OCTOBER 17, 2016

Plus: Next Generation Leaders

TIME

‘Whoever saves one life, saves all of humanity’

The White Helmets of Syria and the 60,000 lives they’ve saved

By Jared Malsin

CELEBRATING 40 YEARS OF AN ENTERPRISING SPIRIT

In 1926, Hans Wilsdorf created the first waterproof wristwatch: the legendary Rolex Oyster. Inspired by his enterprising spirit, Rolex launched the Rolex Awards for Enterprise in 1976 to support visionary people advancing human knowledge and well-being. Forty years later, the Awards continue to celebrate men and women with the passion, vision and commitment to make the world a better place.

ANYONE CAN CHANGE EVERYTHING

rolexawards.com

ROLEX

Awards for Enterprise

40TH ANNIVERSARY

TIME
VOL. 188, NO. 15 | 2016

The Brief

News from the U.S. and around the world

The View

Ideas, opinion, innovations

The Features

Time Off

What to watch, read, see and do

Abu Tarek, 21, a member of Syrian rescue-workers group the White Helmets, helps clear a building following a reported airstrike in Douma, a rebel-held town east of Damascus, on Oct. 5

Photograph by Mohammed Badra—EPA for TIME

ON THE COVER: *Photograph by Beha el Halebi—Anadolu Agency/Getty Images*

TIME (ISSN 0040-781X) is published weekly, except for two combined issues in January and one combined issue in February, April, July, August, September and November by Time Inc. **PRINCIPAL OFFICE:** 225 Liberty Street, New York, NY 10281-1008. Periodicals postage paid at New York, NY and additional mailing offices. **POSTMASTER:** Send all UAA to CFS (See DMM 507.1.5.2); **Non-Postal and Military Facilities:** send address corrections to TIME Magazine, P.O. Box 62120, Tampa, FL 33662-2120. Canada Post Publications Mail Agreement No. 40110178. Return undeliverable Canadian addresses to: Postal Station A, P.O. Box 4322, Toronto, Ontario M5W 3G9. GST No. 888381621RT0001. U.S. Subscriptions: $49 for one year. **SUBSCRIBERS:** If the Postal Service alerts us that your magazine is undeliverable, we have no further obligation unless we receive a corrected address within two years. Your bank may provide updates to the card information we have on file. You may opt out of this service at any time. **CUSTOMER SERVICE AND SUBSCRIPTIONS:** For 24/7 service, visit ***time.com/customerservice.*** You can also call 1-800-843-TIME; write to TIME, P.O. Box 62120, Tampa, FL, 33662-2120; or email ***privacy@time.customersvc.com.*** **MAILING LIST:** We make a portion of our mailing list available to reputable firms. If you would prefer that we not include your name, please call or write us. **PRINTED IN THE U.S.** ◆◆◆◆◆◆◆

Syria's first responders

"WHOEVER SAVES ONE LIFE, SAVES ALL OF humanity," reads the verse from the Quran that serves as the fuel for an impossible mission. The White Helmets of Syria—teachers, tailors, builders, doctors—didn't flee the country, didn't take up arms; instead they return day after day to the scene of some of the worst carnage anywhere on the planet, where civilians are not collateral damage: they are prime targets. With the collapse of a fragile cease-fire, the violence is now as bad as at any time during the civil war that has killed at least 400,000 people and driven 11 million more from their homes.

But that number would be even higher were it not for the work of the volunteer White Helmets. A war defined by impossible choices and implacable hatreds has also produced a model of heroism that reflects the best of humanity. Of the White Helmets he interviewed for this week's story, Middle East bureau chief Jared Malsin says, "These are ordinary people whose work takes them to the extremes of human experience. Each day brings them new traumas, and still they rush in to help after every attack."

Our issue this week also features our latest class of Next Generation Leaders, a project we have undertaken in partnership with Rolex. TIME identified 10 rising stars in fields ranging from medicine to music who we profile in this issue and in stories and videos on TIME.com. Their influence is felt in the movements they lead, the examples they set, the barriers they break. Some alchemy of time, technology and opportunity seems to allow ever younger people to have ever greater impact in their chosen fields; three of the 10 are still in their teens. Accomplished as they already are, it will be fascinating to see the trails these pioneers blaze in the years ahead.

Nancy Gibbs, EDITOR

GIBBS: PETER HAPAK FOR TIME; NEXT GENERATION: RYAN PFLUGER FOR TIME; BLACK PANTHERS: STEPHEN SHAMES—COURTESY OF ABRAMS BOOKS

NEXT GENERATION LEADER "I think jazz is for all ages," says 13-year-old Joey Alexander, a Grammy-nominated pianist featured as one of TIME's Next Generation Leaders (page 41). Watch Alexander perform and talk about music in a video at **time.com/nextgenleaders**

THOMPSON'S TRIP Actor Emma Thompson recently visited the Arctic to meet the imperiled Inuit people. Read her trip diary at **time.com/emmasdiary**

SETTING THE RECORD STRAIGHT In For the Record (Oct. 10), we misstated the name of Keith Lamont Scott, who was fatally shot by police in Charlotte, N.C., on Sept. 20. In "Floating Dorms" (Oct. 10), we misstated the number of studios in the Copenhagen complex. There are 12. A caption in "Europe Swings Right" (Oct. 3) incorrectly identified the location of a rally in Germany. It was in the city of Schwerin.

PICTURING THE PAST Fifty years after the birth of the Black Panthers, TIME spoke with party co-founder Bobby Seale (page 64) about his new book with photographer Stephen Shames, who captured the party's genesis (as seen in this image of Seale in 1967). See more at **time.com/panther-photos**

TALK TO US

SEND AN EMAIL:
letters@time.com
Please do not send attachments

FOLLOW US:
facebook.com/time
@time (Twitter and Instagram)

Letters should include the writer's full name, address and home telephone and may be edited for purposes of clarity and space

Back Issues Contact us at help.single@customersvc.com or call 1-800-274-6800. **Reprints and Permissions** Information is available at time.com/reprints. To request custom reprints, visit timereprints.com. **Advertising** For advertising rates and our editorial calendar, visit timemediakit.com. **Syndication** For international licensing and syndication requests, visit timeinc.com/syndication or call 1-212-522-5868.

Please recycle this magazine and remove inserts or samples before recycling

Chorizo
Chipotle started offering the sausage at all U.S. locations

GOOD WEEK
BAD WEEK

Pastrami
New York City's famed Carnegie Deli will close after nearly 80 years

'The winds are making so many bad noises. We're just doing our best to stay calm.'

JENNIFLORE DESROSIERS, resident of Port Salut, Haiti, describing Hurricane Matthew on Oct. 4 as the storm hit the nation, which is still recovering from a 2010 earthquake; initial reports suggested it had caused five deaths and destroyed 2,200 homes

'I HAVE SAID ENOUGH FOR A LIFETIME.'

VIN SCULLY, announcer for the L.A. Dodgers, broadcasting his final game after 67 years; he started when the baseball team was still in Brooklyn

'We won't have peace, but at least we won't give the country away to the guerrillas.'

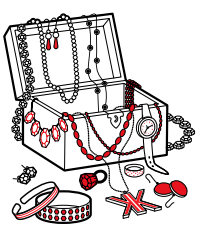
ROOSEVELT PULGARIN, 32-year-old music teacher from Bogotá and one of the 50.2% of Colombians who voted against an agreement to end a 52-year conflict between the government and the rebel group Revolutionary Armed Forces of Colombia

'He's asking everybody to vote for somebody that he cannot defend.'

TIM KAINE, Democratic vice-presidential nominee, on his opponent, Republican Mike Pence, during the vice-presidential debate on Oct. 4

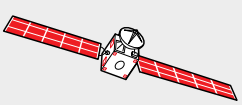
'I have brilliantly used those laws.'

DONALD TRUMP, Republican presidential candidate, explaining his use of tax laws "to benefit [his] company" after the New York *Times* published pages from his 1995 tax return; it showed that Trump claimed a $915,729,293 loss, which could enable him to legally avoid paying federal taxes for 18 years



$10,000,000

Approximate value of the jewelry stolen from reality star Kim Kardashian West at gunpoint in a Paris hotel on Oct. 3



12

Number of years that Rosetta, the first spacecraft to orbit a comet, spent on its mission before crash-landing on Sept. 30

1,325

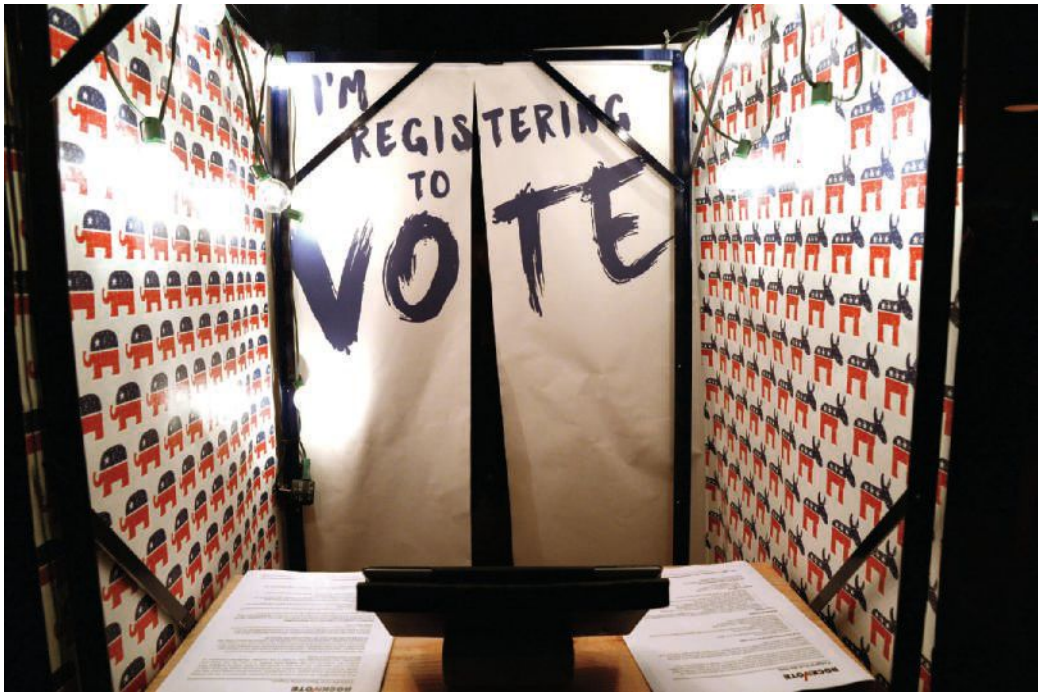
Depth, in feet, of the Czech cave Hranická Propast, now the world's deepest underwater cave after its discovery on Sept. 27

SOURCES: AP; NATIONAL GEOGRAPHIC; NEW YORK TIMES

ILLUSTRATIONS BY BROWN BIRD DESIGN FOR TIME

The Brief

'THERE'S A PERSON UNDER EVERY CLOWN MASK.' —PAGE 9



Democratic lawyers have successfully pushed for new voting policies in swing states

GETTY IMAGES

POLITICS

Democrats are winning the battle to expand voting access

By Sam Frizell

EVERY WEEK, VIRGINIA GOVERNOR Terry McAuliffe spends a few hours in his office with a thick stack of papers containing the names of convicted felons. Sitting under a portrait of George Washington, he checks that each person has completed their sentence and that none are on parole. Then his staff sends out thousands of letters, stamped with the governor's seal, informing these citizens that their voting rights have been restored.

Since 2014, McAuliffe, a Democrat, has re-enfranchised some 59,000 Virginians. It's an effort that straddles the line between civil rights and presidential politics. McAuliffe says he is simply restoring the full rights of taxpayers. But research shows that ex-felons are more likely to vote Democrat. Adding their names to the rolls could help lift McAuliffe's close friend Hillary Clinton to victory on Nov. 8.

McAuliffe's effort is one among dozens of Democratic campaigns to expand voting access across the country. For years, Republican-controlled state legislatures have passed laws that limit access to the ballot box, from voter-ID requirements to shorter hours for early voting. Now Democrats are fighting back, waging legal battles designed to bring millennials and African Americans to the polls.

The effort seems to be working. According to the Brennan Center for Justice at the New York University School of Law, 26 states have increased voting access since 2012, while 14 have imposed new restrictions. "Have we won every fight? No," says Pratt Wiley, the Democrats' national director of

PHOTOGRAPH BY MICHAEL KOVAC

voter expansion. But "in the long term, the rules are getting to the right place."

In the key state of North Carolina, teams of lawyers are scrambling to add polling sites and extend early-voting hours in predominantly Democratic counties. They've also pushed Florida's Miami-Dade County, one of the biggest and bluest in the state, to expand the number of early-voting sites from about 20 in 2012 to 30 this year. In Wisconsin, the party's lawyers beat back voter-ID requirements passed in 2011, and in Minnesota, they successfully fought to make absentee voting easier.

The mastermind behind these efforts is Marc Elias, a hard-charging Democratic election lawyer. Elias—whose firm's clients include the Clinton campaign, the Democratic National Committee and the pro-Clinton super PAC Priorities USA—was a petitioner in the suit that recently overturned North Carolina's voter-ID law. Shortly after, Elias led the Democrats' push to engineer favorable new polling hours and locations in the state's counties. In September, Democratic election officials came to a Raleigh meeting with a team of attorneys. Republicans brought none. "These had been perfunctory processes in the past," recalls Josh Lawson of the state board of elections, which was tasked with mediating an agreement. In the end, Democrats won about 20% more early-voting hours than in the 2012 general election, according to state officials.

Democrats cast their crusade as a high-minded attempt to expand ballot access. But they are picking their battles carefully. While some of the most restrictive measures have been passed in red states like Texas and Alabama, organizers are more focused on blue counties in battleground states. "Both parties are clearly trying to do what they can to help their voters vote and help their side win," says Dan Tokaji, a professor at the Ohio State University's Moritz College of Law and a nonpartisan voting-rights advocate who recently filed a lawsuit to stop Ohio from purging its voter rolls. "That's the agenda of political campaigns."

It's no wonder, then, that Republicans are saying McAuliffe's move to restore felons' voting rights is more about politics than fairness. "The singular purpose of Terry McAuliffe's governorship is to elect Hillary Clinton President of the United States," said Bill Howell, the Republican speaker of the state's House of Delegates. After the GOP challenged the governor's plan, Virginia's Supreme Court ruled in July that McAuliffe's initial proposal—a blanket restoration of voting rights for the state's 200,000 ex-felons—was unconstitutional. But the court permitted him to review cases one by one. And so McAuliffe pores over thousands each week. With every letter to a re-enfranchised Virginian, his staff tucks in a fresh voter-registration form. ◻

TICKER

Ohio ready to resume executions

Ohio said it would resume executions in 2017, using a new three-drug combination. Lethal injections in the state were stalled for three years after a botched execution in which the condemned man took over 20 minutes to die.

Pound plunges over Brexit fears

British Prime Minister Theresa May set out a timetable for the U.K.'s departure from the European Union, saying the formal mechanism for Brexit will be triggered by April 2017. The pound slumped to its lowest level against the dollar in 31 years on Oct. 4 after the announcement.

Flint hit by bacterial outbreak

An outbreak of shigellosis, a bacterial illness transmitted when people do not wash their hands, has sickened dozens of residents in Flint, Mich., where the local water supply has been contaminated by lead.

Poles rally against abortion ban

Millions in Poland took part in a nationwide protest on Oct. 3 against a proposed ban on all abortions, even in cases of incest or rape or when the woman's life is at risk. Science Minister Jaroslaw Gowin later signaled that the country's leadership would withdraw support for the bill.

AFRICA

Wave of unrest crashes on Ethiopia

At least 52 people were killed in a stampede during protests in Ethiopia's Oromia region on Oct. 2, allegedly after security forces opened fire on the crowd. The Oromo people claim to be politically and economically repressed by the ruling Tigrayans. —*Tara John*

Protesters cross their hands in what has become a symbol of the Oromia protests

MOUNTING ANGER Oromia has been racked by protests since 2014, when the government announced plans to expand the capital, Addis Ababa, into the region. Demonstrations have continued, despite the shelving of the plans in January, over issues such as human rights and local governance.

REFORMS DENIED Oromos say the TPLF party, which runs the government and whose Tigrayan elites are seen to have unduly benefited from Ethiopia's economic boom, is standing in the way of vital reforms. Although the government says it did not open fire on protesters in Oromia, its frequently violent treatment of dissenters is likely to inspire more unrest.

AROUND THE HORN The protests threaten not just Ethiopia's burgeoning economy but also regional stability. The country is considered a bulwark against terrorist groups active in the Horn of Africa, like al-Shabab, and the West also needs its help in containing flows of migration from across the continent.

DIGITS

90

Length in years of Karam and Kartari Chand's marriage, believed to be the world's longest, when Karam died Sept. 30 at age 110

AFRICA: GETTY IMAGES; FINANCE: DANIEL ROLAND—AFP/GETTY IMAGES

BEAR DOWN A giant-panda cub tumbles face-first from a stage as 23 pandas born in 2016 are shown off at the Chengdu Research Base of Giant Panda Breeding on Sept. 29. The cubs, ranging from 1 month to 4 months old, were placed on display ahead of China's 67th National Day celebrations on Oct. 1. *Photograph by China Daily/Reuters*

FINANCE

Why Deutsche Bank is spooking the markets

"TOO BIG TO FAIL" IS BACK. A SERIES OF penalties for past misconduct at Deutsche Bank, one of the linchpins of the global financial system, is threatening to ravage shareholders, raising fears about what happens to trillions of dollars in complex financial products known as derivatives on its balance sheet. How it came to this:

TROUBLE MONEY Germany's biggest lender has been paying out large amounts to traders to settle claims that it rigged interest and exchange rates, and it faces more from financial watchdogs for allegedly helping clients (notably in Russia) avoid money-laundering regulations. Negative interest rates, overcapacity in Europe's banking sector and structural changes to financial markets are making it hard for Deutsche to generate profits to pay these penalties, with an even bigger fine on the horizon.

FINE LINE The U.S. Department of Justice is seeking $14 billion from Deutsche for mis-selling mortgage-backed securities in the run-up to the 2008 crisis. Deutsche calls the demand a first step in a bargaining process and says it won't settle at "anywhere near the number cited." But a fine of this scale would devastate Deutsche's capital base, forcing it to raise more to meet regulatory standards.

CASH CALL The bank must now figure out how to raise fresh capital—by selling assets, perhaps, or seeking help from sovereign wealth funds in Asia or the Middle East. If all else fails, it could apply for a government bailout, but granting it would be extremely unpopular in Germany, threatening Chancellor Angela Merkel's re-election bid in 2017. Nobody in Berlin or elsewhere, however, would welcome the repercussions if Deutsche Bank were allowed to fail. —GEOFFREY SMITH

Deutsche Bank CEO John Cryan said concern for the company was "unjustified"

DATA

WHERE THE POOR ARE DOING BETTER

The World Bank's inaugural Global Database of Shared Prosperity found that in 60 of 83 countries monitored from 2008 to 2013, the poorest 40% saw their income increase. Here's a sample of countries where that income rose the most:

+9.58%
Democratic Republic of the Congo

+8.03%
Mongolia

+8.01%
Paraguay

+6.65%
Kazakhstan

TICKER

Kunduz briefly falls to the Taliban

The Taliban occupied large parts of the Afghan city of Kunduz on Oct. 3, almost exactly a year after briefly seizing the city in 2015. Officials reclaimed the city center within 48 hours but are still deflecting fresh attacks from the insurgents.

Lynching-victims memorial to open

The first U.S. memorial to victims of lynching will open in Alabama in 2017, a civil rights organization said. The Equal Justice Initiative said the memorial would pay tribute to the more than 4,000 black victims killed across the South from 1877 to 1950.

Yahoo monitored millions of emails

Yahoo scanned hundreds of millions of its customers' incoming emails in secret at the request of the U.S. government, according to a Reuters report. The tech company responded only that it "complies with the laws of the United States."

Climate deal set to go into effect

With the European Union announcing ratification on Oct. 5, the U.N. said the Paris climate agreement would go into legal force within a month. The deal is the most comprehensive global action on climate change yet.

THE RISK REPORT

Why referendums have been backfiring

By Ian Bremmer

COLOMBIAN VOTERS SHOCKED OUTSIDERS on Oct. 2 by voting down a measure, backed by their President, that would have formally ended the government's half-century war with FARC rebels. Given similarly surprising referendum results elsewhere, it's natural to wonder why voters are increasingly choosing no when political leaders are asking for yes.

Case in point: Former Prime Minister David Cameron asked Britons to vote yes to continue membership in the E.U. Instead, a majority voted no. The clearest lesson from that experience for leaders hoping to win a referendum is to avoid personalizing the vote. By putting so much of his personal credibility on the line, Cameron gave political opportunists, like fellow Conservative Boris Johnson, a chance to use the vote to push him aside and provided former U.K. Independence Party leader Nigel Farage a chance to reframe the debate. The Brexit vote demonstrated that when a leader makes a referendum about himself, he draws in rivals who might otherwise stay out, which increases the odds that the vote will fail. The U.K. is now preparing to exit the E.U., and Cameron has retired from politics.

In Colombia, voters gave President Juan Manuel Santos a humiliating surprise. He didn't promise to resign if voters chose no, but he put enough personal credibility on the line during years of negotiations to present his rival, former President Álvaro Uribe, with a fat political target. Voter turnout was low, and the margin was exceptionally narrow. Unlike Cameron, Santos will live to fight another day. But negotiating new terms with FARC will take time, while a weakened Santos will struggle to achieve other goals.

On Dec. 4, Italians will vote on Prime Minister Matteo Renzi's plan for constitutional changes that would strengthen his ability to bring about much needed political and economic reforms. Renzi began his campaign by pledging to resign if voters rejected the measure, though he has since gone quiet on that matter. He can't entirely avoid the risk that Italians will see the vote as a referendum on himself and his enthusiasm for the increasingly unpopular E.U. But by retreating from a pledge that might have brought rivals into the field against a complicated referendum that few understand, he has increased the odds that he will get the changes and the mandate he's after.

> It's natural to wonder why voters are increasingly choosing no when political leaders are asking for yes

Even when voters back a government's position in a referendum, things can go pear-shaped—as happened in Hungary, where voters supported a move to reject E.U. migrant quotas but didn't turn out in big enough numbers to make the vote official. It should be clear to leaders by now: governing at the ballot box is a gamble. ◻

CRIME

Stolen art that made a return

A pair of Vincent van Gogh paintings stolen from an Amsterdam museum in 2002 were found recently during a police sting of the Naples Mafia in Italy. The combined $30 million find joins other famous artworks to have been recovered. —*Tara John*

VENEZUELA
***ODALISQUE IN RED TROUSERS*, MATISSE**
The Caracas Museum of Contemporary Art realized in 2002 that the Matisse original had been switched with a copy. The FBI caught a couple in 2012 attempting to sell the canvas in Miami Beach.

NORWAY
***THE SCREAM*, MUNCH**
It took only 50 seconds for a thief to steal the most important of four versions of this iconic painting from a Norwegian museum in February 1994. It took police two months to recover it.

U.K.
***FRUITS ON A TABLE*, GAUGUIN**
Stolen from a London flat in 1970, this still life was found some 40 years later in the home of an Italian pensioner. He had bought it at a lost-property auction and eventually got to keep the $44 million piece.

MATISSE: GRANGER; MUNCH: AP; GAUGUIN: GETTY IMAGES; NATION: TIM BOYLE—GETTY IMAGES

Milestones

SELECTED

Former Portuguese Prime Minister António Guterres, as **Secretary General of the United Nations,** by the body's Security Council. The onetime U.N. High Commissioner for Refugees is set to succeed Ban Ki-moon in 2017.

WON

Nobel Prize in Physics, by David Thouless, Duncan Haldane and Michael Kosterlitz, for work in the field of topology revealing "secrets of exotic matter."

Nobel Prize in Physiology or Medicine, by Yoshinori Ohsumi, for research into autophagy, the process by which cells essentially eat themselves.

Nobel Prize in Chemistry, by Jean-Pierre Sauvage, Fraser Stoddart and Bernard "Ben" Feringa, for developing "molecular machines." The tiny structures could radically change health care, computing and more.

PERFORMED

Four **womb transplants from living donors** in the U.S. for the first time. The surgeries could allow thousands of women without uteruses to give birth in the future.

ENDED

The U.S. government's **formal oversight role of the Internet.** The U.S. Commerce Department handed over control of the Internet's directory of website addresses to an independent global group based in Los Angeles.

ACQUIRED

Outdoor gear giant **Cabela's,** by rival retailer company Bass Pro Shops, for about $5.5 billion, as part of the fifth largest retail deal in U.S. history.

Reports of "scary" clowns have surfaced in at least 24 states

NATION

America's new clown panic

SCARED OF CLOWNS? YOU'RE NOT alone. After unsubstantiated reports of people in clown costumes trying to lure children into the woods in South Carolina, which first surfaced in August, there have been so-called "scary" clown sightings in more than two dozen states, including Wisconsin, Alabama and New York. Most were hoaxes, often posted on social media or called into police departments by pranksters, and so far, none have led to any serious injuries or deaths.

It's easy to dismiss events like these as funny or amusing, especially given their proximity to Halloween. But the hysteria they're creating is very real. In recent weeks, clown threats (both real and imagined) have put a Massachusetts college on lockdown, led hundreds of students at Penn State to go "clown hunting" and elicited a response from White House press secretary Josh Earnest. "Obviously, this is a situation that law enforcement is taking quite seriously," he said.

Clowns have long been a subject of fear and fascination, especially in the 1980s, when John Wayne Gacy, who sometimes dressed as a clown, was convicted of 33 murders and when Stephen King's *It* introduced the world to Pennywise. Most clowns, of course, are harmless and fun. But because they paint their faces with extreme emotions and hide under masks and makeup, there's also a creepy factor. They "could be anyone or anything," says Scott Bonn, a criminologist and professor of sociology at Drew University in New Jersey, which is "actually very frightening."

Officials have tried to ease this new wave of fears by suggesting scary clown reports are a passing fad. "This is no different than swatting," says David Hartman, spokesman for the New Haven, Conn., police department, referring to a formerly popular hoax in which 911 callers sent SWAT teams to homes under false pretenses.

But Jordan Jones, who works as a clown named Snuggles at a haunted house in Maryland, says he's worried that people will start to see clowns—especially scary-looking ones—as a legitimate threat. "I fear for my life," says the 22-year-old, who started a Clown Lives Matter movement on his Facebook page, adding that someone could "take a swing" at him when he's in costume. Amid the paranoia, Jordan urges the public to remember that there's a person under every clown mask, and most clowns just want to entertain. "We're not the people in the woods," he says. "I'm not the enemy." —MELISSA CHAN

LightBox

After the storm

A man walks down a flooded street in the Haitian capital of Port-au-Prince on Oct. 4. Hurricane Matthew was a Category 4 storm when it struck Haiti, the poorest country in the Western Hemisphere, causing massive floods and killing at least five.

Photograph by Hector Retamal—AFP/Getty Images

For more of our best photography, visit **lightbox.time.com**


Morgue privée
Ecclesiaste entreprise Funeraire
MORGUE

1 in 5 children faces hunger.

There's more than enough food in America for every child who struggles with hunger. Help get kids the food they need by supporting Feeding America, the nationwide network of food banks. Together, we can solve hunger™. Join us at **FeedingAmerica.org**

Ad Council

FEEDING® AMERICA

The View

'MONEY AFFECTS THE WAY WE THINK, FEEL AND BEHAVE, EVEN IF WE'RE UNAWARE OF ITS INFLUENCE.' —PAGE 15

ENVIRONMENT

Inside the fight for cleaner air

By Justin Worland

AT FIRST GLANCE, LONDON'S Oxford Street looks like any other pristine urban corridor. Trees bloom. Taxis honk. Shoppers flock to stores like Starbucks, Uniqlo and the Gap. Of all the words you could use to describe this destination, *dangerous* would be low on the list.

But the air that flows through Oxford Street is far from benign. Over time, it has become saturated with nitrogen dioxide, a pollutant that is invisible to the naked eye and contributes to a number of health issues—asthma, lung disease, even death—if inhaled on a regular basis. In August, London's mayor, Sadiq Khan, dubbed Oxford "the most polluted street in the world" in terms of nitrogen dioxide (though that distinction is always in flux).

This is not the narrative we're used to hearing about air pollution, which for years has been associated with obvious markers, like fumes and smog, in developing countries. Now, however, it affects everyone. A recent report from the World Health Organization (WHO) estimates that roughly 9 out of 10 people live in areas with excessive air pollution. That includes the usual suspects, such as New Delhi and Beijing, as well as cities like London, Paris and New York. And even in less populated areas, there's risk "down to the lowest levels we can measure," says Michael Brauer, an environmental-health professor at the University of British Columbia.

The consequences are dire. In recent years, researchers have

GETTY IMAGES

PHOTOGRAPH BY HENRIK SORENSEN

linked air pollution—even in small amounts—to a range of medical conditions. Many of them are cardiovascular or respiratory, such as lung cancer and heart disease. But research suggests that inhaling bad air can also disrupt pregnancy and even alter brain function. In sum, air pollution contributes to more than 3 million premature deaths each year, according to the WHO. And while developing countries are the worst hit, around 40,000 of those deaths occur in the U.K. and 10,000 in the U.S.

How did things get so bad? The answers depend on where you live. In the developing world, the main culprit is rapid industrial growth, which has led to the creation of dirty factories and coal-fired power plants. In Europe, it's mostly the rise of diesel-powered cars, which emit nitrogen dioxide. In the U.S., it's a combination of both factories and gas-powered cars. Globally, though, lawmakers have lately ignored the problem until it (often literally) arrives at their doorstep.

Slowly, that's starting to change. In London, Oxford Street and other polluted roads will soon be permanently car-free. In Mexico City, every car is now required to spend one day a week off the road to cut down on tailpipe emissions. In Los Angeles, transit officials have cited air pollution as a key driver behind a move to electric buses. And in Beijing, the government closes some factories on particularly smoggy days. Many policymakers hope measures to address climate change, like last year's Paris Agreement, will also help reduce pollution.

These moves represent an important start, but a real push to clean the air will take years if not decades. The biggest barrier to such efforts may be the cost, real or imagined. Developing countries rely on factories to fuel growth, and officials have long feared that breaking that habit may hurt their economies. There are regulatory hurdles as well. President Obama first announced his Clean Power Plan, which would close many of America's coal-fired power plants, in 2014. It was supposed to take effect in September, but state governments and coal groups slowed the measure with litigation.

In the meantime, a slew of scientists, environmentalists and entrepreneurs are trying to hack the problem on their own. Among them: Vogmask and Cambridge Mask Co., which offer stylish versions of the N95 air-filtration mask, and TZOA, whose Fitbit-like device allows users to track the air quality around them in real time. One group of designers is even making a personal "air bubble" helmet.

Of course, these efforts are treating the symptoms, not the problem. But for many, that's better than nothing. "It's all about minimizing exposure," says Ziv Lautman, co-founder of BreezoMeter, which makes a Google Maps–like app to help users navigate around pollution. "That's our goal." ☐

VERBATIM

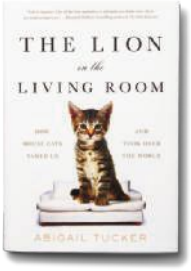
'Fame is interesting. Celebs are supposed to love you guys while also knowing you'd make a meme of our dead bodies to get retweets.'

CHRISSY TEIGEN, supermodel, addressing her fans on Twitter amid widespread mockery of her friend Kim Kardashian for reportedly being bound, gagged and robbed at gunpoint in Paris

BOOK IN BRIEF

Why cats rule the world

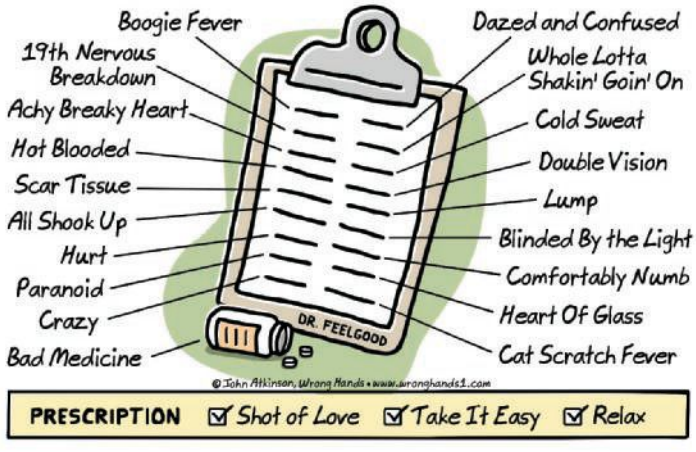
DOGS MAY BE MAN'S BEST FRIEND, BUT in her new book, *The Lion in the Living Room,* Abigail Tucker argues that cats deserve more credit for their domestic dominance. House cats outnumber dogs by as much as 3 to 1 worldwide, she writes, which is especially impressive given their defining traits: unlike dogs, which were originally domesticated for their ability to hunt, shepherd and protect, cats were never utilitarian (aside from their ability to deter mice). Humans could have embraced another small species, like badgers or foxes. But cats primed us to love them, partly because of their humanoid faces—those big eyes remind us of our own babies—and partly because they didn't fear us as much as other animals do. Now felines are a global obsession, especially online, where figures like Grumpy Cat have more followers (and earning potential) than many human celebrities. "In many ways," Tucker writes, "[cats] rule us."



—SARAH BEGLEY

CHARTOON

Rock-'n'-roll medical chart



JOHN ATKINSON, WRONG HANDS

BIG IDEA

The 'roboat'

As unmanned drones take to the skies and self-driving cars start to navigate roads, MIT's Senseable City Lab and the Amsterdam Institute for Advanced Metropolitan Solutions are developing the world's first fleet of autonomous boats. The so-called roboats will not only carry people and goods through Amsterdam's canals but also assess the chemical health of the waters using a series of environmental sensors. (Test missions will start next year.) Eventually, says Carlo Ratti, director of the MIT lab, they will be able to self-assemble into floating structures, such as a makeshift bridge or concert stage. *—Julia Zorthian*

TEIGEN: GETTY IMAGES; BIG IDEA: AMS INSTITUTE AND MIT

VIEWPOINT

How mindfulness can save you money

By Claudia Hammond

IF YOU PUT PEOPLE IN BRAIN SCANNERS and give them something delicious—say, wine or chocolate—the reward centers of their brains light up. In other words, it's making them feel good. But if you promise them a delicious item in the future, there's no reward-center activity. If it's not in our hands (or mouths), we don't care.

Money is the rare exception to this rule, and studies show it has a unique ability to affect the way we think, feel and behave—even if we don't have much or are unaware of its influence. Just as most people think they're better than average at driving, they also think they're better than average at negotiating a deal, which primes them to get ripped off. Moreover, if patients believe pain relief to be pricey, they tend to respond more to its effects.

But there are small changes we can make to have mind over money. When people pay in cash instead of by card, they tend to spend less, because they can see and feel the exchange. Additionally, we're less likely to pull from our savings if they're stored in a bank with a name that makes it sound geographically far away. And purchasing while grumpy often primes us to get a better deal.

The most important mind hack, though, may be to spend money in ways that are proven to make us happier, like prioritizing experiences (which create lasting memories) over material goods.

Hammond is the author of Mind Over Money: The Psychology of Money and How to Use It Better

DATA

THIS JUST IN

A roundup of new and noteworthy insights from the week's most talked-about studies:

1

THE PEOPLE AROUND YOU AFFECT YOUR ATTRACTIVENESS

A study in the journal *Psychological Science* found that people's rankings on an attractiveness scale increased as they were viewed alongside an increasingly unattractive face.

2

DOGS MAY LEARN MORE EFFICIENTLY THAN CHILDREN

Yale researchers who taught dogs how to open a box containing food found that a significant number of dogs learned to skip the unnecessary lever step in four trials, suggesting they're more likely than children to disregard instructions that aren't needed to solve a task at hand.

3

CAFFEINE MIGHT PREVENT DEMENTIA

A 10-year study in *Journals of Gerontology, Series A,* found that for women 65 and older, caffeine consumption above 261 mg—at least two to three cups of coffee per day—was associated with a 36% reduction in the risk of dementia. *—J.Z.*

The digital cloud is underwater—and vulnerable

IT WAS A SYMBOL OF PROGRESS, THE first transatlantic telegraph cable paid out from the deck of a ship between Telegraph Field in Ireland and Heart's Content, Newfoundland. It took four years to lay, and it functioned for three weeks in 1858 before breaking. Today there are 312 undersea cables, all wrapped around glass fiber as thin as a human hair. They carry 99% of the world's intercontinental data, including business transactions worth $10 trillion a day. And one is being repaired about every third day.

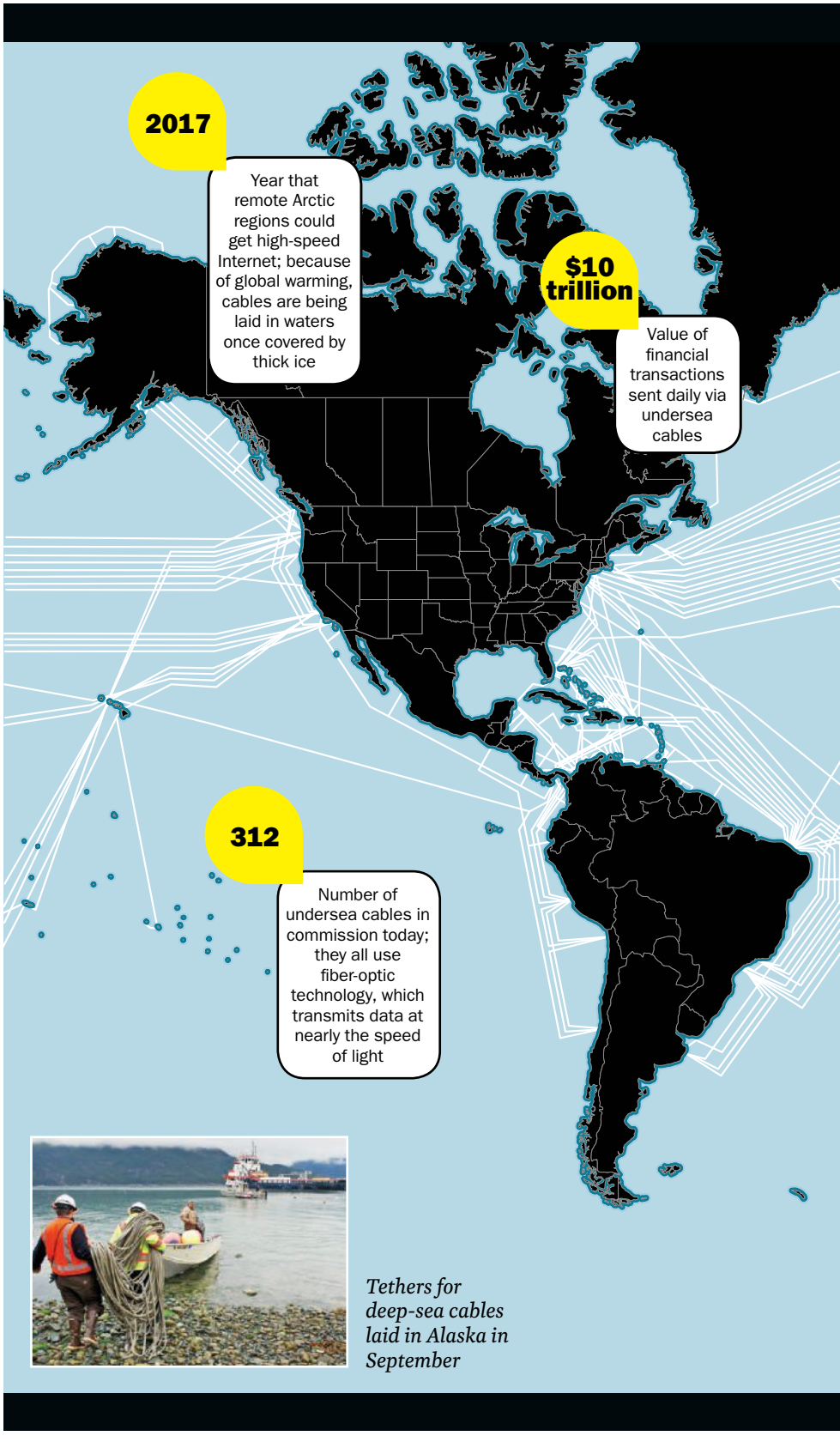
It's usually a fish trawler or anchor at fault, though in 2015 the Pentagon closely watched Russian submarines stalking cable routes, and also a spy ship equipped with submersibles capable of reaching the cables. Close to shore, the lines are reinforced to the thickness of a soda can and buried in trenches made by an undersea digger. But deep at sea they lie right out on the seafloor, about as thick as a garden hose and usually near cables laid earlier, to save the cost of surveying a new route.

During the Cold War, the U.S. placed a tap on a Soviet military line, sending divers down each month to retrieve the tapes. Today they'd use prisms, to divert the light that carries the messages in fiber-optic cables. But as Edward Snowden showed, the U.S. doesn't really need to bother: the National Security Agency has ready access to pretty much all data that passes through the U.S.

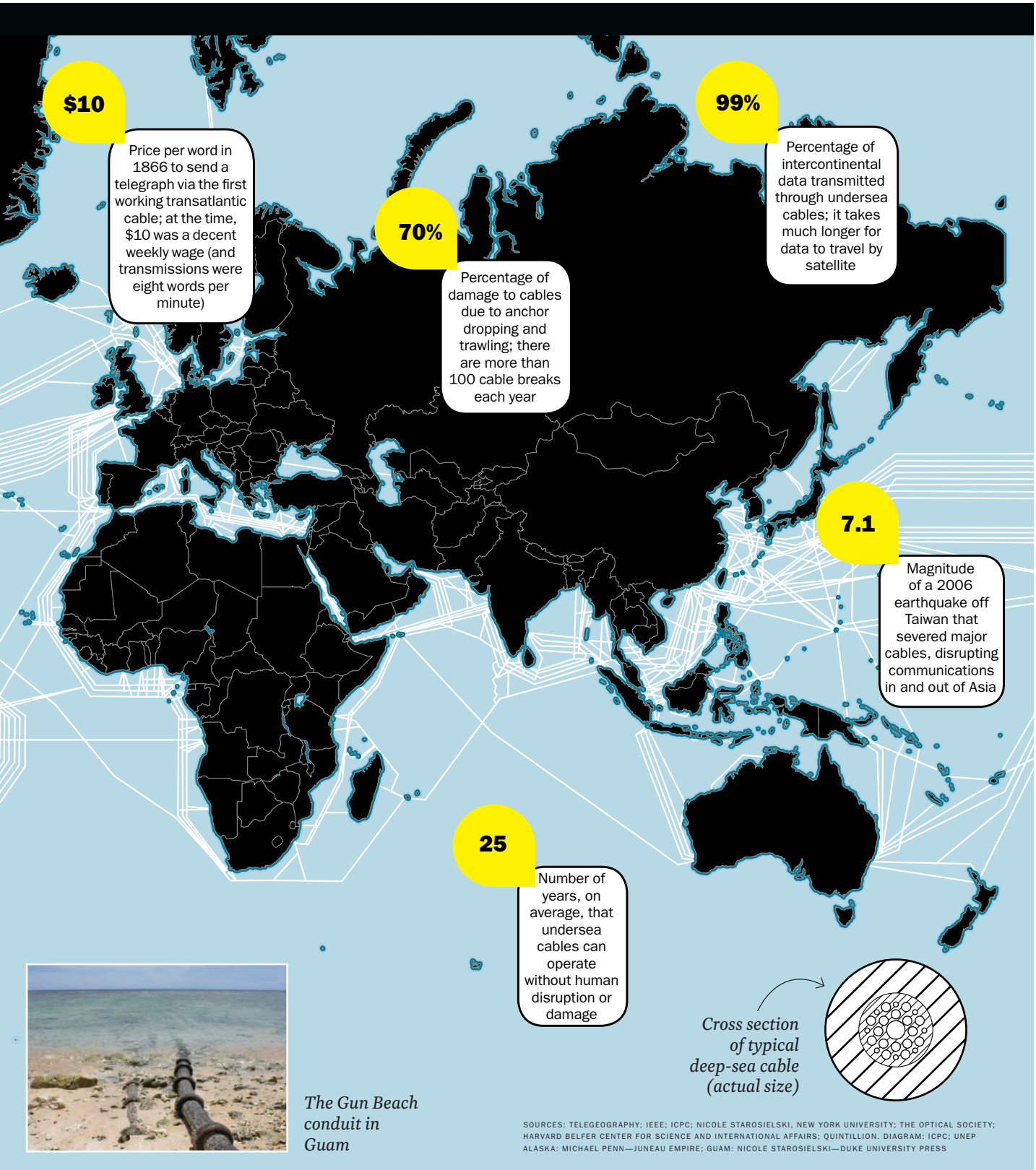
That could change soon. With global warming melting Arctic sea ice, the Northwest Passage is open to ships laying a cable from Asia to Europe. This will speed transmission for financial traders who care about milliseconds—and potentially allow a path for future lines to avoid routine U.S. surveillance.

The most vulnerable point, however, may be landfall. A 2012 Harvard study warned that the terminals where cables come together onshore were vulnerable to hackers or foreign penetration and should get the same level of security as nuclear installations.

—KARL VICK *and* EMILY BARONE



Tethers for deep-sea cables laid in Alaska in September



The Gun Beach conduit in Guam

SOURCES: TELEGEOGRAPHY; IEEE; ICPC; NICOLE STAROSIELSKI, NEW YORK UNIVERSITY; THE OPTICAL SOCIETY; HARVARD BELFER CENTER FOR SCIENCE AND INTERNATIONAL AFFAIRS; QUINTILLION. DIAGRAM: ICPC; UNEP
ALASKA: MICHAEL PENN—JUNEAU EMPIRE; GUAM: NICOLE STAROSIELSKI—DUKE UNIVERSITY PRESS

Running mates from the past prove the need for a new politics of the future

By Joe Klein

THE MOST INTERESTING THING ABOUT TIM KAINE AND Mike Pence is that they represent parties that no longer exist. Kaine is a moderate Democrat in a party hijacked by the Bernie Sanders left. Pence is an old-fashioned conservative in a party hijacked by Donald Trump populism. Left to their own devices, they might have engaged in the civilized, well-informed, stultifying arguments that we've been seeing for years. But both were forced to focus most of their attention on the two heavyweight contenders, Hillary Clinton and Trump, and neither did a particularly good job of it—though Pence got the better of Kaine by being calmer, less intrusive, the exact opposite of his obnoxious ticket partner. Whoever told Kaine that he had to be aggressive, interrupt constantly and focus on Trump's insanities gave him very bad advice.

BUT THERE WERE THINGS to learn in the vice-presidential debate at Virginia's Longwood University, and the most immediate was how stale the old political arguments have become. This was drilled home in the first 20 minutes, when Kaine and Pence took traditionally Democratic and Republican positions on the economy. Kaine: more "investment"—a brilliantly focus-grouped word—to build the economy. Pence: more tax breaks to liberate the economy. Both arguments creak with age and disingenuousness. Thirty years of experience has shown that tax breaks don't stimulate anything except budget deficits. Fifty years of government attempts to expand the welfare state have proven inconclusive at best.

Are you bored yet? I suspect that most Americans were bludgeoned into a stupor by this endless conflict—and by the equally endless argument about American intervention overseas, and by the use of shopworn, abstract market-tested words. That is why voters turned to Sanders and Trump in 2016, for their entertainment value, their focus on domestic challenges, not international military adventures, and their promise of *yuuge* spending on infrastructure programs, which everybody seems to like—except for traditional conservatives like Pence, who didn't mention it once. Pence adhered closely to the old GOP orthodoxy of strength abroad, contradicting just about everything Trump has said about foreign policy. He even criticized Trump's good buddy, Vladimir Putin, as "small and bullying." Kaine didn't have much to say about policy. He was too busy overdoing a good thing, the recitation of Trumpian outrages.

It occurred to me that it might be fun, and edifying, to watch a well-prepared politician with Trump's positions debate Clinton. We saw a glimpse of it in the first presidential debate, when Trump hammered Clinton on trade—an issue on which he is largely wrong, but devastatingly simple. We also saw a glimpse of it when Pence hit Clinton for calling the Charlotte, N.C., shooting of a uncooperative black man, who was probably armed, by a black cop an example of "implicit bias." Kaine responded to this well, citing Senator Tim Scott, an African-American Republican from South Carolina, who gave a moving speech about all the times he'd been stopped for no reason. But Clinton's claim of race bias had been wrong in Charlotte. That sort of racial broad-brushing could be easily refuted by a disciplined opponent.

We won't be seeing such an opponent this year, of course. We will be seeing the sensationally damaged Mr. Trump. And while Kaine's efforts to horse-collar Pence with the Tao of Trump grew tiring, they were not ineffective. Kaine was right: Pence didn't make much of an effort to defend the guy—except to maintain that Trump had never said those things, which was not true. "He's not a polished politician," Pence said finally, waving the white flag. True enough: he is a polished demagogue.

IF NOTHING ELSE, the Kaine-Pence debate answered a major question of this election year: Is Trump the beginning or the end of something? It seems clear, watching two conventional politicians grapple with each other, that the old arguments, and the old ways of arguing, have run their course. We may never again see anything like the conventional Obama-Romney debates of four years ago. Traditional Republicanism has been demolished by Trump. Focus-tested rhetoric, the way Clinton speaks, has been demolished too.

I'm not sure what the parties of the future, and their debates, will look like. It is possible that rudeness and spectacular lies will be the new normal. But it is also possible that a version of Mike Pence's studied calm, and a new brace of policies that speak fresh sense to the American people, will be coming too. ◻

SAME OLD, SAME OLD

PENCE
"They're going to raise your taxes. We're going to cut your taxes."

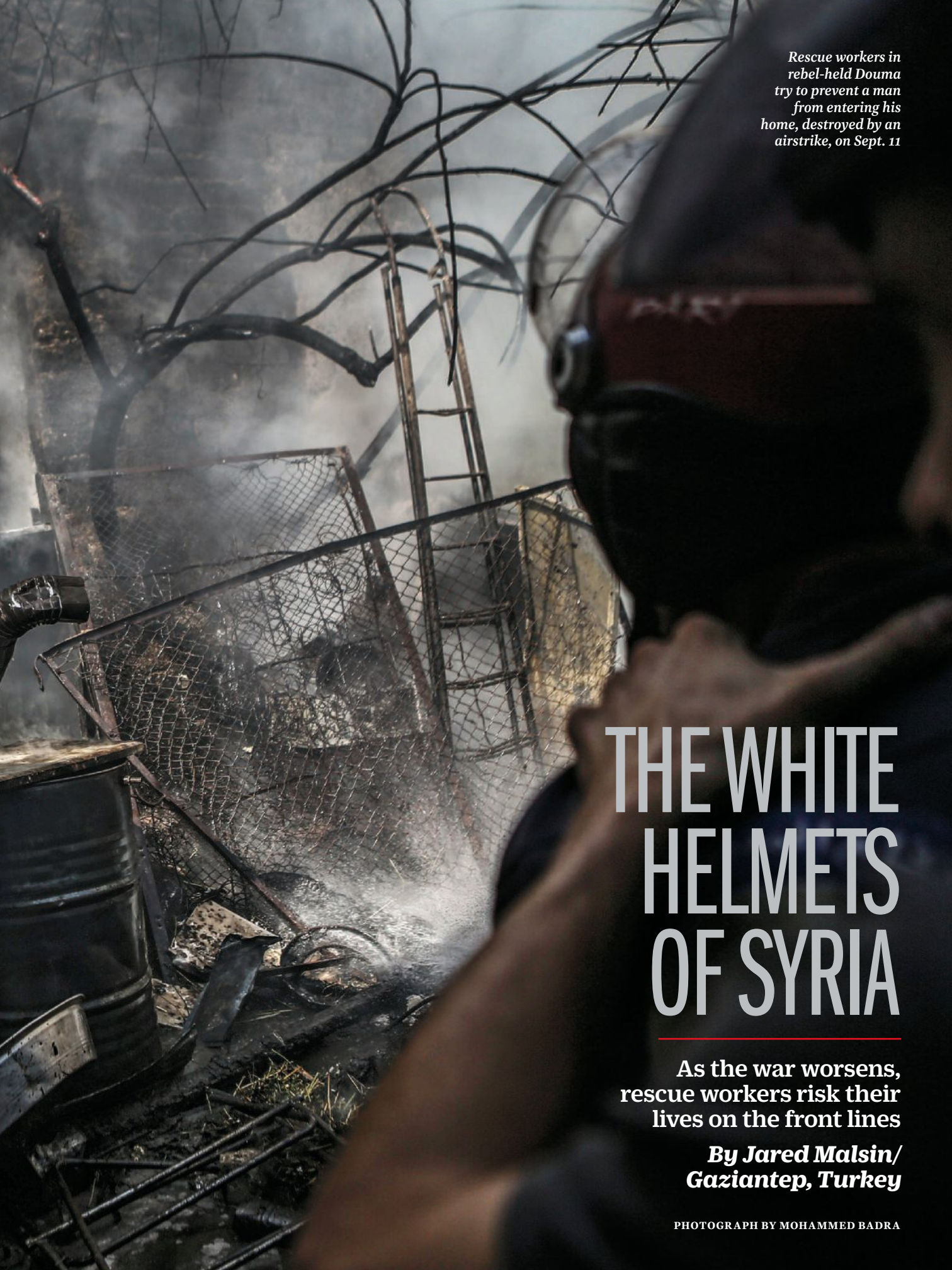
KAINE
"The first thing we do is we invest in manufacturing, infrastructure and research in the clean-energy jobs of tomorrow."

PENCE, KAINE: GETTY IMAGES

Let’s write the future
with remote performance diagnostics that keep fleets sailing.

ABB’s family of Azipod ship propulsion systems has logged over 12 million operating hours. Today, we provide more than 650 connected vessels around the world with live system optimization and technical support from our Integrated Operations Centers. Welcome to a new era of maritime industry. Discover more at **abb.com/future**

ABB



Rescue workers in rebel-held Douma try to prevent a man from entering his home, destroyed by an airstrike, on Sept. 11

THE WHITE HELMETS OF SYRIA

As the war worsens, rescue workers risk their lives on the front lines

By Jared Malsin/ Gaziantep, Turkey

PHOTOGRAPH BY MOHAMMED BADRA

IN SYRIA, IT'S BEEN ALL TOO EASY TO LOSE THE PLOT. THINGS BEGAN SIMPLY ENOUGH, ANOTHER PROMISING BUD IN THE ARAB SPRING—ORDINARY CITIZENS MARCHING PEACEFULLY AGAINST A MIDDLE EASTERN DESPOT.

It was a heart-lifting display, maybe a bit tardy after the movements in Tunisia, Egypt, Bahrain, Yemen and Libya, but you certainly knew whom to cheer for. The good guys were in plain sight, chanting "Freedom" and "Peace" from orderly rows. Until the government forces opened fire.

But as the crowds scattered for cover and, before long, took up arms themselves, what steadily enveloped the conflict was not so much the fog of war as its miasma. Opposition to the regime of Syrian President Bashar Assad shattered into more than 1,000 armed groups. The most successful gathered under the banner of jihadism, either al-Qaeda or eventually ISIS, its even more repugnant spin-off. There's nothing to like there. Then the neighbors started in, sending guns or money or troops—Iran, Russia, Hizballah, Saudi Arabia, Qatar, Turkey and finally the U.S.

All wars produce confusion—for chaos, nothing else comes close—but even the most brutal contests produce a glimmer of hope, or at least some sense of what is driving people to put their lives on the line. Yet to outsiders, 5½ years of revolution and war in Syria might appear to have produced mostly villains, along with refugees and numbing images of suffering on a blasted landscape that recalls Stalingrad.

Enter the White Helmets. Ordinary Syrians emerged from the dust that hangs over the rubble of cities like Aleppo, double-timing it into some of the most dangerous places on earth to do what the world has refused to do—save Syrian lives.

In a war that seemed to have no one to pull for, here was Khaled Omar retrieving a 10-day-old baby from the boulders that had been his mother's home, still alive after hours beneath the rubble. (Omar would live only another year; he was killed by a mortar this August.) Here was an unnamed rescuer setting Omran Daqneesh into the bright orange seat in the back of an ambulance, encased in powdery grit and shock after yet another an airstrike. And here, safe and sound in New York City, was Raed Saleh, head of the White Helmets, working the sidelines of the U.N. General Assembly but eager to return to the place where over 140 of his colleagues have perished saving what they estimate to be 60,000 of their neighbors. "At the end of the day, this is my country," he says.

The White Helmets work across the shattered interior of Syria, wherever Assad's aircraft roll out barrel bombs or Russian fighters direct their missiles. But more and more, that work is in Aleppo. The country's largest city, it is where the forces of Assad and his allies are ramping up for a possibly titanic assault. As many as 300,000 people are living under siege in the city's eastern section, which the rebels have held since the early days of the war, but are now cut off from the countryside beyond.

It has become the signature battleground of the conflict. In the days before a cease-fire negotiated by Russia and the U.S. went (briefly) into effect, its rebel-held neighborhoods endured shattering assaults as regime forces strove to make the most of a closing window for action. And when, after just a few days, the truce was blown to smithereens, the assault resumed, relentlessly: 1,700 airstrikes over the next eight days alone. On some days, they come every few minutes. And there is every reason to believe the attacks will grow. The one that finally shattered the cease-fire was an hours-long turkey shoot on a badly needed humanitarian-aid convoy organized by the U.N.

"Some of us looking at the conflict from the West have consistently underestimated the capacity for bloodshed in Syria to worsen," says Noah Bonsey, a senior Syria analyst at the International Crisis Group. "There's a temptation to think, Well, it can't get any worse. And yet repeatedly it has gotten worse. And I think there's a lesson there. There's no reason to believe this will be as bad as things get."

> 'I think there's a lesson there. There's no reason to believe this will be as bad as things get.'
>
> NOAH BONSEY, Syria analyst at the International Crisis Group

WHEN THE UPRISING BEGAN, Ammar Salmo was teaching English in the town of Safira, southeast of Aleppo. He joined the protests against the Assad regime in 2011, and after one demonstration, in June of that year, police arrested him at his home. He spent about a month in prison until his father paid a bribe equivalent to about $10,000 to free him. When the regime withdrew from the

town, he and other activists helped restore services in the area. Their work became another nucleus of civil defense.

They drew volunteers from a wide spectrum of Syrians: there were teachers and tailors, firefighters who defected from regime-controlled fire departments. (Saleh, the group's chief, was an electronics salesman.) Even militants who had fought in the armed rebellion set aside their weapons to join the White Helmets. From that disparate set of local groups grew a unified national organization that now claims more than 3,000 volunteers in rebel-held areas across the country. (Media associated with Assad or Russia have accused the White Helmets of links with militant groups, but the group's leaders say all their staff are civilians, and the White Helmets' code of conduct forbids taking up arms.) With initial funding from the U.S., the U.K. and Japan, a consulting firm called ARK began organizing training for the rescue teams in neighboring Turkey in March 2013.

The curriculum now covers the full range of hazards that the rescue teams encounter in Syria: how to search collapsed buildings, how to put out fires, how to handle unexploded bombs, what to do in a chemical attack. When the shells fall or an airstrike hits, they run in the direction of the destruction. The White Helmets' credo is a quotation from the Quran: "Whoever saves one life, saves all of humanity."

Three members of the White Helmets arrive at the site of an airstrike in Douma on Oct. 5

"What happened right now in Syria—it's madness," Salmo says during a meeting in late September in Turkey, where he has traveled after being trapped outside Aleppo, when proregime forces surrounded the rebel-held section of the city over the summer. "Because no one can believe what happens. Groups of aircraft shell and shell and shell without stopping. Even sometimes we ask if this fighter or pilot, doesn't this pilot want to drink a tea, to see his family? Why is he still in the sky?"

Salmo, 31, has a round face, a black beard and dark circles under his eyes. He heads the White Helmets' operations in Aleppo, though he is working now in the group's sparsely furnished coordination office in the Turkish city of Gaziantep, near the Syrian border. Salmo paces the floor, checking his phone relentlessly. A stream of messages flickers across the screen.

His colleagues in Aleppo are reeling from the latest spate of airstrikes. On Sept. 23, airstrikes by the regime or Russia—neither the opposition groups nor Islamic extremist groups like ISIS possesses air power—hit three of the White Helmets' four centers in Aleppo. His colleagues need to find new buildings. They need to replace cars and trucks destroyed in the airstrikes. In a city under siege, where basic materials are growing scarce, they need to somehow find fuel for their vehicles, so that they can race to the scene of the next bombing, and the one after that.

Another text message arrives. A relative in Aleppo informs Salmo his uncle has been killed in the shelling. Salmo grimaces, explaining that he had stayed with his uncle the last night he spent in the city over the summer. A week later Salmo will return to Syria, and he is bracing for more death. In a nation of 22 million, more than 400,000 people have been killed so far.

The White Helmets have their roots in the 2011 popular uprising. When the protests began, the regime answered with force, torturing protesters and firing on demonstrations. It wasn't long before demonstrations turned to armed rebellion. Rebel groups wrested control of Syria's towns and cities from the government, and the regime responded by targeting the life-sustaining infrastructure in areas captured by the rebels. When the conflict was still mostly fought in slogans, a favorite of regime supporters was also a threat: "Assad, or we burn the country."

That choice has been made. "When you are walking in the streets, you feel like, O.K., there's no street, you cannot walk because the rubble, the garbage, the water, the electricity. They were doing it by intention—the regime did it by intention," says Gardenia, an activist from the southern Syrian city of Dara'a, where the first large protests broke out. Now with the White Helmets support staff in Istanbul, she asked TIME to be identified by a pseudonym for fear of reprisal.

Local civil-defense groups went to work filling the vacuum left by the regime: reconnecting electricity and water, assessing medical needs, disposing of the dead. It was a humanitarian experiment in revolutionary self-organization—the skeleton of an alternate government establishing itself across much of Syria as the war dragged on from months to years, a shared enterprise that convened disparate

PREVIOUS PAGES: EPA; THIS PAGE: MOHAMMED BADRA—EPA FOR TIME

opposition groups and demonstrated that, absent Assad, Syrians could govern themselves.

That structure was largely destroyed—along with many of the physical buildings in rebel-occupied territory—by aircraft serving an Assad regime that fought in the same way it had governed before the war: aiming to strike fear into the population. Before the war, the Assad regime's primary tool was the all-powerful secret police, whose every glance implied the possibility of interrogation and torture, a knowledge that had penetrated every Syrian and coerced obedience. Now the tools are barrel bombs, explosives rolled out of helicopters or warplanes. The targets, significantly, are seldom rebel military positions held by the fighters known as the Free Syrian Army, also referred to as the FSA, nor are they the forces of Islamist militant groups like ISIS. The targets are residential neighborhoods far from the front lines. The aim is to force the city's population to capitulate and undermine support for the rebels. It's kneel or be crushed.

"There are losses on the front lines at different points," says Zakariya Malahifji, a political officer for one of the largest groups affiliated with the FSA. "FSA members are being killed and injured. But the big losses are among civilians."

Hospitals are another favorite target. Four were hit in as many days starting Sept. 30, according to the humanitarian group Médecins Sans Frontières. On Oct. 1, seven consecutive airstrikes hit Aleppo's largest hospital, code-named M10, over the course of one morning, killing two patients and forcing its temporary closure. The next day the shuttered hospital was hit again while being repaired. U.N. humanitarian chief Stephen O'Brien said in testimony to the U.N. Security Council, even before the first of those bombs fell, that eastern Aleppo's health sector is "on the verge of total collapse."

The White Helmets have become prime targets themselves. In recent months, after regime or Russian aircraft strike an apartment block, they circle back to make a run at the first responders who have scrambled to aid survivors. Many of the 141 White Helmets who have been killed in Syria perished in these so-called two-tap strikes, which have forced rescuers to delay their arrival at bomb sites, and with it lengthens the time before the wounded can be carried to the hospital.

What comes next seems ominously clear. The prospects for a truce, never strong, faded further after U.S. warplanes on Sept. 17 killed 62 of Assad's troops—in what Washington said was a mistake—instead of the ISIS forces they were supposed to hit. The Syrian military announced the end of the cease-fire on Sept. 19, and that night it (or its Russian allies, or both) struck a warehouse in the Aleppo countryside operated by the Syrian Arab Red Crescent. The assault destroyed a convoy of trucks that was loaded with food and health supplies for more than 78,000 civilians.

As the convoy's mission had been carefully coordinated, both with rebel groups and the Damascus government, the assault was no accident; it went on for more than two hours. Some 20 people were killed. U.N. Secretary-General Ban Ki-moon used his farewell address to the General Assembly on Sept. 20 to denounce a "sickening, savage and apparently deliberate attack." Meanwhile, in the Security Council, where Russia has blocked international intervention in Syria since the first days of the war, U.S. Ambassador Samantha Power called out President Vladimir Putin's claim that he had sent forces into Syria to join the battle against ISIS. "What Russia is sponsoring and doing is not counterterrorism," she said. "It is barbarism."

WHEN THE CONVOY came under attack, Salmo had been drinking tea on the balcony at a civil-defense center less than a mile (1.6 km) away in the town of Orem al-Kubra, west of Aleppo. He and the other rescuers tried twice to reach the warehouse on foot but were forced to turn back because continued shelling made it too dangerous. When they made it to the site after midnight, a video camera recorded the scene. Salmo's eyes gleam from the light of the fires burning around him as he gestures with both arms at the charred piles of blankets and the smoldering building. "Pampers—aid from the U.N. to the Syrian Crescent in order to be distributed to the people," he says, waving a package of diapers.

The video was posted online by the White Helmets, whose public profile has risen markedly in recent months. The group has been mentioned as a possibility for the Nobel Peace Prize (announced Oct. 7). In September, a stirring documentary, *White Helmets,* was released on Netflix. At the same time, attention might be a double-edged sword. On Sept. 22 the group won the prestigious Right Livelihood Award, also known as the "alternative Nobel." And the next morning, airstrikes hit those three facilities in eastern Aleppo.

"If you saw the size of the crater, you'd be amazed," says Ismail Mohamed, 31, a civil-defense worker inside eastern Aleppo, by phone. He had just finished a shift and was at home when colleagues began radioing for help. "It looked like judgment day took place there," he says. "Thank God no one was killed."

The attacks have cut down the White Helmets' capacity for relief at a moment when demand for their services was higher than ever. Two civil centers—bases out of which the White Helmets operate—were taken offline entirely. The workshop where they maintain their ambulances was knocked out of service altogether. As a result,

ALEPPO'S DESCENT
The long-traumatized Syrian city has seen violence escalate over the past month

March 2011
The first antigovernment protests take place in Damascus, Dara'a and elsewhere

July 2012
The Free Syrian Army seizes Aleppo, beginning an ongoing battle for the city

Early 2013
The White Helmets are formed

September 2015
Russia launches airstrikes on the city in support of Assad

September 2016
The White Helmets' Aleppo bases become the target of heavy bombing attacks

AMEER ALHALBI—AFP/GETTY IMAGES

Members of the White Helmets evacuate a baby on April 28 from a building destroyed by an airstrike in Aleppo

White Helmet teams in Aleppo are now in a position where they respond only to strikes where there is evidence that living people are trapped under the rubble. Only if they have time, given their scant resources, do the White Helmets then go to retrieve the bodies of the dead. It's a painful choice—in Islamic tradition, burial should follow as soon as possible after death.

"The civil-defense members are exhausted," says Mohamed, the rescue worker in Aleppo. "Whenever they finish taking the rubble away from one place that witnessed shelling, they get called immediately to go to somewhere else."

With Aleppo now at center stage, at least the world's attention is being directed to the core of the conflict. For many people, especially those in the West, the Syrian civil war has become primarily about jihadism. ISIS is perceived as a clear and present threat to the U.S. and Europe, having transformed extremism into a movement and made terrorism a self-starting enterprise.

But within Syria itself, ISIS amounts to a kind of distraction—one that Assad both welcomes and has actually enabled, by freeing jihadists from his jails as the civil war began, to make good on his vocal warnings that any opposition to his regime would open the door to terrorists. For all Assad's talk about fighting terrorism, the two armies rarely fight each other, though they have done business; once ISIS gained control of oil fields, Assad's government became a paying customer.

In terms of killing within Syria, however, ISIS is no match for Assad's side, which is responsible for considerable casualties. In 2015, Syrian government forces and their allies killed eight times as many people in Syria as did ISIS. Observers say most of those victims were civilians, taken by the bombs that, regardless of whom they are targeting, are also dropped on the people rushing to rescue those very civilians, and on the undersupplied hospitals where they are taken for help.

These are war crimes, but no international tribunal has yet convened to address them. It was at U.N. headquarters that an al-Jazeera English reporter asked Syria's Ambassador Bashar Jaafari, "Ambassador, did you bomb the two hospitals in Aleppo?" Jaafari laughed and walked right past.

After refusing to intervene with troops and airstrikes against Assad when the conflict in Syria started, President Barack Obama now says he is "deeply haunted" by the events there. His critics on the left and right say his inaction left the field open for Russia's brutal alliance with Assad, and they call for U.S.-enforced no-fly zones and safe havens in the country—something the White Helmets have called for as well. But Obama continues to resist arguments—humanitarian, tactical or strategic—from senior Administration officials who want to add regime forces to the target list in Syria, where U.S. warplanes have rained bombs on ISIS for two years. On Oct. 3, Washington announced that it would suspend talks with Russia over Syria, another dead end for diplomatic hopes. Obama argues that steps short of a full-fledged invasion wouldn't stop the slaughter of civilians and would risk drawing the U.S. into a bloody quagmire. "You have to make judgments about what is best for the national-security interests of the United States," Obama told a CNN interviewer on Sept. 28, "even though what you see is heartbreaking."

50

Number of bombs and mortars landing each day on hard-hit neighborhoods in Syria

141

Number of White Helmets killed in action

2,900

Number of volunteers in the White Helmets, including bakers, tailors, pharmacists, carpenters and students

60,000

Number of people saved by the White Helmets

SOURCE: WHITEHELMETS.ORG

THAT MEANS THAT FOR NOW, the people of Aleppo's besieged east side are alone in their crisis, alone in their suffering—and they know it. According to the World Health Organization, in the week ending on Sept. 30, at least 338 Aleppo residents were killed, a total that includes at least 106 children, one or two of whose bodies surely unsettled a few thousand viewers on YouTube. Airstrikes also hit a key water-pumping station, a bakery where dozens of people were queuing to buy bread as well as those four hospitals—the ones to which bloodied civilians had been rushed.

Today, there is no electricity in much of the rebel sector, and at night terrified families huddle together in the dark as the shelling lights up the sky. "I believe the international community let us down and did nothing to stop Russia and Assad's massacres," says Najmaldin Khaled, 30, a teacher living in the area under siege. "We are dying every minute, every hour."

And every minute, every hour, those who do not die, but are hurt and hidden and incapacitated by rubble, will be reached by their neighbors, men clad in the jumpsuit of the first responder and protected by headgear that has already grown iconic: the White Helmets. Most important of all, they are Syrians, and in the most elemental way they are retaking ownership of a conflict that has cast them as victims, hapless pawns of jihadist ideologues or something else other than people who organize, care for and govern themselves.

Every time the White Helmets scramble toward the sound of bombs, those heroes of Aleppo reassert the quality that will finally end the war—a unifying national identity that has seemed lost to the sectarian bigots or regional rivals that are pulling their country apart.

The White Helmets go out, of course, for one another, but because they so badly want the world to see what they see, they also post images and video of it online, via Twitter and Instagram and other social media. As one hashtag reads, #ThisIsWhyWeRevolted. —*With reporting by* KARL VICK/NEW YORK *and* MASSIMO CALABRESI/WASHINGTON

SHERYL **SANDBERG**
COO, FACEBOOK

PRISCILLA **CHAN**
CO-FOUNDER, CHAN ZUCKERBERG INITIATIVE

IVANKA **TRUMP**
EVP, THE TRUMP ORGANIZATION

ANITA **HILL**
PROFESSOR, BRANDEIS UNIVERSITY

CHELSEA **HANDLER**
SERIES HOST, NETFLIX

RUTH **PORAT**
CFO, GOOGLE/ALPHABET

SUSAN **WOJCICKI**
CEO, YOUTUBE

ANGELA **AHRENDTS**
SVP, APPLE

GINNI **ROMETTY**
CEO, IBM

WATCH
LIVE
OCT 17-19
ON FORTUNE.COM

FORTUNE
THE MOST
POWERFUL
WOMEN
SUMMIT

Where Influencers go to be Influenced.

THE TRUTH IS OUT THERE

Way out. In 2016, political debate has become unhinged from reality. And it won't stop on Election Day

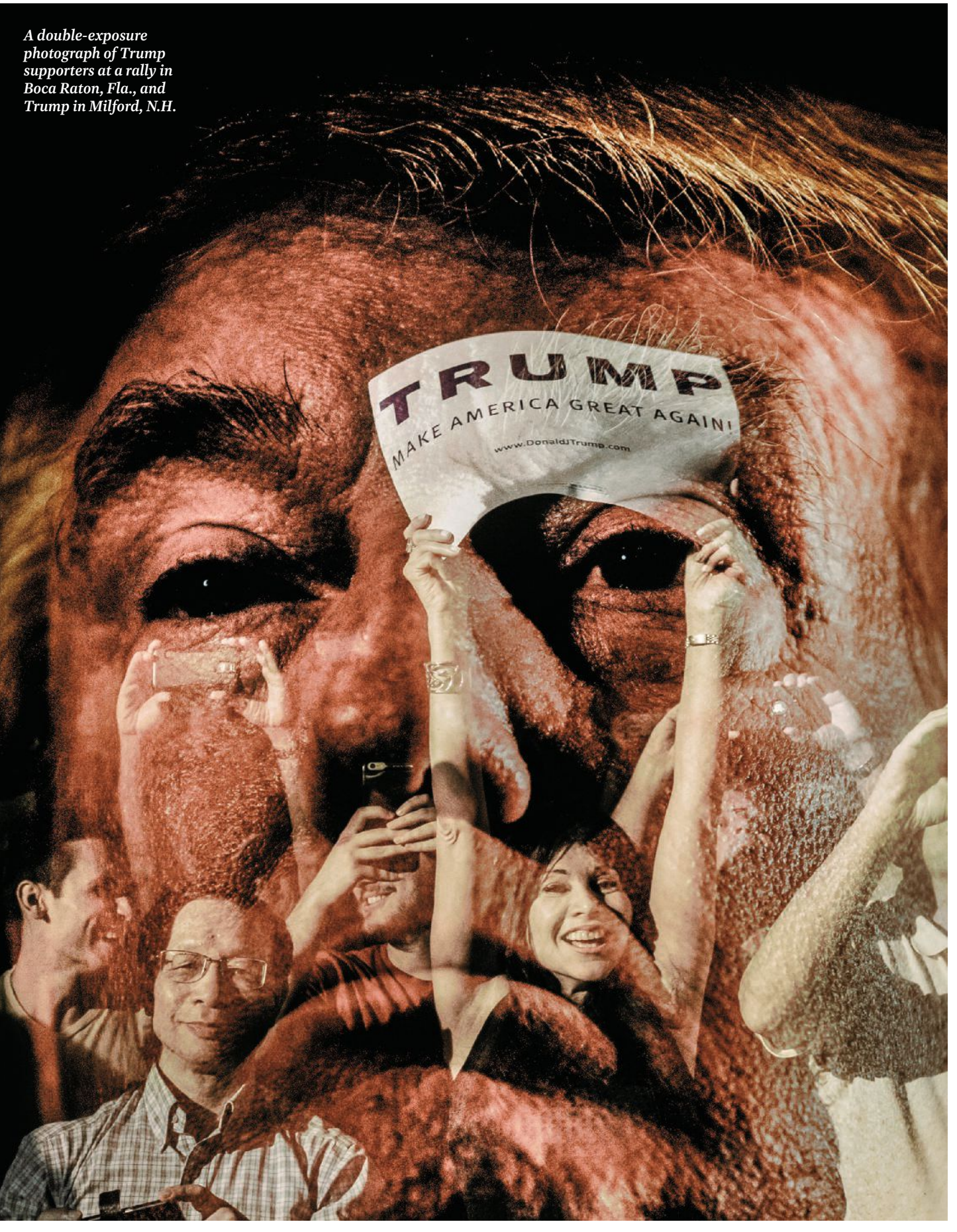
By Charlotte Alter and Michael Scherer

ALLAN THIEL LIKES TO STAY INFORMED. THAT'S how he knows that President Barack Obama is a foreign-born Muslim who cheated his way into the presidency in order to promote a globalist "utopia." A retired factory worker and born-again Christian, he waits on the floor of the Greenville, N.C., convention center for Donald Trump to take the stage, holding up his phone so others can see the latest headline he had just read: "Obama Announces Plans for a Third Term Presidential Run."

The story is not true. But right now, in this moment, Thiel believes it, just as he believes that climate change is a hoax, that Islam is being promoted in American schools and that the government has been bought out by drug cartels. He says that "people aren't being taught history anymore" and "they've dumbed everybody down." As the campaign soundtrack roars and the energy builds, he offers a version of American history that cannot be found in the historical record. "Our country has never had any problems for the last 200 years," he says, shaking his head. "We've never had a problem with guns or racism until the last eight years."

To simply grade the accuracy of Thiel's statements misses the point, because Thiel's beliefs do matter. They show up in double digits in national polls and belong to a reality shared by many Trump supporters TIME interviewed in North Carolina over a few days in September. Here you find deep frustration with the state of the nation, the direction of the economy, the consequence of global trade and the prospect of a President Hillary Clinton. But in dozens of interviews, voters also made arguments built on claims unsupported by facts, often peddling debunked conspiracy theory as plausible truth.

"I never once in history have seen white people riot," says Adam Watkins, a white Trump supporter chatting in nearby Wilmington, N.C., the day of the rally. As it happens, Wilmington was the site of one of the nation's most famous race riots, when hundreds of whites overthrew the elected government in 1898, killed more than a dozen black residents



A double-exposure photograph of Trump supporters at a rally in Boca Raton, Fla., and Trump in Milford, N.H.

PHOTOGRAPHS BY MARK ABRAMSON FOR TIME

and burned down the offices of the only local black newspaper. There is a monument in the center of town commemorating the event. "In the 1960s they had a lot of riots involving black people," Watkins continues. "No whites."

At a nearby café, Roxanne Noble, a registered nurse, calmly explains over an egg sandwich why she can't ever vote Clinton: Vince Foster, a onetime White House aide, was murdered to hide the Clintons' secrets. "I have followed the corruption, the deaths of people working with her," she says. "How could anyone who has educated themselves vote for this person?"

Five official investigations—by U.S. Park Police, the Justice Department, House Republicans, Senate Democrats and special prosecutor Kenneth Starr—ruled Foster's death a suicide. But there are thousands of web pages that describe fanciful Foster murder-plot conspiracies.

More crucially, Donald Trump, the GOP presidential nominee, has spent years regularly encouraging his followers to doubt much of what is known to be true: that the earth is warming, that Obama was born in the U.S., that the FBI's decision not to prosecute Hillary Clinton follows prosecutorial precedent. After losing the first presidential debate in September by every scientific measure, Trump and his campaign spent days promoting unscientific reader surveys, including one by TIME, to lay a claim to victory. And back in May, Trump even made common cause with Noble, declaring that Foster's death was "very fishy." "I will say there are people who continue to bring it up because they think it was absolutely a murder," Trump said.

No presidential candidate in modern memory has played footsie with fantasy like this during a campaign. But for Trump, casting doubt on what is demonstrably real and lending credence to what is not has become a core appeal of his campaign. Democratic societies function on faith in strangers—in police and judges to do their job without fear or favor; in government agencies to fairly enforce laws; and in experts of all stripes, from scientists to journalists to economists, to accurately report on what is happening in the world. Trump's central argument is that faith has been lost, and he has put himself forward as the only solution. "We will never fix our rigged system by relying on the people who rigged it in the first place," he says, when he takes the stage in Greenville.

One of the first casualties of this worldview is the very ability to have a national debate with a common set of facts. When Trump talks about a rigged system, he is not just accusing Clinton of corruption. He is talking about the institutions that facilitate democracy: Election Day poll workers, who he says may try to swing the election for Clinton; the Federal Reserve, which he has accused of favoring Obama; the debate moderators, who he has falsely accused of being Democrats; and the rest of the national press, including the pages you are reading right now, which he claims function as agents of the established elite. "She is being protected by the media, by the press, like nobody has ever been protected in the history of this country," he tells the Greenville crowd. "Me on the other hand, it's a total pile-on."

So it makes sense when Thiel grabs hold of the new headline on his cell phone on the convention floor. The false story about Obama's plans to abolish the 22nd Amendment appears to have originated about two years ago on a satirical site called the National Report, which publishes hoax headlines like "ISIS Claims Responsibility for Sinking *Titanic*." But in a world where nothing and no one can be trusted, the site looks just as real as anything else. In Trump's America, if people are saying it, it might be true.

CAMPAIGN UNREALITY

'Hillary Clinton and her campaign of 2008 started the birther controversy. I finished it.'

Trump, at a press conference Sept. 16 at the new Trump International Hotel in Washington

FOUR YEARS AGO, the nation was embroiled in a very similar argument over the role of truth and accuracy in a presidential election. The campaigns of Barack Obama and Mitt Romney accused each other of lying to voters, and fact checkers said the misstatements were as bad as they had ever seen. On balance, Romney's deceptions were frequently more brazen, but Obama was not innocent. He made the false charge that Romney wanted to outlaw abortion in all cases a centerpiece of his campaign.

But the truth wars of 2012 now seem quaint in retrospect. The fibs mostly concerned policy, and both candidates limited their criticisms of the press, politely working the referees on the sidelines.

Since the country's founding, pamphleteers have spread lies to influence voters before elections. But in 2012, it became clear that there was no institution that could enforce norms of truth telling during the campaign. Fact checkers could rule that a candidate had his pants on fire, but voters would be far more likely to hear the deception in a campaign ad than the judgment in a newspaper.

No one was better prepared to exploit this systemic weakness than Trump, a salesman who had long become comfortable with manipulating reality and dabbling in falsehood. In his first book, *The Art of the Deal,* he boasted of the value of "truthful hyperbole," and in sworn depositions through the years, he had been rather transparent about how he understands the fungibility of facts. Whereas most politicians recoil from the public shame that comes with inaccuracy, Trump had taken the opposite lesson.

Reality, he argued under oath in a 2007 deposition, could be up to him. "My net worth fluctuates, and it goes up and down with markets and with attitudes and with feelings, even my own feelings," he said.

Trump has long done business this way. Just as a condo salesman can make a building more valuable with a pitch that attracts a higher price, Trump's rise to political prominence depended on embracing fantasies early on. And he did it with techniques that politicians have long avoided: He would conflate sources to make incredible information seem credible. He would use sarcasm to insert falsehoods into the public mind, joking most recently about the possibility, unsupported by any evidence, that Hillary Clinton had been unfaithful to her husband. And he would disavow authorship of the lies he shared. After he retweeted the racist libel that blacks kill more than 80% of white murder victims, he refused to correct the information. "There's a big difference between a tweet and a retweet," he told TIME.

For her part, Clinton has been caught misleading voters about her email arrangement, her handling of classified information and her policy prescriptions. But her violations are of a different kind than those of Trump, whose favorite arguments are often the stuff of fiction. He says he opposed the Iraq War before it began, even though his only public utterances at the time were supportive. He insinuated that "thousands and thousands" of Muslims in New Jersey had celebrated on Sept. 11, which did not happen.

"What we are realizing is how much of the normal behavior of campaigns is determined by norms," says Brendan Nyhan, a political scientist at Dartmouth who has long studied the issue of accuracy in politics. "The system isn't built to withstand a presidential campaign like his."

In the final weeks of the campaign, such falsehoods can easily dominate a news cycle. But their biggest impact probably occurred before he started his campaign. For years, starting in 2011, Trump spread doubts about Obama's birthplace in Hawaii, a charge designed to dismiss the nation's first black President as a potential foreigner. In September, Trump finally denounced his own birther crusade, only to replace it with another deception: that it was Clinton and her 2008 campaign that started the birther movement, which they did not.

CAMPAIGN UNREALITY

'Obama's talking about all of this with the global warming and ... a lot of it's a hoax, it's a hoax. I mean, it's a moneymaking industry, O.K.? It's a hoax.'

Trump, at a Dec. 30 rally in Hilton Head, S.C.

Though Trump now admits the truth of Obama's birth, the damage has been done. One Trump supporter in Fayetteville, N.C., who later asked not to be named, tried to settle an argument last month over Obama's birth by asking his phone's virtual assistant where the President was born. When the woman's voice answered with the name of the hospital on Hawaii, he rolled his eyes, asked again and got the same response. Frustrated, he threw his phone down on the counter. Polls have consistently shown that 20% of Americans refuse to accept that Obama was born in the U.S.

TRUMP MAY HAVE BECOME a champion of an alternate reality, but his claims have taken flight at a time when the nation has lost the common public spaces where we once debated our future. In late September, the conservative website Breitbart got hold of a nearly 500-page report from the National Academies of Sciences, Engineering and Medicine about the economic consequences of immigration. Breitbart, which was recently run by Stephen Bannon, Trump's current campaign CEO, cherry-picked a statistic from a theoretical section of the report to produce this headline: "National Academies Study Shows $500 Billion Immigration Tax on Working Americans."

The report's authors quickly explained that that calculation failed to take into account the full impact of the economic effects of immigrants on American wealth. But depending on how the news comes to your smartphone, you might have seen that headline or the contradictory ones that most news organizations used, reflecting the report's final conclusion. "Immigrants Aren't Taking Americans' Jobs, New Study Finds," ran the New York *Times*.

If you're well versed in the subtleties of 2016 media, you'd know about Breitbart's political leanings and take that $500 billion nugget with a boulder of salt. But if you're an ordinary American, you might not know which of these two versions is the truth: you'd just believe the one that sounds most true to you. And you might believe, as Breitbart suggested in subsequent stories, that the National Academies were trying to hide the conclusions of their own report.

It's a problem of quantity as much as quality: there is simply too much information for the public to accurately metabolize, which means that distortions—and outright falsehoods—are almost inevitable. The same technology that gives voice to millions of ordinary citizens also allows bogus information to seep into the public consciousness. Mainstream journalists are no longer trusted as gatekeepers to verify the stories that are true and kill the rumors that are false.

Which means that phony conspiracy theories are often mixed in with accurate journalism and history. Just look at former Trump adviser and conspiracy theorist Roger Stone's book *The Clintons' War on Women,* a treatise filled with conjecture and conspiracy, which has jumped to No. 27 on the Amazon bestseller list in the Presidents & Heads of State biographies category, near titles by

established historians like Jon Meacham and Doris Kearns Goodwin.

At the same time, the information revolution has eroded faith in the institutions that once served as arbiters of reality. Mainstream journalism, government reports and academic research have lost the weight of truth for much of the population. From 2006 to 2016, Americans became 10% less likely to have faith in Congress or the media. In 1958, almost three-quarters of Americans trusted the government most of the time—now, that number is down to 1 in 5. A recent Pew study found that 70% of Democrats trust climate scientists, compared with just 15% of Republicans—and only 16% of Republicans believe the factual statement that scientists are in a near unanimous consensus on climate change.

So instead of institutions, people look to their social networks for information, and social networks are where conspiracy theories thrive best, egged on by Trump's enormous social power. Passed from Facebook to Facebook, retweeted by thousands of anonymous accounts, ideas can spread quickly without verification or context. People tend to share content that gets the most extreme reactions, which means a terrifying but untrue story will be shared more widely than a mildly alarming but accurate one.

And Trump has done his best to discredit the few remaining news organizations that display any rigorous adherence to fact. He regularly tweets at the "failing @nytimes" and smears its "disgusting" and "dishonest" coverage. He calls out CNN for "phony reporting" and slams its "boring anti-Trump panelists, mostly losers in life." He is quick to attack anybody who exposes his falsehoods, painting legitimate news sources as biased and phony.

Five years ago, people could tell whether a news source was legitimate by looking at the site's home page for context. Now all the credibility of publishers is often discarded. In April, Trump announced that Ted Cruz's father was involved with Lee Harvey Oswald, the accused assassin of John F. Kennedy, based on a unsubstantiated, grainy photo published in the *National Enquirer.* "What was he doing with Lee Harvey Oswald shortly before the death?" Trump asked. "It's horrible."

In 2005, the comedian Stephen Colbert, who now hosts *The Late Show* on CBS, had mocked political deception as "truthiness," or half-truths with one foot in reality and one foot in fiction. "You know what the facts are, but you go with what feels more truthful to you," Colbert told TIME, explaining the technique.

But in recent months, Colbert, a fierce satirist of Trump, has come to believe that his old critique no longer applies: "Trump's [version] is completely divorced from reality." How does it feel to watch the new version of truthiness take over America? "How does a parent feel when their baby ends up in a police lineup?" he asks.

WHATEVER THE OUTCOME in November, none of this will end. A Clinton victory will not usher in a return to truth and accuracy or restore American faith in institutions. If anything, a Trump loss could convince his supporters that the system is just as rigged as they've been led to believe it is. Pandora's box has been opened, and once enough people believe something false, it begins to sound almost true.

CAMPAIGN UNREALITY

'His father was with Lee Harvey Oswald prior to Oswald's being, you know, shot. I mean, the whole thing is ridiculous … Nobody even brings it up. They don't even want to talk about that. That was reported, and nobody talks about it.'

Trump questioned Ted Cruz's father's connection to John F. Kennedy accused assassin Lee Harvey Oswald on *Fox & Friends,* May 3

But even people who believe the conspiracy theories still have a sense that their reality is warped. Sitting at a bar in Wilmington, N.C., Gary Wilson tries to explain his skepticism. "There's a lot of conspiracy theorists out there, and some of them are goddamn wack jobs," he says, before explaining his process for figuring out what to trust. "If I hear it from several different sources, I tend to believe it," he says. "'Let me think about that myself, let me see if I can find that one conspiracy even slightly believable.'"

The popular New World Order theory passed that litmus test: Wilson believes that global elites are conspiring with the U.N. to create a world government that will act like Big Brother to ordinary people, and that trade pacts are the first step in the process. (The U.N. is not involved in the enforcement of trade deals, which are signed as agreements between participating nations.)

"I just believe it," he says. "Where did I find my sources? Alex Jones is a good one." Jones is the host of a radio show that is an entertaining mixture of outrage and conspiracy theory; he has become a champion of Trump. At various times, Jones has claimed that the government has poisoned juice boxes to make citizens gay, that the Bush Administration was complicit in the Sept. 11 attacks and even that Trump was a secret agent working for Clinton by sinking Republican chances of winning the White House. "Your reputation is amazing," Trump said on Jones' show in December. "I will not let you down."

Wilson says he began to notice four or five years ago that 9/11 had been an inside job after "a friend of mine turned me on to a couple websites." He hates both candidates but says that if it comes down to it, he'll have to vote for Trump. "A lot of what he says is the truth. He doesn't bullsh-t," Wilson says. "He has no problem saying sh-t that me and him would be saying at the bar." And this is not a place where anyone is asked to prove their assertions. —*With reporting by* TESSA BERENSON, PHILIP ELLIOTT *and* ZEKE J. MILLER/WASHINGTON ◻


I am very sensitive to lights and sounds
Jacob Sanchez
Diagnosed with autism
Ad Council
Sensory sensitivity is a sign of autism.
Learn the others at autismspeaks.org/signs.
AUTISM SPEAKS

New frontiers in breast cancer

By Alice Park

TERRIFYING AS THE *C* WORD CAN BE, breast cancer today means something very different than it did a decade ago. Doctors know more than ever about what causes cancer in the first place and when it's best to screen for the disease as well as which cancers are more likely to spread aggressively and which may be able to be monitored and left alone. This knowledge will only grow more refined in the years to come, thanks in part to a handful of landmark studies launched this year.

Mounting evidence shows that the tendency to respond to every breast cancer with every treatment option available—surgery, chemotherapy, radiation—isn't always necessary, takes a toll in serious side effects and rarely adds years to women's lives. This is especially critical as doctors learn that not all lesions in the breast can spread—particularly those in Stage 0 breast cancer, or ductal carcinoma in situ—which calls into question the very idea of when a cancer really is a cancer.

"It's very difficult to get doctors or patients to accept the fact that there is cancer that doesn't need to be cured," says Dr. Otis Brawley, chief medical and scientific officer of the American Cancer Society. But that's what this new understanding of cancer is pointing toward.

Thanks to a more sophisticated view of what triggers cancer in the first place, more-detailed tools like 3-D mammography and MRIs, and genetic tumor tests that can predict the course of some cancers, the treatment options for women are better than they have been—and they will continue to improve. Ultimately, the goal is a more personalized approach to the cancer that affects nearly 250,000 U.S. women a year. Because no two breast cancers are alike, the way malignancies are detected and treated should reflect that. Here's a closer look at the three major changes shaping breast-cancer care today and down the line.

Screening becomes more tailored

For decades, the mantra around cancer has been that early detection and early treatment save lives. That led to broad recommendations for all women to get mammograms once they reached age 40—and even earlier for women with a family history of the disease.

More recently, some public-health groups have changed their advice, saying most women can begin mammograms at age 50. In order to refine our understanding of who should start screening when, Dr. Laura Esserman, a breast-cancer expert at the University of California, San Francisco, will lead the WISDOM study, which will test a more targeted approach. About 100,000 women across the U.S. will be randomly assigned to either a personalized screening regimen—determining when to have mammograms according to a woman's individual risk—or to annual mammograms. Their outcomes will provide insight into whether the current universal recommendations need an overhaul.

"Cancer is not just one disease," says Dr. Shelley Hwang, chief of breast surgery at Duke University. "So the whole approach to cancer, including how we screen for it, has to change."

ILLUSTRATIONS BY BROWN BIRD DESIGN FOR TIME

There are new risk factors to know about

A DISEASE AS COMPLEX AS BREAST CANCER can result from a combination of factors, both genetic and lifestyle. Everything from the DNA you were born with to the changes in your genes that come from things like smoking, how much you exercise, your radiation exposure, what you eat and even how much you sleep can influence risk. Still, some factors appear stronger than others.

According to the American Cancer Society, as much as 75% to 80% of breast cancers may be tied to lifestyle choices and environmental exposures. (The rest can be traced to genes, including mutations in BRCA1 and BRCA2.) There's plenty of evidence that women may be able to control a certain amount of their breast-cancer risk by maintaining a healthy weight, eating a healthy diet and getting regular exercise as well as refraining from smoking and from drinking too much. Eating a diet high in plants and healthy fats like olive oil and low in animal fats, for example, may reduce breast-cancer risk by as much as 60%, and regular exercise—the equivalent of about an hour a day—can lower it anywhere from 25% to 30%. In part that's because a healthy diet and exercise reduce the risk of obesity, a major driver of many kinds of cancer. Experts suspect that body fat behaves like an organ and releases hormones, including estrogen, that can increase breast-cancer risk. That link has led doctors to recommend limiting estrogen therapy—during menopause, for example—to as short a time frame as possible.

But even with the riskiness of some lifestyles now well established, evidence is emerging that other factors appear to increase breast-cancer risk too. According to a growing number of epidemiological studies, as well as lab and animal research, exposure to various chemicals and toxins in the environment may increase the risk of getting breast cancer. Among the chemicals of concern are BPA—which is used in plastics and tin-can linings—and other hormone-disrupting substances found in household cleaners and personal-care products. Although there's no direct evidence yet that these chemicals can actually *cause* cancer in humans, they have been linked to an increase in risk.

WHAT CAN ALTER THE ODDS?

Experts now know more than ever about how the way we live and the things we're exposed to can increase the chances of getting the disease. These six factors bear watching:

POOR DIET
Too much fat can lead to more cancer-causing hormones

LACK OF EXERCISE
Inactivity can lead to obesity, which ups risk

RADIATION
Medical X-rays in adolescence may heighten risk

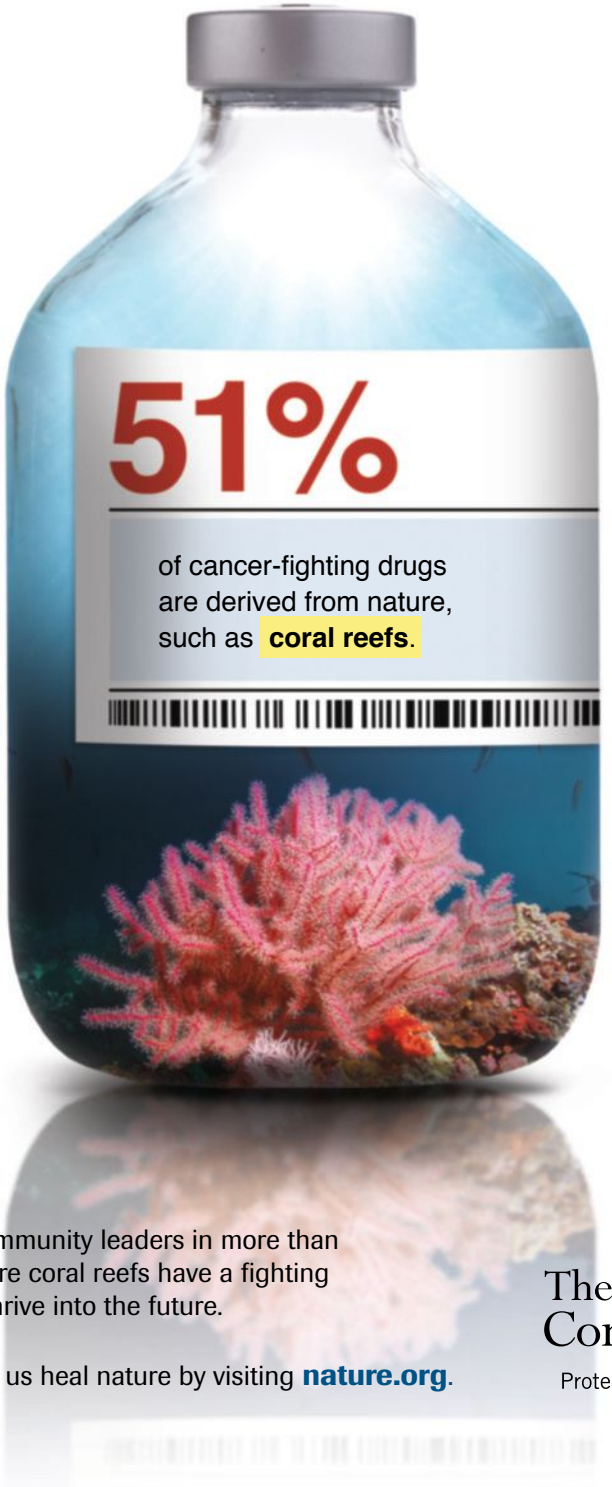
67%
Percentage of women age 40 and over who had a mammogram within the past two years

HRT
The drugs can keep estrogen levels too high, spurring cancer

TOXINS
Chemicals in the air, cleaners and pesticides appear to increase risk

BPA
It can mimic cancer-causing hormones like estrogen

NATURE
SAVES LIVES



We are working with community leaders in more than 75 countries to make sure coral reefs have a fighting chance to survive and thrive into the future.

Learn how you can help us heal nature by visiting **nature.org**.

The Nature Conservancy

Protecting nature. Preserving life.®

Personalization will change the avenues of treatment

TODAY THE VAST MAJORITY OF WOMEN diagnosed with breast cancer receive surgery of some kind, radiation and chemotherapy, regardless of the prognosis or stage of their disease. "How do I know my cancer isn't going to be the one that spreads?" is a question every woman grapples with, says Dr. Mehra Golshan, a cancer surgeon at Boston's Brigham and Women's Hospital. That's why many women and their doctors choose to throw every treatment option available at their cancer. But that aggressive approach is, in many cases, overkill.

Difficult as it may be for doctors and patients to stomach, in some cases, women might be better off living with cancer—as long as it's Stage 0 and under close supervision by physicians—than treating it. Duke's Hwang is about to launch a study measuring the outcome of surgery with or without radiation against that of active surveillance with no immediate treatment; women with ductal carcinoma in situ will be randomly assigned to one study arm or the other. The trial, called COMET, will begin enrolling women this year. "Right now most women are still making the choice to do what's aggressive, but I know these people are out there who want an alternative. So it will be interesting to see how many women participate in the study," says Hwang.

1%
Increased survival rate for women who choose a mastectomy vs. a lumpectomy

25%
Percentage of breast-cancer diagnoses that are Stage 0

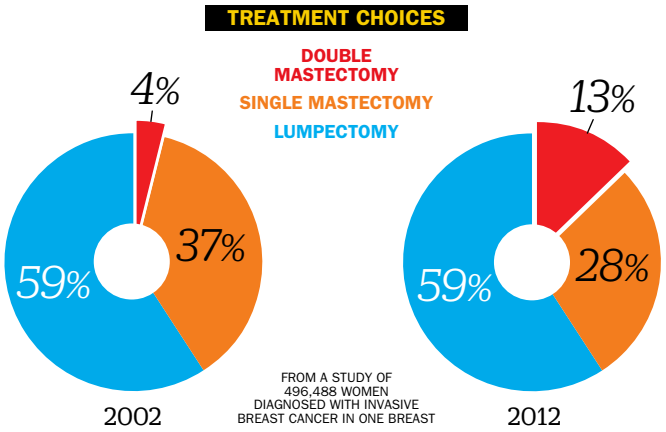
For those with invasive cancers, there may be occasions where less is more. Increasingly, sophisticated genetic testing of tumors can not just identify genetic changes that might signal cancers that are more likely to recur but also predict how effective chemotherapy and hormone-based drugs might be against the tumors. These next-generation tests can help doctors choose a more personalized treatment course, sparing a patient unnecessary chemotherapy or extensive surgery.

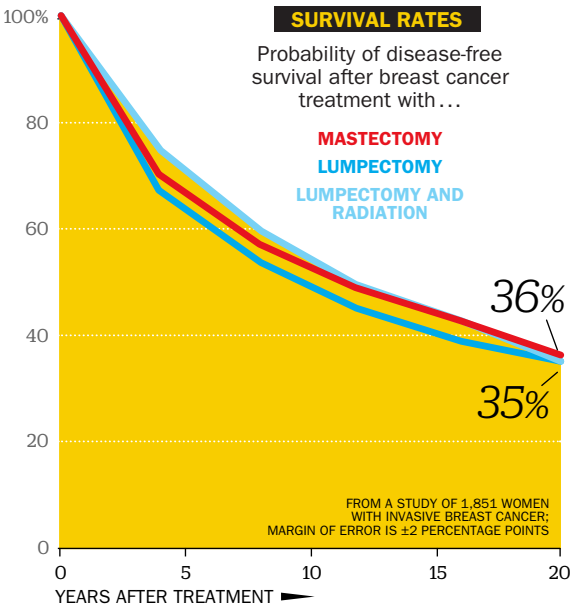
This new approach challenges decades of messages from cancer experts that stressed that living with even a little cancer was too dangerous. "As our abilities to find even small lesions have improved, our definitions of cancer have moved from a 19th century definition to a 21st century definition," says the American Cancer Society's Brawley. "We understand the biological behavior of some of these smaller lesions may not be the same as the larger lesions we found in the past."

Hwang is optimistic that more research will support that view. "It's a very exciting time to be a breast-cancer researcher," she says, "and on the flip side, there's never been a better time to be a breast-cancer patient in terms of the good outcomes they can expect from treatment."

THE TREATMENT DILEMMA

More women are choosing aggressive breast-cancer treatments even though studies have found similar survival rates among those who underwent lumpectomy, with or without radiation afterward, and those who underwent mastectomy.





SOURCES: ANNALS OF SURGERY; NEW ENGLAND JOURNAL OF MEDICINE

MY INCOME WILL INCREASE 20% WITH EVERY YEAR I STAY IN SCHOOL.

Globally, 62 million girls are not in school and even more are fighting to stay there. Girls empowered with an education will delay marriage, have fewer children, earn a higher income, and are more likely to invest in their families and communities. When girls gain skills, knowledge, and confidence, they break the cycle of poverty and help strengthen societies.

EDUCATE GIRLS, CHANGE THE WORLD.

#62MILLIONGIRLS

Peace Corps

LET * GIRLS LEARN

Take action to support the initiative:

Learn more at **LETGIRLSLEARN.GOV**
Get involved at **DONATE.PEACECORPS.GOV**
Tell your friends: **#letgirlslearn** and **@peacecorps**

Next Generation Leaders

TEN PIONEERS ARE DARING TO CROSS BOUNDARIES, FORGE NEW PATHS, TAKE THEIR CRAFTS TO UNEXPECTED PLACES AND ALSO IMPROVE THE WORLD.

THESE ARE THE CREATORS, STORYTELLERS AND ADVOCATES WHOSE WORK WILL INFLUENCE OTHERS IN GENERATIONS TO COME. THEIR LIVES REFLECT THE PROMISE OF TOMORROW.

APICHET "MADAEW" ATILATTANA, OLIVIER NSENGIMANA, XIUHTEZCATL MARTINEZ, HÉLOÏSE LETISSIER, RUBÉN "EL RUBIUS" DOBLAS GUNDERSEN, LOTFULLAH NAJAFIZADA, MOLLY CRABAPPLE, FENG ZHANG, JOEY ALEXANDER AND JANNE SAARIO

FASHION DESIGNER / THAILAND

Madaew

THAI À LA MODE

If great art can come from the most unlikely places, then so too can great fashion—as the rise of Apichet Atilattana proves.

The 17-year-old, who goes by the pseudonym Madaew, grew up in Thailand's impoverished northeastern region of Isaan, the country's rice-growing heartland. He knew as a young child that he identified as a *kathoey,* a transgender female sometimes referred to as a "third sex" in Thailand (he prefers to use a male pronoun). His parents never tried to change who he was, he says, letting him dress up Barbie dolls without feeling ashamed. Soon he was making his own dresses, mixing fabrics with everyday objects like chicken wire and dyed cabbage leaves found near his family's market stall. "I wanted people to see that ugly things that don't seem to go together can become something beautiful," he says.

Madaew's breakthrough came when he crafted a long dress from traditional cloth borrowed from his grandmother, photographing it trailing over a bleak freeway footbridge. The image, merging old-country culture, youthful glamour and urban decay, went viral and brought him fame—he even appeared as a guest designer on *Asia's Next Top Model.*

Thai artist Kongpat "Ong" Sakdapitak—also from Isaan—spotted Madaew's work and asked if he wanted to collaborate on a clothing range. The KOxMA line, launched in September, features rice-sack gowns, overcoats imprinted with banana leaves and shirts emblazoned with iconic board games. It's practical high-street fashion with an Isaan bent.

Madaew has just been awarded a scholarship to study fashion at Bangkok University, and has eyes on the couture houses of Paris or New York City. He owes it all, he says, to his parents. "Parents are really important for *kathoey* kids," he says. "Their support gives us the courage to be successful."

—CHARLIE CAMPBELL

PHOTOGRAPH BY CEDRIC ARNOLD FOR TIME

NSENGIMANA: TIM P. WHITBY—GETTY IMAGES; MARTINEZ: CHRISTOPHER LAMARCA—REDUX FOR TIME

CONSERVATIONIST / RWANDA

OLIVIER NSENGIMANA

Birdman

Saving the gray crowned crane from extinction isn't just about preserving an iconic symbol of wealth and longevity in Rwandan culture, says Olivier Nsengimana. It's also about saving *us.* "Having the cranes disappear means there is something wrong, a balance that has not been maintained," says the wildlife veterinarian. "Conservation is about saving humans as well."

Once plentiful, there are now fewer than 500 of Rwanda's only crane species left in the wild. It is the bird's very symbolism that has led to its downfall. The delicate, meter-tall birds are poached from the wild to become living lawn ornaments for the nation's wealthy, but they won't breed in captivity, and many die.

Nsengimana, 32, originally worked in gorilla conservation but grew disturbed by accounts of the cranes' decline. "I thought, rather than work with gorillas, who already had help, if I could use my efforts to work on the cranes, I could make a huge difference."

Over the past two years Nsengimana has launched a nationwide awareness program to educate Rwandans about the birds. He has set up a crane registry and worked with the government to establish an amnesty program to return any illegally kept birds to his newly founded rehabilitation center, backed by a $7,000 fine for noncompliance. So far, 98 birds have been returned to the wild.

The country's national parks are a source of pride for Rwandans, and Nsengimana is making sure they are restored with birds that symbolize natural wealth as well as environmental longevity. "If we protect animals in their habitats, we are protecting ourselves," he says. "If we fail, we are endangering our children."

—Aryn Baker

ENVIRONMENTALIST / U.S.

Xiuhtezcatl Martinez

PLAINTIFF FOR THE PLANET

On an unseasonably warm afternoon this fall, Xiuhtezcatl Martinez addressed his supporters on the battle ahead. He and his co-plaintiffs are suing the federal government over inaction on climate change that they say threatens their right to life and liberty. "This is the moment," he told activists gathered outside a Eugene, Ore., courtroom, "where we decide what kind of legacy we are going to leave behind for future generations."

Many might consider Martinez himself to be among those future generations—after all, he is only 16. And yet the lawsuit is just the latest front in his decade-long war on behalf of the environment. Inspired at age 6 by Leonardo DiCaprio's climate-change documentary *The 11th Hour,* he has devoted much of his young life to the earth's well-being. At home in Boulder, Colo., he helped lead successful efforts to charge a fee on plastic bags and end the use of pesticides in public parks. He is pushing for restrictions on fracking near homes, schools and hospitals, in the hope of one day achieving a statewide ban. "Straight-out asking for a ban on fracking is not plausible," he says, adding that the question activists should be asking is, "How can we implement real solutions?"

His biggest fight yet, the lawsuit against the government, has only just begun. Although a judge hearing the case hinted in a September hearing that she was planning to rule in his favor, the legal wrangling could last for years. Martinez, at least, has time. The planet might not. —JUSTIN WORLAND

SINGER / FRANCE

HÉLOÏSE LETISSIER

A different kind of voice

It can be hard to know where Héloïse Letissier ends and her onstage persona, Christine and the Queens, begins. She's happy to clarify. "It's really the same thing," she says. "Christine is just me, Héloïse, without the boundaries."

The Nantes-born singer, 28, belongs to a new genre of musicians who eschew the explicit femininity often associated with pop music and instead embrace fluid notions of gender through performance, lyrics and attire; Letissier's go-to outfit is an androgynous two-piece tailored suit. Her catchy synth-pop debut album, *Chaleur Humaine* (Human Warmth), went seven times platinum in France and is just now getting her serious attention across the pond. In October, she began her first, much anticipated U.S. headline tour, accompanied by male dancers, her "Queens."

It's a lot of attention for someone who says she was a loner as a child. She remembers unsuccessfully trying to fit in with her peers, finding solace in her sense of humor and love of words. "Because I was always writing, people would ask me to help them write love letters, like Cyrano de Bergerac." Often she felt uncomfortable in her own skin. "I was never sure of how to be a man or a woman—even wearing dresses felt parodic."

So instead, at age 22, she began identifying as the persona of Christine, who is neither man nor woman. "Because I felt that being a woman was an obstacle, I wanted to become gender-neutral. It became my way of tricking the system."

Through her powerful LGBT anthems and proud pansexual identity, Letissier has become an inspiration to others who feel they too don't fit in with cultural and social norms. "It's a beautiful thing when people tell me they relate to Christine and it makes them feel stronger," she says.

It might sound strange to anyone who has watched Letissier's wild, unself-conscious performances, but she still considers herself an introvert. She dreads greeting fans and posing for selfies. "Christine is my superhero costume, and when people see Héloïse it's like meeting Peter Parker," she says. Even so, Letissier is positive about others of her generation and what they have to give. "I believe in the energy, the fire of young people," she says. "We need them to take over the world." *—Kate Samuelson*

YOUTUBE STAR / SPAIN ›

El Rubius

ONLINE CONQUISTADOR

Rubén Doblas Gundersen may be one of the most famous people you've never heard of. The man known to his fans as El Rubius is a Spanish-speaking superstar of YouTube whose 20.9 million subscribers outnumber those of Beyoncé's and Lady Gaga's channels combined. The 26-year-old is one of a wave of celebrity YouTubers known for their colorful vlogs and is now the site's eighth most popular user.

Doblas Gundersen began uploading footage of himself to YouTube joking and playing video games at age 16, soon after the site launched. After one gameplay got 600,000 hits in a week, his fan base rocketed not just in Spain, but also across Latin America. By age 21, YouTubing was his career, and his life. But he didn't understand the global extent of his fame until he visited Argentina in 2014. "Three thousand people were waiting at the airport. We hadn't organized security—everyone was screaming and grabbing at me." (You can see the footage on, well, YouTube.)

Aware of his popularity among mainly teenage boys, Doblas Gundersen has vowed never to drink or smoke in the vlogs he uploads every three or four days, and he is wary of the pitfalls of social media. He doesn't think the most popular platforms do enough to prevent bullying and has joined other YouTube stars in urging the company to tackle trolling. Yet he still sees himself as a regular Internet user, just like his avid viewership. "If I am a leader, then I'm the leader of the weirdos," he says. "My videos say it's O.K. to be different. I think they make people feel less alone." —K.S.

'IF I AM A LEADER, THEN I'M THE LEADER OF THE WEIRDOS.'

LETISSIER: LAURA PANNACK FOR TIME

PHOTOGRAPH BY JESÚS MADRIÑÁN FOR TIME

NEWS DIRECTOR / AFGHANISTAN

LOTFULLAH NAJAFIZADA

Reporting under threat

Lotfullah Najafizada, head of TOLOnews, Afghanistan's largest 24-hour news channel, often sleeps in the station's compound in the Afghan capital of Kabul. "I don't want to take the risks I face to my home," says the 28-year-old. "It's not just about my safety. It's also my family's safety."

A decade and a half after a U.S.-led invasion displaced the Taliban from Kabul, ensuring safety for himself and his 100-plus staff has become an increasingly critical concern for Najafizada, who started out in journalism in 2006 with a small newspaper in the city of Mazar-i-Sharif. "I was still a student," he recalls. "We all felt we had to do something to make things better for our families, our society." Soon he got a job in online news at the Kabul-based media group MOBY. In 2010, producers decided to launch Afghanistan's first 24-hour news channel, TOLOnews, "and it was decided that I was the person who should run it," he says.

It has not been easy. As Afghanistan struggles to maintain security following the departure of most foreign troops from the country at the end of 2014, civilian casualties have climbed to record highs, and TOLOnews has been targeted by the Taliban's brutal military wing, in particular for its reporting on alleged rapes by insurgents. In January, a Taliban suicide bombing killed seven employees. The future of the network was in doubt.

Led by Najafizada, TOLOnews decided to stay on the air. "It was a unanimous decision. We said we are going to remain objective, we're going to remain critical. The concerns are always there, but our resolve is stronger." *—Nikhil Kumar*

ARTIST-JOURNALIST / U.S. >

Molly Crabapple

DRAWING THE WORLD

In a media landscape of tweets, Snaps and Facebook Lives, Molly Crabapple uses pen and ink—and markers and paint and sketchbooks. That's because Crabapple, 33, is an artist-journalist, sketching from the front lines of conflicts in the U.S. and around the world for publications like *Vice, Vanity Fair* and the New York *Times*.

Crabapple first realized the journalistic utility of her sketchbook when she reported for *Vice* from Guantánamo Bay in 2013. Photographs are heavily censored there, but the guards didn't pay much attention to drawings. "This sketchbook is like a lock pick," she says. "You can expose so many things that can't be exposed otherwise."

Since then, she's sketched her way through the U.S. prison system, across the Syrian border and in Turkey as well as in refugee camps in northern Iraq and Lebanon. When guards wouldn't let her bring a pen into the Rikers Island jail in New York City, she drew with the tip of her fingernail. She documented her own journey, from a goth girl growing up on Long Island to reporting from Syria and Iraq, in her book *Drawing Blood* last year. For her next project, Crabapple is collaborating with Marwan Hisham, a young Syrian man trapped in ISIS-controlled territory.

If art can give journalism immediacy, Crabapple says, then journalism can give art relevance. "Journalism rips art right out of that ivory tower and brings it back into the mud and the blood and the streets of the world," she says, noting that great artists from Goya to Picasso helped document the events of their times. Her work is a perfect slow-media commentary on our current fast-media climate. At a time when there may be more photos taken each year than in the entire prior history of film photography, drawing offers a different way to reach people, she says. "It's saying, 'I cared, I did this, and you should care too.'" —CHARLOTTE ALTER

NAJAFIZADA: ANDREW QUILTY FOR TIME; ZHANG: KATHERINE TAYLOR

PHOTOGRAPH BY BILL WADMAN

BIOMEDICAL ENGINEER / CHINA

FENG ZHANG

Genome pioneer

Big science doesn't always happen with a *eureka!* revelation. As Feng Zhang, 34, will tell you, the most life-altering technologies often have the least remarkable provenance.

China-born Zhang, now a U.S. citizen, first heard about how certain bacteria can clip out sections of viral DNA during a run-of-the-mill lecture in 2011. The biomedical engineer had been working without success for about a year at the Massachusetts Institute of Technology and Harvard University's Broad Institute to develop a precise way to cut and paste DNA, in order to gain unprecedented control over any living thing's genome. He quickly realized that the bacteria were on to something.

He gave himself a crash course in the mechanism, known as CRISPR, and got to work on tweaking it to "edit" cells from mammals. It was a risk, since there was no guarantee that a system that works in bacteria, which are far simpler genetically than mammals, would work on animal cells. But within two years he published his milestone report on the first use of CRISPR to snip out, with unprecedented control, specific parts of DNA from both mouse and human cells. His technique helped launch a CRISPR revolution, allowing scientists to splice out everything from HIV in infected cells to genetic mutations responsible for diseases like sickle-cell anemia, schizophrenia and even cancer. The right edits to plant genomes could also create new biofuel sources and more stable crops.

It's changed everything, Zhang says—for him, and for science. "All of a sudden, having the ability to make very defined changes to DNA is having a catalyzing, accelerating effect on everything from medicine to basic biology to plant biology," he says. And it all began with a routine lecture.

—Alice Park

PHOTOGRAPH BY RYAN PFLUGER FOR TIME

‹ JAZZ PIANIST / INDONESIA

Joey Alexander

MASTER OF THE KEYS

Don't call Joey Alexander a genius. Yes, the Indonesia-born pianist is already, at 13, a Grammy-nominated jazz artist currently promoting his second album, *Countdown*. But the teenager says he doesn't like the labels that come with being preternaturally talented. "I really don't think I'm a genius or a prodigy," he says. "I want people to dig my music and not care about who I am."

He was born in 2003 in Denpasar, the capital of Bali, to musical parents who played him jazz as a baby. At 6, he saw an electric keyboard and thought it was a toy. "Then I found the keys, and I just felt the sound," he says. Other than a little tutoring from his piano-playing father, he largely taught himself.

Alexander's potential was obvious to anyone who listened, and plenty did in the Indonesian capital of Jakarta, where he played for jazz greats like Herbie Hancock, and on YouTube, where Wynton Marsalis discovered one of his videos in 2014. Marsalis, the trumpeter and artistic director for Jazz at Lincoln Center in New York City, invited him to play at the center's gala that year and subsequently became a mentor.

He says his discovery was "God's plan." A devout Christian, he has stayed grounded through his faith. "My music, it's a gift from God, but it's a gift I've had to learn," he says. "It takes hard work and focus."

What's next? Adulthood, for starters, and all that comes with it. "When he really experiences life—when he has his first heartbreak, say—we're going to see his music evolve," his drummer, Ulysses Owens Jr., says. "As he gets older, he'll have even more to say." —NASH JENKINS

'I WANT PEOPLE TO DIG MY MUSIC AND NOT CARE ABOUT WHO I AM.'

SAARIO: KIMMO METSÄRANTA FOR TIME

LANDSCAPE ARCHITECT / FINLAND

JANNE SAARIO

Creating spaces for skaters

Janne Saario says his life rarely veers from skateboarding. The breezy 33-year-old Finn has turned skating into a calling. He's become one of the few landscape architects in the world with a practice focused on creating tasteful and well-designed skate parks for young people, breaking away from the brutalist stereotype of blunt concrete slopes and pyramids.

His site-specific parks, scattered around northern European cities, draw heavily from their natural surroundings. Micropolis in Helsinki is a plot more than half an acre large that uses tiny corridors of grass and trees to blend geometric obstacles with the surrounding greenery. In Lulea, Sweden, Saario turned giant ball bearings into boulders, junked-steel beams into benches and a 26.5-ton ladle into the park's centerpiece—a nod to the town's steel industry.

It wasn't money that drove him to design 35 skate parks in the span of a decade, but rather a desire to turn urban spaces into places for teenagers—especially those who don't identify with conventional sports—to express themselves. "Young people are our hope and future, and by offering beautiful and meaningful surroundings to grow, like wonderful skate parks, we can make a positive change on their picture of the world and future behavior," he says.

Saario learned to skate at age 6 on a contraption of plywood and four wheels built from office furniture. Once his parents bought him a real board, his "mind was blown," he says, by the surreal forms of a local skate park he began to frequent that was shaped like a giant footprint. He was asked to join the European pro skateboarding team of Element Skateboards and began skating in parks and cities around the globe.

It was the modernist plazas of Barcelona—known as "skateboard mecca" for their smooth surfaces and architectural details—that made Saario decide at age 18 to attend a landscape-design course in Finland. Around that time he became an apprentice for architects Sami Rintala and Marco Casagrande, who are famous for work that blends architecture and environmental art.

With their guidance and the do-it-yourself philosophy of skateboarding culture, Saario opened his studio at age 23. He is part of a new breed of designers who eschew ego and the "super-consumption" of materials like nonbiodegradable plastics in favor of recycled material and natural elements. Now a father of two, Saario says parenthood has reinforced his philosophy about giving the young spaces to be themselves: "Being a parent opens up the eyes toward thinking about the next generations."

—Tara John

Time Off

'QUAFFING FROM AN ADULT SIPPY CUP, SHE'S SO SOZZLED SHE'S ESSENTIALLY PICKLING HER SOUL IN SELF-LOATHING.' —PAGE 53

Director, co-writer and star Parker, center, plays Nat Turner, leader of an 1831 slave uprising

MOVIES

Bold and fraught, *The Birth of a Nation* merits your attention

By Stephanie Zacharek

MOVIES, AND SOMETIMES THE people who make them, work on us at strange, subterranean levels we can't always comprehend. That's why few people know quite how to feel about the debut film by Nate Parker, *The Birth of a Nation,* only just now reaching theaters but already blighted by controversy. The movie—which tells the story of Nat Turner, the enslaved African American who led a violent revolt against slave owners in 1831—is distinctive for one notable reason: movies about the history of blacks in this country are rarely made, and if you rule out the usual suspects like Spike Lee and Lee Daniels—and count back to the days before *12 Years a Slave* and *Selma,* recent history in movie terms—they have rarely been made by people of color.

But anyone who might normally laud Parker as a filmmaking hero has reason to think twice: in 1999, while they were students at Penn State University, Parker and his roommate and wrestling teammate Jean McGianni Celestin—co-writer of *The Birth of a Nation*—were accused of raping a fellow student. Parker was acquitted. Celestin was found guilty, though the verdict was overturned. By seeing the film, are people showing tacit support of Parker and his alleged actions? Is his work, or his view on anything, in any way trustworthy?

Anyone who believes he or she will find true gratification in refusing to buy a ticket to *The Birth of a Nation* should probably stay away. But punishment by refusal can't rewrite the past, and it suggests that closing ourselves off from a movie is a bold way to engage with the world when, in fact, it's the opposite. *The Birth of a Nation* isn't a great movie—it's hardly even a good one. But it's bluntly effective, less a monumental piece of filmmaking than an open door. Parker stars as Turner, and his performance is grounded and thoughtful—he may be a better actor than he is a director.

20TH CENTURY FOX

The Birth of a Nation works best when its story is told most simply, without too many strained poetic images. At one point, after a devastating event, Parker's camera closes in on an ear of corn that begins seeping blood, an unnecessary blast of symbolism that tells us nothing, other than that a beginning filmmaker is being a show-off.

There are discrete moments in *The Birth of a Nation* that speak to all sorts of things we "know" as Americans, but in an elemental way that makes us see them anew. We watch a group of well-wishers surround bride and groom Hark and Esther (Colman Domingo and Gabrielle Union), their overwhelming warmth the essence of community. Later, Esther will be dragged away to provide a night's entertainment for a white man—though for us, as viewers, the real horror is the aftermath, when she emerges from the plantation house in her nightgown, her face showing an inability to process the horror of what she's just experienced, as her husband opens his arms to her. The tenderness between them is a bulwark against the brutality of their world, but there's only so much they can do to allay its heartlessness.

Parker at work: he knows what notes to hit for emotional effect

The Birth of a Nation is also unafraid to touch on the complexities of the slave-owner relationship: Nat Turner's owners, Samuel and his mother Elizabeth Turner (Armie Hammer and Penelope Ann Miller), are benevolent, to a point. It's Elizabeth who helps Nat, as a child, develop his reading skills, though her kindness comes wrapped in condescension and proprietary rights. When young Nat approaches a towering shelf in her library, she swiftly leads him away from it, telling him they're books for white folks, containing things he can't possibly understand.

But she does give him a Bible, and that's no small gift: Nat will become a wise and persuasive preacher, respected in his community of fellow slaves. Samuel, too, generally treats him well, for a time, at least: the two men grew up together, and when other white people aren't looking, there's a warm, friendly ease between them. But Samuel will always be a white man in a position of power, and—hoping to restore his somewhat shabby plantation and family name to their former glory—he has no compunction about pimping out Turner's ace preaching skills to neighboring property owners who want to keep their slaves in line. The owners assume that hearing the word of God will make their slaves more compliant. What really happens is that when Nat sees how badly other men's slaves are treated—the horrors mount incrementally but forcefully—he's moved to take violent action.

Parker's direction lacks grace, but he knows what emotional notes to hit for maximum effect. (In that respect, he's not so different from the man who made that other *Birth of a Nation* in 1915, D.W. Griffith.) It's hard for anyone to get a decently funded movie made these days, and yet somehow in any given year there's never any shortage of movies made by and/or about straight white dudes anguished over their backgrounds or their insecurities. A few of those stories per year are fine. But why not tell some new ones for a change? Stories about the African-American experience—stories whose casting would presumably expand the options for actors of color—are as good a place as any to start.

Should this *Birth of a Nation* exist? Should people see it? Is it O.K. if people respond to it? If we care at all about who, beyond white guys, ought to be making movies in America, the answer to all is yes. It's the difference between stepping through an open door or standing off bullishly to the side, wishing someone else had opened it. ◻

MOVIES

Newtown: a vivid portrait of a grieving community

THERE ARE SOME THINGS no parent should ever have to say. In Kim A. Snyder's modest but devastating documentary *Newtown,* the father of Daniel Barden, one of the 20 children killed at Sandy Hook Elementary School in 2012, says that memories of his 7-year-old son's funeral are hazy. He adds, "We did manage to attend quite a few of the other children's funerals."

Newtown is an intimate snapshot of what it means for a small community to face the funerals of 20 children and six adults—deaths that, the film posits, probably wouldn't have happened if not for the easy availability of assault weapons. The picture is quietly yet intrepidly political: it includes footage from a 2013 Senate Judiciary Committee hearing in which emergency-room doctor William Begg explains bluntly, but with barely suppressed anguish, why there were so few lives he and his staff could even try to save that day.

Snyder's camera captures the complex contours of sorrow, which also include elements of joy: parents' faces brighten as they describe what their children were like when they were alive, though it's clear they can't fend off pure grief for long. It's been said that if the U.S. couldn't tighten its gun-control laws after Sandy Hook, it never will. But *Newtown* refutes hopelessness, making its case less with words than with faces it's impossible to forget. —S.Z.

TIME PICKS

BOOKS
One of 10 authors reimagining the Bard's plays for the Hogarth Shakespeare Series, Margaret Atwood sets her interpretation of *The Tempest*, ***Hag-Seed*** (Oct. 11), in a modern Canadian prison.

TELEVISION
High-concept drama ***Falling Water*** (Oct. 13 on USA Network) follows three strangers whose dreams are interconnected.

MUSIC
After dominating charts with her single "Hide Away" and vocals on the Chainsmokers' "Don't Let Me Down," 17-year-old **Daya** drops her first album, *Sit Still, Look Pretty* (Oct. 7), an ironically titled feminist anthem.

MOVIES
Ava DuVernay's timely and devastating documentary ***13th*** (Oct. 7 on Netflix and in theaters) argues mass incarceration of black Americans carries on the legacy of slavery.

PARKER: 20TH CENTURY FOX; FALLING WATER: USA; 13TH: NETFLIX; BLUNT: DREAMWORKS

MOVIES

Emily Blunt's *Girl* on a train in vain

Blunt as Rachel: watching the world pass her by

ONE OF THE SAD THINGS about living in a culture that's at least trying to be progressive is that you can't just have classic bad gals anymore. In movies or in pop literature, now, if a woman character is nuts or scheming or both—let's call her "difficult"—she has to have a good reason for being that way, preferably a psychotic, controlling man. This idea seems feminist on the surface, but it actually tilts toward a dangerous opposite: that somehow women, creatures of feeling more than rationality or intellect, aren't wholly responsible for their behavior.

That's the dynamic at work in *The Girl on the Train,* Tate Taylor's earnest but ultimately droopy adaptation of Paula Hawkins' novel, in which Rachel (Emily Blunt), a woman whose life has fallen apart, gazes with longing and more than a little jealousy into the lives of Megan (Haley Bennett), an apparent free spirit, and Anna (Rebecca Ferguson), a seemingly flawless wife and mommy who enjoys those dual roles a little too smugly. Rachel believes these women's lives are perfect because she views them from afar: the train she rides into and out of the city each day passes their homes, allowing her to peer into these little dollhouse scenes in a blur of wistfulness and anger.

Rachel has a drinking problem, which only exacerbates her already roiling feelings. Plus, she has good reason to resent Anna, who is now living happily with suave, dutiful Tom (Justin Theroux), Rachel's ex-husband. The two, plus their infant daughter, live in the very house that Rachel chose and furnished. As her train rolls by, she obsesses over it with a kind of helpless masochism. Then something terrible happens, and Rachel, having become used to drinking herself into blackout territory, has no idea what she might or might not have done. As she investigates, insinuating herself into Anna's and Megan's lives, details of those lives gradually slip into focus, for her and for us.

But *The Girl on the Train* is less a thriller than a morality tale reminding us never to make snap judgments. No matter how dreadfully some characters behave, we're not allowed to dislike anyone for long. That kind of catharsis isn't allowed. Yet Blunt's Rachel, her face puffy and splotchy from too much drinking, makes the movie watchable—she's its most nuanced and sympathetic character. It's wrenching to watch her nurse her resentment as she stares from the window of that train: quaffing her secret vodka from an adult sippy cup, she's so sozzled she's practically pickling her soul in self-loathing.

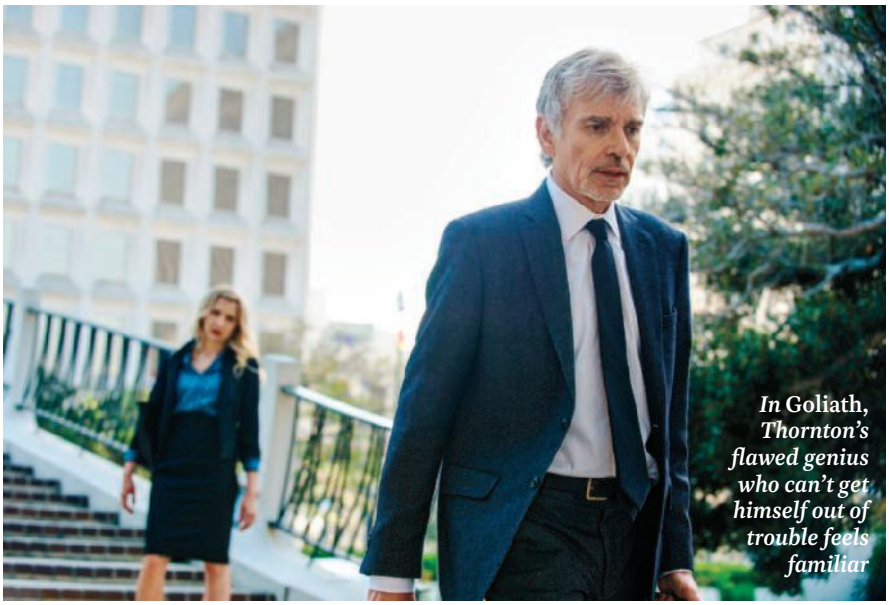
Blunt gives Rachel multiple dimensions—we could never view her as just a stewy mess. But the movie's surprise (or perhaps not-so-surprising) twist doesn't serve its lead character well, at best merely justifying her stalkerish behavior. The revenge she ultimately wreaks is supposed to be grim and sweet, but it comes off more as a plot calculation than something you feel in your gut. For a supposedly dark thriller, *The Girl on the Train* is just so damn *reasonable.* Rachel, drunk and sad and fiercely jealous, is allowed to be just a little bit bad. But not nearly bad enough. —S.Z.

THE BOOK'S RIDE
Hawkins' psychological thriller was No. 1 on the New York *Times* best-seller list for 13 consecutive weeks

TELEVISION

A TV legend's unremarkable return

By Daniel D'Addario



In Goliath, *Thornton's flawed genius who can't get himself out of trouble feels familiar*

THROUGH ITS PILOT PROGRAM, Amazon Studios lets viewers vote on the first episodes of new shows and takes the results into account when deciding which shows to greenlight for a full season. This user feedback helped bring us hits like *Transparent* and *Mozart in the Jungle* as well as a fair share of misfires. But *Goliath,* a new legal drama set to arrive on the streaming service on Oct. 14, bypassed that program entirely. Although it stars Billy Bob Thornton and Maria Bello, the name that earned it a series order is behind the camera.

Goliath is the latest series from David E. Kelley, the writer and creator of such hits as *Picket Fences, The Practice* and *Ally McBeal.* Kelley says he has been so pleased with his Amazon experience that he is done with broadcast TV. But the show he created with the streaming service feels too much like the world he now wants to leave behind. In fact, *Goliath* is exactly the sort of show that might have benefited from the pilot-program process and the testing and retooling that come with it.

Thornton plays Billy McBride, a Los Angeles attorney and the latest in TV's long list of geniuses whose skill sets don't fit into traditional frameworks—call him House, J.D. Once a top litigator, Billy has now found himself taking two-bit cases and searching for a way back to the big time. His ex-wife Michelle (Bello), a corporate lawyer, marvels at how far he's fallen: "This was one of the best trial lawyers ever!"

Eventually we do see his mind at work, but only after plot developments as subtle as Bello's dialogue. Billy is handed a valuable referral to a potential client, the sister of an unlucky fellow whose death in a boat explosion may be tied to his work for a military contractor. The case could revive his career, but Billy can't help himself and instead gets drunk, sleeps with the plaintiff and later misses her hearing. Here we go again: yet another small-screen antihero, speeding to rock bottom until a plot twist forces him to shape up.

The tropes are as familiar as yesterday's news—or today's TV. The whole show feels like a mixtape of borrowed ideas. William Hurt's reclusive legal mastermind—who, in keeping with this show's tiny universe, employs Michelle and despises Billy—has DNA from *Damages* and *Better Call Saul.* Molly Parker's vicious, hypercompetent attorney feels imported from *House of Cards,* on which Parker also appears.

THE ONLY THING on *Goliath* that doesn't feel imported from the past decade of prestige drama is Kelley's sensibility, which overlays the series uncomfortably. Many of his hits merged up-to-the-minute social concerns with characters gaudily unconcerned with propriety. They spit out their lines as if they were too hot to hold in the mouth. And too often the characters seemed more like clever distractions than integral parts of a plot. In *Goliath,* Nina Arianda's role as Patty Solis-Papagian, the lawyer who brings the wrongful-death case to Billy's attention, gets the dubious honor. She's brash, idealistic and prone to dropping *F* bombs when they're not particularly necessary. Take the profanity away and she'd fit in at Ally McBeal's firm, blazing across the screen in a fit of quirky, overstuffed dialogue.

For all of Kelley's success, his shows have not aged well. *Picket Fences, The Practice* and *Ally McBeal* all won Best Series Emmys and yet now are remembered more as cultural moments than enduring programs. Pushing the envelope with odd characters and daring story lines, as Kelley has done masterfully for decades, guarantees attention—but there'll always be someone more daring coming up behind you.

And that's what has happened. In the streaming era, TV has moved so quickly toward normalizing the once controversial that Kelley's tricks no longer work. On some level, *Goliath* seems to understand this: with the show, one of TV's most famous impresarios seems as if he's content to chase trends, not start them. ◻

CIAO, BELLO The actor is part of a gifted ensemble cast; her scenes with Hurt reunite two co-stars from 2005's *A History of Violence*

QUICK TALK

Ryan Tedder

The Grammy-winning singer-songwriter, 37, has written hits with Adele, Taylor Swift and Beyoncé, but he's also a multiplatinum recording artist in his own right: as front man of rock outfit OneRepublic, Tedder is releasing a new studio album, Oh My My, *on Oct. 7.*

This is your fourth album with OneRepublic. What's different about putting this one out? For the first time ever, I've taken the initiative in regards to promotion. We've quietly done a lot while making very little noise. I don't have 40 million Instagram followers and I'm not doing TV, but I'd like to be less of the guy who's intentionally behind the curtain all the time.

What's the most critical thing you think about as a songwriter? There are songs that fly up the charts because of the zeitgeist, but if you're too attached to the current sound, that song will be time-stamped. We just handed in an album with six or seven singles, but by the time we get to single six or seven, production will have changed. So we try to make stuff that doesn't sound dated.

How has streaming changed the way people discover music? Look at the top 10 on Spotify, and eight out of 10 are dance records or collaborations. Spotify tends to lean dance because it started in Scandinavia. But if a song isn't instantly reactive, it could very well die. Maybe if you're lucky, you land a huge commercial or campaign. But if you don't have a cultural anchor behind a song, the world won't know it exists.

Dance music has dominated pop for so many years. What's the next trend going to be? There's been a proliferation of immediate-gratification songs. Music ebbs and flows—it's trendy. But the pendulum will swing back. I predict that in the next 18 months, someone is going to come out with a record that sounds nothing like what's happening right now. It will be sung from the heart and rip your guts out, and it's going to explode. —SAM LANSKY

ON MY RADAR

THE CHAINSMOKERS

'They are song guys. Take away the programming and they're going to sit down and write a ridiculous record on piano or guitar.'

A Seat at the Table *is Solange's first full-length album since 2008's* Sol-Angel and the Hadley Street Dreams

MUSIC

Solange takes a *Seat* but stands on her own

SOLANGE KNOWLES HAS LONG BEEN ONE OF the more interesting figures working on the fringes of mainstream music, with each of her albums reflecting a discrete creative phase. Her Top 40–leaning 2003 debut, *Solo Star,* fell in the sizable shadow of her big sister Beyoncé, but her second act, 2008's *Sol-Angel and the Hadley Street Dreams,* was bright, inventive pop-soul that announced Solange as an unexpected sonic visionary. She sharpened her cool-kid cred with the 2012 EP *True,* anchored by the tense alt-dance single "Losing You." Along the way she launched her own record label, Saint Records, and collaborated with indie-rock acts such as Grizzly Bear and Of Montreal. Unburdened by genre parameters or commercial expectations, her music has soared.

Her new album, *A Seat at the Table,* released on Sept. 30, feels unexpectedly airy given the weight of the subject matter: race, gender and identity. The arrangements are luxuriously smooth and languid. Traditional songs are pieced together with interludes that feature snatches of melody and dialogue including, memorably, her mother Tina speaking on the beauty of black people. Solange's lyrics are direct and pointed on the tender "Don't Touch My Hair" and the jazzy, funky "F.U.B.U.," which shifts effortlessly from joy to resignation. On the stunning "Cranes in the Sky" and the lush "Don't Wish Me Well," her voice is piercingly sweet and lovely, ensuring that this ambitious material is also always pleasurable. It's to her credit that Solange makes such a complex balancing act feel effortless. —S.L.

GOLIATH: AMAZON (2); TEDDER, SOLANGE: GETTY IMAGES

TELEVISION

Speechless gets real about families affected by disability

By Daniel D'Addario

ON ABC'S NEW COMEDY *SPEECHLESS*, CALIFORNIA MOM Maya DiMeo (Minnie Driver) moves through life like a bulldozer, crushing human obstacles in her way by delivering insults with brute force. But not everyone sees her coming. When the principal of her children's new school suggests her son access the campus through a "wheelchair ramp" generally used for garbage bins, Maya offers a verbose "crash course in human dignity." If the school's going to treat her son like trash, Maya is going to get revenge in kind.

Driver gives the performance of her career—and not merely because her particular aptitude for cutting insults is put to such good use. *Speechless* is a movingly textured look at how one child's disability affects the entire life of a family. Maya is this tough because she has to be.

Of her three children, the one most like her in salty demeanor is J.J., who—like the gifted teen actor Micah Fowler, who plays him—has cerebral palsy. J.J. is nonverbal, so he uses every aspect of his mien, along with his spelling board, to transmit his deep cynicism and utter disdain for overearnest teachers and clueless classmates, who greet him with a too-smiley manner that's rooted in sympathy, not empathy.

Maya is happy with J.J.'s inclusion: it's hard-won after the family moved into the dingiest home in wealthy Newport Beach, Calif., to make use of community resources. She even accedes to his desire to hire the uncondescending school gardener (Cedric Yarbrough) as his new helper, though she disdains his line of work. ("He mows grass for a living," she says. "This is a man whose chief job competition is goats.")

Bowie and Driver face a future in which their children crave more independence

> 'You're cool! I know a mother's not allowed to say that matters, but now that we're being honest, it's all that matters.'
>
> **MINNIE DRIVER**, as Maya DiMeo on *Speechless*

But she has less time for her other two children, Ray (Mason Cook) and Dylan (Kyla Kenedy). Good-natured pranks with an endlessly tolerant dad (John Ross Bowie) provide an outlet for little Dylan, but Ray is adrift.

It's in Cook's chemistry with Driver that *Speechless* finds its most provocative subject matter. Obsessively providing for J.J., Maya has suppressed any instinct that distracts from that goal. When Ray signals that endless quality-of-life sacrifices are growing tough to bear, Maya can't allow herself to hear. Her coming to terms with the necessity of engaging all her children is as painful as comedy gets.

Speechless joins a set of accomplished and inclusive ABC family sitcoms, like *black-ish*, *Fresh Off the Boat* and *The Real O'Neals*. Respectively, these shows explore life for a black family, an Asian-American family and an Irish Catholic family with a gay son—all stories that signal a new and welcome openness to all sorts of stories on network television. It's a great neighborhood to be a part of, and one into which the DiMeos fit elegantly. Wit, however savage, can't solve their problems. But families of all kinds know it can provide a path to talking frankly about life's tougher moments. For all her bluster, Maya needs her humor to make life bearable. That the rest of her family, for all their differences, share her clever sensibility is heartening proof that in this beautifully drawn family, no one is far from the tree.

SPEECHLESS *airs Wednesdays at 8:30 p.m. E.T. on ABC*

ADAM TAYLOR—ABC

With our worry-free guarantee, just return it, and we'll replace it no matter how they say it broke–even if an octopus is to blame.

1-Year of Amazon FreeTime Unlimited
Over 13,000 Kid-Friendly Titles
Parental Controls

$99.99

fire Kids Edition | amazon

Daveed Diggs, actor and rapper

Best known for his Tony-winning dual role as an ebullient Marquis de Lafayette and a swaggering Thomas Jefferson in the musical *Hamilton,* Diggs is getting political in his music with hip-hop group clipping. and onscreen with a role on the ABC sitcom *black-ish*

DAVEED DIGGS BECAME ACCUSTOMED TO RAPPING RAPIDLY in front of hundreds of people in the Broadway smash *Hamilton*. But at 7:30 a.m. on a Tuesday in September, he's performing for an audience of one. Sitting in a coffee shop in the New York City neighborhood of Washington Heights, just north of Harlem, he warns that it's "too early to do anything," including rap. He has to catch a flight to Los Angeles soon—a trip he makes with increasing frequency now that he's an in-demand actor, including a six-episode arc on *black-ish* that began on Sept. 28. Still, Diggs eventually begins singing at his signature clip: "Feeling the weight of a city growing fat off hipster chic/ Fusion food, organic beets./ It's a wonder that we still tongue-in-cheek/ When it's so much hand-to-mouth in the streets."

> 'In the wake of Black Lives Matter, everyone is putting out their most racially and politically charged album.'

He wrote the 2012 song about his hometown of Oakland, Calif., but its sentiments could easily apply to the skyrocketing rents in upper Manhattan, where he now lives. "I've been sort of gentrification-obsessed. Right before I left Oakland in 2012, I was feeling it. Now I go back sporadically, and the change is drastic," he says. "It's also strange that everywhere I go from now on, I'm a gentrifier."

Diggs spent the years after he graduated from Brown University in 2004 auditioning for roles in New York. He couch surfed or slept on the subway when he couldn't find a place to crash, and eventually moved back to the Bay Area. He found what he describes as Hollywood's tokenism demoralizing: "Sometimes it feels like the project is just trying to get a black person in a role for the sake of it."

In that respect, *Hamilton* was revolutionary: the cast of the musical about America's Founding Fathers and Mothers is almost entirely nonwhite. "Everybody was like, 'James Madison is black? You're going to confuse people,'" Diggs says. "But *Hamilton* is an immigrant story, and the cast is what that would look like in a modern context. Turns out, it helps the audience understand the story better."

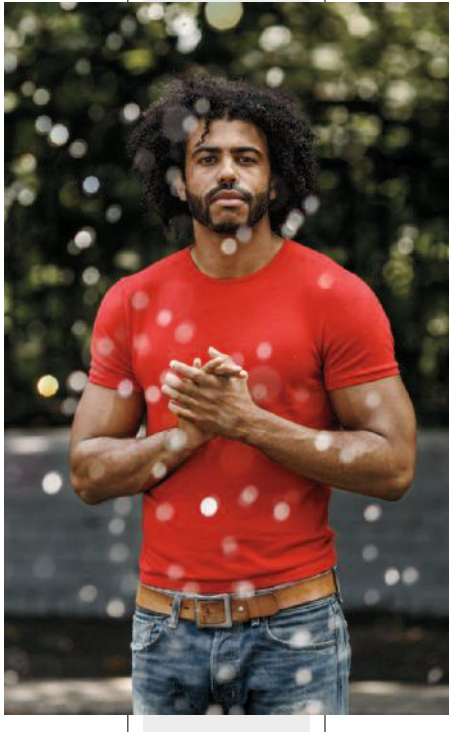
DIGGS WON A TONY in June and left the production in July to try acting onscreen. In his first meeting with his agent, he mentioned *black-ish,* which, like *Hamilton,* trains a pop-culture lens on racial issues. Creator Kenya Barris cast him the very next week. Diggs plays Johan, the brother of the show's matriarch Rainbow (Tracee Ellis Ross, who, like Diggs, is biracial). "I've always related to [Rainbow] the most because there's something particularly hippie–Bay Area about her upbringing," he says. Diggs describes Johan as "post-race" and says he comes into conflict with Rainbow's husband Dre (Anthony Anderson) over black identity. "Johan doesn't feel the same cultural divide as Dre. He has spent time in Europe and felt comfortable in spaces that are mostly white," he says. "I think for Dre there are black-people things and not-black-people things, and Johan doesn't have that."

DIGGS ADMIRES the way both *Hamilton* and *black-ish* strike a balance between the popular and political. In *Hamilton,* Diggs earned one of the biggest cheers when his Marquis de Lafayette and Lin-Manuel Miranda's Alexander Hamilton croon, "Immigrants: we get the job done." And he praises the episode of *black-ish* that dealt with police brutality.

Diggs has become increasingly political in his music too. His latest album with experimental hip-hop group clipping., *Splendor & Misery,* chronicles a slave rebellion in outer space. "In the wake of Black Lives Matter, everyone is putting out their most racially and politically charged album," he says. "Look at [Beyoncé's] *Lemonade* or Kendrick [Lamar]'s work. For hip-hop right now, saying nothing isn't an option anymore." —ELIANA DOCKTERMAN

BEYOND THE STAGE

ONSCREEN Diggs will star as a teacher opposite Julia Roberts in the film *Wonder* next year



IN THE STUDIO Diggs released the album *Splendor & Misery* with hip-hop group clipping. on Sept. 9

IKE EDEANI—THE NEW YORK TIMES/REDUX

For more Voices, visit **time.com/AmericanVoices**

I spy, with my little eye, something beginning with "S."

Who knows what you'll see in the backup camera[1] of your new 2017 Corolla, but that's kind of the point, isn't it? That's why it comes standard, along with **Toyota Safety Sense™ P.**[2] Because, even though you might see almost anything, one thing we think you should definitely see is safety. **How many things can you spy that start with the letter "S"?**

The New 2017

COROLLA

Toyota Safety Sense™ Standard

Prototype shown with options. Production model may vary. 1. The backup camera does not provide a comprehensive view of the rear area of the vehicle. You should also look around outside your vehicle and use your mirrors to confirm rearward clearance. Environmental conditions may limit effectiveness and view may become obscured. See *Owner's Manual* for details. 2. Drivers should always be responsible for their own safe driving. Please always pay attention to your surroundings and drive safely. Depending on the conditions of roads, vehicles, weather, etc., the system(s) may not work as intended. See *Owner's Manual* for details.

United States Postal Service

2016 Statement of Ownership, Management and Circulation

1. Publication Title: TIME
2. Publication Number: 865800
3. Filing Date: October 1, 2016
4. Issue Frequency: Weekly, except for two combined issues in January and one combined issue in February, April, July, August, September and November
5. Number of Issues Published Annually: 44
6. Annual Subscription Price: $49.00
7. Complete Mailing Address of Known Office of Publication: 225 Liberty St., New York, New York 10281-1008
8. Complete Mailing Address of Headquarters or General Business Office of Publisher: 225 Liberty St., New York, New York 10281-1008
9. Full Name and Complete Mailing Address of the Publisher, Editorial Director & Chief Content Officer:
   Publisher: Time Inc., 225 Liberty St., New York, New York 10281-1008; Rich Battista, President & CEO
   Editorial Director: Nancy Gibbs, 225 Liberty St., New York, New York 10281-1008
   Chief Content Officer: Alan Murray, 225 Liberty St., New York, New York 10281-1008
10. Owner: The owner is Time Inc., 225 Liberty St., New York, New York 10281-1008
11. Known Bondholders, Mortgages and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages or Securities

To the best knowledge of Time Inc., the names and addresses of stockholders beneficially owning 1 percent or more of the common stock of Time Inc. as of June 30, 2016 (according to 13F filings with the U.S. Securities and Exchange Commission), are as follows:

Fairpointe Capital, LLC, 1 N. Franklin St. #3300, Chicago, Illinois 60606
BlackRock Fund Advisors, 400 Howard St., San Francisco, California 94105-2228
The Vanguard Group, Inc., 100 Vanguard Blvd., Malvern, Pennsylvania 19355
JANA Partners, LLC, 767 Fifth Ave. Suite 800, New York, New York 10153
Westwood Management Corporation (Texas), 200 Crescent Ct. #1200, Dallas, Texas 75201
J.P. Morgan Investment Management, Inc., 270 Park Ave. 8th Fl., New York, New York 10017
State Street Global Advisors (SSgA), 1 Lincoln St. 27th Fl., Boston, Massachusetts 02111-2900
Dimensional Fund Advisors, LP (U.S.), Palisades W., Bldg. 1, 6300 Bee Cave Rd., Austin, Texas 78746
Schroder Investment Management, Ltd., 31 Gresham St., London, U.K. EC2V 7QA
Norges Bank Investment Management (Norway), Bankplassen 2, P.O. Box 1179 Sentrum, Oslo, Norway NO-0107
NFJ Investment Group, LLC, 2100 Ross Ave. Suite 700, Dallas, Texas 75201
Thrivent Asset Management, LLC, 625 Fourth Ave. South, Minneapolis, Minnesota 55415-1624
Northern Trust Investments, Inc., 50 S. LaSalle St. 4th Fl., Chicago, Illinois 60603
Quantitative Management Associates, LLC, 751 Broad St., Newark, New Jersey 07102
Keeley Asset Management Corporation, 111 W. Jackson Blvd. #810, Chicago, Illinois 60604
Fidelity Management & Research Company, 245 Summer St., Boston, Massachusetts 02210
The Boston Company Asset Management, LLC, 1 Boston Place Suite 2600, Boston, Massachusetts 02108
Renaissance Technologies, LLC, 800 Third Avenue, New York, New York 10022
TCW Investment Management Company, 865 S. Figueroa St. Suite 1800, Los Angeles, California 90017
Investec Asset Management, Ltd. (U.K.), Woolgate Exchange 4th Fl., 25 Basinghall St., London, U.K. EC2V 5HA

12. Not Applicable
13. Publication Title: TIME
14. Issue Date for Circulation Data Below: August 29, 2016
15. Extent and Nature of Circulation:

Average No. Copies Each Issue During Preceding 12 Months

a. Total number of copies: 3,249,131
b. Paid circulation
   1. Mailed Outside-County Paid Subscriptions Stated on PS Form 3541: 2,211,680
   2. Mailed In-County Paid Subscriptions Stated on PS Form 3541: 0
   3. Paid Distribution Outside the Mails Including Sales Through Dealers and Carriers, Street Vendors, Counter Sales and Other Paid Distribution Outside USPS: 64,861
   4. Paid Distribution by Other Classes of Mail Through the USPS: 0
c. Total Paid Distribution: 2,276,541
d. Free or Nominal Rate Distribution:
   1. Free or Nominal Rate Outside-County Copies Included on PS Form 3541: 807,146
   2. Free or Nominal Rate In-County Copies Included on PS Form 3541: 0
   3. Free or Nominal Rate Copies Mailed at Other Classes Through the USPS: 0
   4. Free or Nominal Rate Distribution Outside the Mail: 6,907
e. Total Free or Nominal Rate Distribution: 814,053
f. Total Distribution: 3,090,594
g. Copies Not Distributed: 158,537
h. Total: 3,249,131
i. Percent Paid: 73.7 percent

Number of Copies of Single Issue Published Nearest to Filing Date August 29, 2016

a. Total number of copies: 3,215,480
b. Paid circulation
   1. Mailed Outside-County Paid Subscriptions Stated on PS Form 3541: 2,181,414
   2. Mailed In-County Paid Subscriptions Stated on PS Form 3541: 0
   3. Paid Distribution Outside the Mails Including Sales Through Dealers and Carriers, Street Vendors, Counter Sales and Other Paid Distribution Outside USPS: 53,690
   4. Paid Distribution by Other Classes of Mail Through the USPS: 0
c. Total Paid Distribution: 2,235,104
d. Free or Nominal Rate Distribution:
   1. Free or Nominal Rate Outside-County Copies Included on PS Form 3541: 817,923
   2. Free or Nominal Rate In-County Copies Included on PS Form 3541: 0
   3. Free or Nominal Rate Copies Mailed at Other Classes Through the USPS: 0
   4. Free or Nominal Rate Distribution Outside the Mail: 6,077
e. Total Free or Nominal Rate Distribution: 824,000
f. Total Distribution: 3,059,104
g. Copies Not Distributed: 156,376
h. Total: 3,215,480
i. Percent Paid: 73.1 percent

16. Publication of Statement of Ownership will be printed in the October 17, 2016, issue of this publication.
17. Signature and date: Maria Beckett, SVP, Finance, September 16, 2016

I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

NOTICE TO SUBSCRIBERS

In the event that we are unable to effect the delivery of your subscription to TIME for any reason beyond our control, our obligation is limited to the resumption of your subscription when we are able to do so. If we remain unable to resume delivery within 24 calendar months from the date of interruption, we will have no further obligation under your subscription agreement.

WRITTEN IN BLOOD
French's previous thrillers include *The Secret Place* and *In the Woods*

FRENCH: KATHRIN BAUMBACH

FICTION

Murder, she wrote

THE MURDER OF AISLINN MURRAY LOOKS LIKE A BIG OPPORTUNITY for Detective Antoinette Conway. She usually covers domestic disputes turned fatal, with clear perpetrators. This one is different. The victim in Tana French's new novel, *The Trespasser,* has suffered an attack inside her own Dublin apartment. There are no signs of forced entry or burglary; clues suggest someone took great care to cover his or her tracks. The story's tension goes beyond the thrill of solving the mystery, though: if Antoinette can crack this case, maybe her squad members (all men) will finally stop their campaign of harassment, and maybe whoever has been rifling through her paperwork will cease to do so.

Antoinette, the daughter of an Irish mother and an unknown father who's responsible for her caramel skin, has been on the defensive since childhood, "when Ireland was still lily-white and I was the only brownish kid around, and my first ever nickname was Shiteface." She's an outsider on several levels—sex, race and class—and her colleagues won't let her forget it. Their hazing has rattled her to a breaking point. "I can't tell if this is batsh-t paranoia or the bleeding obvious slapping me in the face," Antoinette says, when she begins to wonder if her own sweet-seeming partner, Steve, could be the one who's out to get her.

Over six novels, French has built an eager fan base spanning readers of literature and thrillers. The books don't form an official series and can be read in any order, but they are connected. Each narrator works on the fictional "Dublin Murder Squad," and they appear in other books as partners or other minor characters. French often deals with the meaning of identity; past narrators have worked under an assumed name, or gone undercover. *The Trespasser* takes that idea even further, centering on a victim whose seemingly bland personality and generic good looks may have been adopted for sinister purposes.

Until the ending, which drags on too long after the perp is revealed, French keeps the reader pulling at the end of a tight leash with revelations about the unlikely links between Aislinn and Antoinette, two outsiders trying to make it in a city that doesn't take well to strangers. "Anyone who turns herself into Barbie because that's the only way she feels worthwhile needs a kick up the hole," Antoinette says, musing on Aislinn, "but someone who does it for a revenge mission deserves a few points for determination." —SARAH BEGLEY

NONFICTION

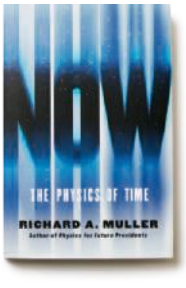
Time travels in two directions

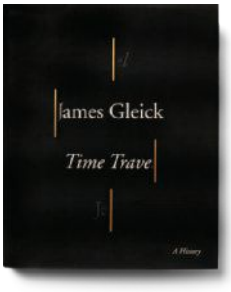
SOME BOOKS OUGHT TO COME WITH A warning—not for the reader but for those nearby, who are bound to be interrupted with passages read aloud. Mind-blowing ideas demand to be shared.

Such a warning ought to come with both James Gleick's *Time Travel: A History* and Richard A. Muller's *Now: The Physics of Time.* The central question of Muller's book is how to define "now," and crucial to the answer is figuring out why (or whether) time moves in only one direction. Muller, an acclaimed physicist at the University of California, Berkeley, posits a theory that seems at once plausible and—surprisingly, for a book with equations—one worth not spoiling. His style is friendly to those without a science background, though the feeling of understanding quantum physics may be fleeting. Gleick, meanwhile, takes a cultural view of time travel, going back to H.G. Wells. If you want to know what now is like—as opposed to what now *is*—you must examine its visions of the future and the past.

Both books quote St. Augustine, who said he was sure what time was until he was asked explain it. And yet we keep trying to pin time down, for good reason. To Muller and Gleick, the question of time leads to something even bigger: free will. What is the link between our pasts, ourselves and our futures? In different ways, each makes a fascinating argument that the most important time is the present. —LILY ROTHMAN

Two new books tackle time, one with science . . .





. . . and one through literature and history

HBO programming president Casey Bloys said he's open to the possibility of **a *Game of Thrones* spin-off series:** "For us, it's about finding the right take with the right writer."

One-year-old Princess Charlotte—daughter of Prince William—**took her first public steps** while attending a party in British Columbia.

Tom Hanks crashed a wedding photo shoot in New York City's Central Park, then offered to preside over the couple's ceremony (he's also an ordained minister).

Rihanna described **her latest Fenty x Puma collection**—which includes sweatpants, hoodies, pearl chokers and fans—as

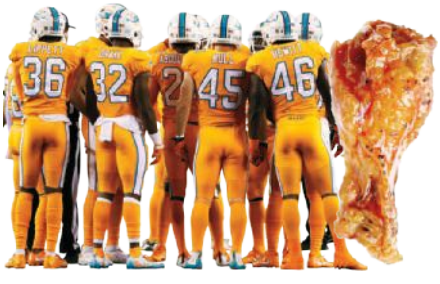
'if Marie Antoinette was going to the gym and needed something to wear.'

One Direction's Niall Horan **surprise-released his first solo single,** a ballad called "This Town."

TIME'S WEEKLY TAKE ON LOVE IT / LEAVE IT WHAT POPPED IN CULTURE

A tech vlogger tried to test the durability of the iPhone 7 Plus by **dropping it from the 148th floor of Dubai's Burj Khalifa** skyscraper, the world's tallest building; the phone was destroyed.

The Miami Dolphins' bright orange uniforms (which they wore during a Sept. 29 game) were widely mocked on Twitter; one fan compared the shade to "undercooked buffalo wings."



Melbourne's Cafe 51 is offering customers free burgers for life. The downside: they must be willing to get **a life-size image of one tattooed on their body.**

A 23-year-old man in Vermont has been charged with **growing at least 40 marijuana plants in a local cemetery.**

A New York Yankees fan who proposed to his girlfriend live on the stadium's scoreboard **dropped the engagement ring and (temporarily) lost it** in the stands. She still said yes.

GAME OF THRONES: HBO; HANKS: MEG MILLER PHOTOGRAPHY; BURGER: INSTAGRAM; YANKEES ENGAGEMENT: AP; IPHONE: YOUTUBE; RIHANNA, PRINCESS CHARLOTTE, MIAMI DOLPHINS, WING, MARIJUANA: GETTY IMAGES

By Raisa Bruner, Cady Lang and Megan McCluskey

I'm a football fan. I just didn't know it

By Joel Stein

ONE OF THE BEST THINGS ABOUT LIVING IN LOS ANGELES was that it had no NFL team. So for the past 10 years, I got away with pretending to watch football by spouting analysis about my hometown New York Giants such as, "Eli Manning throws the football with his arm."

So I was upset when, after 21 blissful NFL-free years, L.A. got a team, the Rams. Then I realized that this was an amazing opportunity. The new fans would be as ignorant as I am about the team. So I could experience whatever it is that America loves about the NFL and not be mocked while I did it. I could go back in time and fix the mistake I made when I was 5 and assumed people would continue to watch baseball.

TO FIGURE OUT how people become loyal to a team they didn't care about a month earlier, I called Ed Hirt, a psychology professor at Indiana University who has studied fandom. He explained that we do this all the time. The moment we arrive at college, we root for the team in order to fit in. We cheer for Olympians we'd never heard of a week earlier. We support Gary Johnson without ever having seen Gary Johnson. "It's really hard to watch and be completely impartial," Hirt explained.

My problem, however, is that it's really easy not to watch. To find out how to motivate myself, I turned to Christian End, an associate professor of psychology at Xavier University who also studies sports fans. He said I just needed to buy a Rams jersey, take photos of myself at games and pick a favorite player I had something in common with. Also, it would help if the Rams won, because people like to bask in reflective glory. "If the Rams are 9-1, the watercooler talk will be about them," he said before the season started. "But if the Rams start out 0 and 8, are people going to want to pay $20 for parking?" This made sense to me, since I am a fair-weather fan not just of sports teams but also of co-workers, friends, family members and moral systems.

For my favorite player, I chose punter and co-captain Johnny Hekker. To find out what we had in common, I called my all-time favorite NFL player, Johnny Hekker. He was pretty excited to talk to a hardcore fan and told me that, like me, he hates horror movies and likes to cook—he even loves the same soup-dumpling place I do. Although we had different stances on Jesus as the Lord and Savior, we both love comedy. Like me, he uses his wife as a comedic foil. On his ESPN radio show, *What the Hekk,* they played the Newlywed Game. "I didn't do too hot," he said. "Men and women just think differently." He precisely summed up 18 years of my TIME columns.

ILLUSTRATION BY ALEX EBEN MEYER FOR TIME

STILL, I WORRIED that I would fail to fit in because I'm too different from football fans, with their love of violence, face paint and not spending Sundays with their families. Then I found out that L.A.'s biggest Rams fan is Ty Burrell, who plays a character on TV exactly like me—the cheerfully oblivious dad on *Modern Family*—which was written for him. To turn me into a Rams fan, Burrell employed the logic he used on kids when he was 6. "It is the only helmet that makes any sense. Rams actually run into each other to mark their territory. Think about it!" he said. I pointed out that Vikings wore helmets in battle. He hadn't considered that. Burrell switched to selling me on the drama of the game, which he constantly defends to his artsy actor friends. I, meanwhile, wanted artsy actor friends, and hanging out with Ty Burrell at Rams games seemed like an easy way to get them.

I headed to the Rams' first home game and found my friends Ross Novie and Trevor Goth, who despite being fans of other teams bought season tickets to force themselves to become fans by spending lots of money. After a few plays I turned to Ross and said, "If we're struggling to establish the run game, we don't have the outside speed to stretch the defense so we're basically dealing with an extra person in the box." Ross looked at me, possibly because I was reading from a note on my phone that Ty Burrell had given me. "That's living-room fan stuff," Ross said. "Here it's grunts, fingers and chants." I could do this. Football, I was learning, was like having sex with my yoga-loving wife.

The Rams won 9-3 in spectacular fashion, and that fashion was getting a lot of penalty calls. Hekker had six punts, with a net punt average of 39.5 yd., which was good enough. Since I became a fan, the team is 3-0. This Sunday, I will again root for Hekker and the Rams, cheering them on with the pronoun *we.* I just hope no one asks me to explain the *we* with proper nouns. ◻

See more at **time.com/panther-photos**

Bobby Seale The Black Panthers co-founder, whose new book marks the 50th anniversary of the party's establishment, talks about guns, Trump and Obama

Your new book with photographer Stephen Shames, *Power to the People*, is full of pictures from the early days of the Black Panther Party. How does it feel to look back at that time? It feels like yesterday. Because I never stopped being active in one way, shape, fashion or form.

The introduction notes that you want to help people make sense of the present by understanding the past. Where do you see that connection? Let's take the Republican efforts, in many states, of voter suppression. When I started the Black Panther Party I was working for the city government of Oakland, Calif. In that framework, young folks were saying, "We're going to have black power." I said, "You ain't getting no power until you get some political power seats." They said, "I don't know, those are the white man's seats." I said, "You'd better *make* some black folks and some Chinese folks and some other people of color in some of those seats."

And now this book comes out at the end of President Obama's second term. How would you assess his impact on that goal? He *represents* the goals we had.

You write a lot about the importance of coalitions across demographic groups. What is the status of that cooperation today? People are basically working like that. We can't run around talking about how this is only for blacks. Even Black History Month is not only for blacks. Women's History Month is not only for women. When I talk to young folks, I try to tell them that we live in an overdeveloped, high-tech, fast-paced, computerized, scientific, technological social order. We have an interconnected global economy evolving all around us. And we have this climate-change factor. It's for all of us—whether it's black, white, blue, red or whatever.

But this presidential election has been pretty divisive. What do you think of the way the candidates handle that? What are you talking about? Donald Trump, the guy is what the people say he is. He's a racist and bigot, etc. That's all. I have nothing else to say about that.

The Black Panther Party got its start with armed observance of the police. What do you think of body cameras? It's not about the body camera. It's the people who observe the police with *their* cameras—that technological observation. Today you do not need guns like we did in the '60s.

> 'Today you do not need guns like we did in the '60s.'

Do you own a gun? No, I don't.

Have any of the goals on the original Black Panther Party 10-point platform been achieved? Originally No. 6 said we wanted all black men and women not to be forced to fight in the war in Vietnam. So we changed that one to we wanted free medical health care for our people. It may not be a perfect health plan, it's still to be worked on, but that has [happened].

The party was founded on your birthday, Oct. 22, in 1966. How are you planning to celebrate this year? We have the Raines family—before Snowden, the Raines family stole the FBI's Cointelpro documents [proving agency surveillance of the Panthers and other domestic groups]—and they're our guests out here to join this 50th-anniversary celebration. It's not just my birthday. You can't talk about Bobby Seale unless you're talking about all that history we made.

—LILY ROTHMAN

JAVIER SIRVENT FOR TIME

The choice is yours, and it's simple.

Why enjoy just one cookie when there's a whole stack in front of you?

The same goes for car insurance. Why go with a company that offers just a low price when GEICO could save you hundreds and give you so much more? You could enjoy satisfying professional service, 24/7, from a company that's made it their business to help people since 1936. This winning combination has helped GEICO to become the 2nd-largest private passenger auto insurer in the nation.

Make the smart choice. Get your free quote from GEICO today.

GEICO®

geico.com | 1-800-947-AUTO | Local Office

THIS WATCH IS A WITNESS TO THOSE WHO SHAPE THE FUTURE.

Rolex is proud to be the official partner of TIME's Next Generation of Leaders, and to celebrate those who can change the world. It doesn't just tell time. It tells history.

ROLEX

OYSTER PERPETUAL AIR-KING

FOR AN OFFICIAL ROLEX JEWELER VISIT ROLEX.COM