorism from 2003 to 2008. Pulling off a chemical, biological or nuclear attack is "hard to do," he notes. "Any plots outside the family tend to get rolled up. Plus, fortunately, most of these terrorists are stupid and incompetent—or very limited in scope." He snarks about "terrorism hypes" who have spent the years since 9/11 predicting another big attack in the U.S., something on the scale of the four-day rampage in Mumbai, India, that left 164 dead and over 300 wounded in 2008. But neither Al-Qaeda, nor its mid-2000s offshoot Al-Qaeda in Iraq, nor ISIS, he notes, "has been able to organize a complex, multipronged attack inside the U.S. since 9/11." They've been relegated to inspiring "lone wolf" ISIS agents and aspirants to carry out flashy attacks with bombs,

grenades and automatic weapons—a far cry from the complex and sophisticated multiple-airliner hijacking operations of 9/11. "None of this is easy, which is why they haven't been able to replicate [Mumbai]," he says. "Guys willing and able to pull off something like that are rare."

Still, New York and other big-city police departments studied Mumbai closely, using table-top exercises and field drills to game out how they might better handle similar scenarios. Paris was also a "game changer" for Lanier's police department, because that city's tapestry of "soft target areas and...a lot of dignitaries" is so similar to D.C.'s. It "caused us to change some of our operations," she says, "some of the tactics of our SWAT team and our first responders." The lessons were applied at the Metropolitan Police's new \$6 million training facility, which features lifelike streetscapes and buildings for practice.

"You look at every attack, no matter how small or far away, and as quickly as you can," says Lanier, who has a prominent role in the regional Joint Terrorism Task Force (JTTF, one of 104 around the country), giving her real-time access to the best intelligence the feds have. "We're trying to get those dynamics as they are unfolding, because we don't know if there's not multiple attacks planned for other places. We want to know about the explosives, who are the people involved and their connec-

LOCKED AND COCKED: F-16s at nearby Andrews Air Force Base are deployable at an instant's notice to intercept intruders into D.C.'s no-fly zone, which extends 15 miles from downtown.

+

FROM LEFT: JACQUELYN MARTIN/AP; MIXPIX/ALAMY



tions, so we can start making immediate protective actions.”

The consensus has been that you can't prepare much for "lone wolves" like Omar Mateen, a misfit who claimed loyalty to a variety of militant Islamic groups before unleashing terror with his automatic rifle at the Pulse nightclub in Orlando. Sheehan and other experts say such attackers are "very difficult to stop once they are ready to launch."

Lanier and her federal partners were thinking about nightclub attacks months ago. In April, they convened a meeting of nightclub owners and restaurateurs in a banquet room around the corner from the White House. "The message was both dire and obvious, once unthinkable and now unavoidable," *The Washington Post* reported. "You know those terrorists who want to attack Washington? Forget the Capitol. Next time, they might come for your happy hour."



"THERE'S STILL NO COMPREHENSIVE PLAN TO MOVE PEOPLE OUT OF THE CITY EN MASSE."

Be ready, the attendees were told by a bevy of police, intelligence and homeland security officials. "As in, who will be in charge if your front-door guy is bleeding out on the sidewalk," according to the *Post*.

"They can pick their target," Sheehan says of the lone wolves, "and very little can be done about it." But aggressive intelligence operations can break up most plots, he argued in a 2008 book, *Crush the Cell: How to Defeat Terrorism Without Terrorizing Ourselves*. "Spies are the key!" he says. The FBI, responsible for counterterrorism nationwide, should work more closely with "local police forces that can follow up in the neighborhoods of [suspects] to head off a potential attack," he argues, "before they can be launched."

And the feds should stop spending "obscene" amounts of money "on activities that have a very marginal impact on our safety." The annual intelligence budget has doubled since the end of the Cold War, Sheehan told an interviewer in 2008, from \$25 billion, "when we defeated a true strategic threat that had hundreds of nuclear weapons pointed at our cities and control of all of Eastern Europe," to \$50 billion, much of that increase spurred by a preoccupation with a few hundred dedicated terrorists.

Lanier is spending on intelligence too, she says. "I have a dedicated field intelligence group. They're out in the field every day." She also gets feeds from the FBI and CIA through the JTTF. "But intelligence comes in a lot of forms," she says. "It doesn't just come from an intelligence officer." It can come from cops on the beat or inside the schools, uniformed officers who engage with people. Other experts see only limited value in that, but they say Lanier is constrained from developing more muscular undercover counterterrorism intelligence operations under the nose of FBI headquarters. "The FBI would go ballistic," says one counterterrorism veteran.

Lanier is overstating the number of patrol officers who are actually out on the street at any one time, a recently retired Metropolitan police captain tells *Newsweek*. "It would scare you if you knew how few police were on the street at any given time," says Robert Atcheson, a 20-year veteran of the force and a former unit commander in the special operations division. "At midnight, there are probably no more than 250 to 300 police officers on the street" out of a total force of 3,600 (not 3,738, the official total, he explains; that's an unfilled, authorized ceiling).

Do the math, he says: "Forty percent of the police force is not in uniform or assigned to patrol, which is the only people who respond to 911 calls or calls for service. The SWAT guys wear a uniform, but they only do SWAT; they don't respond to calls. The crime scene techs wear uniforms, but they don't patrol or respond to 911 calls." The same goes for K-9 officers, detectives and uniforms assigned to homeland security or federal task forces. Subtract another 5 to 10 percent for injuries, sick leave or vacation, plus the 200 unfilled slots, and "your 3,800 starts to look really thin." In fact, it's down to about 1,650. Only 28 percent of that number, he says, works the midnight shift, presumably a good time to throw grenades into a nightclub or drive a truck bomb onto the Mall. That works out to about 450 cops on the street.

Asked about this estimate (without being told the source), Lanier laughs, calls such numbers "insane" and cracks, "You must be talking to a disgruntled union member." (He's not, but she did discipline him and a fellow officer in 2011 for giving Charlie Sheen a high-speed ride from Dulles Airport to a downtown concert date.) "We have about 900 [on the street], but it can be as many on a single shift as 1,200 or 1,300," she counters, "depending on the day of the week and what's going on."

But Atcheson stands by his numbers: "You can't speak truth to power with her," he says. In August 2015, the police union conducted a no-confidence vote on the chief. It passed with 97 percent.

But Lanier has big fans in the higher precincts of the FBI and CIA, where she was a "frequent visitor" after 9/11, Augustyn says.

"Chief Lanier has no greater fan than me," says Michael Rolince, a former high-ranking FBI counterterrorism official. "She probably has one of the





+ TOURIST TRAP: Despite the intense security in the area, a man recently parked his pickup next to the Reflecting Pool and told police he was carrying a bucket of anthrax.

hardest, if not the hardest, chief of police jobs in the country,” he tells *Newsweek*, “just because of what the city is, what it represents, who’s here and who travels here, and how the world views Washington, D.C. It is markedly difficult and markedly different than most other major American cities,” he says. Pointing to Lanier’s years running the Metropolitan police’s special operations unit, he adds, “She gets it; she always has.”

No matter her talent, however, she’ll never be able to protect D.C. to the degree that NYPD Commissioner William Bratton can shield New York, he and others say. “There are just too many moving parts” in D.C., as Augustyn puts it, too many federal and local government agencies and jurisdictions with their own homeland security agendas.

Augustyn, who joined the Jefferson Waterman

international security company after retiring from the CIA, says he was astonished by the radio failures during the fire in the Metro tunnel last year. He thought D.C. officials fixed that problem long ago, taking their lesson from the 9/11 radio failures at the World Trade Center. “I thought, for all the training...you have to wonder where the money’s been spent.”

Lanier had no role in that disaster, but she suggests her agency wouldn’t fall down the way the fire department and Metro officials did. “Maybe I’m a little biased, but when you talk about [police in] the top-tier cities—New York, L.A., Washington—I think we are the most advanced in a lot of ways, but the most advanced in terms of preparation and response as any law enforcement agency in the country.” She stops and then adds, “We have to be.”

On that, at least, everybody can agree. Yet despite the bulked-up Metropolitan police presence on pride weekend, a vandal managed to spray-paint anti-gay graffiti on a sidewalk in Dupont Circle, the 24/7 action center for the city’s LGBT community. Thousands of revelers had gathered in the neighborhood that night.

It could have been far, far worse. ■



CARLOS BARRIA/REUTERS

+
FIRST TENT ON THE LEFT: On the outskirts of Ulaanbaatar, many Mongolians live in traditional tents known as gers, which do not have proper addresses.



NEW WORLD



BRAIN

INNOVATION

DROUGHT

IPO

ENVIRONMENT

HEALTH

GOOD SCIENCE

MAIL MODEL

Delivering letters in Mongolia is hard. Dividing the world into 57 trillion geotagged locations makes it possible


GANHUYAG CHULUUN HUTAGT, the former vice minister of finance of Mongolia, doesn't have a mailing address for his home in the capital, Ulaanbaatar. He gets his personal mail where he works—the Ard Holdings building, which doesn't have an address either, but is large and prominent enough that postal employees know where it is. That's common in Mongolia, where only a tiny percentage of people have addresses, says Hutagt, now CEO of Ard Holdings, a financial holding company that has a stake in the Mongol Post, the largely state-owned mail service.

As Ulaanbaatar grows, many streets don't have names and buildings lack numbers. On the outskirts, people stay in tents, and in the rest of the country, many live a nomadic lifestyle. "Obviously, herders don't have addresses," says Hutagt.

But that should soon change, thanks to What3words, a British company that has figured out a way for any location on Earth to be pinpointed with just three words. The company divided up

the world into 57 trillion squares, 3 meters by 3 meters, and it has preassigned each a unique three-word address. The company's entranceway in London, for example, is "index.home.raft." In New York, the southwest corner of Central Park can be described as "cute.seated.joke."

The company's co-founder and CEO, Chris Sheldrick, says it's as accurate as giving someone 16 digits' worth of latitude and longitude. But words are easier to remember—and tell someone—than numbers. The whole world—even the oceans—is covered by 40,000 English words.

Mongolia is now integrating the system into its postal network. The three-word addresses will be available in the Mongolian language in July, and Sheldrick says the hope is to "get the first packages delivered in August." Hutagt is optimistic about the potential to improve mail delivery and even drive up e-commerce business—after all, you can't have Amazon Prime without a place to deliver your packages. 

BY
ROB VERGER
 @robverger

DISRUPTIVE

LET MY PEOPLE IPO!

Silicon Valley unicorns are cheating the rest of us by staying private

UBER CEO Travis Kalanick is famous for saying things that make him sound like tech's Dr. Evil, but now he's spouting his most damaging rhetoric yet: He vows that Uber won't go public for another decade. He adds that he'll finally do an initial public offering (IPO) "one day before my employees and significant others come to my office with pitchforks and torches."

Well, maybe it's time for that witch hunt. Data show that if Kalanick keeps Uber private for the next 10 years, his company will likely flatline, and concern regarding his truculence is now about more than just Uber. It's about all of us, and it's about the world's growing and volatile income gap. Kalanick is looking straight at America's middle class—the kind of people who might want to buy his stock as a way to build some wealth—and telling us to fuck off.

Worse yet, too much of technology's startup ecosystem agrees. The most dynamic industry on the planet has been actively deciding to keep as much for itself as possible and shut out the rest of the populace by avoiding public stock offerings.

As I write this, a reasonably successful tech company—Twilio, obscure enough that you might think it's the name of a new licorice candy—is about to go public. The markets are celebrating this event the way parents exude over their baby's first word. Before Twilio, the number of so-called tech unicorns going public in 2016 totaled zero. In all of 2015, only five went public. Go back to 2006, and there were 84 tech IPOs for the year.

(By the way, billion-dollar private companies

aren't unicorns these days. They're more like rabbits, propagating everywhere. If that keeps up, they'll turn into a plague.)

Staying private has deep implications. While researching our book, *Play Bigger*, my colleagues Al Ramadan, Dave Peterson and Christopher Lochhead analyzed data about thousands of venture-backed tech companies founded since 2000. They found something that at first seemed weird: The data show that the best time for a company to go public is when it is between six and 10 years old. Cisco, Google, VMware and Facebook are among the many enduring companies that went public in that sweet spot.

The company's age at IPO mattered more to post-IPO value creation than the amount invested while a company was private. There is zero correlation between the money raised by a company before it goes public and its post-IPO value creation. Keep that in mind next time you read about a billion-dollar private financing round. Stock in companies that went public before six years often cratered later. Groupon went public at three years old, and that didn't go well. Stock in companies that went public after 10 years almost always stayed pretty flat, pattering along on fumes.

We figured out why the sweet spot is a real thing when we looked at studies about how new markets evolve. From its inception, a new category of product or service needs years to work itself out and get to mainstream, usually with a bunch of newcomers fighting to be the category king. After five or six years, one company nails it, competitors

BY
KEVIN MANEY
@kmaney



fall away, and the category takes flight. The biggest spike in almost every new category's growth comes within that six- to 10-year window.

A decade after the new category king was born, the explosive growth is fading. The product or service by that point has penetrated most of its target market. Intense excitement just turns into a good solid enduring business—the kind that rarely generates hockey-stick stock gains. We saw this pattern over and over. We presented the finding to investment bankers and venture capitalists, and they said it matches their gut instincts.

The data, then, provide a new lens on why someone like Kalanick seems to be screwing both his company and the public. If a company goes public in the sweet spot, it takes a broad swath of investors on the rocket ride up. Almost anyone can participate in that explosive value creation. When a company stays private for more than 10 years, the only people who get that explosive value creation are the relatively small cadre of private investors, the company's founders and the early employees. This is how the rich stay richer.

Uber is now seven years old. Staying private until year 15 or 17 would be uncharted territory for a company in its position. If past is prologue, going public in year 15 or 17 would be an insult to future stockholders. The great value creation will likely have ended. Kalanick and his inner circle will have feasted and thrown everyone else the scraps.

Some of the great companies, after their initial category-building surge, expand into an entirely new category and restart the cycle. Think of Amazon creating Amazon Web Services for the cloud in 2006, 12 years after the company was founded. Maybe Uber will be like that. Maybe it won't. Let's just say that what Amazon did is rare.

And why might a late IPO screw the company? There seems to be a bunch of reasons. Talented people avoid joining the company unless they can get stock and participate in the big run-up. The absence of the oversight imposed on public companies can make a private firm sloppy about its finances. The company doesn't have stock for acquisitions. Staying private too long is like living with your mom too long—sooner or later, you lose the wherewithal to succeed in the real world.

Facebook CEO Mark Zuckerberg for years said companies should stay private as long as possible. After going public, he changed his mind. "I actually think that it's made our company a lot stronger," he said at a TechCrunch conference. "We run our company a lot better now."

To be fair, the bias against going public isn't crazy. An IPO is a pain in the ass. It costs millions. It forces CEOs to focus on quarterly earnings, sometimes to the detriment of the long run. Sarbanes-Oxley regulations impose a burden. And there's so much private money wanting to get into tech that any company with a pulse can raise round after round. So why bother with an IPO?

THE MOST DYNAMIC INDUSTRY ON THE PLANET HAS BEEN ACTIVELY DECIDING TO KEEP AS MUCH FOR ITSELF AS POSSIBLE.

One survey showed that just 17 percent of Silicon Valley companies even say an IPO is a goal, ever.

But the data show why they should bother. For the company's sake, there's a great time to go public, just like there's a right time to take the pie out of the oven. But there's a bigger public good at risk too. If Silicon Valley doesn't rethink its stance about IPOs, it might not be—as Kalanick joked—employees and significant others showing up with pitchforks and torches.

It might be all the rest of us. ■

PRAYING FOR NO SIGNAL

Science insists that electromagnetic hypersensitivity doesn't exist—cold comfort for those debilitated by its symptoms

NEARLY A YEAR to the day 15-year-old Jenny Fry took her own life, her mother, Debra, brought tulips and a sunflower to lay at her grave.

"In the early days, I came every day," Fry, a dental nurse, says over the phone from her home in Oxfordshire, England, before she left with her husband, Charles, for the cemetery. "Then it went to every other day. Generally, now it's every three days; five days at the most."

She sighs. She sounds drained, unsurprising for a mother still coming to terms with the loss of her middle child. But her exhaustion is not just because of grief. In the year since her family lost their daughter, Fry has devoted her life to battling what she says was the direct cause of Jenny's death: the onward march of technology. In doing so, she's thrust herself into a deeply polarized scientific debate over how best to define an illness on the frontier of science today.

For over two and a half years, Jenny had been feeling ill, complaining of headaches and exhaustion. She couldn't concentrate at school and couldn't sleep at night. Her parents tried a host of solutions to alleviate the problem: They bought a new mattress and thicker curtains to help her sleep; they took her to an orthodontist to see if the headaches were caused by an overbite. "I did all the things you would do in my professional capacity," Debra says, "going through things like a detective to see what caused this or that, and ruling out options."

In May 2015, Jenny came down the stairs pinching her nose. She found her mother and told her that her nose had started bleeding while she was doing her homework. "She said, 'I can't stop it,'" recalls Debra. "I haven't picked my nose; I haven't banged it,' she told me. 'I haven't had this before, Mum.'" Debra stanching her daughter's bleeding, then took to Google in search of an answer.

She became convinced Jenny suffered from a little-known and highly disputed medical condition called electromagnetic hypersensitivity (EHS). The disease is purported to be a weakness to the electromagnetic waves produced by Wi-Fi routers and cellphone towers. People who believe this say modern society is bombarding us with damaging waves, causing myriad symptoms, from headaches and nausea to nosebleeds and sleep problems.

Debra tore out the Wi-Fi in her family home, replacing it with wired Ethernet connections, and pleaded with Jenny's school to do the same. But it didn't: The headmaster did his own research and came to a different conclusion, pointing to studies that showed there was no link between Wi-Fi signals and illness. Jenny continued to suffer, returning home from school with splitting headaches that would dissipate at home. On a June day in 2015, she killed herself. At an inquest into her daughter's death, Debra told the coroner, "I believe that Wi-Fi killed my daughter."

For the better part of a decade, two diametri-

BY
**CHRIS
STOKEL-WALKER**
[@stokel](#)

cally opposed sides—one that claims there is no scientific link between exposure to Wi-Fi signals and illness and another that says people suffer daily because of it—have battled on websites, in newspapers and in scientific journals. James Rubin of the Institute of Psychiatry at King's College London, doesn't dispute that EHS sufferers are ill. "They have physical symptoms; the quality of life they have can be appalling sometimes; they're in desperate need of help," he says. But his surveys of the science led him to believe exposure to electromagnetic rays is not to blame.

Others, including some professionals, disagree. "Ten years ago, I thought this was hokum," says Dr. David Carpenter, director of the Institute for Health and

the Environment at the University of Albany in New York. "People have symptoms they want to blame on something, so they come to electromagnetic fields as the source." But that changed with the sheer number of people who came calling at his door, claiming their lives had been irreparably changed by electromagnetic fields. He's now switched sides: He has a sympathetic

FEELS REAL: A woman visiting Green Bank, West Virginia, lies down after complaining of the effects of electromagnetic hypersensitivity. Someone in a nearby cabin had set up a wireless router. +

JIM MCAULEY

THE PROVOCATION STUDIES HAVE IN GENERAL NOT BEEN POSITIVE, BUT THOSE STUDIES "ARE DONE IN A HALF-ASSED FASHION."





ear and is banging the drum for those affected. EHS is real, Carpenter says, and it's a problem. "The question in my mind is: How does one—in a rigorous scientific fashion—go about getting information that would be convincing to a skeptical scientific community?"

There have been many attempts. A battery of tests, carried out by researchers in fields ranging from psychology to oncology, have been conducted in the past 30 years to prove EHS is caused by direct exposure to electromagnetic radiation. Typically, the tests involve exposing subjects to electromagnetic signals for a short period and measuring their reaction; then doing the same with a placebo. The results are mixed, but mostly the tests find that subjects can't distinguish between real and fake signals.

(Proponents of EHS take issue with these efforts: Carpenter says such studies "are done in half-assed fashion." Testing 15-minute exposures to electromagnetic fields, he argues, is a poor way to disprove what are in his belief the debilitating effects of prolonged daily exposure to Wi-Fi.)

In 2004, Dr. Lena Hillert of the Institute of Environmental Medicine at Karolinska Institutet in Sweden presented a seminal World Health Organization report arguing there was no proof EHS existed in the form its sufferers claim. Twelve years on, she says, there's still no scientific evidence for it. "You can never prove that something does not exist," says Hillert, "but if you fail time after time to prove that something does exist, you do kind of say, 'Enough is enough. If we don't have any new ideas or approaches, we should accept that we can't find support for this hypothesis.'" Hillert says that the best current research supports the hypothesis that EHS is basically due to the "nocebo effect"—where the expectation that something will make you ill becomes a self-fulfilling prophecy. Most of the scientific community agrees.

That's why there are no good data on how many people could be affected by EHS. Though provocation studies continue, EHS censuses stopped in the mid-2000s, before Wi-Fi became ubiquitous. One estimate presented at a European Economic and Social Committee public hearing in 2014 (not peer-reviewed) suggests

that around 5 percent of all Europeans are susceptible. More rigorous (but significantly older) surveys cite similar figures: 3.2 percent of Californians, 9 percent of Germans and 5 percent of the Swiss population complained of symptoms believed to be caused by EHS.

Those numbers might be why the illness is recognized by government officials in some countries. Last year, a judge in Toulouse, France, awarded a woman a disability grant of about \$900 a month after she claimed she was allergic to Wi-Fi and therefore could not work. In 2013, an Australian scientist won a workers' compensation appeal for EHS. The Swedish government classifies EHS as a functional impairment, granting compensation for its effects while not making any official judgment on the cause of EHS symptoms. In Austria, there are formal guidelines on how to diagnose and treat illnesses caused by electromagnetic sensitivity.

Nevertheless, for those who think controls on Wi-Fi routers are the only answer to the spread of EHS, the web of wireless internet being spun across the globe is worrying. It's impossible to walk through the commercial district of any developed city in the world without your phone pinging up offers to connect to Wi-Fi routers. Wi-Fi is so widespread—it's often free, in stores,

**“YOU CAN NEVER PROVE
THAT SOMETHING
DOES NOT EXIST.”**

restaurants, bars, buses and cafés—that it has nearly reached the status of a public utility. For most of the world's population, that's a boon: instant connectivity, often free at the point of access, to nearly all of civilization's information (and pornography) on demand.

But people who believe Wi-Fi is a public health threat find this an intolerable, a creeping, permanently present menace. As the result of her tragedy, Debra Fry has made connections with a number of activist groups, including Electrosensitivity U.K., trying to slow the spread of Wi-Fi; some focus specifically on countering the rollout of Wi-Fi in schools. "This could be the biggest mistake we've ever, ever made," she says.

Some of those stricken with EHS end up fleeing modern society. The day before I spoke to Carpenter, he had been visited at his office by an attorney who thought she suffered from a form



OUT OF LEFT FIELD: Green Bank residents watch a little league game within sight of the Robert C. Byrd Green Bank Telescope, the world's largest steerable radio telescope.

of EHS. Dafna Tachover, who runs an advocacy group for those suffering from the aftermath of EHS, used to work and live in New York City but moved to the Catskill Mountains, 150 miles outside the city. It's the only way to escape, she says, having tried different ways to shield herself from the radiation for several years, including sleeping in her car. "I understood if I wanted to get better," she says, "my only strategy was to avoid it."

She's far from alone—as more EHS sufferers decide to leave the Wi-Fi world, communities are cropping up out in the country. There is an independently run "EHS refuge zone" in Drôme, France, nestled deep inside a nature reserve, where electromagnetic radiation emitters are banned, keeping background levels down to 1 or 2 microwatts per square meter. Green Bank, West Virginia, has become an adopted home for some EHS sufferers because of its location in the National Radio Quiet Zone, where all kinds of radio signals are banned to prevent interference with the nearby National Radio Astronomy Observatory. An EHS sufferer in South Africa runs an EHS-friendly farm, with accommodations in the Western Cape. A smattering of similar communities and communes dot the globe.

Carpenter says that EHS today is in the same position as illnesses like chronic fatigue syndrome, fibromyalgia and Gulf War sickness were before being accepted by science. "For none of those diseases do you have a blood test that will allow you to diagnose definitively what is wrong. In the meanwhile, the people who have this syndrome are really abused by society," he says. "Are we going to accommodate people that have this rather unusual syndrome, or is it just up to them to find a remote place they can survive without being ill all the time?"

Rubin, who does not think that EHS is real, agrees. "We've spent an awful lot of time and money testing whether electromagnetic fields cause symptoms. And what we haven't done is work out how we can treat these patients," he says.

EHS sufferers often say that if only everyone could *see* Wi-Fi, pulsing and throbbing across boulevards and down highways, zipping out of storefronts and around corners, they'd understand. Fry carries a meter that measures the strength of such signals. It's a small and inconspicuous, and people often mistake it for a cellphone. "In the average busy McDonald's or Caffé Nero," she says, "if everybody is on their laptops and mobile devices, my meter goes off the scale." **N**



DOWN TO OPTION PEE

To survive drought along the Mekong River, locals are trying everything from satellites to recycled urine

KEO YEUN NODS at the two metal rods, then at a small hole nearby, full of brown water. “It’s not magic,” he says, shrugging. “I’m experimenting with water, to survive.”

Keo lives on a small farm near Cambodia’s ancient Angkor Wat temple complex, and what he is doing is equally venerable: dowsing, or divining for water, to help his family get through Southeast Asia’s most brutal drought in decades.

He paces across his dry patch of land with the rods held loosely at one end, close to his chest, waiting for the opposite ends to start moving apart, indicating (he hopes) the presence of moisture. When this happens, he drills into the ground at the indicated spot. If he finds water—and Keo says he often does—he’ll use it for his crops. Two weeks ago, he says, a Korean nongovernmental organization trained him in the method. There’s

BY
JENNIFER RIGBY
[@jriggers](https://twitter.com/jriggers)



+ **DAMMED:** A surge in the number of dams along the Mekong, like this one in Thailand, is expected to alter the river's flow in the years ahead, potentially making some areas less habitable.

no real science behind water dowsing, however, and most experts are not convinced that it's the answer to Asia's water crisis. "My auntie used to swear by it, but I'm not sure it's better than just drilling five holes," says Jeremy Bird, director-general of the International Water Management Institute (IWMI). "You'll find water in lots of places, but the main thing is how long it will last, and no diviner can tell you that."

The situation is dire: The 2015-2016 drought has hit nearly 100,000 households in rural Cambodia, along with many millions more people in nearby countries, including Vietnam. A particularly strong El Niño pattern that wreaked havoc across the globe caused this past year's extreme weather, but climate scientists say the Mekong region in particular (including parts of China, Cambodia, Vietnam, Thailand, Myanmar and Laos) faces an uncertain future: more intense dry seasons, wetter monsoons, floods, storms and rising sea levels. It is "among the most seriously imperiled regions on the planet," says Virginia Burkett, the U.S. Geological Survey's chief scientist for climate and land use change.

Moreover, the mighty Mekong and its environs are facing challenges beyond climate change. The river has also seen an explosion of dam building, first upstream in China and now along its length, as countries scramble to harness the river's power for energy. The potential impact of the dams is not understood yet. "It is hard to know how and to what extent the Mekong Delta may remain habitable or productive in the future, but [with] the current pace of climate change and hydropower development, it will be altered beyond recognition," says Maureen Harris, Southeast Asia director of the river protection group International Rivers. These changes will affect the flow of the river and the fish within it—shallower rivers make it harder for fish to survive, and there are fears dams will block migration routes altogether, threatening the survival of a number of species. This could make life much harder for the 60 million people who live in the area and rely on the Mekong for water, food and their livelihoods.

What exactly should be done also remains unclear, in large part because experts don't yet have even the most basic information about the situation, says Yasmin Siddiqi, Asian Development Bank's principal water resources specialist in the region. "We have just done some work, and the preliminary findings are that three-quarters of this region will face water shortages unless we move into better water management," she says. "One of the first steps to take is to start measuring how much water is actually being used and by whom. This is really a black hole to us."



The bank has funded a project using satellites to monitor water usage in pilot countries, including Vietnam and Cambodia. At a macro level, the project will measure water use across the entire country. But, says Siddiqi, the most exciting implications are more localized. "Historically, we have not been able to measure how much rice we can grow with a cubic meter of water," she

SIXTY MILLION PEOPLE RELY ON THE MEKONG FOR WATER, FOOD AND THEIR LIVELIHOODS.

says. "Now, using satellite technology, we can start to look at individual farmers' plots and see across an irrigation system which farmer is growing the most out of one unit of water. Then we can find out what that farmer is doing differently and use him as a kind of change agent to help us work with other farmers." The potential impact is massive: about 80 percent of the water used in Asia goes to agriculture, often inefficiently.

Satellite monitoring is modern science, but many of the other techniques now being promoted in the region to improve water use involve new twists on methods as ancient as dowsing. For example, digging wells to capture excess water during floods can both reduce the impact of the flood and save water for dry season. And there are some simple ways to use water more efficiently year-round by considering all aspects of the water cycle, including human waste—specifically, urine. "Wastewater is rich in nutrients and can produce fish feed," says Pay Drechsel, resource recovery lead at the IWMI. Drechsel is working on a number of climate mitigation projects that center around recycling human urine. The most intriguing, he says, is to implement a system utilizing duckweed, one of the fastest-growing plants in the world and a lover of urine. It floats on the



surface and transforms nutrients in urine, like nitrogen and potassium, to protein. This cleans the water, and the plant itself grows into valuable feed for fish and other animals.

Fish could be one key to helping the region adapt. The U.S. Agency for International Development, working with nonprofit research group WorldFish, has spent \$2 million in Cambodia helping communities diversify from growing rice to catching fish in their rice fields when they are flooded in rainy season. This is nothing new, but modern techniques used to improve “community fish refuge ponds”—small bodies of water protected by the community, designed to provide sanctuaries for fish in rice fields even during dry season—bumped up fish biomass by 30 percent over two years. That’s enough of an improvement that farmers can now survive, if severe flooding damages their crop, by catching fish.

In Vietnam’s Mekong Delta region, rice remains king, and it is here where innovations could deliver what the IWMI’s Bird says is a game changer. Until recently, the area boasted perfect conditions, combining long, warm, dry seasons with wet seasons that keep the rice moist without drowning it. These Goldilocks environs have helped Vietnam become one of the top three rice exporters in the world. But the cash crop is now threatened by drought, flood and a phenomenon known as saline intrusion, when seawater penetrates the fertile delta as a result of rising sea levels combined with drought-lowered rivers.

In response, researchers have developed strains of rice resistant to these threats and are now working with farmers to plant them. “This has been a paradigm shift,” says Reiner Wassmann, head of the climate change division at the International Rice Research Institute. “We have now developed rice varieties that can cope with complete submergence, for something in the range of two to three weeks.” On the flip side, the team has also developed rice varieties that are resistant to drought and salinity. “We are not introducing a new variety that farmers are not used to, where people don’t like the taste,” says

Wassmann. “We are just taking varieties that are popular in any given place and then, through precision breeding, adding a very specific trait.”

Of course, this being 2016, there’s an app for that too: The Rice Crop Manager cellphone application provides recommendations to farmers on things like fertilizer, and researchers are working on including warnings about salinity levels.

And there’s a final, perhaps unexpected 21st-century development that could have a huge effect on the Mekong region’s future: equal rights for women. “We are chasing technology [and] innovation, but women’s inclusion is critical,” says Siddiqi. Forty percent of the farmers in Asia are women, but governments and local agencies often do not recognize their position, and as a result these farming women struggle to get access to training and even fertilizer. If women were properly involved in these programs, annual food yields in the region could jump by up to 30 percent, the U.N.’s Food and Agriculture Organization estimates.

So if it really is all hands to the pump to cope with the Mekong’s uncertain future, it is essential that some of those hands belong to female

RESEARCHERS HAVE DEVELOPED STRAINS OF RICE THAT ARE RESISTANT TO DROUGHT, FLOOD AND SALT.

farmers, like Thong Throm, who lives near Angkor Wat in Cambodia. Supported by Plan International, an NGO traditionally focused on alleviating child poverty, Thong is trying out a host of new techniques to help her crops during dry season. These include cultivating vegetables in grow bags, similar to the ones used in gardens throughout North America and Europe. Plan International has distributed them in 200 villages to help farmers grow vegetables using less water.

“My husband is a resource, but I am the leader of our group,” she says decisively, showing me around her farm. Thong says that women like her have to be at the head of the charge toward new technologies because they are more closely connected to feeding their families than men. But she knows that she needs to be a pioneer. “I have to educate the other mothers and wives to grow like me,” Thong says, “because I’m worried that things are going to get worse and worse.” ■

4th ~ 7th August 2016, Cornbury Park, Oxfordshire

WILDERNESS

177 HOURS OF TALKS & DEBATES

NEWSWEEK PRESENTS:

IS OUTSIDER POLITICS HERE TO STAY?

LARRY SANDERS / A.C. GRAYLING

GEORGE GALLOWAY / CAT BOYD

IN DISCUSSION WITH ...

DIGITAL EDITOR SERENA KUTCHINSKY

THE RSA / THE V&A / THE SCHOOL OF LIFE

NEWSWEEK / VICE UK / THE ECONOMIST FILMS

FRONTLINE CLUB / PEN INTERNATIONAL

INDEX ON CENSORSHIP / SUNDAY PAPERS LIVE

SUNDAY ASSEMBLY / SALON LONDON

LIVE PODCASTS FROM LITTLE ATOMS / PHILOSOPHY BITES

LEVEL UP HUMAN / THE ODDITORIUM / FRIENDS OF THE EARTH

GUERRILLA ARCHAEOLOGY PRESENTS THE BIG DIG

STATE OF THE NATION WITH JOLYON RUBINSTEIN

OVER 300 SPEAKERS INCLUDING...

MARTIN REES, ASTRONOMER ROYAL / ANTONY BEEVOR

CHARLOTTE CHURCH WITH ZOE WILLIAMS / SCILLA ELLWORTHY

AC GRAYLING / JAMES RHODES / SIMON REEVE

SATISH KUMAR & RESURGENCE

ACROSS 7 DEDICATED VENUES...

THE FORUM / LITERARY TENT / THE ODDITORIUM / THE SCHOOL OF THOUGHT

WATERFRONT / SUNDAY ASSEMBLY / GUERRILLA ARCHAEOLOGY

"The most cerebral festival I've ever been to"

The New Scientist





+
WINGING IT:
The Pohoda festival in Slovakia will be one of the few places to see PJ Harvey perform her new album this summer.



DOWNTIME

SPORTS

FESTIVAL

FILM

GRAFFITI

STYLE

ANIMALS

FIELD DAYS

What's new on the festival circuit this summer in Europe and beyond

WITH THOUSANDS of festivals being held all over the world every summer, it can be difficult to know which ones are worth your time and money. We all know about the big names, but what about the newer, under-the-radar events that take place in little-explored valleys, on shorelines and in deserts. From an arts festival on the banks of Lake Malawi to an eco-marine whale festival near Cape Town, here's *Newsweek's* selection of lesser-known but worthwhile events this summer throughout Europe and beyond.

SLOVAKIA

JULY 7-9 PohodaFestival.sk/en

Pohoda festival in Slovakia is not as well-known as some of the bigger European festivals, like Sónar or Primavera, but its lineup is worth paying attention to. It'll be one of the few places fans will be able to see the British musician PJ Harvey play her new album, *The Hope Six Demolition Project*. Other exciting acts include Flying Lotus, James Blake, Anna Meredith and Kiran Leonard, as well as the Prodigy, who will headline. The

festival takes place at a military airfield close to the Czech border in the valley of the River Váh, with dramatic backdrop views of the Western Carpathian Mountains.

CROATIA

JULY 28-SEPTEMBER 6 OtokObonjan.com

If you like the idea of a festival but can't stand crowds, Obonjan (pronounced O-ban-yan), with its limited capacity of 600 guests, might be the one for you. It's an all-rounder festival that stretches over six weeks on a private island in Croatia. The musical lineup is already looking impressive, with Jessy Lanza, Kate Tempest, Four Tet, Floating Points and DJ Shadow booked to play the island's enormous stone amphitheater. An underwater sculpture park, lectures on ecology and astronomy, and indoor and outdoor film screenings should ensure the days are just as interesting as your evenings. Obonjan is likely to be as much a holiday retreat as a festival rave—and you'll probably return from it feeling relaxed rather than frazzled.

BY

LUCY JONES

[@lucyjones](https://twitter.com/lucyjones)

LUCIA OHRADKOVA

ENGLAND

AUGUST 6-7 CaughtByTheRiverThames.com

Caught by the River Thames is a new London festival that celebrates the arts and nature, with a focus on literature, music and the natural world. It's organized by the team behind the U.K.-based website Caught by the River, which started as an online meeting place to celebrate the non-digital, especially fishing, walking, thinking and simply taking the time to look around at the world. (Caught by the River also now operates as a publishing house and record label.) Acclaimed travel and nature writer Robert Macfarlane has described it as a "true confluence of currents." The inaugural lineup promises to "bridge the previously unspanned gap between mind-bending psychedelic rock 'n' roll shows and Springwatch" and it features eclectic performers such as naturalist and broadcaster Chris Packham; musicians Low, Beth Orton, Sun Ra Arkestra, Super Furry Animals and Gwennno; and nature writers Melissa Harrison and Amy Liptrot. Faber & Faber publishers will be presenting its own program in the Faber Poetry Chapel, and London Sound Survey will celebrate the city's audio history. It promises to be both a nature symposium and a celebration of English eccentricity on the banks of the dirty old river.

FINLAND

AUGUST 12-14 FlowFestival.com/en

Scandinavian music festivals often have the most appealing lineups, and Flow is no exception. It takes place in a historic power plant in Helsinki, close enough to the capital's shorelines and its 300 islands for festivalgoers to explore the area and sightsee until the music starts up each day. The festival site isn't too big, and the vibe is friendly and relaxed. Flow's key draw is the standard of high-caliber artists it attracts. Stormzy, Iggy Pop, Massive Attack, Jamie xx, Savages, FKA Twigs, Chruches, New Order, Anohni, Thundercat and M83 will all play here this summer. There is also an arts and design program.

GERMANY

AUGUST 31-SEPTEMBER 2 Pop-Kultur.berlin/en/

The inaugural Pop-Kultur festival in 2015 took place in Berlin's iconic nightclub Berghain, but this year's program will spread to places that "represent various melting pots of the creative scenes here in Berlin," according to the director, Katja Lucker, who is head of Musicboard-Ber-



lin, an organization that supports and funds music in Berlin. Highlights this year include a live premiere of the new album by cerebral techno-mongers Brandt Bauer Frick, who play electronic music almost entirely on analog instruments; experimental composer Fatima Al Qadiri; and drone merchant Liars. As well as plenty of established heroes, such as Thurston Moore, Matthew Herbert and Mogwai, there's a rich lineup of newer acts, including Ezra Furman, Cat's Eyes and Zebra Katz.

MOROCCO

SEPTEMBER 16-18 TheOasisFest.com

The first Oasis festival was held last year, and already it's a favorite of the notoriously hard-to-please dance music community. The house and techno music weekend takes place in a hotel in the foothills of the Moroccan Atlas Mountains. The venue, the Source Music Resort, is a short ride from the souks, snake charmers and street-food hawkers of the Jemaa el Fna in central Marrakech. Electronica wiz Maya Jane Coles, Syrian wedding singer turned international star Omar Souleyman and legendary Detroit producer Derrick May are highlights this year, and, as festivals must diversify these days to pull in increasingly demanding customers, yoga, swimming, painting and a pop-up souk are also on offer. Oasis has been warmly received by techno-loving locals and foreign visitors passing through. And, by September, it shouldn't be too swelteringly hot to dance in the desert.

+ **SIMMER HOURS:** From Sweden to Africa, summer festivals deliver massive audiences and long, varied rosters of hot performers.



JAPAN

SEPTEMBER 17-19 MindGames.jp

Think of outdoor festivals and you might experience flashbacks of Portaloos at Reading Festival, heaving crowds in Hyde Park or tents floating in mud on the rainy Isle of Wight. Not so with the Labyrinth. Japan's cult favorite is an outdoor electronic music festival nestled in the natural beauty of the Gunma mountains and surrounded by forest pines. It's a well-kept secret, and tickets are limited and hard to get hold of. Lauded by dance music heads, it evolved out of the Japanese psytrance scene into a celebration of carefully curated techno, with a focus on excellent DJs and quality sound systems. Although the lineup isn't announced yet, it's a testament to the taste of the three people who run the festival that music lovers will buy tickets blind, trusting it'll be worth the journey. "Take the best of available genres—from Italo, [electronic body music] and new beat to *kosmische*, house and electro—and weave them together into one long psychedelic trip": That is how co-founder Russell Moench describes the festival's *modus operandi*. Resident Labyrinth favorites include Italian producer Donato Dozzy and Belgian stalwart Peter Van Hoesen.

ITALY

SEPTEMBER 22-26 SaloneDelGusto.com

Europe is full of food festivals, some of them just celebrating one product, from garlic to strawberries, herring to hops. But the festival that foodies might be most interested in this summer is a special 30th-anniversary celebration of the Slow Food movement in Turin, the cultural hub in Northern Italy. Dedicated to food, gastronomy and the philosophy of using locally sourced produce with regional, traditional recipes, the Terra Madre Salone del Gusto will offer taste workshops, cooking schools and *enotecas* (wine bars) on the banks of the River Po and in historical piazzas and parks, and an enormous market with food from five continents. The big questions around food production and consumption will be tackled at conferences on meat-eating habits, protecting biodiversity and sustainability. Food for thought, but also the chance to eat as well (and as much) as possible over a long weekend.

MALAWI

SEPTEMBER 30-OCTOBER 2 lakeofstars.org

As far as spectacular festival locations go, it would be hard to beat the picturesque shores of Lake Malawi, the third largest lake in Africa, with its clear, turquoise waters, palm-fringed white sand beaches and mountainous backdrop.




The Lake of Stars event has grown significantly since it was started in 2004 by British tourist Will Jameson. Then, just 700 punters showed up. The program combines a selection of international musical acts. In previous years, Foals, DJ Yoda, John Wizards and Bombay Bicycle Club have all played at Lake of Stars, along with Malawian musicians—both well-known and upcoming. The festival also features film, theater, poetry and exhibitions. Popular hit-maker Patience Namadingo and rising rapper Piksy will be among the Malawian artists onstage in 2016. The festival aims to support the local commu-

THE FESTIVAL'S A SHORT RIDE FROM THE SOUKS, SNAKE CHARMERS AND STREET-FOOD HAWKERS OF MARRAKECH.

nity with outreach projects and was originally set up to generate revenue for the developing economy. Friendly, relaxed and a good value—tickets are around \$40—with views across to the twinkling lights of Madagascar and some of the most vibrant music in the world, it's raved about by those who've made the trip.

SOUTH AFRICA

SEPTEMBER 30-OCTOBER 2 saturdaytourisonline.com

Slightly different from the array of arts and culture events is the Hermanus Whale Festival near Cape Town. Yes, that's right: a whale festival. It's the only eco-marine arts festival in the country and was set up to celebrate the migration of Southern Right Whales at one of the best places in the world to spot the great cetaceans. While looking out for Moby-Dick on his return to the waters of Walker Bay is the star attraction, revelers can also expect top South African food, music performances, sports events, ocean-based educational stalls and a vintage car show. 



WAGS TO RICHES

She poops on your sidewalk and nibbles at your garbage, but Toast, the dog queen of Instagram, has a brand that will make you roll over with envy

IT'S A FRIDAY afternoon, and I'm sitting in a conference room in New York City, listening to Katie Sturino boast about her "daughter's" celebrity admirers. "Reese Witherspoon follows her," she says. "Drew Barrymore follows her. That girl from *Pretty Little Liars* follows her. She has a lot of random celebrity followers, which is really cool."

Her "daughter" is a dog named Toast, a 10-year-old ruby Cavalier with marble-round eyes and an unreasonably long tongue that flops out the side of her mouth. And for thousands of pet-inclined internet users, Toast is the celebrity. "Probably like three or four times a day, people stop and take pictures," says Sturino. "We were at an adoption event last week, and this woman came from Sweden and was like, 'I was so excited! I thought I wouldn't meet you.'" All for a dog whose primary skill appears to be sleeping.

Toast is a quintessential wags-to-riches tale, rescued from a puppy mill half a decade ago by Sturino and her husband, Josh Ostrovsky (better known as the Instagram comedian "Fat Jew"). "The first day we got her...she had all dead teeth, crazy hair." Then Sturino, a PR professional with an interest in fashion, began dressing up the dog in fancy outfits and taking photos. Now Toast commands a following of about 360,000 on Instagram and is repped by DBA (Digital Brand Architects), an agency that specializes in inter-

net celebrities. "Toast is their only dog client," Sturino says. "They were like, 'This is a joke.' I said, 'It's not a joke.'"

It's definitely not. All around you, pooping on your sidewalk and nibbling at your garbage, are internet-famous dogs—four-legged animals with more successful brands and more lucrative marketing deals than you'll ever know. Some, like Manny the Frenchie, have upward of a million Instagram followers. These dogs are moneymakers: A single sponsored Instagram post might earn an owner several thousand dollars. (Toast has worked with brands like Febreze and Swiffer.) Recently, Harvard Law graduate Loni Edwards launched the Dog Agency, a talent management firm intended for these big-deal canines.

"I get DMs, like, every day," Sturino says, "with people with four followers being like, 'Repost me!'" In these cases, she rarely responds. "If I went to your account, and maybe you had 10,000 followers, and I see that you have 200 posts, and you're actually working at it and doing it, OK, let's talk about it," she says. "Maybe you have a message. But, like, I'm not going to take your pet store dog and just help you out because you want a famous dog."

Sturino has had meet-ups with a dozen or so pooches, but status anxiety can get in the way. "I think there's like a hierarchy on Instagram,"

BY
ZACH SCHONFELD
@zzzzaaaaccchhh





BITE ME, LASSIE:
Toast has 360,000
followers on Insta-
gram and has her
own agent.

she says. “Maybe if you’re too famous, you’re not going to meet up because you’re weary of people using you for your followers.”

In January, I met some of the internet’s most elite dogs while attending Toast’s swanky wedding, where Sturino says she dressed up the dog in \$175,000 worth of diamonds and raised money for the National Mill Dog Rescue.

This time, I’m here to cover the release of Toast’s first book. *ToastHampton: How to Summer in Style* consists of 120 sleek pages of photographs showing Toast posing against tony Hamptons backdrops. In some images, the dog wears sunglasses or sweaters; in others, she appears au naturel, with her trademark lolling tongue. The photos—professionally shot and full of colorful ornaments—are similar to what you’ll find scrolling through Toast’s Instagram except bigger, fancier and, well, with a \$17 price

—
**“TOAST IS JUST
TELLING THE PEOPLE
ABOUT HOW TO LIVE
LIKE A LUXURIOUS,
FANCY DOG.”**

tag. “Toast is fancy,” Sturino says, “and she is just telling the people about how to live like a luxurious, fancy dog.”

The dog mom always wanted to have a book, so she reached out to HarperCollins and scored a deal. The target audience? “Toast fans,” she says, and “resort towns.”

Sturino has two other dogs, Underpants and



Muppet. They're Toast's "siblings," and they each have their own Instagram profile. When I ask Sturino about the income generated from her dog's branding deals ("it's...not enough to live on"), a publicist tells me that a portion of the money goes to dog-related charities. A few paragraphs about helping dogs from puppy mills appear in the back of the book.

Sturino's passion for helping dogs rescued from puppy mills is genuine. (She bristles at the mention of labradoodles, a breed commonly purchased in pet stores.) So is her passion for the vicarious celeb glow that comes with having an Insta-famous dog.

At first, her family and friends were dismissive. "People were like, 'This is a weird obsession, and you should watch out,'" she recalls. "Even the wedding! People were like, 'Uh, that's so weird.' But then [Toast] was in *People* magazine! *Real Housewives* filmed it. It was ridiculous! But these are the qualifiers that make people think you've done something right, versus 'You're a psycho.'"

Soon Sturino pulls out her phone to show me

a video of Toast #Swalking, a swimming motion that the dog makes in the air when carried. Other dogs have also started #Swalking, she says, but Toast did it first and does it best.

I can't help telling Sturino that the whole business is a lot like *Best in Show*, Christopher Guest's 2000 mockumentary about dog show devotees. Surprisingly, she agrees. "Don't think I'm not in on this joke," she says.

Joke? What joke? In on it—how?

"I understand it's ridiculous. I understand it's funny that my dog wrote a book. And, like, my dog is being picked up in a car service to go to *Good Morning America*."

"Katie is fully laughing with you!" one of the publicists adds.

But I'm not laughing. Neither is Toast. She is sleeping, sprawled across the conference table like a frat boy recovering from a dozen Natty Lights. Occasionally, her long and winding tongue emerges from its cocoon. It's all very on-brand. ■

"I UNDERSTAND IT'S RIDICULOUS. I UNDERSTAND THAT IT'S FUNNY MY DOG WROTE A BOOK."



+ THE RICH IS BACK: Toast's new book features lavishly produced photographs of her in settings evocative of summer in the pricey Hamptons.



CREEPTYINGS MUST DIE

Vandals are defacing some of the West's most gorgeous places

THE DEBATE OVER urban graffiti is a complex one, frequently pitting commercial interests against artistic ones. Graffiti in the wilderness is a much simpler matter: It is a despicable crime, never more so than when the tags mar national parks. That is the takeaway from the case of 23-year-old Casey Nocket, also known as “Creepytings,” who in June pleaded guilty to defacing government property by applying her images, and tag, to seven public parks in the West during what might be deemed a rather productive 2014 trip. So prolific was Nocket during her 26-day sojourn that her masterpieces have not been fully erased in at least two parks.

The blog Modern Hiker first alerted the world in 2014 to Nocket's work, which she had been incautiously promoting on Instagram and Tumblr. In an October 21, 2014, post, Modern Hiker's Casey Schreiner reported that Nocket “was so moved by all the natural beauty she saw that she just had

to paint all over it.” Her calling card—usually, a stylized portrait, with her “Creepytings” tag—appeared in some of the most famous parks in the West, including the Grand Canyon, Yosemite, Death Valley and Rocky Mountain.

Sensing unwanted attention, Nocket quickly locked her Instagram account, but the National Park Service identified her as the culprit and launched an investigation. On June 13, she pleaded guilty in a Fresno, California, federal courtroom, and she will be on probation for two years and must perform 200 hours of community service. In addition, she is banned from all national parks while serving her sentence and will have to pay restitution.

Nocket was the target of plenty of outrage, but she is merely a convenient symbol for a criminal subculture that takes pride in the vandalism of national parks, particularly in the West, where the desert is some of the last truly American wilderness left. Much of it is sacred to Native Americans too.

In April, Arches National Park in Utah was defaced with graffiti “that was carved so deeply into a famous red rock arch that it might be impossible to erase,” according to an Associated Press report. Two months earlier, alleged celebrity Vanessa Hudgens faced a fine of \$5,000 for defacing a rock in Arizona's Coconino National Forest. Such incidents have become disturbingly common, with vandals celebrating

their exploits on social media, in seeming ignorance that they spoil the experience of wilderness for the rest of us.

“National parks are special places for most Americans. Seeing them marked up is like getting punched in the gut,” Schreiner told the *Los Angeles Times* last year.

There is a wholesale argument about the criminality of graffiti that I do not buy: The works of Banksy and Swoon are very much art, and that they appear on the side of a building only enhances their message and allure, as was the case with the earlier street art of Jean-Michel Basquiat. But if the graffiti appears on a rock formation in Death Valley, that's simply a crime—and a stupid one at that. **N**

LET US SPRAY: At Barker Dam in Joshua Tree National Park, graffiti was painted over by conservators, and the site was declared off-limits.



THE CURATED LIFE

A FAIR TO REMEMBER

With its sophisticated mix of the old and new, Masterpiece London has become a fixture on the summer calendar

IN EARLY JUNE, heartily sick of this wet and windy summer in England, I signed off an email to a friend in Geneva with a valedictory whinge about the weather. His reply came like a ray of sunshine piercing the clouds in a 17th-century landscape.

“Summer is definitely coming. Let’s not give up hope,” he wrote. “I’ll be over for Masterpiece, a show I much enjoy, with two of my colleagues, and every year we go there the sun is always out.”

He’s right about Masterpiece, the international art, design and antiques fair in London. My recollections of it are of a perpetual summer, the evening sunlight gilding the splendid displays. The aisles of exhibitors showcasing art, antiques, jewelry and watches are more like broad boulevards, along which one can walk while sipping from flutes of champagne dispensed from a trolley.

Masterpiece is a serious contender for the title of leading European art, collectibles and antiques fair. Now in its seventh year, it is a key event in the British summer season. It takes place on a patch of Thames-side ground at the Royal Hospital Chelsea, which hosts the Chelsea Flower Show in May. If the flower show fires the starting pistol on the British summer season, then Masterpiece—which runs from June 30 to July 6 this year—marks its apogee.

Masterpiece is the direct descendant of the Grosvenor House Antiques Fair, which first took place in 1934 and from 1937 enjoyed royal patronage: first that of Queen Mary, whose

taste for collecting bibelots and souvenirs was legendary, then for almost half a century from Queen Elizabeth.

Being chairman of the Grosvenor House Antiques Fair was a bit like being Her Majesty’s representative at the Royal Ascot races. The man who found himself in the job for the last-ever Grosvenor House in 2009 was Simon Phillips, who became one of the founding members of Masterpiece London.

Phillips, who gives the impression of having been born wearing an Hermès tie, is the proprietor of Ronald Phillips, a world-renowned dealer in 18th- and 19th-century English furniture on Bruton Street. (Simon took over from his father, Ronald, in the late 1990s.) Once upon a time, London’s Mayfair district brimmed with shops like his: sepulchral spaces consecrated to the worship of ormolu and marble, marquetry and gilding. Now high-end restaurants and big-name fashion brands have pushed these palaces of taste, scholarship and if-you-have-to-ask-you-can’t-afford-it pricing to the brink of extinction.

But Phillips is more than just a survivor. With Masterpiece, he has reinvented the way antique furniture is sold at a time when the flash of the modern and contemporary often eclipses the dignity of the old and antique, a time when the slashed canvas of a Fontana broadcasts its owner’s wealth and taste far more effectively than a Sheraton dining table.

THE HINTON HOUSE ELEPHANT TABLE



BY
NICHOLAS FOULKES

+
IF YOU HAVE TO ASK: Masterpiece is the direct descendant of the Grosvenor House Antiques Fair, which first took place in 1934.



Masterpiece recontextualizes collectibles: It is an event that combines the exclusivity of the Royal Enclosure at Ascot with the gastronomy of the West End (catering is courtesy of pop-up versions of Le Caprice, the Ivy and Scott's, inter alia) and the good humor of a cocktail party with interesting guests, including, in past years, Tom Ford and Prince Harry.

"We started it because the Grosvenor House had folded, and London was desperate for a new fair," says Phillips. "We wanted it to be younger, fresher: the catering, the cars, the boats, the watches, the bronzes, a complete cross-section, a little bit for everybody."

Masterpiece is for you, whether you're in the market for a 1920s Danish deco grandfather clock designed by Jens Jacob Bregnö and inspired by the discovery of Tutankhamun's tomb; a Ptolemaic period canopic container; a Renoir; a Giacometti; a diamond necklace; a vintage Riva; or a brand-new Steinway piano made with crystal house Lalique.

The sort of museum-quality antique furniture that Phillips peddles is another ingredient in this sparkling collector's cocktail. His star item this year is "the Hinton House Elephant Table" (note his dignifying use of the definite article), a George II parcel gilt side table with Egyptian porphyry top from about 1735. It cannot quite decide whether it is a piece of sculpture or furniture, and comes with one of those POA price tags comfortably north of

IT COMBINES THE EXCLUSIVITY OF THE ROYAL ENCLOSURE AT ASCOT WITH THE GASTRONOMY OF THE WEST END AND THE GOOD HUMOR OF A COCKTAIL PARTY.

half a million pounds. It is the kind of furniture that has been the focus of a certain type of collector for centuries—but Masterpiece is now placing it in front of a much wider audience.

Nevertheless, when talking to Phillips, it is sometimes possible to detect a hint of nostalgia for the old days of the antiques trade in the West End. "The merchandise was grander. The premises were grander," he says wistfully. "Everything about it was grander."

Well, not quite everything: The grand and glittering showrooms of the West End may have almost disappeared, but London never before had an antiques fair that came close to the glamour of Masterpiece. **N**

To ^{—the—} Do List



1 PERCH *The Luna Sky Bar at the Dubai International Financial Center is designed to evoke the United Arab Emirates' national bird: light fixtures resemble a falcon's plumage; bottles behind the bar are in cages.*



2 VISIT

London's Kew Gardens has a 17-meter-high aluminum beehive. It's hooked up to an actual hive with the bees' activity triggering LEDs to glow and fade.

3 TOUCH

Raf Simons, a former creative director for Dior, has produced a new collection of throws, upholstery and cushions for Danish textile company Kvadrat.



4 WATCH

The Edinburgh International Festival, which runs August 5 to 29, offers three weeks of opera, theater, music and dance in Scotland's historic capital.

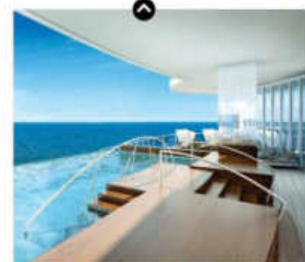
5 BOARD

The Belmond Andean Explorer, which launches next year, will be South America's first luxury sleeper. It will go from the Peruvian city of Cusco to Lake Titicaca in one night (from about \$440 per).

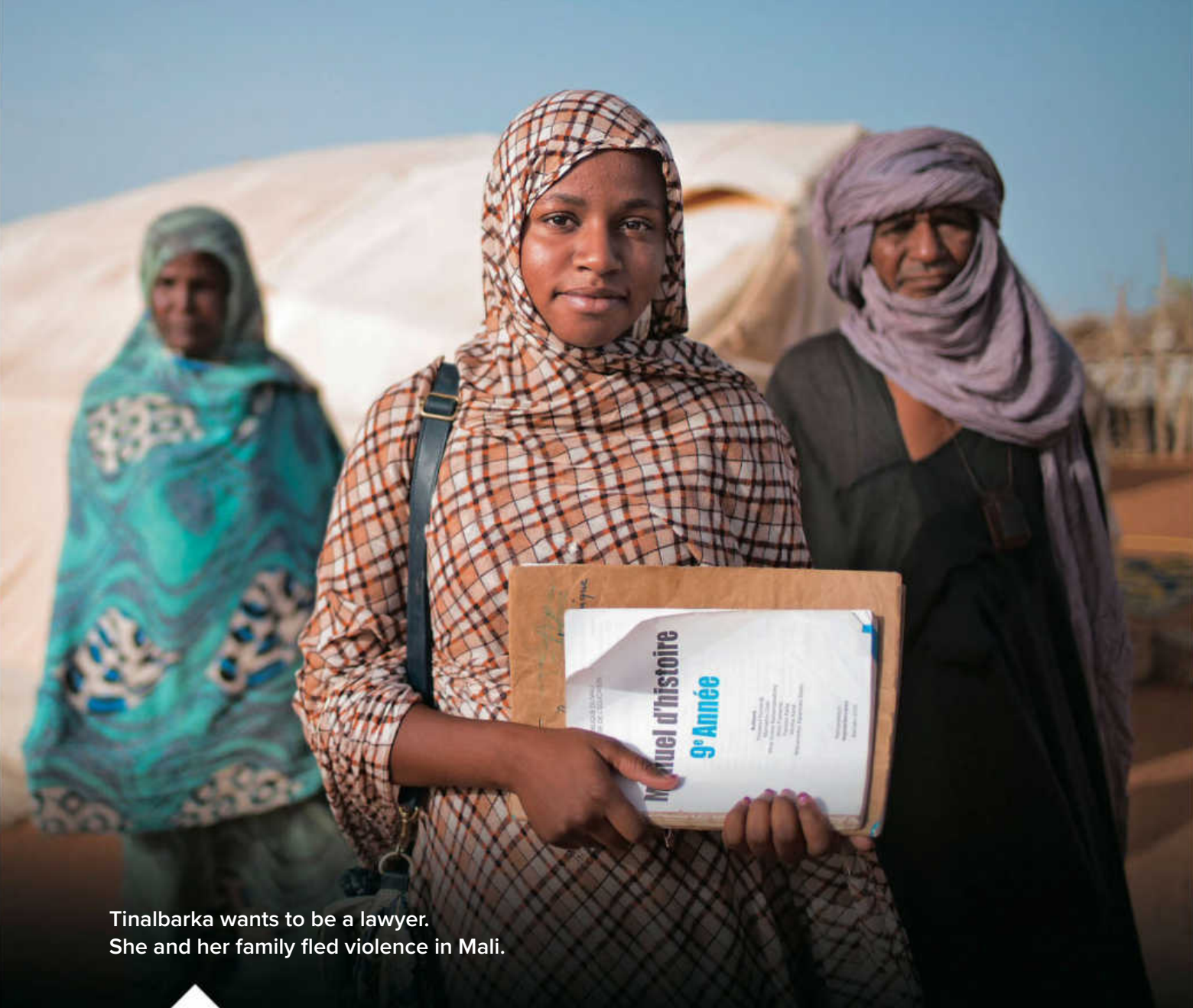


6 SAIL AWAY

The Seven Seas Explorer, described as the world's most luxurious cruise ship, takes to the waves on July 20. It will be sailing around the coast of southern Europe throughout the summer.



1. FOUR SEASONS; 2. KEW GARDENS; 3. RAF SIMONS/KVADRAT; 4. MARIO DEL CURTO; 5. BELMOND ANDEAN EXPLORER; 6. REGENT SEVEN SEAS CRUISES



Tinalbarka wants to be a lawyer.
She and her family fled violence in Mali.

We stand together #WithRefugees

PHOTO: © UNHCR / A. DRAGA J

worldrefugeeday
www.refugeeday.org



CEO meeting in Silicon Valley.

Rediscover the world:
from Frankfurt
nonstop to San Jose



NORMAN Y. MINETA
SAN JOSE
INTERNATIONAL
AIRPORT 
SILICON VALLEY'S AIRPORT

LH.com

Bookings on LH.com for selected non-stop flights from Germany. Seat availability limited.



Lufthansa