## Nieman



## **AUTOMATION IN THE NEWSROOM**

How algorithms are helping reporters expand coverage, engage audiences, and respond to breaking news

#### **Nieman Online**



David Axelrod, right, director of University of Chicago's Institute of Politics, speaks with GOP strategist Steve Schmidt at Covering Campaigns, a conference for 2016 election reporters

NIEMAN.HARVARD.EDU, AWARDS & CONFERENCES

"The question is, how as reporters do you approach the campaign so that you're looking at the race from the standpoint of the American people?"

—DAVID AXELROD
STRATEGIST FOR OBAMA'S PRESIDENTIAL CAMPAIGNS

#### **Nieman**Reports

#### **Architecture Criticism: Dead or Alive?**

Chicago Tribune architecture critic Blair Kamin addresses those who question his craft's enduring influence and suggests how criticism can be revitalized in the digital age

#### What APIs Can Do for News

For NPR, The New York Times, and The Guardian, application programing interfaces have lowered the cost and risk of experimentation. David Weinberger, a fellow at Harvard's Shorenstein Center on Media, Politics, and Public Policy, explores the value of APIs for news organizations

#### NiemanLab

#### The Future of Public Media Membership

Knight Visiting Nieman Fellow Melody Kramer reports on the sustainability of public media beyond tote bags and pledge drives. She explores how membership can be broadened and strengthened, and the non-monetary ways people can contribute to their local stations

#### Finding the Money?

A detailed look at which independent local news sites are making money—and which ones aren't

#### **Nieman**Storyboard

#### From the Archives

E.L. Doctorow, who died this summer, visited the Nieman Foundation in 1977. The master of the historical novel talked about his new book "Ragtime," his foray into journalism, and the differences— or lack of them—between journalists, novelists, and historians

#### 23 Ways To Be a Columnist

In remarks to a gathering of the National Society of Newspaper Columnists, Mary Schmich of the Chicago Tribune offers 23 things she has learned in 23 years of being a columnist



 $Companies' \ quarterly \ earnings \ reports \ represent \ a \ vast \ opportunity \ to \ automate \ journalism$ 

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Hasit Shah (page 28), a 2014 Nieman-Berkman Fellow, is a former news producer and South Asia specialist for BBC News in London. He is developing a mobile news platform for new Internet users in India.



Rose Eveleth (page 46) is a writer, producer, and designer based in Brooklyn. Eveleth has written for Scientific American, BBC Future, and others. Currently, she is the host and producer of a podcast called "Meanwhile in the Future."

THE NIEMAN FOUNDATION for Journalism has partnered with the Pulitzer Board to celebrate the 100th awarding of the Pulitzer Prizes taking place in 2016.

The yearlong centennial celebration will include four signature events in Florida, California, Texas, and at Harvard, each focusing on a major aspect of Pulitzer history: Social Justice and Equality; War, Migration, and the Quest for Peace; Presidents and the Press; and Abuse of Power.

THE NIEMAN EVENT, THE capstone of the series, will take place in September 2016. Focusing on power, accountability, and abuse, the program will include Pulitzer winners in conversation, storytelling, and performance.

"This is not just a moment for retrospection," said Nieman curator Ann Marie Lipinski, a past co-chair of the Pulitzer Prize board. "Exploring the ways the use and abuse of power have echoed throughout the history of the prize can ignite debate and strengthen both journalism and the arts as we look out to a new era."

Other participating organizations include the Newseum; The Poynter Institute; The Dallas Morning News in collaboration with the George Bush Presidential Library and Museum, the George W. Bush Library and Museum, and the Lyndon Baines Johnson Library and Museum; and the Los Angeles Times with USC Annenberg School for Communication and Journalism. Other smallerscale events will take place across the country throughout the year.

NIEMAN REPORTS HAS received two Mirror Awards, which honor excellence in media industry reporting. "Moral Hazard" by Yang Xiao, NF '14, won in the best commentary category while "Where Are the Women? Why we need more female newsroom leaders" by Anna Griffin, NF '12, won as the best single article in digital media.

"Moral Hazard" appeared in the Winter 2014 issue of Nieman Reports as part of a cover package on "The State of Journalism in China" that



Nieman curator Ann Marie Lipinski met in New Delhi, India with Nieman Fellows, including (clockwise from top left) Raj Chengappa, NF '91; Nirupama Subramanian, NF '03; Hiranmay Karlekar, NF '67; Anil Padmanabhan, NF '01; Rema Nagarajan, NF '12; and Sunil Sethi, NF '89



Anna Griffin

looked at how reporters are trying to work around Chinese censorship 25 years after Tiananmen. "Where Are the Women?" was the cover story for the Summer 2014 issue of the magazine. It examined the dearth of female leadership in newsrooms and what can be done to increase their ranks at the top.

Administered by Syracuse University's S.I. Newhouse School of Public Communications, the Mirror Awards honor the reporters, editors, and teams of writers who examine their own industry for the public's benefit.

This year's awards were presented at a ceremony in New York City on June 11.

INVESTIGATIVE REPORTER Robert Parry is the recipient of the 2015 I.F. Stone Medal for Journalistic Independence, recognized for his distinguished career marked by meticulously researched investigations, intrepid questioning, and reporting that has challenged mainstream media.

Parry established the first investigative newsmagazine on the Internet, consortiumnews. com, in 1995 and continues to edit the site today. He is known for his breaking news reporting during the Iran-Contra affair while working for AP and Newsweek in the 1980s. He received a George



Yang Xiao

Polk Award for National Reporting in 1984 and he was a Pulitzer Prize finalist the following year. He made several documentaries for PBS's "Frontline" on the October Surprise conspiracy theory during the 1980 presidential election, and he has authored several books.

"Robert Parry has for decades been one of the most tenacious investigative journalists," said Bill Kovach, former Nieman Foundation curator and chair of the advisory committee overseeing the award. "Driven by his concern that the information flooding our communications system increasingly substitutes opinion for historical fact and undermines effective citizen and government decisions, he has created a unique news website to replace disinformation with facts based on deep research."

The annual award was established in 2008 to recognize journalistic independence while honoring the life of investigative journalist I.F. Stone. Journalists chosen as recipients produce work capturing the spirit of independence, integrity, and courage that characterized I.F. Stone's Weekly, which was published from 1953 to 1971.

Perry will be presented with the I.F. Stone Medal during a ceremony at Harvard on October 22.

## "The Real Unit of Exchange Is ... People"

# Medium's Evan Hansen on optimum story length, writing for free, and online publishing

VAN HANSEN IS HEAD OF content labs at Medium, the online publisher created by Twitter co-founders Evan Williams and Biz Stone in 2012. Previously, Hansen was editor in chief of Wired.com for eight years. He has worked online for most of the 20 years he has been in the journalism industry.

With a clean, simple design, Medium aims to change the way people write, publish, and read online. In three years, Medium has evolved and now features content by both amateurs and professionals—not just journalists and novelists, but politicians and policymakers as well. President Obama's 2015 State of the Union was published on Medium, and Walter Isaacson published a portion of his latest book, "The Innovators," on the platform. Medium today publishes two branded publications: Backchannel, about technology, and Matter. In July, the site had 28 million unique visitors globally, according to internal metrics.

Medium is not without critics, especially among freelance writers. Out of several thousand articles posted on the site each day, Hansen recently estimated that Medium pays for about 50 or fewer. The unpaid writers retain the copyright to their work.

Hansen spoke at the Nieman Foundation this spring in conversation with David Jiménez, a 2015 Nieman Fellow. Edited excerpts:

#### On creating engagement

As a writer, you want more than a nice easel. You want an audience and ultimately, you want to get paid. At Medium, the first piece of the puzzle was to make a much more el-

egant and appealing tool for writing and to create an environment where readers will take the time to pause and engage with the words in front of them.

You want that instead of creating all this clutter, what I used to call "link roulette" when I was at Wired. We were convinced that the stories people were reading wouldn't keep their attention for more than a couple seconds, or maybe a minute if we were lucky. So we'd say, "Let's put 40 other links up there. The minute they get bored with this one, they'll click off, and they'll stay with Wired."

I think you start to see some of the seeds of why writing is broken on the Internet. Reading is an experience in which you're engaging with another mind. The engagement between an author and a reader was getting severed, so at Medium we wanted to reconnect those dots.

The method for doing that, in addition to creating the tools, was to create a network, a place where people engage with each other and not just with documents. It took Facebook and social networks to realize that the real unit of exchange is not documents, it's people.

#### On algorithms and editors

When you try to curate vast amounts of information, you run into a scaling problem. People are a better judge of individual pieces of content than algorithms, but when you're trying to review thousands of pieces of content in real time and make suggestions about what to read, it gets to be a problem.

I think ultimately it's a combination of people plus machines. What the algorithms are doing, though, is fundamentally responding to what humans are doing with the content.

#### On optimum story length

We ran some numbers to figure out if there's an optimal length for writing on Medium in terms of people finishing a story. Our data scientists assured me that seven minutes is the ideal reading time for a post.

Two years ago, when Medium really took off, there was a resurgence of interest in long-form writing. Medium acquired an investigative science journalism magazine called Matter, which was publishing one long-form story once a month. We got associated with the long-form movement, largely as a result of that.

Yet we accept any type of writing as long as it fits our terms of service. Shorter stuff is great. Long does not always serve the reader better. Very few stories actually rise to the level of needing 10,000 words. The idea is to publish stuff that is shorter, conversational, and ephemeral without displacing or removing long-form.

#### On (not) paying writers

I think there's a whole range of motivations for people to write. You have amateurs who are trying to get their name out there. Having an open platform where their stuff might get noticed and seen by a big audience is very appealing.

You have people who have stories that they want to get out to the public and they want to own that relationship and their own words. Then on the far end of the scale, you have professional writers who write to put

The real workhorse of Medium is the network. It's the people on it reading, recommending, interacting. It's not a top-down process



Medium's Evan Hansen, right, and David Jiménez discussed the site's growth and future plans

bread on the table. Even they have a range of motivations for writing certain things.

Writers will happily publish on The New York Times op-ed page and they don't always get paid. They get huge reach for their stuff. There's a whole kind of calculus that you do in terms of "Am I building my brand as a writer?" versus "Am I getting paid?"

There is the notion that you get paid for the words that you write, and I understand that freelancers don't want to get taken advantage of, but there's a ton of reasons why people would get value out of putting things up on a platform like Medium for free.

#### On finding a revenue model

Our long-term goal is to build a platform that rewards writers for being there. We want to build revenue-creation tools in a way that, say, YouTube has done for video creators. We want to do that for writers and give people a bigger cut of the pie.

We haven't considered what our most potent revenue model will be in the long run. We're a broker between creators and audiences. It could be that we're connecting professional writers, designers, photographers, and illustrators, and giving them a marketplace where they can connect with customers at scale, so if you're a photographer maybe you can license your image to hundreds of people for a dollar each.

We also act as a creative service agency for brands, like BMW. For them, we launched a site called re:form. They had a very high interest in associating their brand with design so they deputized us to build them

a high-quality publication around design. We hired an editor who hired journalists to write stories about design. BMW is never mentioned once. We labeled the stuff, saying, "Hey, this is sponsored by BMW," and everything's aboveboard, but it's a different model of advertising. [Medium has since stopped publishing on its re:form site and the BMW sponsorship logo was removed.]

What's different about our model is not that we're trying to compete with, say, The New York Times or any media company. Ultimately, we want to be a place that serves those companies, that tells them, "Hey, you're going to get value out of publishing on Medium even if you're a major media brand."

We're not gearing our tools to that particular customer now but in the long run, that makes sense for us. We don't want to be competing with writers or publishers. We're competing with other people who provide tools for publishing on the Internet.

#### On the value of publishing on Medium

When you post on Medium, you have followers. People recommend your article. We have algorithms that then will progressively show it to more people. The more recommended it gets, the more it pushes up or goes out in an e-mail blast and so on.

That's the fundamental dynamic of distribution that we're trying to build. We have a few levers that we can pull. We have an @Medium Twitter account and a Medium Facebook account. We populate the homepage with a human-curated list of stories.

We're putting about 25 to 30 stories [that number has since dropped to five to 10] a day on the homepage and maybe tweeting the same number of posts and oftentimes, they're the same ones. The real workhorse of Medium is the network. It's the other people on it, reading, recommending, interacting. That creates the amplification. It's by design supposed to be very organic and not a top-down editorially driven process. It's bottom-up based on readers.

Writers can see who follows you. If people follow you, there's a notification sent out to that group of people every time you publish something and every time you recommend something. You can drill in to see who's following you.

Medium gives an opportunity to a young writer to get noticed by people in a way that you might never have a chance to get noticed otherwise.

One of my favorite stories about people whose lives have literally been changed by publishing on Medium is about a 19-yearold who wrote a post concerning how teenagers use social media. Our tech editor, Steven Levy, noticed that piece, asked the kid whether he would like to put that post in Backchannel, which is our in-house technology publication. He said "Yes." He was ecstatic first of all that Steven Levy had noticed it. We paid the guy for it. The post exploded. It owned the Internet for a day. Then, TechCrunch called him up. They said, "We want to interview you. We want to introduce you to some people at our start-up." He flew out and met all these people. He got an internship at a company he would never have had access to before.

I think this notion that the value of writing is inherently the dollar that's spent on the word is mistaken. In fact, everyone who has written a book would say that the value of the book isn't necessarily the revenue they got from selling the book, but it's all the opportunities they got from the speaking engagements and other things.

For a lot of people, writing might be a loss leader for other things. Distribution, marketing, attention—they may be way more valuable to you than a dollar. ■

#### Free, at Last

Tracking fish caught by slaves, Margie Mason, NF '09, helps end years of captivity

so often, journalists are quick to dismiss stories that have been done before, especially those that have been written over and over again. But what if you could take a subject everyone has known about for years—an open secret—and make it your own, breaking news and linking unspeakable abuse occurring in Southeast Asia's oceans to the food on American dinner tables? That's exactly what my Associated Press colleague Robin McDowell and I set out to do when we began a yearlong investigation exposing modern-day slavery in the fishing industry's gritty underworld.

Migrant workers from the poorest parts of Thailand, along with neighboring Myanmar, Cambodia, and Laos are routinely sold onto Thai fishing boats that end up in foreign waters thousands of miles away for up to years at a time. Those lucky enough to return have long told of the horrors experienced at sea—brutal beatings, 22-hour shifts, no medicine, a lack of food, unclean water, and bodies stashed in the freezer or tossed overboard.

What is less known—and much harder to prove—is that their catch is transported from the open sea back to Thailand where it's processed and shipped worldwide as

We used satellites and trucks to discover the ultimate destinations of fish caught by slaves on Thai boats part of the country's \$7 billion annual seafood export business. Our reporting showed that everything from the fake crab in your California roll to the food in your cat's bowl could have been caught by slaves.

How did we do it?

After months of dogged reporting and networking, we essentially uncovered a slave island in a remote corner of Indonesia, complete with men locked in a cage and a company graveyard filled with dozens of fishermen buried under fake Thai names.

It was an explosive story on its own, but it wasn't enough. We were determined to name names.

We used satellites to track a refrigerated cargo ship filled with slave-caught fish from the Indonesian dock to Thailand. From there, we spent four nights in a truck following load after load of seafood being delivered to cold storage facilities, processing plants, and the country's largest fish market.

Once we nailed down that some of these smaller companies were selling to two major Thai exporting businesses, California-based reporter Martha Mendoza started connecting the dots. She used U.S. Customs records to

determine that tainted fish can wind up in the supply chains of some of America's biggest stores, including Walmart, Kroger, Albertsons, and Safeway, along with the nation's largest food distributor, Sysco. It can also find its way into the supply chains of some of the most popular brands of canned pet food, including Fancy Feast, Meow Mix, and Iams.

But even after we had all of this, we still could not run the story until we knew the slaves quoted and shown on camera were safe. We asked the International Organization for Migration to help, and they worked with Indonesian authorities to move the identified men off the island and into a secure shelter ahead of publication.

Just over a week after our story ran, the Indonesian government made a dramatic rescue—freeing more than 300 slaves from the island. Since then, more than 800 men and counting have been repatriated, arrests have been made, businesses have cut ties with tainted suppliers, a Congressional hearing has been held, and U.S. federal legislation has been written, all proof that sometimes the best reporting comes when reporters take a new look at an old story.



A formerly enslaved fisherman is reunited with his mother in Myanmar after 22 years

#### In the Line of Fire

With virtual-reality project, Karim Ben Khelifa, NF '13, fosters empathy

AFTER 15 YEARS OF ASSIGNMENTS IN WAR zones around the globe, I've found that the hopes, dreams, and nightmares of enemies are often more similar than they are different. This is the story I need to share.

In my 2013 photo project "Portraits of the Enemies," I placed viewers in-between life-size portraits of enemy combatants. My new virtual reality project, "The Enemy," is designed to help audiences discover a shared humanity between opposing combatants in eight conflict zones, including Israel and Palestine, and Afghanistan.

Based on interviews I've conducted with soldiers, we have produced a prototype that places participants in the middle of two enemy combatants who share what drives them to take up arms. As viewers don virtual reality headsets, text on the facing wall provides background on one of the conflict zones.

Two photographs show the opposing combatants. As viewers approach each of the photos, they hear sounds recorded in the conflict zone—gunshots, sirens, people panicking—and are introduced, with my voice, to the two subjects with a few details about their lives.

The photographs disappear and participants hear people entering the room. When they turn around, they find three-dimensional lifelike manifestations of the two subjects in the photographs. When approached, each soldier, prompted by my questions, explains why he is fighting. Though not interacting with each other, the soldiers appear to make eye contact, with viewers caught in their emotional crossfire.

My goal is not only to inform people, but to change the way they perceive others. Though we may not agree with the combatants, we need to see them as human beings.

The prototype was shown at the Tribeca Film Festival in April, and people's reactions demonstrated how powerful virtual reality technology can be. I didn't expect to see so many viewers, with no personal investment in the conflicts, break down crying.

We don't anticipate the project to be done until early 2017, but what we have so far is already changing the way people discern "the other." We all want the same things, and we're all fighting for survival. That's what I, as a storyteller and a journalist, want to address.



In "The Enemy," Gilad, an Israeli soldier, shares his reasons for taking up arms

#### TAXI TO THE **BRIGHT SIDE**

NPR CORRESPONDENT FRANK LANGFITT, NF '03, FINDS HIS BEST STORIES BEHIND THE WHEEL OF A FREE **CAB HE DRIVES IN SHANGHAI** 

IN THE SUMMERS DURING college, I drove taxis in Philadelphia. All sorts of people opened up in the anonymity of a cab.

Three decades later, while covering China for NPR, I felt my stories lacked a sense of life as it's really lived here. So, I took the old Philadelphia taxi-driving model and applied it to Shanghai, a city of 24 million. I rented a Toyota Camry and slapped on signs that said in Mandarin, "Free Loving Heart Taxi" and explained that I wanted to chat with people and learn about life in the city.

For some Chinese, a middle-aged American offering free rides proved irresistible. People hopped in my car and told me their stories. The result has been a series of profiles, heard on "Morning Edition" and "All Things Considered," called "Streets of Shanghai."

Driving around the city, I discovered revealing characters I never would have found through conventional reporting. Take Chen, a pajama salesman I met at a ferry stop. He'd moved his family to Los Angeles because China's rote-learning school system was crushing his daughter's spirit and ruining her eyesight. I had heard of Chinese millionaires making moves like this. But until I met Chen, I didn't realize that even a pajama salesman was looking to rescue his kid.

Earlier this year, my news assistant Yang Zhuo and I advertised a free ride home for Chinese New Year, the world's largest annual mass migration. We found two men who were heading back home to marry their sweethearts. One, from a poor farming village, had risen-improbably-to become a Shanghai lawyer. I drove them and one of their fiancées 500 miles into China's interior, spent days with their families, and helped out as a chauffeur at both weddings.

In total, I've spent nearly a decade covering China. I've had more fun and learned more from giving rides than anything else. I also think I'm closer to capturing the real China.

# The dramatic and narrative appeal of documentary theater BY LAURA COLLINS-HUGHES

THE DAY MOLLY IVINS DIED IN 2007, Margaret Engel called up her twin sister Allison and told her they had to write a play about the wisecracking Texas political columnist who stuck George W. Bush with the nickname "Shrub."

No matter that the Engels were journalists who had never before ventured into drama. They were theater lovers from way back, and a one-woman show felt to them like the right form for a tribute. For Ivins's fans, it would be a less solitary activity than reading her words on the page. Each performance would be a communal experience of listening once more to her voice, channeled through the actress playing her.



When "Red Hot Patriot: The Kick-Ass Wit of Molly Ivins" premiered in 2010 at the Philadelphia Theatre Company, Kathleen Turner was the star. The show has since been performed, by Turner and others, all over the country, and the Engels are now working on two more plays: one about Erma Bombeck, due to debut in October at Arena Stage in Washington, D.C., the other about Damon Runyon. Both new plays were spurred by requests from the subjects' representatives.

After years as newspaper reporters-Margaret, a former managing editor of the Newseum who also worked at The Washington Post; Allison, who got an MA in screenwriting from the University of Southern California in 2009 and also worked at the San Jose Mercury News-the move into playwriting often surprises fellow journalists. They act "like we discovered nuclear fusion in our basement or something," Allison says. But, she argues, writing for the stage isn't really so different from writing for a newspaper: "You're telling a narrative." Indeed, the elements of journalistic excellence—research, reporting, storytelling are also essential to writing for the stage.

Certainly, there's plenty of precedent. J.M. Barrie, the playwright who gave the world "Peter Pan," started out as a journalist. A Chicago Tribune crime reporter, Maurine Dallas Watkins, wrote the 1926 play "Chicago," which Kander and Ebb spun into their gritty, glamorous hit musical. George Bernard Shaw, famous for his plays and politics, made his first literary ripples as a critic. Pierre Marivaux, the 18th-century French dramatist; Mary Coyle Chase, who wrote "Harvey"; Ben Hecht and Charles MacArthur, who penned the classic comedy of newspapering, "The Front Page"-all journalists. Tom Stoppard, Michael Frayn, and David Rabe were, too, long ago.

These days, the traditional route to a playwriting career in America involves getting into a top drama school, an approach that also worked for Watkins, who wrote "Chicago" as part of the first class of graduate drama students at Yale. But the Engels are hardly alone among contemporary veteran journalists writing for the theater. It helps that—perhaps ever since writer-performer Anna Deavere Smith's landmark "Fires in the Mirror," an interview-based solo piece about the Crown Heights riots, in 1992—the stage has become not just hospitable to but hungry for documentary theater, often political in nature, and other work rooted in the real world.

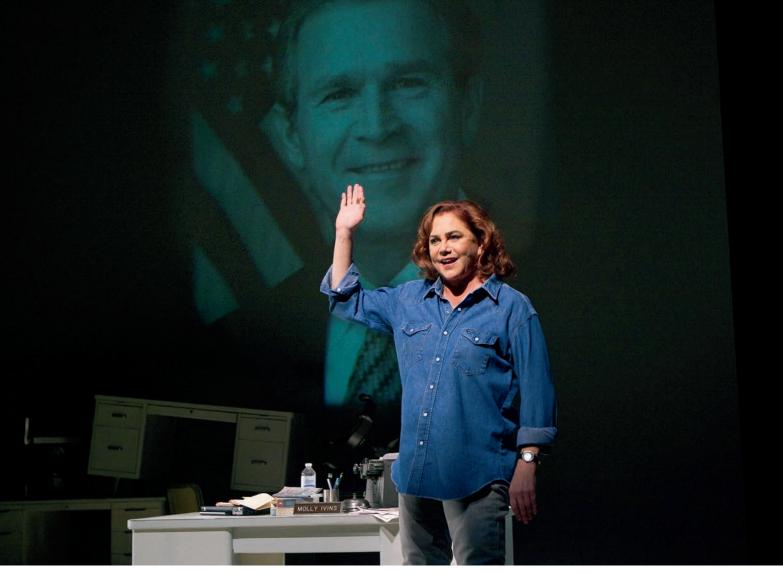
The Tectonic Theater Project journeyed to Wyoming a month after the 1998 murder of gay college student Matthew Shepard and shaped its off-Broadway hit "The Laramie Project" (2000) from company members'

Journalist-turnedplaywright **Lawrence Wright** says "Fires in the Mirror" changed his idea of what drama could do

interviews with locals, then returned for a follow-up a decade later. Jessica Blank and Erik Jensen made "The Exonerated" (2002) out of their interviews with wrongly convicted former death-row inmates. "My Name Is Rachel Corrie" (2005), about a young American peace protester killed in Gaza by an Israeli bulldozer, takes its text from her diaries and e-mails, edited by Alan Rickman and The Guardian's new editor in chief, Katharine Viner. The list is long and getting longer. "There's always been theater looking at current events in a very direct way, in an almost nonfictional way, but I think it's really taken off in the last 20 years," says Peter Marks, chief theater critic at The Washington Post.

Even as playwrights have borrowed techniques from journalism to create such work, journalists have recognized an opportunity to transfer their well-honed skills to a different medium. Lawrence Wright, The New Yorker magazine staff writer who won a Pulitzer Prize in 2007 for his book "The Looming Tower: Al-Qaeda and the Road to 9/11," has been writing plays since the early 1980s. Wright, whose most recent play, "Camp David," premiered in 2014 at Arena Stage, credits "Fires in the Mirror" with changing his idea of what drama could do when he saw Smith perform it at New York's Public Theater. "I was riveted by the notion that you could marry journalism and theater," he says. "I didn't know that that was possible."

When Wright finally tried fusing the two forms, it was partly in reaction to a favor the playwright David Hare asked of him when Hare was working on a piece about Jerusalem in the late 1990s. "He wanted to use a line that I had written in The New



Playwriting isn't so different from journalism: "You're telling a narrative," says Allison Engel, co-author of "Red Hot Patriot," shown above

Yorker about Jerusalem, and he wound up not using it, but I got jealous," Wright recalls. "I thought, you know, 'I know a lot more about Jerusalem than he does, and he gets to do this one-man show."

That envy eventually nudged him to create his own well-received solo piece, "My Trip to Al-Qaeda," which premiered off-Broadway at the Culture Project in 2007. Intended as a response to questions he kept getting about his experiences reporting on terrorism, the performance wasn't so different from journalism at its most primitive, he says: "If you imagine a bunch of Neanderthals are sitting around and wondering what's over the next hill, and one of them volunteers to go and then comes back and stands in front of the campfire and tells them what he saw, well, that's a lot like standing on the stage and telling people what you saw when you went to visit Al-Qaeda or you went to visit Hamas."

Marks, who called the show "a first-rate piece of theater," reached to a less distant past for a comparison: "It was almost a throwback

to the days when explorers used to go around the world and come back to New York and give a lecture on what they found, and people would be kind of mesmerized."

NNE NELSON WASN'T looking to write a play in the days after September 11, 2001, but she was feeling "utterly stymied" as a writer. A former war correspondent in Central America who had transitioned into academia in New York, she was surrounded by a huge, unfolding story—and watching the international students she oversaw at the Columbia University Graduate School of Journalism report it for news outlets back home. She didn't have a way to contribute to the coverage.

Then Nelson met a fire department captain who needed help crafting eulogies for the men he'd lost at the World Trade Center. Coaxing out of him the details of their lives, she wrote the tributes the

captain would give and in the process found a September 11 story that would become her first play. "The Guys," which she finished in nine days, premiered 12 weeks after the attack and was an instant hot ticket, starring Sigourney Weaver and Bill Murray at the tiny Flea Theater in Tribeca, not far from Ground Zero.

Based on Nelson's experience with the fire captain, "The Guys" is a fictionalized account. At first, Nelson considered telling the story straight, in a magazine piece, but her shame at the behavior of other journalists such as the television reporter who asked the grieving captain, on camera, how it felt to lose his best friend—checked that impulse.

Nelson wasn't willing to intrude on the captain's privacy, but she also knew she wouldn't be able to shield his identity in a work of journalism. When she happened to sit next to Sigourney Weaver's husband, the theater director Jim Simpson, at a dinner, "the wheels started turning," Nelson recalls. "I said, 'Oh! I can change anything I want to in a play."

Theater people talk a lot about dramatic truth, which is different from truth in the everyday sense: less about facts than about capturing an essence, even if that comes about by changing or obscuring facts. That's what Nelson believes she was able to do with "The Guys," which premiered at a time when hero worship of firefighters-maudlin press coverage included—was a post-9/11 norm. Her play, by contrast, conjures images of flawed, honorable, regular people who died on the job.

"I felt that, in a lot of ways, it was more true than the journalism people were writing," Nelson says. "Society needed heroes, and they needed to put the heroes on a pedestal, then whoever you put on a pedestal, you have to tear down. And all of these expectations were being imposed on them, and they were dazed by it, because it wasn't who they were. And they came to this play and said, 'Thank you. That's who we are. We're guys doing our job.""

But for journalists-turned-playwrights, creativity can be the trickiest part—the element of theater that is most in conflict with their training. As Marks puts it, "'Invention'

#### **Iournalism is** good preparation for collaborating with directors

is a sacred word among playwrights, and it's kind of kryptonite among journalists."

So it was for Bernard Weinraub, who grew up reading plays and dreaming of a life as a playwright. He spent his career instead at The New York Times, but when he retired in 2005, he finally acted on the fantasy. A story he'd covered provided the seeds of his first play, "The Accomplices," about what the United States government and the Jewish establishment in this country failed to do to save Jewish lives during the Holocaust. Franklin D. Roosevelt and Ben Hecht are among the 14 characters.

Having taken playwriting classes at New York University as a young man, and again, gearing up for retirement, at the University of California, Los Angeles, Weinraub understood the demands of drama: Conflict and tension are essential, which is not the case in a news story. Steeped in Hollywood—he covered it for the Times, and he is married to the producer Amy Pascal he sympathizes with the makers of historically based movies, such as "Selma" director Ava DuVernay, who almost invariably get into some kind of trouble for reworking real-life events. Nonetheless, Weinraub's conscience pricked whenever he deviated from reality in "The Accomplices," which the New Group premiered off-Broadway in 2007.

"In the beginning, it can be a slightly awkward line to walk over, because you still want to deal with as many facts as you can," he says. "You eventually realize you have a story to tell, and some of the details either have to be omitted or altered to make it a palatable two-hour film or play. But there's a constant tension there—for journalists. It's sort of a delicate balance, and you're always feeling a little bit guilty if you're making some changes. But then you realize, this is a drama, and I have no idea what X said to Y. You have to make up the dialogue."

Wright had to do a bit of that, too, in "Camp David," his play about the 1978 Israeli-Egyptian peace conference Jimmy Carter held at the Maryland presidential retreat. Much of the dialogue spoken by its four characters—Jimmy Carter, Rosalynn Carter, Menachem Begin, and Anwar Sadat—is taken from life, but not all of it.

"When I'm going out on a limb and making stuff up, I wanted to make sure that it was true to their characters and true to their beliefs," Wright says. "Jimmy Carter came on opening night. I doubt that he would have been able to tell what he really said and what I imagined he said." PLAYBILL

#### PLAY TIME

A sampling of plays written by journalists and based on real events

#### "Pygmalion," **George Bernard Shaw**

A basis for "My Fair Lady," which lampoons Britain's class system via lessons in speech refinement

#### 1926 "Chicago," Maurine **Dallas Watkins**

Watkins gleaned material about female murder suspects from cases she covered as a reporter for the Chicago Tribune

#### 1928 "The Front Page," Ben Hecht and **Charles MacArthur**

Tabloid newspaper reporters take on the police beat



#### "Sticks and Bones," **David Rabe**

A black comedy about a blind Vietnam veteran alienated from friends and family who cannot fathom his wartime experiences

#### "Every Good Boy Deserves Favour," Tom Stoppard

Set in the USSR, a criticism of the Soviet practice of treating political dissidence as a form of mental illness

#### 2001 "The Guys," **Anne Nelson**

A fictionalized account of Nelson's

experiences ghostwriting eulogies for firefighters in the wake of 9/11

#### 2003 "Democracy," Michael Frayn

An look at the Guillaume Affair, an espionage scandal that rocked Germany

HE WAY MARGARET ENGEL sees it, there's a feeling in America that people must choose one field and stick with it. "If you are 23 years old and right out of drama school and wrote a play, that's considered totally fine," she says. "But if you switch from a different profession—if you're a reporter and now are doing a play—there's a big, how do I say this, skepticism of that. There's not much tolerance for people multitasking."

Playwriting provides plenty of unfamiliar challenges for journalists new to it: writing dialogue that comes alive when spoken aloud, drawing characters who seem like flesh-and-blood human beings, keeping the number of required actors low enough that the budget wouldn't be astronomical.

But journalism is good preparation for doing quick script rewrites and collaborating with directors. "If an editor tells you, 'You gotta change the lede,' you change the lede," Weinraub says. "So if a director asked me to do something, nine times out of 10 I did it. I'm a very easy guy to work with as a playwright—maybe too easy."

Journalists also tend to excel at research. Before the Engels wrote "Red Hot Patriot," Margaret Engel ordered 51 solo plays from the publisher Samuel French, Inc., and the sisters read them all. "That was a good introduction, because it really felt that it was doable," she says. "We liked a lot of the plays, but some of them weren't fabulous, and so we thought, 'Well, we can at least meet that low bar."



Lawrence Wright took much of the dialogue in his "Camp David" from the 1978 peace talks

Wright researches his plays the same way he does his books: extensive interviewing, voluminous reading. In fact, he spun his 2014 book, "Thirteen Days in September: Carter, Begin, and Sadat at Camp David," out of his research for "Camp David." In "Thirteen Days," he stuck to the rules of nonfiction; in "Camp David," he laid invention on top of fact. "When I become deeply acquainted with the characters and I have a sense of what really happened," he says, "the real things become the girders upon which I can build this abode, and then once I have those real things in place, I can go inside it and start imagining it."

Imagination, according to Marks, is where many plays by journalists fall short, sometimes because the authors haven't spent long enough learning "the tools of entertainment" that vital theater requires. If subjective observation and breadth of character are lacking, a play can feel too tethered to the page. "There's a kind of flatness sometimes to plays by journalists because they're basically interested in imparting information; that's what we do," he says. "The big picture of what turns this into meaningful drama, what makes this dramatic, is often the thing that falls away."

As the Engels ready "Erma Bombeck: At Wit's End" for its autumn opening, Margaret says she'd like to see even more theater based in journalism: "Journalists uncover amazing, spectacular stories always, and so much of it vanishes after the story is written. You don't have to be making up wacky scenarios when true life shows you all the drama you could handle." ■

#### 2005 "My Name is Rachel Corrie," edited by Alan Rickman and Katharine Viner

Based on the diaries and e-mails of Corrie, who was killed while protesting the destruction of a house in the Gaza Strip

#### 2007 "The Accomplices," **Bernard Weinraub**

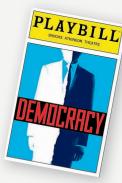
Historical drama suggesting that the FDR administration failed to do everything it could to rescue European Jews during World War II

#### "Red Hot Patriot: The Kick-Ass Wit of Molly Ivins," **Margaret and Allison Engel**

A staged celebration of the liberal Texan columnist and the glories of the First Amendment

#### 2014 "Camp David," **Lawrence Wright**

Explores the 13 grueling days of the 1978 Mideast Peace Talks, when President Carter hosted Israeli Prime Minister Menachem Begin and Egyptian President Anwar Sadat in Maryland







Amidst a challenging political and economic environment, young Egyptian reporters are developing innovative journalism and business models

BY MAGDI ABDELHADI





NE DAY LAST MAY, Egyptian private television station TEN broadcast an interview with Justice Minister Mahfouz Saber in which he expressed the opinion that a law graduate whose father was a garbage collector could never be-

come a judge because "a judge must come from a respectable environment, materially as well as morally."

Within minutes, social media was buzzing with calls for Saber to step down. Even the mainstream media joined in. Less than 24 hours after the interview aired, Saber resigned, an unprecedented outcome in a country where just a few years ago ministers were immune to public opinion and accustomed to remaining in office for decades.

On that same day Saber resigned, the first print run (about 48,000 copies) of the privately owned daily Al-Watan was pulped following an objection from "sovereign entities," a common euphemism for the Egyptian Army or intelligence services, to a headline and a column. The headline— "7 Stronger than el-Sisi"—referred to the numerous challenges facing President Abdel Fattah el-Sisi's efforts to reform Egypt's Kafka-esque bureaucracy. The column, by Alaa al-Ghatrify, was a thinly veiled reproach of the president and those of his supporters who believe el-Sisi's sagging popularity can be bolstered by sycophantic media coverage rather than concrete

The second edition of Al-Watan appeared later with a new headline—"7 Stronger than Reform"—and with the rest of the report, a sharp critique of the entrenched bureaucratic interests fighting to preserve the status quo, intact. Al-Ghatrify's piece was gone, though it promptly appeared on his Facebook account and was widely shared.

These two incidents illustrate how far Egyptian media has come—and how far it still has to go—since the Tahrir Square protests of 2011 that toppled President Hosni Mubarak. Columnists and reporters are once again beginning to expose corruption, police brutality, and the failure of the state to provide basic services and uphold the rule of law. Social media storms can force ministerial resignations. Yet, when journalists go too far, censors are still quick to step in, as the al-Ghatrify case shows.

"The Egyptian media is still in transition," says Naila Nabil Hamdy, associate professor of journalism and mass communication at the American University in Cairo—a transition from state-run to independent entities, from print to digital media, and from national to local coverage.

Leading this shift is a cohort of digitally savvy journalists-turned-entrepreneurs launching their own platforms. Encouraged by post-Mubarak revolutionary fervor and fed up with the stifling environment of state and corporate media, these 20- and 30-something reporters face formidable obstacles: a restrictive legal system, the threat of government repression, and scarce venture capital willing to support independent media projects. The challenging political environment has forced these editors to innovate, developing ownership, business, and journalism models never seen before in Egypt.

The new voices are, however, still vastly outnumbered by state and corporate media. The state-run media empire alone is made up of newspapers (some 50 dailies and weeklies), radio stations, and TV networks that employ some 74,000 staff. State-controlled outlets have little or no credibility among Egyptians but remain on autopilot, with millions of dollars of government money keeping them afloat. On state-run TV news, nationalist songs are intercut with images of state officials in sharp suits and sunglasses next to President el-Sisi delivering a speech or inaugurating a new infrastructure project,

followed by archival footage of flybys and elite military troops rappeling down walls. Editorial independence also is rare among private media firms, which require reporters to hew closely to political or corporate interests.

The political situation is also fraught. Since the overthrow of President Mohamed Morsi in July 2013, the country has seen a considerable deterioration in its human rights record and a dramatic increase in the number of jailed activists and journalists. Egypt's national union of journalists, the body that represents print media workers, accuses the police of escalating its attacks on journalists and arresting them on spurious charges. Between January and March of this year alone, the union documented 126 "violations" against journalists—verbal or physical abuse, confiscation of equipment, or prevention from covering certain events. A report by the Committee to Protect Journalists (CPJ) concluded in June that 18 journalists were "behind bars in relation for their reporting—the highest in the country since [CPJ] began recording data on imprisoned journalists in 1990." The report describes prison conditions: "In letters from prison, some journalists wrote that they often do not see sunlight for weeks; others described the torture of prisoners, including the use of electric shocks." The Egyptian government rejects the accusations, insisting that those in detention are being tried for other offenses.

The arrest and subsequent trial of three Al-Jazeera journalists in December 2013 has thrown into sharp focus the plight of journalists in Egypt. After 400 days in jail on charges of broadcasting false news and supporting the outlawed Muslim Brotherhood, designated as a terrorist organization by the Egyptian government, Australian Al-Jazeera reporter Peter Greste was released in February. His two Egyptian colleagues, Mohamed Fahmy and Baher Mohamed, won an appeal and were released on bail. They await a verdict in their re-trial.

In 2013, Lina Attallah and her colleagues lost their jobs at Egypt Independent, the English-language edition of the flagship daily, Al-Masry Al-Youm. After a dispiriting series of editorial and financial disputes with their bosses, Attallah and her colleagues decided to start Mada Masr ("Egypt's Horizon"), an English-Arabic news and arts website that caters primarily to Egypt's well-educated cultural elite, rather than look for jobs at other mainstream outlets. "There was nowhere else to work," says Attallah. "It was a time when media freedom became more and more limited. No media outlet could afford to hire independent journalists who wouldn't compromise the content. And that is why we had to build our own space."

Mada Masr is using that space to cover controversial subjects. In May of last year, the site published an in-depth account of the corruption case in which Mubarak and his sons were convicted of embezzling some \$17 million in state funds to spend on their private homes; Mubarak was sentenced to three years imprisonment and his sons for four years each. Based on what the site

# MADA MASR PROVIDES RARE INSIGHT INTO CORRUPTION IN EGYPT

described as "exclusive access to court documents" and the firsthand account of a key prosecution witness, the piece offered a rare insight into how corruption operated in the highest office in Egypt. Mubarak and his sons are appealing the verdict. Although most media outlets covered the case, none offered an account as crisp, thorough, and well documented as Mada Masr.

The site signed a deal in June with WikiLeaks that gives it exclusive access to more than 100,000 documents from the Saudi Foreign Ministry. Mada Masr has published several pieces based on the documents, including one about the alleged

role of members of the Saudi royal family in helping an Egyptian businessman, wanted on corruption charges, smuggle some of his possessions to Saudi Arabia. Another suggests that Cairo's Al-Azhar mosque, the most influential seat of Sunni Islam, was being influenced by Wahhabi Islam, Saudi Arabia's more puritanical strand of the faith, in that country's sectarian conflict with Shia Iran. Rather than publishing the relevant documents with little or no context like other papers, Mada Masr contextualized the story, offering a depth of comment and analysis rare in Egyptian journalism.

Mada Masr describes itself as an independent and progressive content provider that is different from Egyptian media controlled by the state or corporate interests. Its coverage and news agenda reflect that ambition. In practice, Mada Masr becomes a platform for dissenting voices and a tool to challenge dominant narratives whether they are about the economy, political conflict, or even cultural discourse. Mada Masr thus treads a fine line between advocacy journalism and the impartial paradigm it claims to represent.

Though some Egyptian media are bolder in their reporting today, censors still routinely step in when they think journalists have gone too far



Mada Masr stands out in another respect: It is trying to bring maximum transparency to its operations. At the end of each year, staff publish, in Arabic and English, an audit of their editorial performance—what the site covered well and what it covered poorly, how journalists dealt with controversial issues and the risk to their safety. "We do the annual review to reflect on our practice and develop it," says Dalia Rabie, one of the editors of the site. "We are a growing project, and we are constantly trying to learn from our failures and successes, and we also like to engage our readers in the process."

Editorial success is one thing; commercial viability another. No local capital is available without strings attached, yet Atallah and other new digital outlets need investors to keep their sites going until other revenue streams come online. Mada Masr currently receives financial support from international media development organizations while it explores live events as a complement to revenue generated via advertising and subscriptions.

One such event is Mada Marketplace, a combination craft fair and music festival on the old campus of the American University in central Cairo, a stone's throw from Tahrir Square. Rock bands perform against a huge Mada Masr banner, while attendees browse food stalls, book stands, and tables heaped with artisan jewelry and handmade clothes. Mada Marketplace is "more of a community-building than money-generating activity," says Amira Salah-Ahmed, its business development officer and co-founder. "It gets our audience to come out from behind the screens to meet us and meet each other and tell us about what we produce, stories we



Al-Jazeera's Mohamed Fahmy stands accused of being a member of a terrorist organization

should cover." Salah-Ahmed says that Mada Masr broke even on its first event; not bad for an organization still building its brand.

Fatemah Farag is another young Egyptian journalist trying to combine editorial integrity with commercial success. In 2011, she founded Welad El Balad ("Sons of the Land"), the country's first network of local newspapers exclusively dedicated to covering the countryside. "As a newspaper editor within mainstream media, my job was to identify where the red line was, then try to see how close we could move toward the red line, perhaps play on the red line, maybe sometimes stick your toe outside the red line," Farag says. "Now there was an opportunity to decide that the red line doesn't exist, and do something very different."

Welad El Balad is certainly different. Whereas almost all Egyptian media outlets are concentrated in Cairo, Farag has her eyes set on the largely uncovered countryside, where more than half of Egypt's over 80 million people live. From an office in 6th of October, a satellite city south of Cairo, she manages Welad El Balad's eight weekly publications, two of which are digital-only, spread over eight provinces in the Nile Delta and Upper Egypt. Some 100 journalists operate out of newsrooms situated in the communities they cover, reporting on hyperlocal issues—education quality, healthcare in public hospitals, clean drinking water, industrial waste dumping on farmland. Page two of each paper, called "We Are Listening to You," is dedicated to complaints from readers and responses from local government. In the absence of elected assemblies, these forums are the closest readers are likely to get to local democracy.

Welad El Balad is groundbreaking in a country where the media have always been Cairo-centric and owned by either the state or big money. And the approach seems to be catching on. Farag says that the 2014 circulation was 200,000 for all eight newspapers combined. Given that around five people read each copy, Welad El Balad reached around a million people. Sales and ad revenue now cover 25 percent of operational costs. For the rest, Farag relies on foreign aid, a risky strategy given the suspicion with which the West is regarded in Egypt. In May, for example, Welad El Balad had to issue a statement refuting comments in mainstream media suggesting that the company was receiving money from abroad as part of an international conspiracy to destabilize Egypt.

# EGYPT'S FIRST NETWORK OF LOCAL PAPERS COVERING THE COUNTRYSIDE IS GIVING READERS A VOICE

O SURVIVE, START-UPS LIKE Welad El Balad and Mada Masr have to come up with novel solutions for old problems: How to make money and reach readers. To ease dependence on donors, Welad El Balad offers media training for young journalists or bloggers, while Mada Masr publishes a daily e-mail newsletter that translates and analyzes Arabiclanguage newspapers in Egypt. Aimed at foreign diplomats and expats, individual subscriptions are \$50 per month. Welad El Balad relies on citizen journalists for much of its coverage and, in another first for Egypt, deploys informal distribution networks that comprise contributors, volunteers, small business owners, and even itinerant vendors. The papers sell for around 13 cents, and distributors get 25 percent. Some local editions, like Al-Fayoumiya, based some 130 kilometers southwest of Cairo, also host cultural activities several times a month, including readings, book signings, and debates. In recognition of Welad El Balad's work with underserved communities, the World Association of Newspapers and News Publishers (WAN IFRA) gave it a Silver Award for the best community service in April.

The local approach is also taking root in Cairo, a metropolitan area of some 20 million people with neighborhoods that are almost cities unto themselves, with a million or more residents. Yet there is no single daily publication that covers local issues. Tarek Atia is trying to change that with Mantiqti ("My Neighborhood"), the first in a series of hyperlocal newspapers he hopes will eventually cover all of the city's districts. Unlike Farag, who relies on both subscription and advertising revenue, Atia is taking the free sheet route, hoping his circulation numbers



An Egyptian denounces toppled President Hosni Mubarak against the backdrop of two journalists who were killed during the uprising in 2011

and local audience will attract sufficient advertisers. Atia says Mantiqti "is part of a global trend, where media workers are going back to the roots of journalism by re-discovering the importance of local."

Launched two years ago, the first Mantiqti covers downtown Cairo, an area that emerged outside the medieval Islamic city some 150 years ago. Designed to be "Paris on the Nile," it has fallen on hard times but has an air of faded glory. Mantiqti has its office on the ground floor of a block of flats that miraculously survived the onslaught of modernization. It has high ceilings, wooden shutters, and colorful floor tiles. Atia's colleagues stuff advertising leaflets into the latest issue as he explains why Egypt needs hyperlocal journalism. "National newspapers are only interested in the area when there is a big event, but then it is forgotten," he complains, citing the issue of street vendors in central Cairo as a case in point.

The story was covered only sporadically by the national media. So many street vendors had set up shop in the area that local residents complained that there was no room for pedestrians. Mantiqti covered the issue intensely. "We gave a platform for everybody's grievances," Atia says. "We did not take sides. The only side we took was, How do we help transform this chaotic situation into a much more healthy environment for everybody?" Atia is convinced that the paper's coverage played a part in finding an innovative solution. The street vendors were moved to a specially designated market zone, thus easing congestion on neighborhood sidewalks.

Mantiqti comes out monthly and has a circulation of around 10,000 copies. Atia hopes to break even by the end of 2016. He's now looking for investment that will enable him to launch new Mantiqtis in other, more afflu-

ent parts of Cairo and move from monthly to weekly publication. Then he hopes to attract national advertisers lured by the more upscale demographic. In the meantime, he's developing digital portals for specific neighborhoods and a mobile app enabling users to rate local businesses and services. His company, too, organizes events and runs media training courses, covering topics like basic video journalism and journalistic ethics.

Purging Egyptian journalism of the legacy of 60 years of authoritarian rule will take many years. But Atia speaks for many of his entrepreneurial colleagues when he says, "We have to be part of the process that puts these issues on the agenda—media development, press freedom, professionalism in media production. I'm definitely not waiting for those [things] to happen. I am actually part of the process that is making those things happen."





OHN STANMEYER/NATIONAL GEOGRAPHIC

AUL SALOPEK HAD BEEN writing international stories for more than 20 years before he decided to slow down. "I was a conventional foreign correspondent zipping around the world doing fireman stories," he says. Working for the Chicago Tri-

bune, he parachuted into crisis zones to report intensively for a week or two, churning out rich stories that earned him worldwide acclaim, along with a couple of Pulitzers.

Eventually, he settled down to write a book about his travels, a frustrating exercise for Salopek, who wanted to be out in the field, not writing about being out in the field. "I sat at my desk fantasizing about how to escape, and thinking what would be the most amazing narrative I could pursue,"

he recalls. "What is the ultimate quest?" For Salopek, the answer was "the spread of homo sapiens out of Africa." So he conceived a project tracing that migration, from Ethiopia, across the Middle East and Asia, and down through the Americas to the tip of Argentina.

To follow that path, he would use the same means our long-ago ancestors did: his feet.

Thus was born the Out of Eden Walk, a seven-year quest to walk across the world and report every step of the way. Now two years into the project, Salopek has gotten as far as Tbilisi, Georgia, writing long stories for National Geographic and shorter pieces for an ongoing blog. In January 2013, he spent time with researchers digging up human fossils in Ethiopia, subsequently writing about their worries that attacks by

Somali pirates were threatening oceanographic research. In February of this year, he walked alongside Syrian refugees as they fled into exile in Turkey, reporting that gave him fresh emotional insight into a crisis that has been covered for four years.

"Everyone is going faster and faster and getting shallower and shallower," says Salopek. "I said, 'How about we slow down a bit to grab a little mindshare by going in the opposite direction.' The rewards have been far in excess of my expectations, both professionally and personally. It's a sense of narrative direction I never had before when I was flying around the world and telling stories of the crisis of the day that seemed disconnected."

More and more journalists are catching up with slowing down, espousing a new

form of "slow journalism" that takes its time to tell stories, even as social media's nanosecond news cycle increases pressure to be fast and first. This past January, Andrew Sullivan, pioneer and patron saint of the political blog, announced he was calling it quits. For nearly 15 years, Sullivan had lived up to the name of his Daily Dish with diurnal missives that dissected the news in real time. In one of his last posts, he explained his decision to stop: "I am saturated in digital life and I want to return to the actual world again. ... I want to have an idea and let it slowly take shape, rather than be instantly blogged. I want to write long essays that can answer more deeply and subtly the many questions ... presented to me."

Former New York Times executive editor Jill Abramson announced last November that she is collaborating on a new media start-up with Steven Brill that would advance writers up to \$100,000 each to write stories longer than an article but shorter than a book. "This American Life" producers Sarah Koenig and Julie Snyder spent a year re-investigating the story of a 1999 murder in Baltimore County,

### SLOW JOURNALISM, More than breaking **NEWS, ASKS "WHY?"**

and then spaced out the story in 12 hour-long segments to create "Serial," which became the most popular podcast of all time. Part of what made the show so engrossing was the way it unfolded slowly over time, with one episode often complicating or even contradicting the one before it.

Slow journalists measure reporting time in months or years, rather than days, and see the form as something more than just a reboot of long-form narrative nonfiction. Like the "slow food" movement from which it gets its name, slow journalism stresses openness and transparency, laying bare to audi-

ences its sourcing and methods and inviting participation in the final product. It also provides a complement and corrective to breaking news, where amid the pressures of ever-present deadlines, conjecture can often replace reporting. "We are at an age of overload; we have too much information coming at us too fast," says Megan Le Masurier, a media and communications professor at the University of Sydney who wrote a scholarly article on the topic for Journalism Practice. "If you tune into the news on a daily basis, you get the updates, but you lose sight of why things are happening."

The term "slow journalism" first appeared in a February 2007 article in the British politics and culture magazine Prospect, written by Susan Greenberg, a senior lecturer in English and creative writing at the University of Roehampton. In contrast to daily news, she contended that journalism driven by craft, voice, and care was increasingly becoming a "luxury" product. "What I mean is the luxury to take time," she says. "It takes time to discover things, it takes time to figure things out, it takes

Slow journalists linger, as did Katherine Boo who spent years in Mumbai reporting her book "Behind the Beautiful Forevers"



time to do something new, and it takes time to communicate it in a way that does justice to it." To describe the phenomenon, she borrowed the concept from "slow food," an international movement that started in the 1980s with protests against McDonald's in Europe, advocating for food that was locally sourced, ethically produced, and cooked, served, and enjoyed with enough time to savor the ingredients.

Though many of the principles of slow journalism aren't new, the idea has taken on fresh urgency. It shares characteristics with narrative journalism, especially the emphasis on immersive reporting. So Ted Conover can spend months working as a prison guard in Sing Sing to write "Newjack;" Adrian Nicole LeBlanc can live nearly a decade with a family in the Bronx for "Random Family;" and Katherine Boo can stay more than three years in a Mumbai slum for "Behind the Beautiful Forevers." Then there is Robert Caro, who has spent more than 30 years chronicling the life of President Lyndon B. Johnson-with four volumes published, and a fifth, examining the bulk of his presidency, forthcoming.

with more context and analysis is what compelled Rob Orchard and Marcus Webb to launch Delayed Gratification, a self-styled "Slow Journalism Magazine," in the UK in 2011. "Journalists are constantly on the back foot trying to keep up with breaking news on Twitter and social media," says Orchard, the magazine's editor. "We wanted to provide a haven where journalists have plenty of time to react to the news events and try to find stories that hadn't been found in the first knee-jerk reaction."

Released quarterly as a highly stylized print magazine, each issue revisits the news of the last three months, sifting through the headlines to identify the important stories and report them with more depth and context. A recent issue included a story covering the mining disaster in the Turkish town of Soma that killed more than 300 people and briefly dominated news in May 2014. "It was a horrible tragedy, and it got blanket coverage," says Orchard. "All the news organizations sent their crews in and they stayed for a few days, and then the agenda moves on, as it always does. But the story hadn't ended." While the spotlight was on the town, says Orchard, politicians grieved with families



The slow journalism magazine Delayed Gratification examines stories, such as a mining

and made promises of giving money to survivors and reforming the mining industry. Three months later, however, all the promises had evaporated. The resulting story detailed a community seething with shock and anger and struggling to put itself back together. "When you return to events after the dust has settled," says Orchard, "what you often find is a completely different story."

Orchard doesn't see the magazine competing with "fast" news so much as augmenting it. "All of us are news junkies as much as everyone else," he says. "We are all constantly checking our phones. What the magazine addresses is a desire for something a bit more considered and nourishing."

Since 2008, when the economic crisis further squeezed journalism, those in



disaster last year in Turkey, after most media have departed. Above, locals prepare graves for the mine accident victims

search of that kind of nourishment have increasingly moved online, with a new cadre of narrative websites—The Atavist Magazine, Narratively, Longform-challenging the conventional wisdom that Web surfers are only interested in reading bitesized chunks. In fact, according to analytics firm Chartbeat, while more than half of readers spend less than 15 seconds on

a Web page, those who do stay are staying longer—and those staying longer are more likely to return. Chartbeat recently changed its metrics to emphasize "engaged time" on pages rather than pageviews or unique visitors as a more accurate measure of quality. Amazon's Kindle Direct Publishing platform is deploying attention metrics, too. Its subscription program now pays independent

authors by the number of pages read rather than how often a book has been borrowed. All this reader engagement matters because, according to Chartbeat, readers are 20-30 percent more likely to remember an ad if they spend at least 20 seconds on a page.

Journalists like Dutch reporter Arnold van Bruggen and photographer Rob Hornstra welcome attention metrics. They

spent five years traveling in the war-torn regions of Abkhazia, Georgia, and the North Caucasus for The Sochi Project, a series of books and online stories that cast new light on the 2014 Winter Olympics in Sochi, Russia. Each year they spent three months in a different region to produce a new chapter, stunning in their intimate portraits and rich, authoritative writing. Just over the mountains from Sochi, the North Caucasus is among the poorest and most war-torn places in the region, the site of three centuries of conflict with Russia, including two wars with Chechnya in 1994-1996 and 1999-2006, a brief war between Georgia and breakaway republics South Ossetia and Abkhazia in 2008, and increasing radicalization among the Muslim population of Dagestan, once home to the family of Boston Marathon bombers the Tsarnaev brothers. "The Olympics are about the unity of nations, and the Caucasus are about war and conflict. It was so surreal to see Sochi chosen as the Olympic city," says van Bruggen.

The time van Bruggen and Hornstra spent there gave them unique access to stories in the region. Through interviews at wrestling schools in the North Caucasus, for example, they gained an introduction to a family in Dagestan with ties to rebels fighting in the mountains, affording a rare opportunity to tell the human story behind the continuing Islamic insurgency in the region. By the time the Games began in 2014, The Sochi Project had caught the attention of journalists from around the world, who turned to van Bruggen and Hornstra for context on the region. "The way Sochi was organized, people experienced it as a sort of suburb of Moscow," says van Bruggen. "I think we changed the narrative and showed how Sochi was in the middle of this very volatile region."

In addition to providing greater depth, forays into slow journalism are often typified by greater transparency in the reporting process. In "Serial," Koenig opened up her methodology to an unprecedented degree, airing her doubts and changing her mind from episode to episode. "There was a lot of context to everybody's point of view," says Snyder. "In order to really understand what we were trying to say and draw meaning for it, we needed time. We needed the listeners to be just as inside the story and understand it on as granular a level as we did."

Koenig's on-air vacillations have been criticized by some reviewers and even lampooned on "Funny or Die" and "Saturday

Night Live," but Snyder defends them: "I feel like we made the right choices. Anybody looking at the case would have come to moments that were similar. I have a lot of uncertainty, and it seemed important to be honest about that, and not pretend that we knew everything." Mark Berkey-Gerard, an associate professor of journalism at Rowan University in New Jersey, agrees: "What people really liked about it was seeing the process in motion and going through all of the things a reporter goes through to get the truth. And also seeing that even if you put hundreds of hours into a piece, you may never get the truth."

Transparency brings its own challenges. According to Snyder, the very public nature of listener engagement with "Serial"-some of it reckless speculation—affected story selection and promises of anonymity for seasons two and three, which are in backto-back production, with season two airing this fall. Another struggle for reporters of the genre is more basic: How to support themselves while they do the difficult, timeconsuming work of pursuing a story.

Along with nine other writers, McKenzie Funk, author of "Windfall: The Booming Business of Global Warming," about the race for profits in the Arctic, formed Deca (the Greek prefix for "10"), a collaborative through which members help each other produce and disseminate narrative work. After raising \$32,000 on Kickstarter last year, the group committed to paying half of members' expenses, up to \$2,500, as well as providing fact-checking and cover design support toward the publication of stories as Amazon Kindle Single e-books. For each project, another Deca member serves as editor, with 70 percent of profits going to the writer, 5 percent to the editor, and 25 percent back to the collective.

SO FAR HAVE BEEN SUPPORTED BY GRANTS OR CROWDFUNDING

Funk's contribution, "Of Ice and Men," grew out of an article he originally pitched to The New York Times Magazine about a looming confrontation between Royal Dutch Shell and Greenpeace in 2012. When Shell never appeared in the Arctic that year, the magazine killed the piece. Funk kept with the story, discovering that the reason for Shell's disappearance was the crash of a massive oil rig, which he investigated for the next year and a half to create an in-depth piece on Shell's safety practices.

Ironically, before Funk published the Amazon Single, he sold an excerpt of the e-book to The New York Times Magazine. That never would have happened had he not had Deca's financial and emotional support. "It was languishing, to be honest. I didn't know what to do with it," says Funk. "Knowing I had a place to publish it kept me going." Despite that success, however, Funk admits he's been disappointed with revenues earned from Amazon. "The monev from The New York Times Magazine is the most money that's come from it by far,"

OR SLOW JOURNALISM, PERHAPS even more so than other enterprise projects, time is money. Most of the slow journalism efforts so far have been supported in one of two ways: philanthropic grants or crowdfunding. Salopek is funding his long walk with a grant of nearly \$1 million from the John S. and James L. Knight Foundation, without which, he says the project wouldn't be possible.

Van Bruggen and Hornstra funded themselves through crowdsourcing and book sales, which rarely topped more than \$1,200 over expenses per year until the final year. "It's a bad economic model," sighs van Bruggen, who is working with Hornstra on a new project based in Western Europe. "For our next project, we need to make a living during the making of it."

Amazon doesn't release the amounts writers have earned from selling Kindle Singles, but editor David Blum notes that writers keep 70 percent of profits from sales and retain all rights to the work. Sometimes Amazon pays expenses "in the four-figures," according to Blum, for reporting, as it did for a recent Single on the Costa Concordia cruise ship disaster. Authors retain full profits from any movie deals, as author Stephan Talty, who co-wrote "A Captain's



Brothers living in a disputed region of Georgia pose with Kalashnikovs for The Sochi Project

Duty" about the capture of Captain Richard Phillips by Somali pirates, recently did with a Kindle Single called "Operation Cowboy." "It's never an easy path to making a living as a writer," says Blum, "but people have felt that Kindle Singles have helped them in making a living and giving them a creative outlet they wouldn't have anywhere else."

Delayed Gratification has survived for four years by charging \$57 a year for subscriptions. Still, editor Rob Orchard laments that he is only able to pay writers 32 cents per word, compared to typical word rates in the U.K. of 50 to 65 cents per word. Likewise, Narratively's founder and editor in chief, Noah Rosenberg, says the site only pays "a few hundred bucks" per story. That's hard to stomach for writers used to rates of \$1 to \$3 per word for national magazines. Recently, the site has begun hiring writers to produce branded content for clients including Chevrolet, General Electric, and SundanceTV. While such a practice may raise eyebrows about the separation of editorial from advertising, Rosenberg says such

measures are necessary to subsidize creative journalism, adding that the site is vigilant about conflicts of interest.

One publication that seems to have cracked the code on making slow journalism sustainable is The Atavist Magazine, which publishes long-form narrative articles of 10,000 to 20,000 words. Started back in 2011, the site from the beginning vowed to compensate writers at the level of major print publications.

"When we first started, we paid writers thousands of dollars out of our bank accounts," says CEO and editor Evan Ratliff. Since then, the company has received more than \$4 million from investors, including Barry Diller and Andreessen Horowitz. What allows the company to succeed is a publishing platform separate from the magazine that individual subscribers use to publish their own content, which drives revenue for the company as a whole. For each article, Atavist pays a fee and then splits any revenue from subscriptions, single-copy sales, and television and film rights. "On

average, writers make north of 10 grand on a story," says Ratliff.

For every slow journalism publication that survives, another goes by the wayside. Back in 2010, LA Weekly editors Joe Donnelly and Laurie Ochoa founded Slake, a handsome print publication featuring long-form journalism focusing on Los Angeles as a crossroad of cultures in the 21st century. "Every piece of the journal was put together with the utmost attention to detail," says Donnelly. "That's where it all falls down to a certain degree, because this painstaking process was very expensive." At its height, the journal had 500 subscribers at \$60 each, and issues hit the Los Angeles Times bestseller list 14 times. But the publication ran out of money after two years.

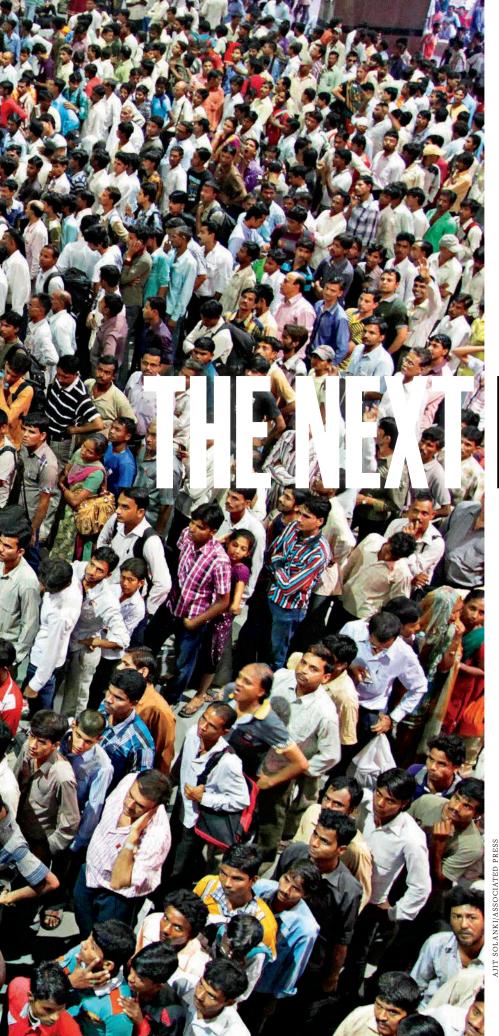
Donnelly was next hired to edit an online publication called Mission & State that featured a mix of stories from around the Santa Barbara region, funded by a two-year grant from the Knight Foundation. The publication failed to develop a business model that could keep it afloat, however, and shuttered after only a year and a half. "We have to be willing as consumers to support this stuff, and how do you get the genie back in the bottle now that we are conditioned not to pay for anything?" Donnelly says.

The question of sustainability is one that has also bedeviled the slow food movement. which has developed models such as community-supported agriculture in order to support local farmers. Residents, often in an urban area near a farm, purchase shares at the beginning of the growing season, allowing the farmer to obtain seeds and equipment, in exchange for weekly or biweekly deliveries of produce at harvest time.

Some outlets have experimented with community-supported journalism. One successful publication is Belt Magazine, which started in Cleveland and has since expanded to a handful of other Rust Belt cities. Rather than subscriptions, Belt is funded by "memberships" that range from \$20 per year to \$1,000 and include copies of the magazine as well as swag like T-shirts and a membership card that offers discounts on local events and products.

However it's funded, as with local and organic foods, much of the success of slow journalism has come from consumers willing to pay a premium for it. "We happily do that because we take responsibility for health and the environment," says Le Masurier. "In the same way, consumers need to take responsibility for journalism." ■





As Quartz, BuzzFeed, and The Huffington Post look for footholds in India, the bigger opportunity for news may be among Indians buying smartphones to access information in languages other than English

BY HASIT SHAH

# BILLION

every morning, Mr. and Mrs. singh gently shoo their dog away from the freshly delivered copies of The Times of India and the Hindustan Times, two of India's oldest and most popular Englishlanguage newspapers, and settle down to read over the day's first cups of strong tea. In their comfortable home in the well-to-do South Delhi neighborhood of Greater Kailash Part 1, the Singhs have a good broadband connection and own BlackBerry smartphones, an iPad, and a MacBook. They are Internet users, but never first thing in the morning, and only rarely for news.

In the evenings, they watch one of the major Indian news channels, whichever has the most interesting stories or the least irritating shouting match, and often switch to the BBC or Al Jazeera. I stay with them once or twice a year when visiting India, and we often discuss news and current affairs over an evening drink. In India—unlike in the U.S.—TV and print are still doing very well, as suggested by the Singhs.

The couple represent the opportunity and one of the challenges—facing American news outlets looking to set up shop in India. Over the past year or so, Quartz, BuzzFeed, and The Huffington Post, as well as Business Insider, have all launched India-specific versions of their sites, each chasing the same 125 million fluent English speakers. At the same time, legacy brands have a diminished presence. CNN is ending its content and licensing partnership in the country, and The New York Times scrapped its India Ink blog last year.

The recent digital arrivals face considerable revenue challenges. Although Internet use is growing—India now has the third-largest number of Internet users in the world, behind the U.S. and Chinaadvertisers spent only about 12 percent of their budgets on digital in 2014. In the U.S., it's closer to 30 percent. Plus, for most of the population, broadband networks are poor to nonexistent, and cellular coverage is erratic at best. Furthermore, many Indians still prefer to consume news through legacy channels. The challenge: How to make money with minimal staffing and a strategy based almost exclusively around digital advertising and branded content, when print and TV are still so dominant.

Meanwhile, many of the billion-plus Indians who have had no Internet access at all are expected to buy inexpensive smartphones. Though these people are linguistically and culturally diverse, they will likely share three characteristics: Their devices will be basic; their literacy rates will vary widely; and the vast majority won't speak English. "We're on the verge of seeing a massive number of people discover the Web for the first time, mostly through mobile devices," says the BBC World Service's Indian-born mobile editor Trushar Barot. This emerging demographic represents the next big audience for news.

In rural India, literacy is shockingly low: According to the government's Socio Economic and Caste Census in 2011, the most recent year for which data are available, 315 million people living outside cities are illiterate. Nevertheless, there is an opportunity here.

Indians read newspapers and watch TV news in numbers that can still surprise media executives in the developed world. According to the 2014 Indian Readership Survey, about 300 million people, around a quarter of the total population, read a print paper. The largest daily, the Hindi-language Dainik Jagran, had a readership of 16.6 million that year; the biggest English paper was The Times of India, with a readership of 7.6 million. By comparison, the biggest paper in the United States, USA Today, has a combined print-digital readership of just over 6.7 million, according to the most recent data from the Alliance of Audited Media. Oh, and overall newspaper circulation in India is rising.

India now broadcasts more than 400 news and current affairs TV channels. The Hindi-language Aaj Tak news channel has nearly 40 million weekly viewers, according to India's Broadcast Audience Research Council. The biggest channel overall, the entertainment-focused Star Plus, has a weekly audience of about 400 million. In India, "TV is already at scale and is going to grow," says Samir Patil, the Mumbaibased founder of digital news site Scroll.

Despite the continuing strength of print and TV, there are nonetheless reasons for legacy media to fear the encroachment of digital, according to research compiled by Samar Halarnkar, editor of the nonprofit data journalism site IndiaSpend. Even as India's overall media revenue pie expands, print's share is falling, mostly nibbled away by digital. And despite ongoing circulation growth, more than 70 percent of the industry's ad revenue originates from just two cities, Delhi and Mumbai, where the combined population is around 50 million and smartphones are becoming ubiquitous. Once Delhi and Mumbai advertising dollars

CHEAP SMARTPHONES THREATEN TO END T **HEGEMONY OF PRIN** MEDIA AND TV IN INDIA start shifting to mobile, papers may start facing problems.

Anticipation of that shift is part of what brought Quartz, BuzzFeed, and The Huffiington Post to India. Their editorial strategies differ-BuzzFeed fixates on viral pop culture content before planning to ramp up to serious news; Quartz focuses on business and financial briefs; The Huffington Post sports a broad mix of repackaged and original content-but their commercial challenges are identical.

Quartz India, which has six local journalists working out of a small Delhi newsroom, says traffic has increased from 200,000 monthly unique users to around 1.5 million over the past year. Not all of these users will be in India itself, with a large diaspora accounting for at least some of the growth. Quartz India content is aimed at both an Indian and a global business audience, with articles on everything from Bangalore real estate to Google's hiring strategy in Hyderabad. "That approach is harder in some ways," says Quartz publisher Jay Lauf, "but we think focusing on what's truly interesting about a topic allows you to attract a readership on both levels. Our audience target is the same business leaders who we find read our regular Quartz content." Lauf describes Quartz India's advertising performance as "wildly successful," particularly among big global brands like GE, though he declined to cite specific numbers.

BuzzFeed India editor Rega Jha, who runs a team of six from a small office in Mumbai, is replicating the same editorial strategy that has worked so well in the U.S.: Focus first on humor and pop culture, then gradually add more substantive journalism. "The plan down the line," she says, "is to hire a news team to really aggressively cover the kinds of stories I don't think the mainstream organizations here are doing justice." Jha won't say how big BuzzFeed's audience is but she hopes to build it—and, eventually, its revenue streams—with distinctive coverage of progressive social justice issues like sexuality and feminism, still fringe topics for much of India's media but of increasing interest to younger, urban Indians. More than half of the country's 1.2 billion population is under the age of 25, including Jha herself.

Some are skeptical about the effectiveness of simply building a big audience and hoping advertisers will come. "The idea of scale and reach as the key metrics is incredibly seductive and somewhat dangerous when it comes to news," says Harvard



Print newspapers in India have surprisingly high circulations, and readership is on the rise

Business School professor Bharat N. Anand, who researches the media and entertainment industries. Anand thinks subscriptions or paywalls—or some combination thereof—are essential to sustainability. But to convince Indian audiences to actually pay for content, when newspapers still cost only a few cents, he believes media companies must create high-quality, unique user experiences. Digital news outlets will need deep pockets and patience.

EANWHILE, INDIA'S OTHER audience—the millions of people who will acquire cheap smartphones—is underserved. On my last trip to Delhi, Kundan Kumar—a member of the Singhs' live-in domestic staff who is from a village in Uttar Pradesh, a sprawling, underdeveloped Hindi-speaking regionproudly showed me his latest gadget, a sleek \$100 iPhone-like handset made by the Indian firm Lava. He's never owned a personal computer, but he and the hundreds of millions of young Indians like him are increasingly turning to their smartphones for entertainment and information.

Entertainment is there-movies, music, instant messaging. As for information, Kundan reads newspapers and watches TV because it's much easier and cheaper than using up his precious data allowance on news platforms not designed for him and not in languages he can read. To that end, I am working on a project, funded by the

Knight Foundation, to build a platform that makes news and other essential information much more accessible through these types of inexpensive handsets.

Ketla-which means "how much" or "how many" in Gujarati, my family's native language—uses swipe-able comics to convey news and other information to non-English speakers of differing literacy levels. Initially, Ketla will produce one locally relevant news story a day, with artists and editors using information already in the public domain to create simple comic strip narratives.

There are other uses for Ketla, too. A local healthcare provider, for example, might want to publicize a free service for pregnant women and explain why it's important. Ketla could help the provider create and distribute a digital comic strip for that purpose. Because the platform uses illustrations, not video, the data is light enough to work across India's erratic networks. Text is minimal, so it can be easily translated to any of India's officially recognized languages. Plus, the content is shareable via existing social media platforms like WhatsApp, which helps further extend its reach.

Multilingualism is essential for reaching rural audiences in India, which has, in addition to about 20 official tongues, hundreds of dialects. "It's a huge challenge for any platform to service a country as linguistically and geographically diverse as India," says Raheel Khursheed, a former TV reporter who is now head of news, politics, and government at Twitter India. Twitter thinks it's worth trying to meet that challenge because it believes platforms that operate exclusively in English have limited room for growth. Indian Twitter users can tweet in any language available on a given mobile device, and the company is also working with regional newsrooms to help them craft stories more native to the social Web.

Translation software is making it easier to reach audiences. The Google Translate app now includes Hindi as one of its languages. With its "real-time visual translation," you can point your phone at a foreign menu or road sign and find out instantly what it says. Handsets from Micromax, maker of some of India's best-selling smartphones, feature a new, locally designed operating system that enables real-time transliteration and translation. So, a message typed in English can be received in Hindi; one written in Gujarati (which is spoken by about 50 million people, according to the 2001 census) can be received in Punjabi (about 30 million speakers). "For the 90 percent of Indians who don't use English, we saw a clear opportunity," says Rakesh Deshmukh, CEO of MoFirst, the firm that makes the operating system.

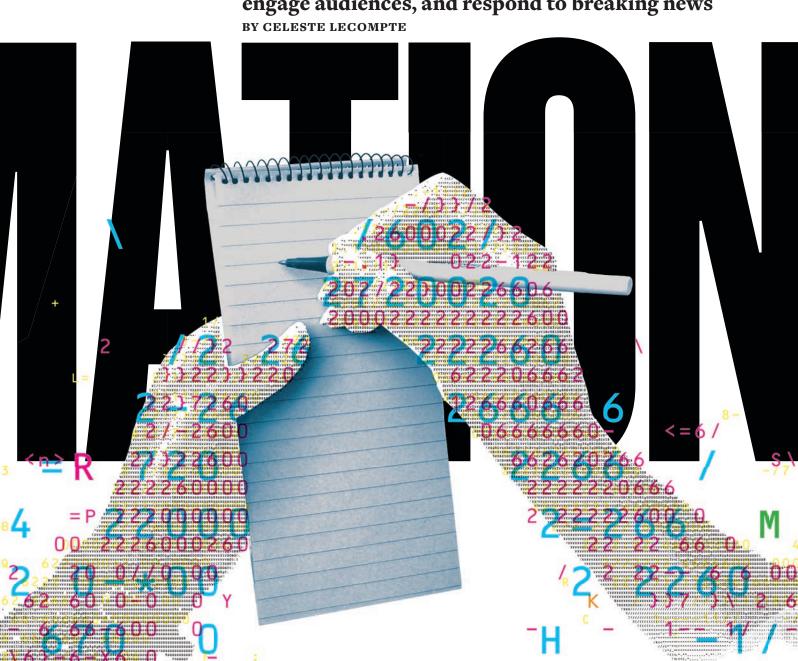
For digital news, this technology could be a game changer. If the software can be made to work to a publishable standard, and not just with informal private messages, where a degree of error is usually tolerated, news outlets could save a lot of time and money on translation and transliteration. Crucially, audiences could also control the language in which they receive news. Digital news content would suddenly have a much bigger reach.

Journalistic efforts are already under way to create this kind of content. The People's Archive of Rural India, a network of volunteer journalists covering stories they say mainstream urban media overlook, aims to record the lives of the more than 800 million Indians who don't live in cities—in every possible language and various digital formats. The project, still in its early stages, is also dedicated to archiving India's languages.

In Delhi, the Singhs may be settled in their media routine. But news outlets should consider paying closer attention to Kumar and other Indians like him, who represent an enormous emerging market eager for news, information, and entertainment. I can think of a billion reasons why it's in the interests of news outlets to overcome barriers of language, literacy, and relatively low-end tech. ■

# ALL TO SERVICE OF THE NEWSROOM

How algorithms are helping reporters expand coverage, engage audiences, and respond to breaking news



PHILANA PATTERSON, ASSISTANT BUSINESS editor for the Associated Press, has been covering business since the mid-1990s. Before joining the AP, she worked as a business reporter for both local newspapers and Dow Jones Newswires and as a producer at Bloomberg. "I've written thousands of earnings stories, and I've edited even more," she says. "I'm very familiar with earnings." Patterson manages more than a dozen staffers on the business news desk, and her expertise landed her on an AP stylebook committee that sets the guidelines for AP's earnings stories. So last year, when the AP needed someone to train its newest newsroom member on how to write an earnings story, Patterson was an obvious choice.

The trainee wasn't a fresh-faced j-school graduate, responsible for covering a dozen companies a quarter, however. It was a piece of software called Wordsmith, and by the end of its first year on the job, it would write more stories than Patterson had in her entire career. Patterson's job was to get it up to speed.

Patterson's task is becoming increasingly common in newsrooms. Journalists at ProPublica, Forbes, The New York Times, Oregon Public Broadcasting, Yahoo, and others are using algorithms to help them tell stories about business and sports as well as education, inequality, public safety, and more. For most organizations, automating parts of reporting and publishing efforts is a way to both reduce reporters' workloads and to take advantage of new data resources. In the process, automation is raising new questions about what it means to encode news judgment in algorithms, how to customize stories to target specific audiences without making ethical missteps, and how to communicate these new efforts to audiences.

Automation is also opening up new opportunities for journalists to do what they do best: tell stories that matter. With new tools for discovering and understanding massive amounts of information, journalists and publishers alike are finding new ways to identify and report important, very human tales embedded in big data.

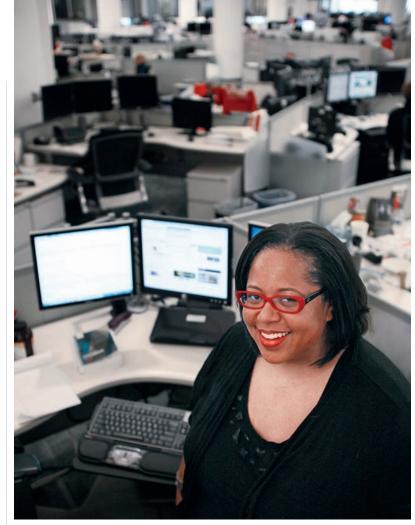
#### **Algorithms and Automation**

YEARS OF EXPERIENCE, INDUSTRY STANDARDS, AND the AP's own stylebook all help Patterson and her business desk colleagues know how to tell an earnings story. But how does a computer know? It needs sets of rules, known as algorithms, to help it.

An algorithm is designed to accomplish a particular task. Google's search algorithm orders your page of results. Facebook's News Feed determines which posts you see, and a navigation algorithm determines how you'll get to the beach. Wordsmith's algorithms write stories.

In order to write a story, Wordsmith needs both data about the specific task and guiding principles about the general one. Your GPS needs to know where you are now and where you're going; it also needs to know that "giving directions" means showing the fastest route from point A to point B, which depends on a variety of other data like whether streets are one way, what the speed limits are, and if there's traffic or construction. Similarly, to write an earnings story, Wordsmith needs the specific data about a company's quarterly earnings, and it also needs to know how to tell an earnings story and what information it needs to accomplish that goal.

To train Wordsmith, Patterson had to think about the possible stories the data might tell and which metrics might be important. Did a company report a profit or a loss? Did it meet, beat, or miss analyst expectations? Did it do better or worse than it did in the previous quarter or a year earlier? Deciding which metrics and data might matter was a head-spinning task. "You have to think of as many variables as you can, and even then you might not think of every variable," she says.



AP's Philana Patterson helps train software to write earnings stories

Working with other journalists on the business desk, she settled on a handful of storylines, with all their accompanying variety. She then worked with software developers at Automated Insights, the Durham, North Carolina-based company behind Wordsmith, who translated those story models into code the computer could run to create a unique story for each new earnings release. Today, the AP produces about 3,500 stories per quarter using the automated system, and that number is set to grow to more than 4,500 by the year's end. Automation is taking off, in large part because of the growing volume of data available to newsrooms, including data about the areas they cover and the audiences they serve.

The history of the news business is, in some ways, a history of data. The ability to collect and publish business-critical information faster than others has been a key value proposition since Lloyd's List was first published in London in 1734. Companies like Bloomberg and Thomson-Reuters have built empires on their ability to provide market data to business readers. But even outside the business media landscape, data has been an important part of why customers have turned to news outlets: Box scores, weather, election results, birth and death announcements, and poll results are all classic elements of a newspaper.

Just as media have undergone a digital revolution, so have the data that inform many elements of the news. Information of all types is increasingly accessible in the form of "structured data"—predictably organized infor-

THE RACE TO **PUBLISH BUSINESS** DATA OUICKLY DATES **BACK TO THE FIRST** LLOYD'S LIST IN 1734



# HOW A ROBOT LEARNS TO WRITE A STORY

An annotated Associated Press earnings report by Automated Insights' Wordsmith system BY JONATHAN SEITZ

"OUR GOAL PRIOR TO automation was to have 130 words onto the wire within 15-20 minutes of the press release" announcing a company's earnings for the most recent quarter, says Philana Patterson, the AP's assistant business editor. Since it began using Automated Insights' Wordsmith platform in 2014 to automatically generate these stories, the AP has been able to get stories of up to 500 words onto the wire as quickly as one minute after the earnings data is released. The Wordsmith software is capable of generating up to 2,000 stories a second, says Joe Procopio, chief product officer at Automated *Insights. Here's how it works:* 

Phrases like "falls short" are part of a strict vocabulary the Associated Press defined for Wordsmith based on the same style guide used by AP reporters. Patterson says the AP's goal was to let the numbers tell the story and only use plain verbs. The choice of word is partially randomized, with "beats," "misses," and "matches" having a higher probability of being used than "tops," "falls short of," and "meets."

FedEx reports fourth-quarter loss of \$895 million, [1] falls short of [2] forecasts

MEMPHIS, Tenn. (AP) \_ FedEx Corp. (FDX) on Wednesday reported [3] a fiscal fourth-quarter loss of \$895 million, after reporting a profit in the same period a year earlier.

On a per-share basis, the Memphis, Tennessee-based company said it had a loss of \$3.16. Earnings, adjusted for non-recurring costs and asset impairment costs, were \$2.66 per share.

The results did not meet Wall Street expectations. The average estimate of 12 analysts surveyed by [4] Zacks Investment Research was for earnings of \$2.70 per share.

[5] The package delivery company posted revenue of \$12.11 billion in the period, which [6] also fell short of Street forecasts. Six analysts surveyed by Zacks expected \$12.39 billion.

For the year, the company reported [7] profit of \$1.05 billion, or \$3.65 per share. Revenue was reported as \$47.45 billion.

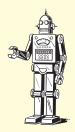
[8] FedEx expects full-year earnings in the range of \$10.60 to \$11.10 per share.

FedEx shares have risen roughly 5 percent since the beginning of the year, while the Standard & Poor's 500 index has increased almost 2 percent. The stock has climbed 31 percent in the last 12 months.

[9] This story was generated automatically by Automated Insights (http://automatedinsights.com/ap) using data from Zacks Investment Research. Full Zacks research report: FDX.

The AP compares performance to Wall Street forecasts as well as to the company's own announced expectations, the latter of which is typically considered a more powerful indication of performance.

Wordsmith analyzes numerous factors to find a story's lede. There are hundreds of possible data points that could be used, based on comparisons among factors like current earnings data, the company's historical data, performance of similar companies, or Wall Street expectations, Procopio says. This is similar to the guidelines given to the AP's reporters for covering earnings: Net income (also called "profit" and "earnings") is considered the primary benchmark for a company's success, so it should be compared with the same quarter in the year prior to get a sense of whether the company is doing better or worse.



Wordsmith relies on data entered by humans at **Zacks Investment Research** for AP stories, but reporters will often incorporate additional quotes and context when covering the same earnings report. AP reporter David Koenig wrote a story on this release that included explanations for why FedEx's revenue was down: lower fuel surcharges, a strong dollar, and a change in accounting of pension costs. Patterson says the AP hasn't been able to get those contextual details into the structured format Wordsmith needs quickly enough, so the Automated Insights stories are produced without them.

The AP always assigns additional reporting resources to 80 companies, while another 220 are reviewed each quarter by editors. "We're trying to use earnings stories as a window into the company's strategy," **AP business editor Lisa Gibbs** says of the work her reporters are doing now. "When you're having to churn out hundreds of earnings stories you don't necessarily have the time or the brainpower to look for those more interesting tales."

After using "FedEx Corp." on first reference, the company is referred to as a "Memphis, Tennesseebased company" or a "package delivery company." To avoid repetition, Wordsmith pulls those descriptions from a database of company locations and business types that have been defined in accordance with AP style.

**Since Wordsmith has** already given FedEx's earnings and noted that it did not meet expectations in the previous paragraph, here it notes that overall revenue missed expectations as an aside using the word "also," since that detail is of secondary importance to data about earnings. It is able to do this because separate algorithms check the overall flow of the language at the sentence, paragraph, and story levels to keep it from becoming repetitive. In effect, the system is writing new sentences based on what it has already written, Procopio says, similar to how a human might write.

**Because Wordsmith is** monitoring the flow of the story, this can lead to small changes in the language, such as substituting synonyms for words that occur multiple times. Terms like "profit" and "earnings," for instance, may be used interchangeably in some situations. "We don't ever want an article that's 'profit, profit, profit,"" Procopio says.

This data about FedEx's expected earnings for the vear is not always included when Zacks sends its initial data. When additional data from Zacks is delivered, the entire dataset will be reevaluated and a new story will be generated.

Every automated AP story goes out on the wire with this disclaimer as well as a link to a page that gives more detail about how the automation works. If a reporter has rewritten an automated story, the disclosure will remain, with the language updated to read: "Elements of this story were generated partly by Automated Insights."

mation, like a spreadsheet, database, or filled-out form. This makes it well suited for analysis and presentation using computers.

The growth of structured data is at the heart of increasing automation efforts. Business and sports have long been data-intensive coverage areas, so it's no surprise that automation is being used in these areas first. The sports and business agate were among the first items to exit the print pages and find new homes online, in part because this kind of information is easily handled by digital systems. But today, a growing volume of private and public data is available in digital formats, and new tools make it easier to pull data out of even non-digital formats. (For more on the journalistic promise of open data, see "A Brief Guide to Robot Reporting Tools" on page 40.)

But data isn't the same as information. Algorithmic content creation isn't just about turning a spreadsheet of numbers into a string of descriptive sentences; it's about summarizing that data for a particular purpose.

The Associated Press's data is provided by Zacks Investment Research; that company uses human analysts who review Securities and Exchange Commission data, stock pricing, and press releases to build a custom feed of the numbers the AP has requested. That data is sent to Automated Insights, and Wordsmith assembles the stories following the rules Patterson and her colleagues helped set.

Translating even the simplest data means converting the loose guidelines a human reporter might follow into concrete rules a computer can follow. For example, a human reporter might have a general idea of when a company's performance was very different from analyst expectations, based on their knowledge of the industry. But for the algorithm, the AP had to specify exact ranges for which the spread between actual earnings and expectations is considered large or small. Wordsmith uses such metrics to decide both which words are used to describe the data and how the story is structured for example, whether the fact that a company missed analyst estimates should be mentioned in the headline. The story-assembling algorithm uses a predetermined set of vocabulary and phrases (known as a corpus) that follows the AP's strict stylebook rules.

"It's a lot!" Patterson says. "To come up with a system to trigger the right type of story, we as reporters and editors and programmers have to figure out this stuff ahead of time."

You have to know, "what it is you want your data to tell you," says Evan Kodra, a senior data scientist with Lux Research, a Boston-based market research firm. The more targeted and specific the questions, the better the results. "It still takes a lot of creativity to define the problem."

Editors say that's one reason they're incorporating automation technologies into their workflow: It enables them to focus on the fundamental work of being a reporter. "Isn't that our whole job: understanding the purpose of any kind of narrative before we do it?" asks

Scott Klein, an assistant managing editor at ProPublica. "In a way, our job is figuring out the purpose of the story and figuring out a way of telling it."

ProPublica's first—and so far only—foray into automated journalism was part of "The Opportunity Gap," a data-driven analysis of which states are (or aren't) providing low-income high school students with the coursework they need to attend and succeed in college.

Studies have shown that advanced high school coursework can improve a student's college outcomes, and in 2011, ProPublica released an investigation into where low-income high school students have equal access to, and enrollment in, advanced courses. The analysis was based on a new data set from the U.S. Department of Education. ProPublica used the data to create an interactive news app to accompany the story. Website visitors could explore the data at the federal, state, district, and school levels.

Two years later, the team was preparing to update the app with current data when Narrative Science, a Chicago-based competitor of Automated Insights, approached them. The company's platform, Quill, uses a similar algorithmic method to produce stories from sets of data. ProPublica had spent months analyzing, interpreting, reporting out, and correcting the Department of Education's data set. "The data were so well structured and we understood it so well," says Klein, meaning it was a good fit for automation. They decided to use automation tools to provide a written narrative to accompany each of the 52,000 schools in the database.

Each of the profiles needed to provide a summary of the data for an individual school, but it also needed to connect each school with the broader story. To provide context, ProPublica decided to include both a summary paragraph outlining the thesis of the broader investigative work and a comparison with another school to show the local context. To produce the narratives, ProPublica's editors provided Narrative Science with their complete data set as well as some sample write-



ProPublica's
Scott Klein says
automation gives
reporters more
time to figure
out the best way
to tell a story

ups. But the most important part was selecting the right schools for comparison.

The editors wanted to prioritize comparisons that showed differences with regard to opportunities, but it wasn't appropriate to compare a school in California to a school in Chicago because the economic and policy conditions can vary widely across such geographic gaps. Based on their reporting, Klein and data editor Jennifer LaFleur decided to first restrict the comparison to schools within the same district or state, before highlighting data that showed similarities or differences between the compared schools. "Even though the data look the same," says Kris Hammond, chief scientist and co-founder of Narrative Science, "there are so many different environmental conditions that are outside the scope of this data that the comparisons would not fly and would, in fact, be making false analogies." This kind of journalistic insight is critical to finetuning the performance of algorithms.

Like any human reporter, robot journalists need editors. But the challenge of editing automatically generated stories isn't in correcting individual stories; it's in retraining the robot to avoid making the same mistake.

N MAY 2015, THE NEW YORK TIMES WROTE an article about a new study on how where you grow up affects your economic opportunities later in life. The study used tax records to track the fates of 5 million children who moved among U.S. counties between 1996 and 2012. The study concluded, "The area in which a child grows up has significant causal effects on her prospects for upward mobility." To accompany the article, the Upshot team produced an interactive piece that highlights data for each of the 2,478 counties included in the study.

But rather than just present a searchable database or zoomable map, graphics editors wrote an article that adapts to the user, based on their current location. By looking at the user's IP address, key paragraphs highlight local income statistics and compare them to national averages. The accompanying map is automatically focused on that county and its neighbors. Users can choose other locations, but rather than seeing an entirely separate story, the same story gets new data and a new lede for the new location.

When "The Best and Worst Places to Grow Up" was released, many users didn't notice that the text was assembled algorithmically. They just arrived at the page and thought their version of the story was the only version of the story. That seamless experience is partially the point, but it comes with its own editorial demands. "Because people think this is edited by a human editor,

#### TEACH YOUR COMPUTERS WELL

Avoiding the risks of algorithmic bias BY CELESTE LECOMPTE

SYSTEMS LIKE Wordsmith and Quill are natural language generation (NLG) platforms. That means they're designed to turn data into humansounding prose. NLG is an active area of technology development, aimed at helping translate the growing stores of structured data into human-usable information.

Siri, Apple's conversational assistant, uses natural language generation to answer simple questions and respond to user requests. But Siri is also using another technology that **Quill and Wordsmith** aren't: natural language processing (NLP).

Natural language processing is a class of artificial intelligence tools that let computers analyze unstructured data-like

newspaper stories-to identify patterns. Those patterns can then be applied to new situations. That's how Siri figures out whether you're looking for a restaurant or a pet shop when you ask her for the nearest "hot dog." Then, Siri uses natural language generation to direct you to the nearest frank.

By looking at large volumes of data, NLP systems develop statistical models about how often humans use specific vocabulary, syntax, and phrases in a particular context. To do so, they depend on training data sets, known as corpora, that have something in common-e.g., all of the text is weather reports or earnings statements.

The models generated by NLP tools will replicate the same biases inherent in the corpora. Usually, that's good: You want Siri

to bias her response toward an edible treat, not a panting pet. But it has its dark side, too, and the risks of ignoring biases are significant. Google's new Photos tool recently highlighted the issue when a black user found that photos of him and his friend were labeled "gorillas" by the software. The error was likely linked to a lack of black faces in the algorithm's training data for "people." And a number of recent studies have found issues with Google's search algorithm: an image search for "CEO" returns almost exclusively images of men, while women conducting online job searches are shown fewer ads for highlevel coaching services. These kinds of issues happen because the algorithms learned from the patterns of past user behavior—reinforcing

damaging cultural stereotypes.

Today, Wordsmith and Quill require editors to explicitly construct the models that shape stories. **But NLP-based systems** could "read" multiple examples of the text editors want to create, alongside the data sources for the story, and develop their own statistical models for what makes an earnings story or a homicide report. Examples of this approach are few and far between outside of a research context—for now. But it's not wise to bet against improvements in this area of technology. If news organizations adopt more artificial intelligence techniques, it will be important to ensure that they're using diverse training data that reflect their efforts to produce more inclusive coverage of communities. ■

you have to have the same standards, accuracy, quality, and tone. There's a big danger in messing things up," says Gregor Aisch, a graphics editor for The New York Times.

The story uses pre-assigned blocks of text and follows specific rules for how to assemble paragraphs based on the available data. In some cases, it might be as simple as substituting a new number or county name. For the best- and worst-performing counties, the story got additional sentences that only appeared in those contexts. In addition to editing the pre-written chunks of text, editors had to check for flow between sentences in multiple possible arrangements.

The challenge is even trickier for newsrooms using systems like Quill or Wordsmith, because these systems use more "word variables," and they have more options for how to describe data. So, the same data might be able to produce a dozen different variations of a story.

For now, the process for editing these stories is more or less the same as for human writers: reviewing drafts.

FOR ITS BEST PLACES TO GROW UP REPORT, THE NEW YORK TIMES USED **ALGORITHMS TO ASSEMBLE STORIES** THAT VARIED DEPENDING ON THE **USER'S LOCATION** 

Klein says most of the drafts that ProPublica received at first had errors. Data appearing in wrong parts of the story was the most common mistake. Once editors mark up the drafts, developers make the changes to the code to ensure it doesn't happen again. Over time, ProPublica felt confident it had a system that produced accurate stories and used language with which its editors were comfortable.

The Associated Press also spent months reviewing drafts, refining the story algorithms, and verifying the quality of the data supplied by Zacks. The first quarter that the system was live, editors reviewed drafts of every story before it was put out onto the wire, checking for errors in both the data and the story. Now, the majority of stories go live on the wire without a human editor's review.

The AP says the only errors it still sees come from errors in the data passed to the system. Some are simple typos or transposed numbers, while others depend on more complicated human errors. Unless data is gath-

SETH WENIG/ASSOCIATED PRESS

ered by a digital sensor, the process almost always starts with humans doing data entry, which is often where problems are introduced. Since the project's inception, Patterson says, only two published errors have been traced back to the algorithm.

In July, Netflix released second-quarter earnings at the same time as its stock underwent a 7-to-1 split. But the data Wordsmith received didn't reflect the split, so Wordsmith initially reported that the price of an individual share fell 71 percent and noted that the company had missed analyst expectations for per-share earnings. Neither of which was true. In fact, investors who owned the stock saw an increase in the value of their portfolio; Netflix's share price has more than doubled since the beginning of the year. This was, in effect, a human error: The analyst data should have reflected the stock split. But Wordsmith does not have an automated warning that kicks in when something anomalous—like a 71 percent drop in share price from a AT AP, AUTOMATED STORIES HAVE FREED **UP 20 PERCENT** OF THE BUSINESS **DESK'S TIME** 

company like Netflix-appears. The lesson, for automated and human-generated stories alike: Your data have to be bulletproof, and you need some form of editorial monitoring to catch outliers.

The story was updated with a correction, following the same processes as for any human-generated story. But because of the way AP stories are syndicated, uncorrected versions of the story persist online. Patterson says it's wrong to blame automation for that kind of error. "If the data's bad you get a bad story," she says.

Tom Kent, the AP's standards editor, acknowledges that mistakes are an issue that the AP takes seriously but he also points out that human-written stories aren't error free, either. "The very stressful job for a human of putting together figures and keeping data sets separate and not mixing revenue and income and doing the calculations correctly was a prescription for mistakes as well," he points out. According to Patterson, who oversees all corrections (human or otherwise) for the business desk,

#### A BRIEF GUIDE TO ROBOT REPORTING TOOLS

From crime statistics to SEC filings, software agents can monitor vast amounts of open data to help journalists spot potential stories BY JONATHAN STRAY

TRANSPARENCY IS pointless if no one is watching, but there's no way a human reporter can keep up with the open data created by a modern city, let alone a country. Software agents, sometimes called bots, can monitor vast amounts of information and provide summaries, or alert reporters when something interesting appears. While there is huge potential for advanced techniques from artificial intelligence, there are also some useful bots that can be set up today, in minutes.

The most straightforward way to monitor open data is to present it in more useful ways. Narrative Science demonstrated its Quill automated story writing product by generating textual reports from sensors monitoring the health of Chicago's beaches. These systems make open data more accessible and

understandable by converting it from one form into another. While this is valuable, bots can also "read" and analyze open data, generating news by flagging items found in

a larger data stream. Software can look for the unusual. The Los **Angeles Times crime map** generates automated alerts when violent and/ or property crime reports from the most recent week are up significantly over the average for a neighborhood. These alerts are displayed on the main crime map and the page for each neighborhood. There is a deep question here about the right numerical threshold for triggering an alert, or more generally what words like "anomaly" or "unusual" should mean in practice. Part of the work in creating a robot reporting tool is coming up with mathematical definitions for newsworthiness, something that journalists may not be used to doing.

For decades banks and others in the financial industry have employed much more sophisticated anomaly detection software to detect fraud and other threats. Generally this is done with proprietary software on proprietary data. But there's a huge amount of public financial data that is not regularly monitored by journalists. The Securities and **Exchange Commission's EDGAR** system publishes disclosure filings from all U.S. public companies, up to 12,000 reports per day during peak periods. This data fuels a cottage industry of advanced analytics tools for investors, which could also be used by reporters to monitor the activities of entire industries, beyond just the specific companies that a reporter already

knows might be interesting. The rise of algorithmic and high-frequency trading suggests that journalists should also be engaging in detailed analysis of market data streams with an eye towards underhanded dealings, much as financial data provider Nanex does. In 2013, Nanex analyzed trading data and found evidence suggesting insider trading, because trades were executed faster than the information could have possibly been transmitted after the embargo ended. We cannot have algorithmic accountability without robots watching the algorithms; humans are just too slow.

This sort of work will require sophisticated new software. But there are simple bots available now to help journalists with their daily needs.

Sometimes you just want to know when somebody writes about a particular

the error rate is lower than it was before automation, though she declined to provide exact figures.

#### Algorithm-assisted Journalism

THE IMPERATIVE TO AVOID ERRORS PROMPTED the AP to keep its automated stories simple, which makes them, well, somewhat lifeless. Other Wordsmith users include descriptions of major factors, such as most point-contributing players for fantasy sports or top-performing stocks and categories for financial portfolio summaries, that influence the overall trend in a data set. The AP has opted to exclude these more analytical facts, often included in human stories, from automation because of concerns about adding too much complexity too quickly. "There are things we decided not to do quite yet that were presented as possibilities," Patterson acknowledges. "We chose not to add them to the stories, because we were really committed to making sure that the accuracy of the stories was intact."

topic. The free Google Alerts service scans the Web for specific words or phrases and sends an e-mail when they appear. The names of people and organizations are an obvious query, but two prominent databases of police killings—Fatal **Encounters and Killed By** Police—use Google Alerts to find relevant incidents in local news reports.

Other simple bots watch for changes in a web page. This can be used to detect deleted content, track shifts in language as a politician or company responds to scrutiny, or

to create a record of who said what when. There are myriad tools for change detection, from free sites like Follow That Page to more professional services like Versionista. There is a whole subgenre of bots that monitor Wikipedia, such as @congressedits which tweets when someone edits a page anonymously from an IP address belonging to the U.S. Congress.

We can expect to see much more sophisticated bots make their way into journalism in the next few years. IBM's Watson technology is best known for defeating "Jeopardy!"

\$1,200 \$0 (EN WATSON

Watson's ability to answer questions has uses far beyond game shows

Instead, the Associated Press has human editors who add context to many of its automated stories. At least 300 companies are still watched closely by the AP's business desk staff. There are 80 companies that always get additional reporting and context by Associated Press staff; another 220 get reviewed by editors, who may enhance the story with their own reporting or context. That system has created significant efficiencies for the AP, freeing up 20 percent of the staff's time across the business desk, estimates Lou Ferrara, the vice president and managing editor who oversaw the project. And that doesn't take into account the impact of the initiative on the AP's customers.

One of the biggest impacts of the Associated Press's automated earnings project has been its expanded coverage of smaller companies that are primarily of interest to local markets. The AP's customers are, largely, local outlets, and companies of interest to these clients had fallen out of AP coverage during the cutbacks of the

champions at their own game in February 2011. But the ability to answer general questions by instantly consulting a large body of reference material has applications far beyond game shows, and IBM has since invested more than a billion dollars in a new division devoted to cognitive services. One of the first big applications is health care. IBM has collaborated with Memorial **Sloan Kettering Cancer** Center, where the system aims to assist doctors in diagnosing complex cancers by comparing a patient's case to huge databases of medical research.

This kind of artificial intelligence technology will be developed first for fields such as law, finance, and intelligence where there are large business opportunities. But consider what it could do for journalists. Imagine telling a newsroom AI to watch campaign finance disclosures, SEC filings, and media reports for suspicious business deals that could signal undue political influence. The goal is a system powerful enough to scrutinize every available open data feed, understand what each data point means in context by comparing it to databases of background knowledge and current events, and alert reporters when something looks fishy or interesting.

This dream is a ways off, but the necessary technology is under active development within powerful industries. If this technology can be imported into journalism it may change the field in significant ways. The definition of news will shift toward things that can be expressed to a computer, something which seems a little inhuman but could end up being more transparent and systematic than the tenets of "news judgment." As a result of this systematization, journalists and their readers will expect to be everywhere, monitoring every government department and every multinational corporation, not just the ones that have caught our attention recently.





2000s. For communities, this was a potentially significant loss. "If there's a big company, it's employing people in your family, your neighbors, people you go to church with," says Patterson. "There are a lot of people who are interested in the economic health of that company."

In Battle Creek, Michigan, for example, the Kellogg Company is one of the region's most important employers, and its fingerprints are all over town-from thousands of monthly pay stubs at the bank to the names on a school to the W.K. Kellogg Foundation's cheery-looking headquarters downtown. Pat Van Horn is among the locals who worked at Kellogg until she retired in 2010. She and her husband Lance still pay attention to what's happening at the company. They have friends who work there, and like many locals, they've got Kellogg stock in their portfolio.

So each quarter, when the company releases its earnings statements, the Van Horns glance at the Battle Creek Enquirer to see how things are going. "You know, what was the earnings report this quarter, the dividends are going to be X amount per share," says Lance. "We follow them a little bit."

The Enquirer uses the Associated Press's earnings stories as the foundation for its coverage of the company; local reporters add context, digging deeper on issues that are likely to impact Battle Creek. That frees up reporters and editors to do the work that the computers can't do.

For the AP, content licensing is king, making up the vast majority of the company's revenue, and newspaper and online customers accounted for 34 percent of 2014 revenue. Continuing to deliver content those customers want is key to retaining their business. "It's not like we're going to be growing revenue in the local markets in any particular way," says Ferrara. Instead, the AP sees the automated earnings as a way to retain customers, particularly those that have been hard hit by job losses across the industry.

The AP is doubling down on that strategy; the company has continued to expand its automation efforts, adding public companies with a market capitalization above \$75 million as well as select Canadian and European firms. Many of these companies would never have been covered by the AP's staff writers. The same

Alexis Lloyd of The New York Times R&D Lab says the public's thinking about automation hasn't changed since the 1950s

OREGON PUBLIC **BROADCASTING'S AUTOMATED LOCALIZED EARTHQUAKE PREPAREDNESS REPORTS WOKE UP** LISTENERS TO THEIR **VULNERABILITIES** 

is true for other areas of coverage the AP is looking to automate, including Division II and Division III college football and basketball games.

By offloading the basic reporting work, the AP hopes it's making it easier for local papers to focus on the stories that matter to community members, like the Van Horns. "We're not here merely to be just churning out numbers," says Lisa Gibbs, the AP's business desk editor. "We're really writing these stories for customers who are more likely to have shopped at a Walmart than to own individual stock in Walmart."

Gibbs was hired just after the introduction of the automated earnings stories. She says it was an opportunity for the team to rethink how the company was going to cover business. With automation, Gibbs says her team has been able to focus on doing the kinds of medium-sized enterprise stories that had been squeezed out before. She points to the example of a piece by business reporter Matthew Perrone, who covers the U.S. Food and Drug Administration, which reported on a lack of regulatory oversight for the growing number of stem cell clinics. "We were able to take some time, send him to travel to some of these clinics, and ultimately publish the story," she says.

> HE AP ISN'T ALONE IN USING AUTOmation to support its reporting efforts. One of the first places to adopt automation in the newsroom was the Los Angeles Times. The paper's Homicide Report maintains a database with information about every homicide reported by the Los Angeles County coroner's office; each victim profile includes a brief automatically generated write-up. It's up to reporters to decide which stories deserve more indepth reporting.

The LA Times built on the lessons from that project with the introduction in 2011 of Quakebot. Ken Schwencke, a digital editor on the LA Times's data desk at the time, used data from the USGS Earthquake Notification Service to automatically generate short reports on earthquakes above the "newsworthy" threshold of a 3.0 magnitude. LA Times reporters review the stories, publish them, and update the story with additional information as it becomes available. Quakebot's big advantage is speed; a story can be posted online in under five minutes. This kind of assistive role is one that many news organizations insist is the foundation of their automation efforts.

The AP recently hired its first "news automation editor," Justin Myers. He sits on the editorial team and is represented by the News Media Guild, just like his editorial colleagues. His job is to help figure out how to

streamline editorial processes and "give time back to the writers, editors, and producers, who in a lot of cases are slogging through whatever processes we've built up over the years, rather than focusing on doing journalism."

Myers has spent his first few months on the job mostly interviewing reporters, editors, and producers to find out what work he can help take off their plates. The number one question he's asking: "How do you spend your time?" If it's possible to automate some of a staffer's burdensome tasks, Myers is happy to help. "Let's have a computer do what a computer's good at, and let's have a human do what a human's good at," he says.

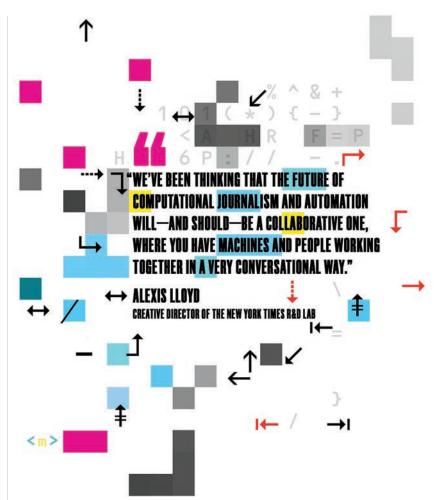
Alexis Lloyd, creative director of The New York Times R&D Lab, agrees. The general public's thinking about automation hasn't been updated since the 1950s, she says. Typically, we imagine an all-or-nothing scenario: all with humans or all with machines. She says that's wrong; across all kinds of industries the approach to automation has changed to focus on more assistive technologies. "We've been thinking that the future of computational journalism and automation willand should—be a collaborative one, where you have machines and people working together in a very conversational way," she says.

Several news organizations are using automation to support their reporters' work behind the scenes, too. Lloyd mentioned Editor, a new tool that integrates with the company's content management system to help reporters tag content by providing automated suggestions. Similar efforts are under way at BBC News Labs, with a tool called Juicer.

These tools support news organizations in their push to develop new storytelling formats that highlight the relationships between news events and help provide readers with richer context. Most of these efforts require large amounts of detailed metadata that can help link together stories that have in common people, places, or ideas. Adding metadata is a frustrating task for most reporters, who are typically more concerned with crafting their story than dissecting it. Automation is a way to expand the use of metadata—without putting a extra burden on reporters and editors.

Behind-the-scenes tools can also help reporters in more proactive ways. For example, another tool from The New York Times R&D Lab automatically tracks its stories on Reddit, looking for hot conversations, and alerts journalists when there's an active discussion of their work they might be interested in monitoring or participating in.

This is one of the most promising areas for automation in the newsroom, says Nick Diakopoulos, an assistant professor at the University of Maryland's Philip Merrill College of Journalism, who has been studying the use of algorithms in media. By tracking social media or other public data sets, automation tools can help support newsgathering in a digital environment. Using automation tools like these can raise journalists' awareness of issues, help them pay attention to important data sets, or listen to conversations and react more quickly, he says.



#### Personalization and Revenue

AUTOMATION CAN ALSO BECOME A USEFUL TOOL for connecting with audiences more directly. In June, journalists at Oregon Public Broadcasting (OPB) rolled out a news app to accompany a series on earthquake preparedness in the state. The app, called Aftershock, provides a personalized report about the likely impacts of a 9.0 magnitude earthquake on any user's location within the state, based on a combination of data sets. The scenario isn't just speculative; the region is widely expected to face a massive quake of just this sort, known as the Cascadia quake. "OPB has been doing a bunch of coverage on the Cascadia quake and how people can prepare, but a lot of people don't care about a topic until it affects them directly," says OPB's Jason Bernert. "When you put them in the center of the story, they take an interest."

Aftershock uses data sets on earthquake impacts that were modeled by the Oregon Department of Geology and Mineral Industries and impact zones defined by the Oregon Resilience Plan report. The data mixes and matches ratings for things like shaking, soil liquefaction, landslide risk, and tsunamis. In total, there are 384 possible combinations, and users see a version of the story that's relevant to the location they've selected. As with The New York Times's "Best and Worst Places

to Grow Up" interactive, the news app dynamically stitches together the various elements of the story which the OPB team calls "snuggets," a portmanteau of "story nuggets"—based on the data for each location.

Some of the data applies to broad regions of the state, but other data sets have estimated impacts for regions as small as 500 meters. Aftershock takes advantage of that granularity by showing users the expected impacts for specific addresses. "There's a big difference between 'a 9.0 earthquake in Oregon' and 'your area is where shaking is going to be the worst," says Bernert. "It has a different emotional response for people to start different conversations."

The editorial appeal of projects like this is clear but personalization has the potential to attract the interest of the business side as well. Following the mid-July publication of The New Yorker's in-depth article about the Cascadia quake, Bernert says, Aftershock's traffic soared. For a few days afterward, the site was handling 300 times the usual number of requests. Other OPB reporting on the Cascadia quake saw an increase in traffic, but "the real social driver was Aftershock," he says. On Facebook, users were sharing Aftershock and saying, "This is what's going to happen to me; I better go out and get prepared" and encouraging others to check out how they would be impacted as well.

Although none of the current implementations have focused on monetization efforts specifically related to personalized content, it is the aspect of automation that could have the largest effect on potential news revenue.

> UTOMATION IS ALREADY BEING used today to personalize some news organizations homepages or to provide "recommended for you" features. By further increasing engagement with users, automation that personalizes content could have positive impacts on revenue from advertising and subscriptions. This kind of personalization provokes anxiety among many news professionals, who worry that personalization will limit readers' exposure to the stories editors

might deem important in favor of things that are frivolous. As Mark Zuckerberg said when describing the value of the News Feed, "A squirrel dying in front of your house may be more relevant to your interests right now than people dying in Africa."

For now, most article personalization efforts focus on types of users, much as Aftershock uses automation to match specific addresses to general scenarios. It's more like having a shirt with the right collar and sleeve-length measurements than a handmade, custom-tailored one. "We haven't got it down to the person yet," acknowledges Joe Procopio, chief product officer for Automated Insights.

That's true of even the most sophisticated algorithms that are used by credit agencies, retailers, and personnel companies; vast quantities of personal info are crunched to pigeonhole users as a "type" that can be used to predict loan default risk, send perfect-for-you coupons, or characterize your management style. Take the example of Crystal, an artificial intelligence tool that helps you write better e-mails for specific individuals, based on their online profiles. The program reviews things someone has written online, such as their LinkedIn profile, and identifies them as one of 64 types. Each type has associated communication tips about things like vocabulary to avoid, how much detail to include, and how formal the language should be.

Automated Insights provides this kind of customization to its commercial customers already—one car-sales website uses Wordsmith to show users slightly different descriptions of the vehicles based on their profile, Procopio says. A first-time car buyer might be shown a description that emphasizes the car's fuel performance, while a mother in the market for a family vehicle might see descriptions that emphasize safety ratings. In both cases, the information in the profiles is the same, but different features are prioritized.

Diakopoulos says lack of data is a significant barrier to such personalization of stories. To push further into true personalization, news organizations would need to collect a lot more information about their usersand develop strategies for how to address stories to those different types of users. "News organizations aren't very good about even having user models," Diakopoulos points out. "They don't really know who's on their site. That's very different than having a robust user profile and an ability to adapt the page based on the cookie profile and so on."

Even if users were to agree to provide more detailed information—by logging in with Facebook or LinkedIn, say—journalists would still need to be at the helm of efforts to target those users with content in specific ways. The complexity involved in automating a story with just one variable—geography—would become exponentially more difficult. For newsrooms, that presents significant challenges for editing, fact checking, and writing multiple variations of the "snuggets" to be used in the stories. "There is concern," says Procopio, "that someone is going to read a story and not get all the facts because it's biased toward that person. I don't think that concern is warranted."

As the technology improves, the potential value of personalization from a revenue perspective will certainly become more important. Frank Pasquale, a professor at the University of Maryland Francis King Carey School of Law and author of a recent book on the pervasive power of algorithms, "The Black Box Society," argues that if stories can eventually be customized for users based on factors like their income, where they live, or any of the micro-categories (e.g., "cat lover," "Walmart



**Automated** Insights' Joe Procopio, right, with company CEO Robbie Allen, says personalization is a growth area

shopper," or "STD sufferer") that data brokers collect from our online lives, newsrooms will almost certainly face pressure to do so. "That's going to be seen, eventually, as revenue maximizing," Pasquale says.

He suggests a question for newsrooms to consider as they apply personalization: "To what extent is this 'dead-squirrel' personalization and to what extent is this personalization that draws people creatively into stories about other parts of the world?"

To focus on the latter, one option is to rely less on broad personal data that sparks fears about who algorithms assume a user is and instead focus on what's relevant about a user's relationship to a particular story. For example, The New York Times's Upshot team has recently published a few stories that use in-story interactions to adapt a story to a user's existing knowledge or views on the subject.

In one case, users were asked to draw a line on a graph they thought represented college enrollment rates across economic groups. Based on the line drawn, users were shown one of 16 different versions of the story, each of which explained the real data while comparing them to the user's own assumptions about the issue. It was a simple but very successful piece of explanatory journalism because it focused the written article on information most relevant to the reader, without changing the reported parts of the stories. Projects like these also have the advantage of built-in transparency about what characteristics are being used to automate the story's creation. Users actively provide the information to the system in order to get the information they want, and that input data is clearly linked to the story itself.

Transparency is one of the stickiest issues facing automation systems, particularly as they intersect with

**SMALL NEWS ORGANIZATIONS** COULD. IN FACT. HAVE THE MOST TO GAIN FROM AUTOMATED JOURNALISM. THEY ARE WELL-POSITIONED TO DRAW ON LOCAL DATA TO WRITE STORIES

personalization. Kent, the AP's standards editor, thinks concerns about algorithmic transparency are overblown when it comes to automatically generating content. "Human journalism isn't all that transparent," he says. "News organizations do not accompany their articles with a whole description of what was on the journalist's mind that could have affected his thinking process, whether he had a head cold, had just been hung up on by a customer service rep of the company he was writing about, and so on."

Because the rules governing how automated stories get assembled are available for scrutiny, automated journalism may be more transparent than stories written by humans, he argues. But for the majority of projects, it's hard to know what value readers might find in disclosures, even if they were presented. Mike Dewar, a data scientist in The New York Times R&D Lab, has written about the futility of publishing documentation if none of the intended audience can read it. Instead of publishing just open source data or documentation on algorithms, he argues, the community needs to adopt common standards and procedures.

That kind of standardization could benefit non-technical users, who would become more familiar with how such projects work and what to expect. Standardization could also help smaller newsrooms experiment with automation. At OPB, Aftershock was a hugely successful project, but it required some heavy lifting from the small public media team. Bernert and his colleague Anthony Schick built the app during a three-day build-a-thon sponsored by the University of Oregon's journalism school, with the pro-bono assistance of a local interactive design firm, students, and academics. "There's a lot of value to this kind of work," Bernert says. "But how do we make it sustainable for a small public media newsroom?" Having a larger shared set of the technologies and methodologies would help.

Small news organizations could, in fact, have the most to gain from using automation. While Wordsmith and Quill are focused on expanding in big-dollar markets like financial information and insurance, they've demonstrated their technology on a variety of local data, such as water quality reports from public beaches and public bike-share station activity. Local news organizations could be well positioned to take advantage of this kind of structured data using automation, either by expanding their coverage or by creating new products.

Commercial providers once siphoned off some of news organizations' most important revenue streams by finding better ways to deliver classified ads, job listings, home sales, and other information—much of which is available in the form of structured data. Automation could be one way for news organizations to recapture some of that revenue.

After all, automation is about putting narratives around data, and news organizations have the skills and experience needed to do just that.

#### **Nieman Watchdog**

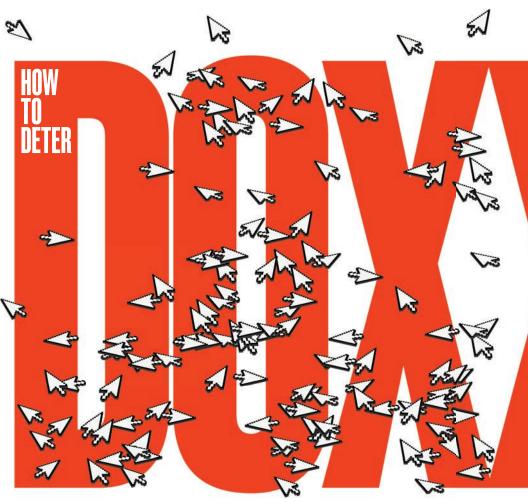


"Hey do you like pizza?" an egg-avatared user asked. "Are you vegetarian/vegan?"

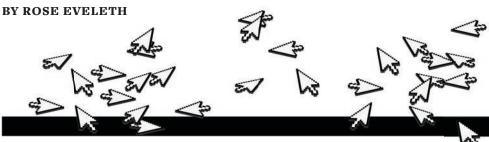
Merlan looked at the Domino's e-mail again: two large pies, one with triple cheese, triple sausage, triple salami, triple barbecue, hot sauce, half onions and half pineapple, and one with no cheese but triple sausage. Eventually, it clicked. Merlan was being doxxed, the practice of publicly posting private information (home addresses, phone numbers, credit card and Social Security details) which can be used to threaten or otherwise harass an individual.

The harassment that follows doxxing, a term derived from "doc," as in "documents," is like a human distributed denial of service attack—every channel for digital communication is flooded to the point where it becomes unusable. Your phone is full of vile text messages and rings continuously. Your e-mail is full of threatening messages and photographs of dead bodies. Twitter and Facebook—and other ways you might communicate with friends and family not physically present—are clogged with threats. All coordinated by often-anonymous harassers who have taken offense at something you've written.

Though doxxing has yet to be formally studied and many incidents are not reported, it does appear to be on the rise, particularly the doxxing of journalists. Melissa Bell, vice president of growth and analytics at Vox Media, where several staffers have been targeted, says that the online harassment has "become a noticeably worse problem in the last year." Two New York Times reporters who included details about the daily life of Darren Wilson, the Ferguson, Missouri police officer who shot and killed unarmed black teenager Michael Brown, in a story were doxxed. Cybersecurity journalist Brian Krebs was "swatted"a tactic in which harassers make false 911 calls claiming a dangerous situation at the



## Newsroom strategies to prevent the harassment that



address in hope of a SWAT team showing up—after writing about a site that purports to sell Social Security numbers and credit reports. Amanda Hess, a journalist at Slate, has written publicly about the harassment she's faced.

Journalists think a lot about protecting their sources, building security tools and secure methods of communication. But when it comes to their own safety, reporters are often stuck with a strange dilemma. They have to have open channels of communication to speak with sources and get information, but that can also put them at risk for harassment. As doxxing continues, newsrooms are starting to re-examine their security systems and the support networks in place for reporters. Though many newsrooms still struggle with how to respond to

harassers, there are a few strategies media companies can employ to deter doxxing.

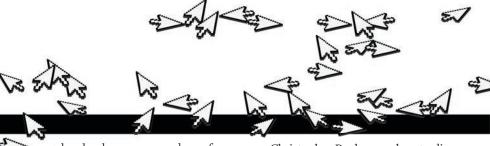
Merlan responded by chronicling her harassment in a post on Jezebel, where she is a reporter, and where, earlier on the day she was doxxed, she had written a post about a Time magazine poll asking readers which words they would like to see banned. A set of users on the forum 4chan had banded together to flood the poll with votes for the word "feminist." In her post on the ballot stuffing, Merlan called 4chan "the Internet's home for barely potty-trained trolls." Users of the site did not take kindly to the characterization, so they posted her address (or, what they thought was her address) and plotted to send her everything from pizza and vacuum cleaners to potential rapists and a SWAT team.







## can follow public posting of personal information

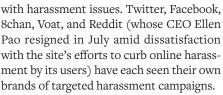


4chan has become ground zero for many coordinated harassment campaigns, in defiance of an official policy against doxxing. Doxxers obtain personal information from public records, data collection services, and security breaches or through hacking into e-mails and other personal accounts. Doxxing is almost always followed by a call to action, often in the form of coordinated harassment that ranges from threatening phone calls and unwanted food deliveries to more dangerous things like swatting or posting a claim on Craigslist that the resident has rape fantasies and encouraging men to visit.

4chan describes itself as "a simple image-based bulletin board where anyone can post comments and share images." The forum was founded in 2003 by then-teenager

Christopher Poole as a place to discuss anime and manga. Poole stepped down from running the site in January of this year. Since 2003, the site has grown into a hub for discussion and image sharing that ranges from cute kittens to vulgar threats and coordinated harassment. Anyone can post anything without attaching any identifying information of their own. Critics point out that this makes it too easy for users to threaten and harass victims without any fear of retribution. The site has been in the news recently in connection with GamerGate, in which some female video game journalists and developers have been harassed, and was home base for last year's hacked celebrity nude photographs.

But while 4chan gets a lot of the attention, it's not the only platform dealing



Nathan Mattise's story is a lot like Merlan's. At 4 a.m. on January 5th he got a hard push from his girlfriend. His phone kept buzzing, and when he looked at it, it was full of missed calls and text messages. Three hours earlier, someone on the site 8chan (founded in 2013 by a 4chan user who felt the site had become too "authoritarian") had begun posting information about Mattise, including his phone number and home address. Over the next 14 hours, he was inundated with e-mails and calls as well as pizzas, Chick-fil-A food, and 50 copies of the Koran. In a story for Ars Technica, where Mattise is an editor, he had used the name 8chan to refer to a subset of 8chan users. 8chan users protested.

The first thing Mattise did was contact his editors. "I wasn't the first person on Ars who was doxxed. I won't be the last," he says. His editors urged him to contact the police. "The NOLA PD was really willing to listen to me and file a report."

That's not the experience many people have. In a Pacific Standard article, Amanda Hess recounts several stories of women who've been met with unhelpful, even skeptical, responses from police. "Why would anyone bother to do something like that?" one officer asked her after she reported an online rape threat.

This is one area where newsrooms can help employees. Merlan praises the company lawyer who walked her to the police station to report the threats. She and her lawyer explained to the police what was going on, but even with a lawyer in tow the precinct wasn't exactly helpful. Without information on the physical location of the perpetrators, the police said they would wind up closing the case right away.

Arielle Duhaime-Ross, a reporter at The Verge who was targeted last year, says having understanding editors is really important. "My managing editor and editor in chief took me aside and asked me about how I was doing and what they could do," she says. "They reminded me of what Vox Media offered: You can see a therapist easily once or twice through our system; there were numbers I could call. It was really helpful knowing that this system was in place." Her editors encouraged her to take time off and offered to re-route her e-mail address to the





## **Nieman Watchdog**



general tips e-mail for The Verge. Her e-mail stayed re-routed for weeks.

At some companies where harassment has been constant or pervasive, there are specific channels through which employees can support one another. Vox, for example, has a Slack chat room called "Vox Media No Haters" where people can report harassment and work together to support one another. "Those are some of the techniques that we've used to say, 'We're here with you. You're not alone. This isn't something you need to experience as an individual," says Bell. "That's how we try to tackle it as a company." Gawker has a similar setup. "Even having a chat room where you can share a gross comment and laugh at it together is really helpful," says Jezebel editor in chief Emma Carmichael.

At many publications, though, support for harassed reporters stops there. "What we really need," argues Merlan, "is employers who are thinking proactively about our safety."

In January of this year, someone at Gawker leaked the company's seating chart as a media in-joke. To the writers at Jezebel, who receive threats on a daily basis, that wasn't very funny. And it highlighted the importance of understanding of how social media is used. "A lot of our writers were like, 'Oh, great, a seating chart for a crazed person to come find me," says Carmichael. "Jezebel had to explain why [the leak] felt like a threat, and I had a lot of productive conversations out of that with people from other sites and our executive editor."

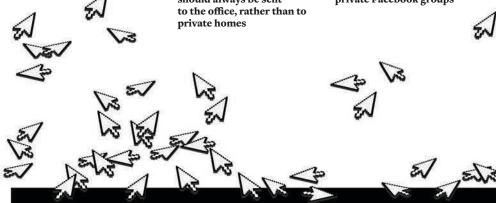
Having newsroom staff understand possible threats is crucial. Staff should know what 4chan and 8chan are, understand basic digital security, and take threats and harassment seriously. For Mattise, a more widespread newsroom understanding of 8chan might have helped him come up with a less provocative headline. "If I had kicked that to someone else they might have noticed that 8chan users get really particular about this," he says. "That might have been something someone caught in advance. If editors are familiar with these sites and topics that seem to be intermingled with doxxing, that knowledge will help."

At Vox, Bell says, new employees are offered information on how to keep their identities safe. Trainings that walk reporters through basic digital security measures—how to mask their IP addresses, how to set up password management services, and how to remove their information from data collection sites and do-

Some things journalists can do to support colleagues and protect themselves

## **BEFORE IT HAPPENS...**

- New hires should have digital security traininghow to keep personal information private, which sites and groups target reporters, how to send and receive encrypted filesas part of the on-boarding process, and this training should be updated as the harassment ecosystem changes
- Editors should get training on what harassment looks like and the people and sites that might target employees or freelancers. Finance departments should be comfortable using encrypted documents for things like invoices and tax forms
- Reporters should be offered an official e-mail address and phone number that is separate from their personal points of contact. Packages and letters should always be sent to the office, rather than to
- Freelancers should consider using P.O. boxes instead of their home addresses and Skype or Google Voice phone numbers in place of personal cells or landlines. Do not send sensitive data like Social Security numbers and home addresses via unencrypted e-mail
- Those concerned about harassment should set up personal support networks like Slack chat rooms or private Facebook groups



main registries-make it a little harder for would-be harassers to find personal data. Newsrooms can, and should, set up educational sessions for their editors and reporters, not just on the nitty-gritty of digital privacy, but on the harassment policies of social media sites and the best ways to support reporters who might be targeted.

## VOX TRAINS ITS REPORTERS IN DIGITAL **SECURITY MEASURES**

Vox has also made changes to its sites to deter doxxers. Vox's pre-written tweets used to include the author's Twitter handle, which gave potential harassers immediate access to Twitter feeds. Now, the Twitter button simply directs to the general Vox account. "We wanted to keep a little bit of a wall between the vitriolic users," Bell says. "A small product change like that, it's not going to stop harassment, but it's a little thing we can do." Bell also says Vox is collaborating with Twitter and Facebook about how to make the platforms less toxic.

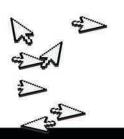
If all of this feels insufficient to tackle the level of harassment reporters face, it is. Editors are frustrated by how helpless they feel about keeping their reporters safe. I know that frustration firsthand because doxxing happened to me.





## IF IT HAPPENS...

- If you choose to report the harassment to the police, bring a lawyer who understands the issues and examples of the threats. If you know any identifying information about the harassers, share that as well
- Colleagues can support doxxed reporters by diverting or monitoring official work e-mails and voicemails, keeping an eye on the target's Twitter mentions to document the harassment, and reporting the abusers



 Doxxed colleagues will probably appreciate your support, but don't be offended if they don't respond. Most of the channels you might use to reach them—phone,

e-mail, and social media accounts-are likely flooded with messages from harassers. They may be ignoring those streams or unable to see your support amidst the deluge





Freelancers may be regarded as easier targets, and in many ways they are. They have no HR department, no lawyers to help

them with the police, no editors to read their e-mails and tweets for them. Their home address is their work address. Many freelancers send tax documents over unencrypted e-mail and, if they get a P.O. box or pay for other forms of digital security, it all comes out of their pocket. Many freelance contracts have clauses about what happens should a journalist get a publication into trouble, but very few say anything about what should happen if a story gets a journalist into trouble. Often freelancers balk at indemnification clauses for fear of being hung out to dry during a libel suit, but there are reasons they might want the help of their employer's lawyers should they need to file police reports or get a restraining order against a harasser. "A freelancer could certainly propose including



a clause that might give them access to the media organization's in-house counsel or lawyers or some form of guidance in these circumstances but it's not standard yet," says John D. Mason, a copyright lawyer who has represented journalists in harassment cases. "If this trend continues, it may become easier and, sadly, it may become commonplace."

In the meantime, where can freelance journalists turn? In my case, I was lucky enough to be part of a Slack network of freelancers who were a lifeline. A handful of freelancers in my neighborhood met me at coffee shops to work by my side when I was afraid of working at home alone. I no longer send tax documents via unsecure e-mail, which often means teaching editors how to use encryption. And I urge fellow freelancers to secure their personal information, sending nearly everyone I know the link to Crash Override Network—a site developed by people who were targeted by GamerGate—where anyone can work through a threat model. Having a safety net in place before doxxing happens can be incredibly helpful, whether that's a dedicated separate Skype number for friends and family, or a private Slack space for friends.

While proactive measures to keep reporters safe and support systems for them when they're harassed are key, social media companies should do more to prevent harassment. Twitter's then-CEO Dick Costolo admitted earlier this year that the service had serious issues with harassment. "We suck at dealing with abuse and trolls on the platform and we've sucked at it for years," he wrote in an internal memo. Facebook hosts many pages and photos dedicated to promoting sexist violence. Some of those who report it have been told that the images or pages don't violate Facebook's terms of service. Both services are struggling to keep up with the torrent of abuse reports, and neither seem to be prioritizing the safety of their users.

If I learned one thing from my ordeal it's that doxxing can happen to anyone, at any time, for nearly any reason. But awareness of the risks—and effective strategies to mitigate them—too often come from bad experiences rather than preparation. When I was doxxed, the person who understood the most about what happened was the Domino's delivery guy. As soon as Twitter was mentioned, he knew exactly what I was experiencing. Now it's time for reporters and editors to know just as much.







Scale Is Everything

BY JOSHUA BENTON

HIS HAS NOT BEEN A GOOD year for local news. That's a sentence I could have written any year for the past decade, for a host of reasons now numbingly familiar. But 2015 has felt like a turning point for the most threatened sector of the American news ecosystem. And I'm worried that some of what hopefulness remains in the system is being wrung out by changes in the larger digital world.

There will still be success stories, sure. But the most important job that local news has done for decades—providing a degree of accountability to thousands of local communities across the country—is increasingly going undone. And the chances of any true digital substitute arising seem to be on the decline. It's worth stepping back for a moment to consider why things have gotten as bad as they have—and why I suspect they'll get substantially worse in the next few years.

Let's start out by looking at what are still the primary engines of local news: newspapers. As outmoded as ink-on-paper seems to many in 2015, there are very few communities where the largest local newsroom is attached to anything else.

You may not hear about newspaper layoffs and cutbacks as much as you used to, but they're still happening—just more quietly. In July, the American Society of News Editors' annual census reported that newsroom employment dropped more than 10 percent in 2014—the largest decline since the financial crisis, despite an overall economy growing steadily if only moderately. The Boston Globe and The Dallas Morning News-metros considered above-average performers in their peer group-have announced new rounds of buyouts this year.

It's anecdotal, but my private conversations with leaders of newsrooms across America have taken a turn for the depressing. I hear worries that, at a point when some newsrooms are finally making a shift toward digital-first workflows and structures, the digital business they were chasing is disappearing. Many of their small reasons for optimism the past few years, like paywalls, have faded. You can also see it in the stock prices of publicly traded newspaper companies. Since the start of 2015, Lee's stock is down about 30 percent, A.H. Belo is down about 50 percent, and McClatchy is down 70 percent.

What about beyond print? Local TV news continues to reach good-sized audiences, and the upcoming presidential election cycle will add many millions to stations' bottom lines. But disruption seems right around the corner for them, too. Young people are already tuning out local TV news, just as they did to newspapers earlier; a Pew study this summer found that millennials were nearly twice as likely to have gotten political news from Facebook as from local TV.

More importantly, it's unclear if there will be any place for local news in the broader shift to streaming—think Netflix, Amazon Prime, and HBO NOW-and cord-cutting. The new "skinny bundles," which aim to let people pick a smaller subset of online channels than a full cable subscription, typically have no local element at all. (One exception: Apple is reportedly pursuing local channels for its upcoming bundle.)

There are vigorous debates about what the future will hold for TV; the medium has proven stubbornly successful through waves of digital change. But even if TV survives, its hard to see where local TV news-built for a world of daily appointment viewing, of people sitting down every night at 6:30 to see what happened that day—fits in.

But the decline of traditional media is by now an old story. What about the new digital

media that were supposed to succeed and supplant them?

On net, I'm still an optimist. If you look at the many jobs a traditional local newspaper did, most of them are being accomplished today just fine-or sometimes far better than before. Coverage of Washington will remain solid. I don't think that we won't have enough stories about technology, sports, food, or plenty of other subjects. Companies like BuzzFeed, Vox Media, Vice, and more are doing high-quality work and building sustainable business models to back it. They're also attracting huge amounts of capital, all hoping to back the few giant media companies that become the successors (or acquisitions) of the last generation of great media companies.

"The media" is going to be fine. The biggest issue is that very little of that capital is going into local news.

From a purely financial perspective, why should an online company bet on local news, anyway? Local media grew in this country because local distribution was all that was practical. Newspapers were interested in covering news roughly as far as their delivery trucks could drive in the morning. TV stations were interested in as far as their broadcast towers could reach. Your market position was entirely driven by the range (and limits) of your distribution. So it made sense to focus on covering local issues, local governments, local sports, local businesses.

Digital distribution, of course, knows no such boundaries—the same websites are available from Manhattan to Peoria. That means the competitive barriers are down-those Tulsans who always secretly wanted The New York Times can have it all they want now and the smart business approach is to aim for the largest achievable audience. That's why the venture-funded start-ups aim for giant, psy-

From a financial perspective, why should an online company bet on local news, anyway?



Newspapers covered local news because audiences were limited by geography, but online media can focus on broader, high-value markets

chographic slices of the market (Millennials! Liberals! Conservatives! People who like cats!) rather than muddled geographic ones. Patch, as derided as it was by newspaper types, was nonetheless the most ambitious attempt at local digital news, and its flameout has likely scared off some potential investors.

Still, the hopeful belief of local publishers was that maybe their advantages might let them scratch out a decent business. Local advertisers would want to reach local readers, and a local newsroom doesn't need to be as big as a national or global one.

And there are plenty of smaller efforts: personal blogs that grow into small news operations, local gadflies who dig up dirt at city hall, talented aggregators, foundation-supported nonprofits. These can be wonderful; I'm glad they exist, and they deserve your support. But they're not nearly numerous enough or deep enough in coverage to do anything more than a fraction of what newspapers once did.

And 2015 has made it clear that scale is becoming everything. Smaller audiences had better be very high-value—read: super-rich -to be worth reaching. These distributed content deals, like Facebook's Instant Articles, Snapchat's Discover, and Apple's News? They're all about the big guys. We live in a time when there are honest questions whether companies like Twitter and LinkedIn have a big enough share of our attention to have legitimate advertising businesses. If Twitter may not be big enough for advertisers, how can The Shreveport Times be? The local advertisers who might have been the life's blood of local news sites seem happy to advertise on Facebook instead.

That trend is likely to continue as more of our online time shifts to smartphones, where Google and Facebook combine to make nearly 70 percent of all the advertising revenue on the planet Earth. Local news sites are disproportionately likely to be clunky and slow, a real issue on mobile devices, and they generally have terrible technology for targeting ads at readers.

Here is a telling quote from Michael Finnegan, chief financial officer of Atlantic Media—a company that has negotiated the transition from print to digital as well as just about anyone. He's talking about the possibilities of a platform-driven world, where Facebook, Google, and perhaps a few others control even more of the means of distribution:

"Let's say we reach 35 to 40 million people through owned and operated sites today. Five years from now, our brands could be reaching 300 to 500 million worldwide, but not if we insist that all of them have to interact with us on our terms on our site. That's the future I see. That's the future a lot of major media companies see. Some of them are running towards it faster than others."

That may be a perfectly wonderful future for Atlantic Media. But it's hardly one available to most local news organizations, which continue to see traditional readership fade and they have few good ways to monetize the one that might replace it.

There was a vision of the Internet, in the late 1990s and early 2000s, that imagined that the little guys could be winners. Reaching an audience would no longer mean owning a printing press or an FCC license—it would simply mean posting to the Web, using free or cheap tools, and letting the Internet's power to connect audiences and publishers do the rest. A tiny blog could be as powerful as a giant media company!

But the story of the Web in 2015 is nearly the Bizarro World version of that vision. The free and open Web, architected for equal access, is instead dominated by a few large media companies who, in turn, are dominated by a few large technology platforms. Ad dollars flow up the chain to a few companies with headquarters between San Francisco and San Jose. And it's entirely unclear, in that context, how most local communities—the cities and towns where we live, work, and play-will find the information they need to thrive.

Joshua Benton, a 2008 Nieman Fellow, is the founding director of the Nieman Journalism Lab

## From Idea to Feeling

In "Out on the Wire," cartoonist Jessica Abel illustrates the storytelling secrets of leading narrative radio shows

SPENDING HOURS SITTING ALONE AT A drawing table, cartoonist Jessica Abel often listens to public radio, a habit that turned her into a devotee. Abel calls radio "the most fertile ground for narrative nonfiction in English-language media."

With a foreword by Ira Glass, her graphic novel "Out on the Wire: The Storytelling Secrets of the New Masters of Radio" takes readers behind the scenes of popular programs such as "This American Life" to uncover the techniques producers use to construct engaging stories.

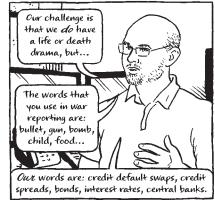
In this excerpt, Adam Davidson (first panel) of "Planet Money" as well as Soren Wheeler (in plaid shirt) and Jad Abumrad, both of "Radiolab," talk about what they grapple with as they try to turn a lofty idea into must-listen radio. ■

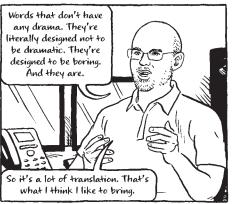
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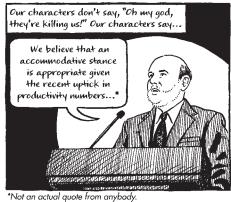
#### REMEMBER THE BIGGER PICTURE



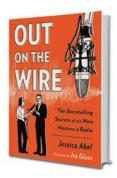
Framing is especially important in stories about abstract ideas. Or containing deadly boring multisyllabic words. And the edit is where you're reminded that you still haven't connected the story to something bigger.











"Out on the Wire: The Storytelling Secrets of the New Masters of Radio" By Jessica Abel

You can't just deliver something as an

idea, you have to turn it into a feeling.

## 1953

Julius Duscha, the first assistant director of Stanford's journalism fellowship program, died in San Francisco on July 2 at the age of 90.

Born in St. Paul, Minnesota in 1924, Duscha began his career at the St. Paul Pioneer Press and Dispatch before moving to Washington, D.C. He wrote for The Washington Post from 1958 to 1966, rising

to the position of chief national political reporter.

Duscha became the first assistant director of Stanford University's Professional Journalism Fellowship Program. Starting in 1968, he headed the Washington Journalism Center, a nonprofit founded by W.M. Kiplinger to recruit black liberal arts students into journalism careers. Duscha worked at the Ford Foundation-funded

Center for 22 years, arranging fellowships and seminars on Washington issues for young journalists. He retired in 1990.

Duscha's work appeared in publications such as The Atlantic, Harper's, The New York Times Magazine, and the Washingtonian. His work in the latter earned him a spot on Nixon's Enemies List. Duscha was also the author of several books, including a memoir, "From Pea Soup to Politics:

How a Poor Minnesota Boy Became a Washington Insider."

Duscha is survived by his wife, Suzanne, and four children.

## 1969

#### Richard Longworth,

a Distinguished Fellow at the Chicago Council on Global Affairs, retired in June after nearly 60 years of reporting, researching, and writing. Since 2003, he had led the Chicago Council's studies on global cities. He is the author of three books, the most recent of which, "On Global Cities," was published by the Council this spring as an e-book. Previously, he was a foreign correspondent for UPI and the chief European correspondent for the Chicago Tribune from 1976 to 2003.

#### "A GREAT EDITOR AND A GREAT FRIEND"

William Marimow, NF '83, looks back on the storied career of fellow Nieman John Carroll



**John Carroll**, NF '72, one of the country's most influential journalists, died in Kentucky on June 14, 2015 at the age of 73. As editor at the Los Angeles Times from 2000 to 2005, he oversaw the paper's record acquisition of 13 Pulitzer Prizes in just five years. While leading the paper, he focused on investigative reporting and beat coverage. Carroll joined the Times after a distinguished career at The Philadelphia Inquirer, Kentucky's Lexington Herald-Leader, and The Baltimore Sun.

John Carroll was a great editor and a great friend. During the seven years we worked together at The Baltimore Sun, we talked every day—seven days a week, 52 weeks a year—so I witnessed John's brilliance firsthand. His genteel, quiet demeanor in many ways belied his intense interest in great stories and his determination to make sure that when the stories reached print, they were written with fluidity and packed the maximum impact.

One of John's great skills was his ability to see the forest when the rest of us were still wandering in the trees. A classic case in point was the Sun's story on the hazards of shipbreaking, which received the Pulitzer Prize for Investigative Reporting in 1998. Our maritime reporter, Will Englund, had written a story about the activities along Baltimore's waterways and observed the dismantling for scrap of the Coral Sea, a World War II vintage aircraft carrier. Englund said the work looked dangerous, and that the asbestos-laden ship might also be harmful to the Patapsco River. When John read the story, he wondered aloud whether this was happening elsewhere in the United States and around the world. Within days, Englund had been teamed up with our colleague, Gary Cohn. Their reporting over the next year took them to Wilmington, North Carolina; Long Beach, California; and, eventually, to the remote shores of southern India. Their story fulfilled John's vision and led to major reforms in how U.S. ships are dismantled.

John was also a gifted and often brilliant headline writer. When the Sun was about to publish an investigative series on juvenile boot camps, created to help teenagers who had run afoul of the law change their ways, John was confronted with the prospect of a two-line headline with space for only seven letters on each line. After agonizing about the precisely right approach, John typed out "From 'Yo' To 'Sir" and presented it to me with his whimsical smile. Perfection—

When John's wonderful wife, Lee, who was teaching in a Baltimore elementary school, lamented the fact that her kids were struggling to learn to read, John initiated an in-depth series in the Sun that examined the merits of teaching reading through phonics—the old-fashioned, traditional method—versus the whole language method. That series, known as "Reading by Nine," galvanized the community and inspired hundreds of Sun employees and others to volunteer as public school reading tutors. That was John Carroll at his best—quintessential public service journalist.

## 1978

Arun Chacko, one of India's leading journalists who covered news around the world, died in New Delhi on June 16 after a battle with cancer. He was 66.

Chacko began his reporting career at the Indian Express newspaper in 1971 and quickly rose to the position of chief reporter. He helped establish the World Report news syndicate.

He provided global coverage for publications such as the Boston-based South Asia World Paper, Asia Week, and India Today, where he was a senior editor. From 2004 to 2008, he served as director of the Press Institute of India and he subsequently consulted for Indo-Asian News Service, India's largest independent newswire.

Chacko is survived by his wife, Arati, and a son.

Danny Schechter, a television producer, media critic, and antiapartheid activist, completed "Surveillance A to Z," before he died in March. Seven Stories Press is publishing it in January.

#### "A ROMAN CANDLE CAREER"

Jim Stewart, NF '81, reflects on the tough-minded reporting of his Nieman classmate, Donald McNeill



Donald McNeill, NF '81, a longtime international correspondent, died of an infection at a hospital in Boston on June 27. He was 80. He covered the fall of Saigon and the Iran hostage crisis. He served as CBS's Moscow correspondent and subsequently was a chief correspondent in Israel. He was a professor of broadcast journalism at Boston University from 1988 to 2002.

Unlike the rest of us, McNeill was already a shooting star when he arrived at Harvard. We stood in awe of this white-haired, saber-tongued Canadian who already had a long list of accomplishments: Rhodes Scholar, chief political correspondent for the Canadian Broadcasting Corporation, Washington correspondent, newsmagazine host, and author. Every new assignment had led to a better assignment and inevitably to a disagreement with management and a career re-boot. A "Roman-candle career," Don called it.

To absolutely no one's surprise, he was snapped up by CBS News soon after the Nieman year ended and dispatched to Moscow as bureau chief. It was like throwing kerosene on a campfire. The Helsinki Accords had loosened up satellite transmissions and McNeill went on the streets and in their faces. He concentrated on dissidents, ordinary life in the Soviet Union, and the sheer meanness of it all. He won a George Polk Award in 1983. The Kremlin seethed.

It was not unexpected then that, in January 1984, when CBS decided to rotate Don and his soul mate, wife Sandra Allik, that he would be summoned to the Foreign Ministry press department for a little chortling. His replacement, fellow Canadian Mark Phillips, recalled the sneering attitude of the press department apparatchik as Don handed over his credentials. "And vat ess your nyext assignment Meester McNeill?" Adopting a super sly face, Don responded "I'm going to a country whose founding philosophy is based on the writings of a mid-nineteenth century, central European Jewish writer where the main economic unit is the collective farm and where 45 percent of the GDP is spent on the military." Startled at seeing themselves in that mirror, the Russians hesitantly guessed "Berlin? Warsaw? Beijing?"

"Israel," McNeill said. "Israel." And within a year of his arrival there Benjamin Netanyahu would be lobbying to kick Don out of town as well. This Roman candle of a man shed light wherever he went and we will all miss him greatly.

The book is based on Schechter's interviews with journalists, whistleblowers, government officials, and security officials.

## 1992

Carmel Rickard has joined Legalbrief, a publisher of newsletters, in South Africa. She writes a bimonthly column examining important rulings. Rickard served as the legal editor of South Africa's Sunday Times for several years.

## 1995

Lorie Hearn, executive director and editor of inewsource, is the recipient of a 2015 Edward R. Murrow Award for her work on "An Impossible Choice," a multimedia series about life support. Produced by inewsource, the series was recognized for its audio components.

## 2005

Ines Pohl is leaving Die Tageszeitung, a German paper commonly referred to as taz, and joining Germany's international broadcaster Deutsche Welle as a foreign correspondent in Washington, D.C. She leaves taz after serving as the newspaper's editor since 2009.

## 2013

## Mary Beth Sheridan has

been named deputy foreign editor at The Washington Post, where she has worked as a reporter and editor since 2001. Prior to the Post, she served as a foreign correspondent posted in Italy, Colombia, and Mexico for AP, The Miami Herald, and the Los Angeles Times.

#### Karim Ben Khelifa has received a 2015 Doris Duke New Frontier Fellowship from the Sundance Institute's

New Frontier Story Lab, which offers funding for fellows to develop and refine audience engagement for their exploratory projects. Khelifa, a photojournalist, will use the funds to further develop his virtual reality project "The Enemy."

## 2014

#### Wendell Steavenson

has penned a new book, "Circling the Square: Stories from the Egyptian Revolution." Steavenson spent more than a year in Cairo writing for The New Yorker during the revolution. Ecco published the book in July.

## 2015

Nabil Wakim is the new director of editorial innovation at Le Monde. Previously, he was the French newspaper's digital editor in chief.

Jason Grotto received a 2015 Gerald Loeb Award, which honors outstanding contributions from journalists reporting on business, finance, and the economy. Grotto was recognized for his Chicago Tribune series exploring risky bond deals pursued by the Chicago public school system.

## **Denise-Marie Ordway** has

joined Journalist's Resource, an online project of Harvard's Shorenstein Center that curates scholarly studies and reports, as a research reporter and editor. Previously, she covered education for the Orlando Sentinel in Florida for more than 11 years.

#### Laurie Penny has been named a 2015 fellow at Harvard's Berkman Center for Internet and Society, where she will write and speak about digital rights, social justice, technology, and culture.

#### Not Just a Beat

Being a legal affairs reporter in China is perilous, but rule of law is the only option for a better future

S A LEGAL REPORTER IN China for the past six years, I have spent a lot of time in courthouses. Judges almost always bar reporters from sitting in courtrooms and policemen frequently shoo us away from the building. So I often hid in the bathroom, waiting for potential sources. If I was found out, at least I had a plausible excuse for being there.

In 2010, a policeman pulled me out of the restroom in a Beijing courthouse. I was there to cover a trial involving the stateowned China Central Television (CCTV) and an illegal fireworks display the year before that ignited a major fire, killing one firefighter and injuring eight people. More than 20 people, including some low-level CCTV employees, were charged in connection with the disaster. Many journalists questioned whether the trial was fair. Reporters were barred from attending the trial or even using the bathroom next to the courtroom. I was able to interview some of the lawyers for the defendants who gave me the case materials. My article was headlined "Questioning the CCTV Fire."

When I could not hide in the bathroom, sometimes I sat in the courthouse corridor. If no policeman was watching, I would kneel and listen at the door. One day, when I was listening like that, someone watching the security cameras used to monitor what goes on in the courthouse noticed what I was doing. The leader of the press office suddenly approached me, with a young judge and a few policemen in tow. One of the

policemen threatened to pull me outside. The young judge said, "No, don't touch her. Let her leave on her own." I was moved by his kindness and wanted to thank him. But I just kept walking and dared not look at him. I was afraid I could not hold back my tears if I faced him. A few days later I tried to find the young judge to express my gratitude. But I never saw him again.

However, I have continued to feel grateful that he spoke up for me. After that incident, the courthouse staff knew that I was the reporter who would listen at the door. One day, I again was sitting in the corridor of the Beijing No. 2 Intermediate Court, trying to listen to a trial involving Zeyuan Li, a former military official. He had spent time in prison for fraud, smuggling, and other crimes. When he was released, he somehow raised about \$330 million and bought the majority share of the state-owned Shenzhen Airlines, trading on his ties to the authorities. Four years later, he was arrested for embezzlement.

When I was in the corridor trying to listen to the trial, a young woman from the press office, her finger pointing at me, approached with her boss. She said, "That woman in blue is a reporter." I answered, "Yes, I am a reporter. Please put down your

#### Jieqi Luo



Courthouse staff know me as the reporter they may find in the corridor, listening at the door

finger. That is disrespectful to me." After the leader left, the young woman sat near me, to keep me from listening at the door. When the session adjourned, I found a source who helped me gain access to thousands of pages of court documents. I wrote an exclusive story, telling the truth about the hegemony of business relationships in China. Some businessmen cooperate with politicians, getting many privileges. These secret deals are difficult for the press to discover.

Sometimes I got lucky and was able, with the help of a source, to enter the hearing room. However, I had to pretend I was not a reporter so I could not take any notes. In 2013, I went to Shandong province to cover a bank fraud case. All press were barred from the hearing room.

With the help of the defendant's families, I pretended to be one of them. Before I entered the hearing room, I went to the restroom and put a tape recorder inside my bra. The hearings often lasted a few hours and I would eventually feel the heat of the battery on my chest. My heart would beat faster and faster.

One day, two policemen were sitting beside me. I was nervous but I tried to hide it. Before the hearing started, I stood up to get some water. My hands were shaking. When the hearing finished, I rushed out of the court. I called my editor and shouted, "I hate it. I hate coming to the court. Sooner or later, I will die of a heart attack."

Yet I could not stop. No matter how angry or upset I got, I continued being a legal reporter because I am proud of what I do. Legal affairs is not just a beat. I am working for human rights and for the freedom of the Chinese people. I believe that the rule of law is China's only option for a better future.

In recent years, more and more disappointed Chinese people have emigrated to other countries. But most of the people don't want to or are not able to emigrate. I am one of them. Those of us who stay in our own country are determined to make it better—for ourselves and for our children.

Jiegi Luo, a 2015 Nieman Fellow, is a senior legal reporter for Caixin Media Co. in China



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