

The New Crisis

Saving The New York Times

P.50

Robot Reporters

P.52

Journalism in the Post-Truth Era

Welcome to Macedonia, Land of Fake News

P.56

The 24/7 Attention Economy

P.60

Black News Matters

P.64

Edward Snowden, Defender of the Free Press

P.68

Fact.

THE NEWS MEDIA IS IN TROUBLE. The advertising-driven business model is on the brink of collapse. Trust in the press is at an all-time low. And now those two long-brewing concerns have been joined by an even larger existential crisis. In a post-fact era of fake news and filter bubbles, in which audiences cherry-pick the information and sources that match their own biases and dismiss the rest, the news media seems to have lost its power to shape public opinion. It's worth remembering, though, that as recently as 30 years ago, people worried that the press had entirely too much power. In 1988, Edward Herman and Noam Chomsky published a book called *Manufacturing Consent*, which argued that the US media puts a straitjacket on national discussion. The news, they argued, was determined by the small handful of media corporations capable of reaching a mass audience—a huge barrier to entry that kept smaller, independent voices out of the conversation. The corporations' business model relied on national-brand advertisers, which tended to not support publications or stories they found controversial or distasteful. And journalists relied on the cooperation of high-ranking sources, a symbiotic relationship that prevented the press from publishing anything too oppositional. As a result, Chomsky and Herman wrote, "the raw material of news must pass through successive filters, leaving only the cleansed residue fit to print." The result was a false national consensus, one that ignored outlying facts, voices, and ideas.

BY
Jason Tanz

25.03

In the three decades since Herman and Chomsky leveled their critique, almost every aspect of the news industry has changed. National-brand advertising has given way to automated exchanges that place ads across thousands of sites, regardless of their content. Politicians no longer need to rely on journalists to reach their audiences but instead can speak to voters directly on Twitter. In fact, the ability to reach a national audience now belongs to everyone. There is nothing to prevent fringe ideas and arguments from entering the informational bloodstream—and nothing to stop them from spreading.

These developments have upended the business logic that once pushed journalists toward middle-of-the-road consensus. When there were only three national news broadcasts, each competed to attract the broadest audience and alienate as few potential viewers as possible. But with infinite news sources, audiences follow the outlets that speak most uniquely to their interests, beliefs, and emotions. Instead of appealing to the broad center of American political opinion, more news outlets are chasing passionate niches. As media theorist Clay Shirky says, they can't rely on captive viewers but always have to hunt down new ones, "recruiting audiences rather than inheriting them."

These trends have been in place since the dawn of the internet, but they were supercharged over the past couple of years as social media—and especially Facebook—emerged as a major news source. Media professionals' already-eroding power to steer the national conversation has largely vanished. Before social media, a newspaper editor had the final say as to which stories were published and where they appeared. Today, readers have usurped that role. An editor can publish a story, but if nobody shares it, it might as well never have been written.

The News in Crisis

We have gone from a media business model that manufactures consent to one that manufactures dissent.

If readers are the new publishers, the best way to get them to share a story is by appealing to their feelings—usually not the good ones. A recent paper in *Human Communication Research* found that anger was the "key mediating mechanism" determining whether someone shared information on Facebook; the more partisan and enraged someone was, the more likely they were to share political news online. And the stories they shared tended to make the people who read them even more furious. "You need to be radical in order to gain market share," says Sam Lessin, a former vice president of product management at Facebook. "Reasonableness gets you no points."

In other words, we have gone from a business model that manufactures consent to one that manufactures dissent—a system

that pumps up conflict and outrage rather than watering it down.

This sounds dire. Heck, it is dire. But the answer is not to pine for the days when a handful of publications defined the limits of public discourse. That's never coming back, and we shouldn't want it to. Instead, smart news operations, like the ones profiled in these pages, are finding new ways to listen and respond to their audiences—rather than just telling people what to think. They're using technology to create a fuller portrait of the world and figuring out how to get people to pay for good work. And the best of them are indeed creating really, really good work. As the past 30 years of press history shows, everything changes. Great journalism helps us understand how and why things change, and we need that now more than ever.

The Generation Gap

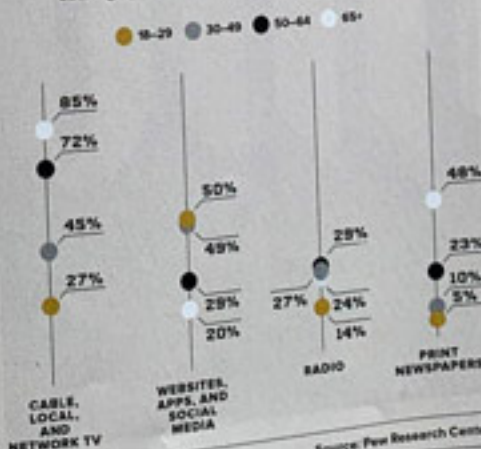
The younger the consumer, the more dramatic the shift away from traditional news outlets. Here's the percentage of each age group who say they often get news from ...

RELATED PODCAST



On the Media

WNYC's show takes a deep dive into the stories behind the news, from the Trump dossier leak to the unspoken rivalry between the FBI and the CIA.



The Decline in News Jobs

The number of Americans whose job it is to "inform the public about news and events ... for newspapers, magazines, websites, television, and radio" has decreased by nearly 10 percent over the past decade, according to the Bureau of Labor Statistics. The next 10 years aren't looking any better.

2004
59,640
2014
54,400
2024
49,600*

*BLS projection: "Declining advertising revenue ... will negatively impact the employment growth."



JASON TANZ (@jasontanz) is editor at large at WIRED.

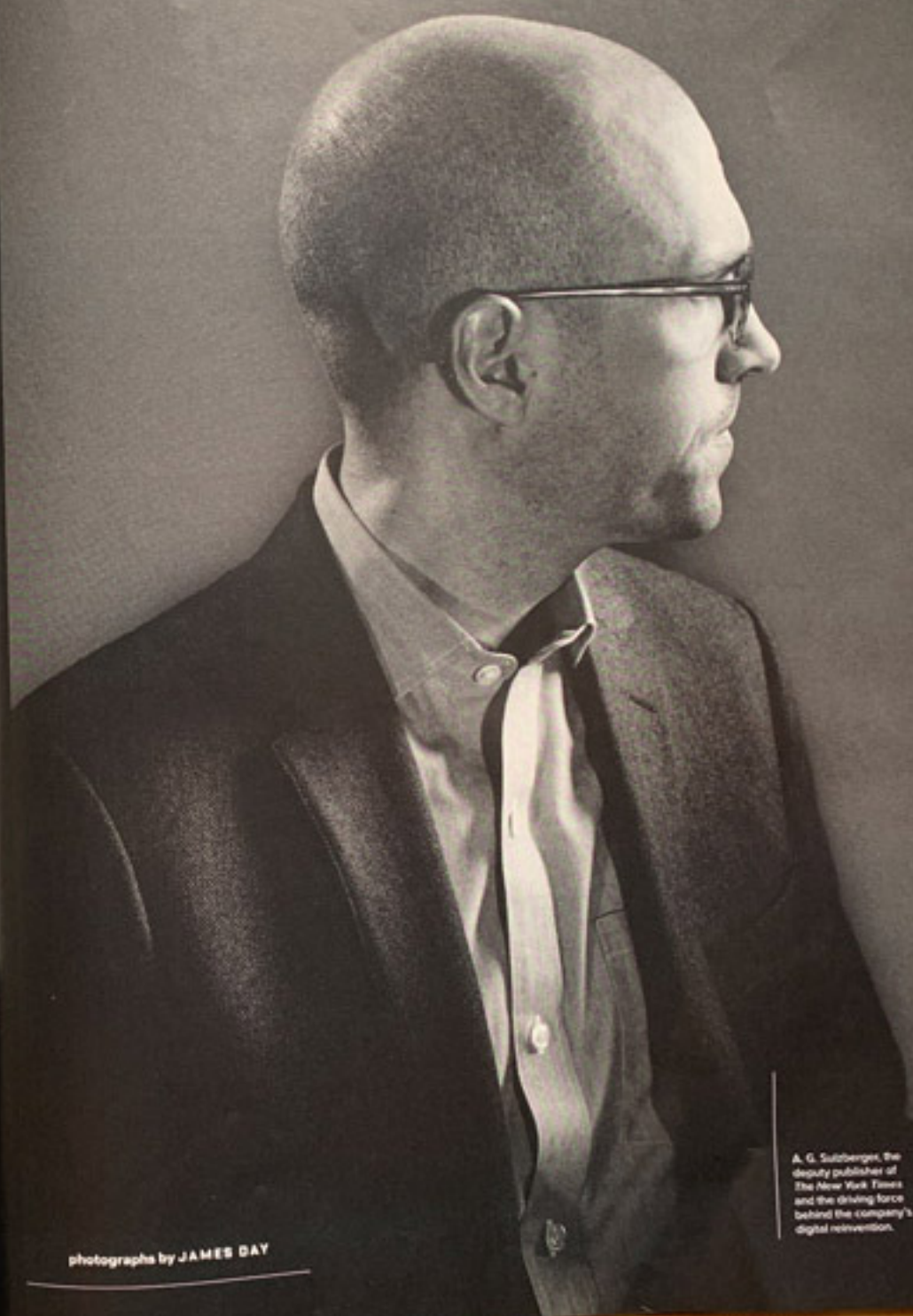
Keeping Up
With the

Times

How the Gray Lady is trying to claw its way

into the digital future.

BY
Gabriel Snyder



A. G. Sulzberger, the deputy publisher of The New York Times and the driving force behind the company's digital reinvention.

photographs by JAMES DAY



ARTHUR GREGG SULZBERGER doesn't remember the first time he visited the family business. He was young, he says, no older than 6, when he shuffled through the brass-plated revolving doors of the old concrete hulk on 43rd Street and boarded the elevator up to his father's and grandfather's offices. He often visited for a few minutes before taking a trip to the newsroom on the third floor, all typewriters and moldering stacks of paper, and then he'd sometimes go down to the subbasement to take in the oily scents and clanking sounds of the printing press. This was the early '80s, when *The New York Times* was nothing but ink on paper and was printed in the same building where the journalism was created. His memories are hazy, perhaps because he's 36 now and it was a long time ago, and perhaps because that building, like the *Times*, was always just there, a fact of life.

□ □ □

The *Times* building is still there, except it's not the *Times* building anymore. It's been sold off and sliced up, and the top two floors are presently occupied by Snapchat, while the bottom two were bought by Kushner Companies, the family business of Jared Kushner, son-in-law extraordinaire of Donald J. Trump. A few blocks—but more like a century—away from that old building, Sulzberger sits in his office in the newish glass-and-steel-lattice-encased headquarters of the *Times*. He looks the picture of a young tech executive—close-cropped hair, tortoiseshell glasses, considered stubble—and I ask him point-blank if he worries about whether *The New York Times* will ever cease to be a fact of life. “No,” he says, equally point-blank, which is exactly the party line one expects to hear from the deputy publisher of the *Times*—a recent appointment that put him next in line to lead the paper when the current publisher and chair, his father, retires. But there could be another reason for his confidence. Sulzberger, like more than three dozen other executives and journalists I interviewed and shadowed at the *Times*, is working on the biggest strategic shift in the paper's 165-year history, and he believes it will strengthen its bottom line, enhance the quality of its journalism, and secure a long and lasting future.

The main goal isn't simply to maximize revenue from advertising—the strategy that keeps the lights on and the content free at upstarts like the Huffington Post, BuzzFeed, and Vox. It's to transform the *Times*' digital subscriptions into the main engine of a billion-dollar business, one that could pay to put reporters on the ground in 174 countries even if (OK, when) the printing presses stop forever. To hit that mark, the *Times* is embarking on an ambitious plan inspired by the strategies of Netflix, Spotify,

and HBO: invest heavily in a core offering (which, for the *Times*, is journalism) while continuously adding new online services and features (from personalized fitness advice and interactive newsbots to virtual reality films) so that a subscription becomes indispensable to the lives of its existing subscribers and more attractive to future ones. “We think that there are many, many, many people—millions of people all around the world—who want what *The New York Times* offers,” says Dean Baquet, the *Times*' executive editor. “And we believe that if we get those people, they will pay, and they will pay greatly.”

How they reach those people, and how they make them pay, is now the work of hundreds of journalists, designers, engineers, data scientists, and product managers. At stake isn't just the future of a very old newspaper that has seen its advertising revenue cut in half in less than a decade—it's the still unresolved question of whether high-impact, high-cost journalism can thrive in a radically changing landscape. Newspaper companies today employ 271,000 fewer people than they did in 1990—around the population of Orlando—and with fewer journalists working with fewer resources, and more Americans getting their news on platforms where the news could very well be fake, the financial success of the *Times* isn't an incidental concern for people who care about



GABRIEL SNYDER (@gabrielnyder) is an editor and writer living in Brooklyn.

The financial success of the *Times* isn't an incidental concern for people who care about journalism. It's existential, especially in the context of the new American president.

Completed in 2007, the current home of *The New York Times* is a few blocks (but more like a century away) from the old headquarters.



journalism. It's existential, especially in the context of the new American president. Just days after the election, Trump suggested that the *Times*—or, per his preferred Twitter epithet, “the failing @nytimes”—would be a frequent target of his administration, calling an article “dishonest” for citing something he had said on CNN (which was

odd, since he did actually say it, in public, on video) and adding (also falsely) that the *Times* “is losing thousands of subscribers because of their very poor and highly inaccurate coverage.” In fact, it's been the exact opposite: Four weeks after the election, *Times* chief executive Mark Thompson told an industry conference that subscriptions

had surged at 10 times their usual rate. To Thompson, the likeliest explanation wasn't that the *Times* did a bang-up job covering the final days of the election—like everyone else, they failed to anticipate Trump's victory—or that readers were looking to hedge against fake news. He suggests a simpler reason: “I think the public anxiety to actually have professional, consistent, properly funded newsrooms holding politicians to account is probably bigger than all of the other factors put together.” In other words, the president's hostility to the press and the very notion of facts themselves seems to have reminded people that nothing about *The New York Times*—or the kind of journalism it publishes—is inevitable.

O

ON MAY 25, 1994, Arthur Ochs Sulzberger Sr., who had stepped down as publisher of the *Times* two years prior but was still the company's chair, was delivering a speech in Kansas City, Missouri, and turned to the burgeoning “information highway.” He didn't like it much. “Far from resembling a modern interstate,” he predicted, it “will more likely approach a roadway in India: chaotic, crowded, and swarming with cows.”

That same day, back in New York City, Arthur Ochs Sulzberger Jr., who succeeded his father as publisher (which he remains to this day), was also giving a speech about technological change. “If they want it on CD-ROM, I'll try to meet that need. The inter-

Sulzberger realized that the BuzzFeed leak had turned an administrative white paper into a media rallying cry. "You couldn't read the Innovation Report and think that the status quo was an option. It's not *should* we change, it's *how* do we change."

net? That's fine with me," he said. "Hell, if someone would be kind enough to invent the technology, I'll be pleased to beam it directly into your cortex." It was a line the young publisher liked to repeat. "He said that in my job interview," says Martin Nisenholtz, who was hired in 1995 as the original architect of the Times' digital strategy. "Arthur's notion was that these technologies were principally delivery systems for Times journalism." When NYTimes.com launched on January 22, 1996, it was updated once a day with stories from the print edition. Like most everything then, it was free to read for anyone in the US with a dial-up connection.

Arthur Gregg Sulzberger, who goes by Arthur but is known as A.G. around the Times, was 16 at the time, and the bulk of what happened next in journalism—the rise of blogs, social media, podcasts, and mobile; the fall of print circulation, advertising, and prestige—happened while he was

learning how to be a journalist. He graduated from Brown with a degree in political science in 2003 and started writing for *The Providence Journal* and *The Oregonian* before joining the Times as a metro reporter in 2009. The financial crisis that coincided with his homecoming so damaged the Times' advertising revenue that many started to speculate about when the Times would go bankrupt. Though digital advertising increased from an asterisk in financial reports to well over \$100 million between 2005 and 2010, it wasn't nearly enough to offset the \$600 million loss in print advertising over the same period. The Times managed to survive through savvy financial maneuvering—taking out a \$250 million loan from Mexican billionaire Carlos Slim in exchange for what is now a 17 percent stake in the company; selling its gleaming Renzo Piano-designed Manhattan headquarters and leasing it back from the buyer; shed-

ding assets like About.com and a stake in the Boston Red Sox—but its continued existence was no longer a foregone conclusion. "The former Times executive editor Abe Rosenthal often said he couldn't imagine a world without the Times," one critic wrote in *The Atlantic*. "Perhaps we should start."

Over the next few years, finding new digital revenue became the Times' top business priority, and in 2014, Sulzberger, by then an editor on the metro desk, was tasked with overseeing an internal assessment of the paper's digital efforts to date. The result was a 97-page document known as the Innovation Report, which found that editors too often said no to programmers and product designers from the technology group. "The newsroom has historically reacted defensively by watering down or blocking changes," read the report, "prompting a phrase that echoes almost daily around the business side: 'The newsroom would never allow that.'" Initially intended for only a handful of senior managers, most Times employees first learned of the report from a grainy photocopy that was leaked to BuzzFeed; one employee said they cried when they first read it because, as Harvard's Nieman Lab reported, "it surfaced so many issues about Times culture that digital types have been struggling to overcome for years."

The BuzzFeed leak was devastating for Sulzberger—"a moment of panic," he says. "We had written a pretty frank and candid document expressly for a small group of leaders of this organization, and suddenly it felt like our dirty laundry was being aired." Even worse: It was a Sulzberger, of the Sulzbergers, doing the airing. Still, he realized within a few days that the public scrutiny had turned an administrative white paper into a media rallying cry. "You couldn't read that report and think that the status quo was

an option. Once it's clear that that is not an option, then the conversation all of a sudden becomes much more productive. It's not *should* we change, it's *how* do we change."

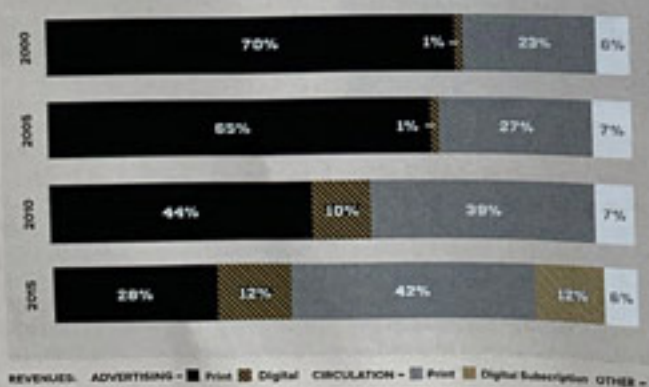
The privileging of print journalism over the web, the sclerotic approach to change, the lack of coordination between the growing number of digital disciplines and specialists—Sulzberger and his team laid it all bare, lighting a digital-first fuse that still burns today. "It's not like I'm the first person who came into this newsroom and said, 'Social media is something that needs to be accounted for in our future,'" Sulzberger says. "But it wasn't until the Innovation Report that those points really landed."

The Innovation Report was also the first time that most people outside of the Times had ever heard of Sulzberger, though Times watchers had for several years pitted him against two of his cousins—David Peripich and Sam Dolnick, an executive and an editor at the Times, respectively—as a leading candidate for the publisher's job when Sulzberger's father eventually retired. Public scrutiny has been, by all appearances, uncomfortable for Sulzberger. He started his career at a time when snarky newsroom chatter found a public outlet on blogs and social media, and his reaction to that unwanted attention was to recoil from many of the digital platforms that are second nature to his peers.

He has no public presence on Facebook or Twitter, which Sulzberger can get a little defensive about—he was promoted to management in 2015 to help implement the recommendations of the Innovation Report, and he knows there's an easy joke to be made about how the person charged with leading the Times into a digital future has never liked, tweeted, or snapped. When I ask him how he knows what he knows about these new platforms, he says, "I'm not active on social

The Business Section

The sources of revenue at the Times have shifted dramatically in the 21st century.



1. With its open floor plan, the third-story newsroom is home to much of the Times' vast reporting operation.

2. On the ninth floor, where the Beta Group works, each new app, blog, and vertical under development has its own conference room lined with whiteboards, diagrams, mock-ups, and Post-it notes.



media; I am a student of it," and waves an arm at a wall of his office covered in dozens of color printouts of pie charts, tables, line graphs full of digital metrics—proprietary information that he asked remain off the record. "I spend a lot of time thinking about the trends that are reshaping our industry. I spend a lot of time talking to people on the front line of those trends," he tells me, "and a big part of my job is making sense of that."

T

THE TIMES IS a big organization, with about 1,300 journalists, and management has created a number of task forces to workshop new approaches to reporting and storytelling. One committee, the 2020 Group, studied the newsroom for a year, and its report, published in January, detailed how Times journalism should evolve over the next three years. (Among the recommendations: Greater emphasis on visuals, greater variety of formats and voices. They also announced that the Times would be introducing an alternative metric to pageviews that would "measure an article's value to attracting and retaining subscribers.") Another division, Story(X), was created last spring to experiment with emerging technology like machine learning and translation. And then there is the Beta Group, which has become a hub for most of the Times' digital initiatives. Beta was launched by Sulzberger's 39-year-old cousin, Perle, who, after working at two tech startups out of college, helped launch a

DJ training school called Scratch Academy. He went on to Harvard Business School for an MBA and landed at Booz & Company as a management consultant. When he joined the family business in 2010 as an executive director for paid products, he and his team oversaw the rollout of the paywall that for the first time required people to shell out cash for full and regular access to NYTimes.com. The project has become the Times' biggest business success of late. Five years on, more than 1.5 million people pay more than \$200 million every year for a subscription.

Even with the success of the paywall, though, "it's a very, very steep uphill battle to simply sell people on the idea of buying one more news story," Kinsey Wilson, the Times' executive vice president for product and technology, admitted at a conference last year. He later told me: "I believe that the only way you create value is if you're able to bundle various services together." Which is where the members of the Beta Group come in. They're tasked with developing a new suite of editorial products (apps, blogs, verticals) that, in the way of expensive original programming on HBO and Netflix, keep existing subscribers coming back and new subscribers coming in. Central to Perle's original vision was having Beta's product people work alongside designers, developers, and—most radically for the Times—editors. No one on Beta has an office; instead, each product is assigned its own conference room lined with whiteboards covered in colorful diagrams, design mock-ups, and Post-it notes where members of the team immerse themselves in what they are trying to build.

In addition to Cooking and Crossword—two of the original Beta apps—the group is now working on Real Estate, an app for home listings; Well, a health and fitness blog the group wants to turn into a suite of per-



Highlights From the New New York Times

Five recent standouts from the Times' multimedia expansion.

NYT POLITICS BOT

An AI-powered chatbot deployed for the 2016 election. Subscribers could type in questions and the bot would offer up-to-the-minute polling data and analysis.

STILL PROCESSING

A weekly podcast from Wesley Morris and (WIRED alum) Jenna Wortham about the intersection of pop culture and public policy.

THE FIGHT FOR FALLUJA

An 11-minute VR film from the Pulitzer Prize-winning video journalist Ben Solomon. Viewers "embed" with Iraqi soldiers battling to retake the city from ISIS.

PUZZLE MANIA

A special print-only section in the Sunday Times last December. It contained the "MegaPuzzle," a 728-clue crossword that was the largest ever created for the Times.

RACE/RELATED

A weekly email newsletter with features and essays on race and ethnicity in America.



sonalized training and advice services; and Watching, a vertical dedicated to TV and movie recommendations. The newest addition to Beta was an acquisition: In October, The New York Times paid \$30 million for The Wirecutter, a gadget review site. (In a show of confidence in the deal, Perle stepped back from the Beta Group earlier this year to become general manager of The Wirecutter.)

"Working hour by hour, day by day, with software developers and designers and product managers—to me that was a real revolution, a kind of epiphany," says Clifford Levy, who won two Pulitzers at the Times before being promoted to the assistant managing editor overseeing digital platforms. "This is standard operating procedure in Silicon Valley, but it was radical here."

And the radical shift was felt, and heard, throughout the newsroom. "It is not incorrect for me to say that I had no idea what people were talking about in my first couple months," says Sam Sifton, the Times' food editor, who started working with the Beta Group to launch the Cooking app back in 2013. "We can iterate on that." What? We spoke different languages, different cultures." Still, Sifton has embraced his new digital mission,

agreeing this past November to host a text message experiment called "Turkey Talk" to help cooks with their Thanksgiving dinners.

This shift toward personality-driven personal service echoes an earlier chapter in Times history, when, in the 1970s, the paper rolled out an array of advertiser-friendly sections like Weekend, Home, and Living. The goal, according to then-executive editor Abe Rosenthal, was to figure out "ways that would get more revenue, more readers." Just as those new sections were greeted with howls of derision both inside and outside the paper—James Reston, a Times elder statesman, said, "It goes against my original concept of what the Times ought to be"—today's emphasis on news-you-can-use ("What We Know and Don't Know About the Trump-Russia Dossier," "15 Ways to Be a Better Person") has provoked accusations of clickbait. To Jill Abramson, who ran the newsroom between 2011 and 2014 (and whose firing was, as fringes go, public and acrimonious), the choice between publishing quality journalism and clickbait is a false one. "In my years, I used to laugh that everything you agreed to in terms of lighter or more advertising-friendly content would be

because we needed that advertising revenue to support the Baghdad Bureau," she says. "So if a certain audience wants lighter content, they can click on it. If others don't want it, there's still plenty of great international or investigative reporting at the Times."

In the 2020 Report, the authors announced that management would be dedicating an additional \$5 million every year to its presidential coverage. They also wrote that service journalism like "15 Ways to Be a Better Person" is essential to attracting new online readers. For the Times to grow, they argued, there must be room for both.

T

"THERE'S THIS FASHION for media companies to call themselves technology companies," says Jake Silverstein, editor of The New York Times Magazine. "Our job isn't to make technology. Our job is to figure out how to use technologies." Or, as Sam Dolnick puts it: "We're not going to create augmented reality. We're going to figure out how to use that in a journalistic way."

Which is to say, a "Timesian" way, a shorthand you frequently hear for what the Times can and cannot do in the interest of protecting its exalted status (and nowhere is it more exalted than within the Times itself). What Timesian means or doesn't mean often depends on who's defining it, but it's typically in the same general neighborhood as authoritative, or maybe stuffy. Editors are infamous for their lengthy divinations on



RELATED PODCAST



The Run-Up

Times reporter Michael Barbaro, who also just launched a daily audio briefing, provides insider commentary for political junkies.

1. David Perlich, former head of the Beta Group, is now general manager of gadget site The Wirecutter.

2. Alex MacCallum oversees the Times' video strategy (including its Facebook Live experiments).

3. Meredith Kopit Levien, chief revenue officer, is managing the ongoing transition from an advertising-driven business model to subscription-first.

4. Sam Dolnick, an associate editor, spearheads innovation in the newsroom, from AI bots to VR films.

How Do You Take Your News?

The Pew Research Center recently asked Americans whether they prefer to watch, read, or listen to the news. Here's what they said.

WATCH IT
46%

READ IT
35%

HEAR IT
17%

WHAT'S NEW?
2%

*Actual answer:
"No answer."



5. Kinsey Wilson, executive VP for product and technology, oversees the hundreds of developers and engineers behind the Times' digital expansion.

6. Dean Baquet, executive editor, has led the newsroom since 2014.



Even as Sulzberger boasts, "We employ more journalists who can write code than any other news organization," there are some inside the *Times*—usually those who can't write code—who chafe at the endless waves of experimentation.

whether new headline styles are sufficiently Timesian, and, per the Innovation Report, nothing slowed down a new initiative more than when management deliberated on just how Timesian it was or wasn't.

It's been Dolnick's mission to drum up enthusiasm in the newsroom for testing out new applications, from VR to livestreaming, without worrying too much about the Timesian thing. After stints at the *Statens Island Advance* and the *Associated Press*, Dolnick started at the *Times* in 2009 as a metro reporter—the same year as his cousin A.G.—and wrote a prize-winning series on halfway houses before becoming a senior editor for mobile and then an associate editor. Inside the *Times* these days, he is known for the regular companywide email newsletter "Digital Highlights."

One such highlight: At the Olympics last summer, deputy sports editor Sam Manchester sent short, frequently humorous text messages to the 20,000 readers who had signed up for the service. One, which sparked a viral meme, was a photo of a lifeguard watching swimmers practice, with a caption: "You know who has the most useless job in Rio? She does. That's right, they have lifeguards in case Olympic swimmers need saving."

"A generation ago, or even five years ago," says Dolnick, "there'd be a lot of this Timesian stuff. 'Oh, *The New York Times* doesn't do that. We don't make jokes in text messages.' The audience responded, though, and Manchester buckled under the thousands of questions that readers texted him. That explains why, for its next engagement experiment with readers, the *Times* turned to artificial intelligence. Running up to the election, they created a Facebook Messenger chatbot that offered daily updates on the race in the voice of political reporter Nick Confessore. Running the

backend was a tool created by Chatfuel that combined natural language parsing (so it could understand the questions posed to Confessore) with a conversation tree (so that the bot could respond to readers' queries using prewritten answers).

One of the biggest initiatives Dolnick has been involved in is virtual reality. He says it started with an email he sent to Silverstein last year: "Hey man, want to see something cool?" Dolnick had just visited a VR production company called Vrs (since renamed Within) and brought one of their films, *Clouds Over Sidra*, into his office. The *Times* has since jumped into VR, partnering with Google to send its Cardboard VR viewers to all of its 1.1 million Sunday print-edition subscribers, creating an NYT VR app that's been downloaded more than 1 million times, and producing 16 (and counting) original films about topics as varied as displaced refugees (*The Displaced*), floating movie stars (*Take Flight*), and battling ISIS in Iraq (*The Fight for Fallaja*). It remains a working experiment. The floating movie stars, for example: "People liked it, it got pretty good views," Silverstein says. "But it didn't feel like we were advancing the ball. It had a little whiff of 'Look at us. We have VR.'"

Even as Sulzberger boasts, "We employ more journalists who can write code than any other news organization," there are some at the *Times*—usually those who can't write code—who chafe at these endless waves of experimentation. "When we're told this is the new best practice, everyone marches in lock-step," says one editor who asked to remain anonymous. "Facebook Live? Yep! Video? On it! *The New York Times* isn't a place where people say no, and we're flat-out exhausted."

In March of 2016, Alex MacCallum, the *Times*' senior vice president for video (and at the beginning

1 CONTINUED ON PAGE 584

Attention

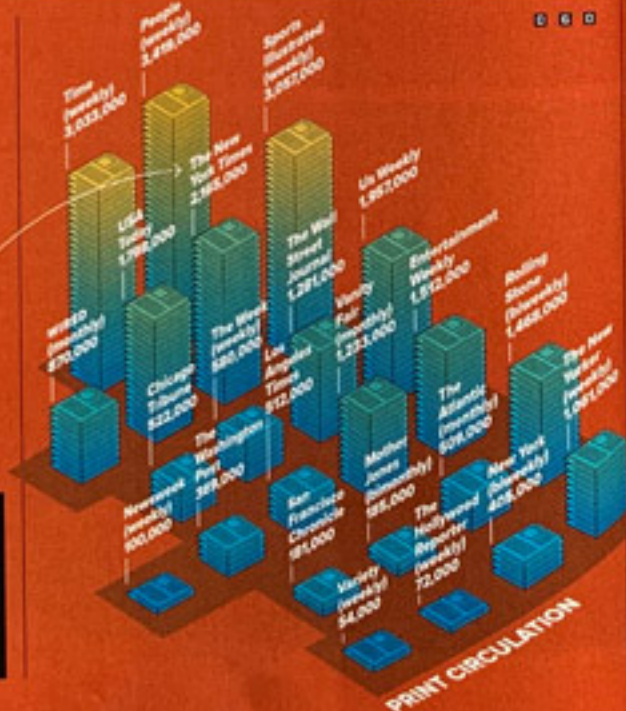
Is Our Business

The news is a relentless 24/7 battle to grab eyeballs and achieve total domination. Here's who's winning.

THERE IS A term for news organizations that predate the internet—legacy media—and you may have heard that they're dying. But in researching who was watching and reading what at the end of 2016, one thing became clear: Some of the oldest voices in the news are still the biggest. Just the print issue of *The New York Times* reaches more people every day than the Huffington Post does, and the nightly news shows on ABC, CBS, and NBC each have many millions more viewers than even the highest-trafficked news site. At least for now.

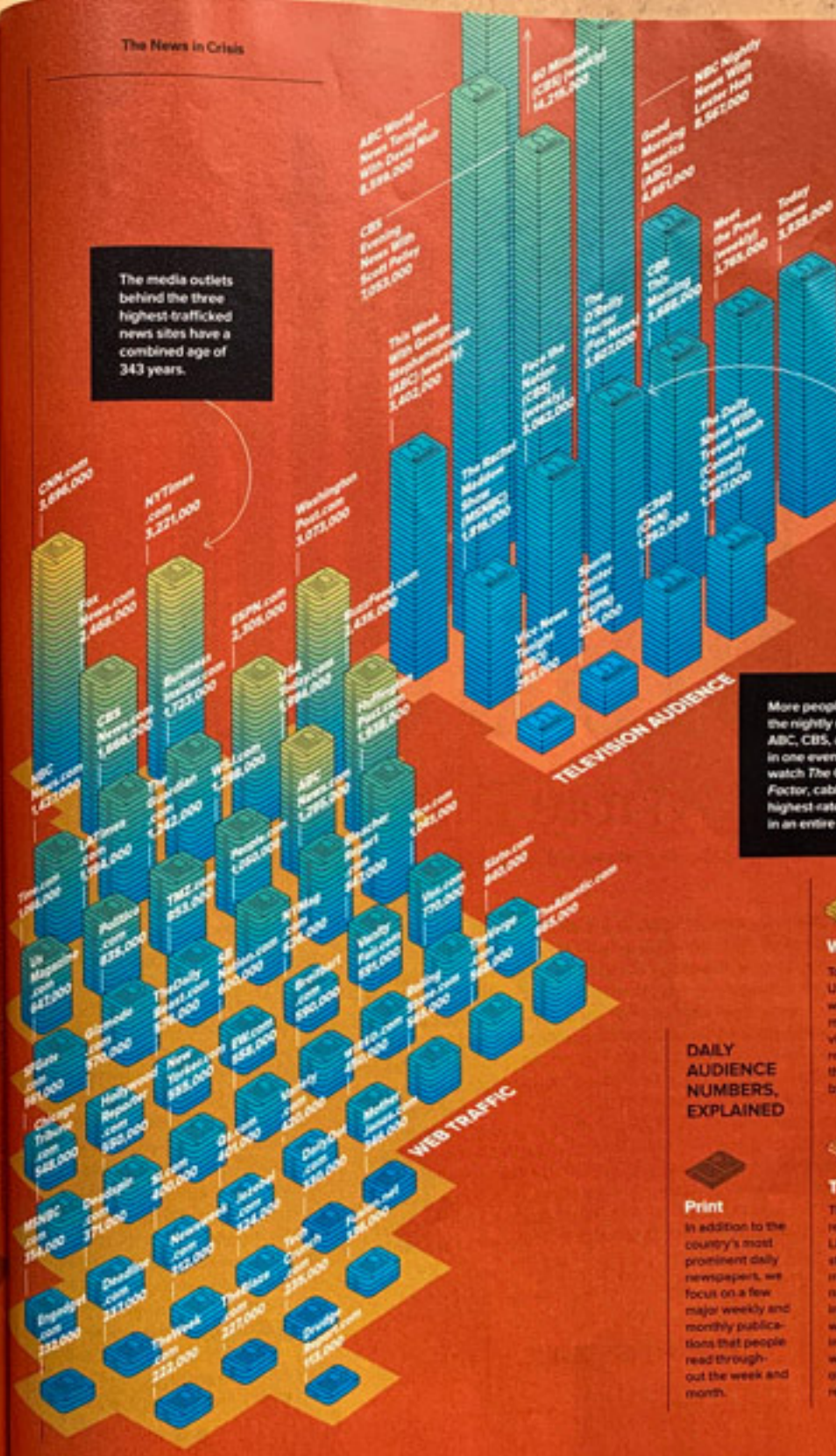
Example = 100,000 daily downloads

The New York Times has the greatest combined print and web audience, with 5.4 million readers, followed by USA Today (3.8 million) and The Washington Post (3.4 million).



The News in Crisis

The media outlets behind the three highest-trafficked news sites have a combined age of 343 years.



More people watch the nightly news on ABC, CBS, and NBC in one evening than watch *The O'Reilly Factor*, cable news's highest-rated program, in an entire week.

DAILY AUDIENCE NUMBERS, EXPLAINED

Web

To calculate daily US web traffic, we averaged the monthly unique visitors of three recent months, then divided by 30.

Print

In addition to the country's most prominent daily newspaper, we focus on a few major weekly and monthly publications that people read throughout the week and month.

TV

These numbers reflect the Live+7 industry standard, which measures the number of people in the US who watch a program in real time or within a week of having recorded it.

Robots

Wrote This Story

What The Washington Post's journalism-generating software means for the future of news.

WHEN REPUBLICAN STEVE KING beat back Democratic challenger Kim Weaver in the race for Iowa's 4th congressional district seat in November, *The Washington Post* snapped into action, covering both the win and the wider electoral trend. "Republicans retained control of the House and lost only a handful of seats from their commanding majority," the article read, "a stunning reversal of fortune after many GOP leaders feared double-digit losses." The dispatch came with the clarity and verve for which *Post* reporters are known, with one key difference: It was generated by Heliograf, a bot that made its debut on the *Post*'s website last year and marked the most sophisticated use of artificial intelligence in journalism to date. When Jeff Bezos bought the *Post* back in 2013, AI-powered journalism was in its infancy. A handful of companies with automated content-generating systems, like Narrative Science and Automated Insights, were capable of producing the bare-bones, data-heavy news items familiar to sports fans and stock analysts. But strategists at the *Post* saw the potential for an AI system that could generate explanatory, insightful articles.

BY
Joe Keohane

What's more, they wanted a system that could foster "a seamless interaction" between human and machine, says Jeremy Gilbert, who joined the *Post* as director of strategic initiatives in 2014. "What we were interested in doing is looking at whether we can evolve stories over time," he says.

After a few months of development, Heliograf debuted last year. An early version auto-published stories on the Rio Olympics; a more advanced version, with a stronger editorial voice, was soon introduced to cover the election. It works like this: Editors create narrative templates for the stories, including key phrases that account for a variety of potential outcomes (from "Republicans retained control of the House" to "Democrats regained control of the House"), and then they hook Heliograf up to any source of structured data—in the case of the election, the data clearinghouse VoteSmart.org.

□ □ □

The News in Crisis

The Heliograf software identifies the relevant data, matches it with the corresponding phrases in the template, merges them, and then publishes different versions across different platforms. The system can also alert reporters via Slack of any anomalies it finds in the data—for instance, wider margins than predicted—so they can investigate. "It's just one more way to get a tip" on a potential scoop, Gilbert says.

The *Post*'s main goal with the project at this point is twofold. First: Grow its audience. Instead of targeting a big audience with a small number of labor-intensive human-written stories, Heliograf can target many small audiences with a huge number of automated stories about niche or local topics. There may not be a wide audience for stories about the race for the Iowa 4th, but there is some audience, and, with local news outlets floundering, the *Post* can tap it. "It's the Bezos concept of the Everything Store," says Shailesh Prakash, CIO and VP of digital product development at the *Post*. "But growing is where you need a machine to help you, because we can't have that many humans. We'd go bankrupt."

Prakash and Gilbert take pains to stress that the system is not here to usher reporters into obsolescence. And that brings them to the second objective of Heliograf: Make the newsroom more efficient. By removing tasks like incessant poll coverage and real-



JOE KEOHANE is a (human) writer living in New York City.

Rise of the News-bots

Three more AI-powered tools for journalists.
—GREG BARBER

WIBBITZ
USA Today has used this AI-driven production software to create short videos. It can condense news articles into a script, string together a selection of images or video footage, and even add narration with a synthesized news-caster voice.

NEWS TRACER
Reuters' algorithmic prediction tool helps journalists gauge the integrity of a tweet. The tech scores emerging stories on the basis of "credibility" and "newsworthiness" by evaluating who's tweeting about it, how it's spreading across the network, and if nearby users have taken to Twitter to confirm or deny breaking developments.

BUZZBOT
Originally designed to crowd-source reporting from the Republican and Democratic National Conventions, BuzzBot's software collects information from on-the-ground sources at news events. BuzzBot has since been open-sourced, portending a wave of bot-aided reporting tools.

time election results from reporters' plates, Heliograf frees them up to focus on the stories that actually require human thought. "If we took someone like Dan Balz, who's been covering politics for the *Post* for more than 30 years, and had him write a story that a template could write, that's a crime," Gilbert says. "It's a huge waste of his time."

So far, response from the *Post* newsroom has been positive. "We're naturally wary about any technology that could replace human beings," says Fredrick Kunide, a *Post* reporter and cochair of the Washington-Baltimore News Guild, which represents the *Post*'s newsroom. "But this technology seems to have taken over only some of the grunt work." Consider the election returns: In November 2012, it took four employees 25 hours to compile and post just a fraction of the election results manually. In November 2016, Heliograf created more than 500 articles, with little human intervention, that drew more than 500,000 clicks. (A drop in the bucket for the *Post*'s 1.1 billion pageviews that month, but it's early days.)

RELATED PODCAST



Note to Self

Whether analyzing the debate over Apple's security or assessing a new device used by cops to see if motorists have been texting, this HNYC series offers a timely look at the tech industry.

Gilbert says the next step is to use Heliograf to keep the data in both machine- and human-written stories up-to-date. For instance, if someone shares a Tuesday story on Thursday, and the facts change in the meantime, Heliograf will automatically update the story with the most recent facts. Gilbert sees Heliograf developing the potential to function like a rewrite desk, in which "the reporters who gather information write more discrete chunks—here's some facts, here's some analysis—and let the system assemble them."

With the rapid advances in AI technology driven by cheap computing power, Prakash sees Heliograf moving beyond mere grant work. In time, he believes, it could do things like search the web to see what people are talking about, check the Post to see if that story is being covered, and, if not, alert editors or just write the piece itself. Of course, that's where things could get sticky—when Facebook fired the human editors of its Trending module last year and let an algorithm curate the news, the world soon learned (falsely) that Megyn Kelly had been fired from Fox News. "Will there be controversy when the bot thinks this is important, and humans say this is important, and they're the exact opposite thing?" Prakash asks. "It's going to get interesting."

The Post, like every other major news organization, is looking to tap new revenue streams, and it's reportedly in talks to license out its CMS to clients like Tronc, a consortium that includes the Chicago Tribune, the Los Angeles Times, and dozens of other regional papers. As those newsrooms struggle with dwindling resources, it's not hard to imagine a future in which AI plays a larger and larger role in creating journalism. Whether that's good news for journalists and readers is another story. ■

■ ■ ■

Black

News Matters

Behind the scenes at a media outlet for millennials of color.

RELATED PODCAST



Code Switch

Five minority journalists confront thorny, occasionally uncomfortable issues of race and identity in NPR's cathartic weekly show.

WHEN MORGAN DEBAUN was a student at Washington University in St. Louis during the early Obama years, she and a handful of friends often found themselves at this one lunch table in a campus cafeteria. It was big and round, whereas the other tables in the cafeteria were long and rectangular, and it was perfect for the hours the group spent talking about what shows they were watching, what music they were listening to, and whatever was happening in the news or around campus. They were among the very few black students at the predominately white university, and the table became a place of both sanctuary and celebration. Over time, other black students would drift into their orbit and join the conversation. It almost felt like gravity—or what DeBaun came to think of as black gravity.

BY
Carl Brooks Jr.

The News in Crisis



CARL BROOKS JR. is a writer in Los Angeles.



The LA headquarters of three-year-old media and tech company Blavity.

That was six years ago, and today DeBaun is the CEO and cofounder of Blavity, a three-year-old media and tech company that's been described as "BuzzFeed for black millennials." With 17 full-time staffers in its LA offices, Blavity publishes articles with titles like "From Trayvon Martin to Alton Sterling: Tears That Never Dry" and "Why Atlanta Is the Most Authentically Modern Black Experience on TV Right Now." At the core of the site is the sense of community DeBaun found at the round table. "Our audience likes to talk to each other," she says. "You can't just say, 'Beyoncé released an album.' They want to talk and argue about it. So how do we facilitate that engagement?"

Part of her strategy is a reliance on user-generated content. Roughly 60 percent of the articles and videos on the site are submitted by readers, then edited by Blavity's staff. To DeBaun, this isn't just free content that invites readers into the editorial process—it's journalism created by and for her target audience. "The people who make the best content on Instagram and Twitter are usually black," she

says. "With Blavity we built a platform to showcase that creativity."

When a series of racist texts were sent to black students at the University of Pennsylvania after Donald Trump's election victory, Blavity didn't link to or rely on reporting from, say, *The Philadelphia Inquirer* (with its 86 percent white newsroom); it published "Reflecting on Racism at UPenn: A Call to Action From the Front Lines," written by the director of the college's Black Cultural Center and featuring on-the-ground, in-the-room-where-it-happened details about the incident and its aftermath. "Black people are being attacked at an institutional level," DeBaun says. "Blavity having scale, and being able to distribute their stories, will be really powerful, especially now."

With the launch this past November of AfroTech, a summit in San Francisco for black people in tech, Blavity is expanding its reach into another community where, as in journalism, people of color remain painfully underrepresented. DeBaun and her growing team at Blavity have another future in mind. ■

photograph by ANGIE SMITH

Diversity in the Press

The percentage of nonwhite journalists in a few of the country's biggest newsrooms.

Miami Herald	41%
Los Angeles Times	34%
The Washington Post	31%
The New York Times	22%
San Francisco Chronicle	21%
The Boston Globe	17%
The Philadelphia Inquirer	14%
The Denver Post	12%

Source: American Society of News Editors

Reporters

Need Edward Snowden

America's most wanted whistle-blower is helping to protect journalists from government snoops.

WHEN EDWARD SNOWDEN leaked the biggest collection of classified National Security Agency documents in history, he wasn't just revealing the inner workings of a global surveillance machine. He was also scrambling to evade it. To communicate with the journalists who would publish his secrets, he had to route all his messages over the anonymity software Tor, teach reporters to use the encryption tool PGP by creating a YouTube tutorial that disguised his voice, and eventually ditch his comfortable life (and smartphone) in Hawaii to set up a cloak-and-dagger data handoff halfway around the world. Now, nearly four years later, Snowden has focused the next phase of his career on solving that very specific instance of the panopticon problem: how to protect reporters and the people who feed them information in an era of eroding privacy—without requiring them to have an NSA analyst's expertise in encryption or to exile themselves to Moscow. "Watch the journalists and you'll find their sources," Snowden says. "So how do we preserve that confidentiality in this new world, when it's more important than ever?"

BY
Andy Greenberg

Since early last year, Snowden has quietly served as president of a small San Francisco-based nonprofit called the Freedom of the Press Foundation. Its mission: to equip the media to do its job at a time when state-sponsored hackers and government surveillance threaten investigative reporting in ways Woodward and Bernstein never imagined. "Newsrooms don't have the budget, the sophistication, or the skills to defend themselves in the current environment," says Snowden, who spoke to WIRED via encrypted video-chat from his home in Moscow. "We're trying to provide a few niche tools to make the game a little more fair."

The group's 10 staffers and a handful of contract coders, with Snowden's remote guidance, are working to develop an armory of security upgrades for reporters. Snowden and renowned hacker Bannister Huang have

partnered to develop a hardware modification for the iPhone, designed to detect if malware on the device is secretly transmitting a reporter's data, including location. They've recruited Fred Jacobs, one of the coders for the popular encryption app Signal, to help build a piece of software called Sander; the tool would allow journalists to encrypt a trove of secrets and then retrieve them only if several newsroom colleagues combine their passwords to access the data. And the foundation's coders are building a plug-and-play version of Jitsi, the encrypted video-chat software Snowden himself uses for daily communication. They want newsrooms to be able to install it on their own servers with a few clicks. "The idea is to make this all point-by-numbers instead of teaching yourself to be Picasso," Snowden says.

But the foundation's biggest coup has been SecureDrop, a Tor-based system for WikiLeaks-style uploads of leaked materials and news tips. The system has now been adopted by dozens of outlets, including *The Guardian*, *The New York Times*, and *The Washington Post*. "It works," Snowden hinted a tweet from *Washington Post* reporter David Fahrenthold the day after he published a leaked video of Donald Trump bragging about sexual assault.

Snowden's own leaks have shown the dire need for the foundation's work: In early 2013 he revealed that British spies had collected emails from practically every major newspaper and wire service. Other signs of encroaching state surveillance have also put journalists on guard. Late last year it emerged that Montreal police had tracked the phone calls and texts of a reporter in order to identify sources critical of the department. And in early January, before he had even taken office, Don-

ald Trump called on Congress to investigate a leak to NBC news—one that gave the network a sneak peek at an intelligence report on Russia's role in influencing the US election. In the months since Trump's victory, the Freedom of the Press Foundation's phones "have been ringing off the hook" with requests from newsrooms for training sessions, says Trevor Timm, the foundation's executive director.

Snowden is quick to note it was the administration of President Obama, not Trump, that indicted him and at least seven others under the Espionage Act for leaking information to journalists. That's more such indictments than all other presidents in history combined have issued. But Snowden and Timm worry that Trump, with his deep-seated disdain for the media and the full powers of the US Justice Department at his fingertips, will be only too happy to carry forward and expand that precedent.

All of that makes the media's technical protections from spying more important than ever. "We can't fix the surveillance problem overnight," Snowden says. "But maybe we can build a shield that will protect anyone who's standing behind it." If the group succeeds, perhaps the next Snowden will be able to take refuge not in Moscow but in the encrypted corners of the internet.



ANDY GREENBERG (@a_greenberg) wrote about Google subsidiary Jigsaw in issue 24.10.

How to Leak (and Not Get Caught)

A brief guide to becoming an anonymous source.

WEB

The anonymity network Tor obscures your identity by routing your online traffic through computers worldwide. Access it via the web-based Tor Browser to visit any site related to your planned contact with the press. Find a directory of the 35 or so news organizations that maintain SecureDrop portals—Tor-enabled inboxes for anonymous tips. Then choose an outlet and leak away.

PHONE

Buy a burner—a cheap, prepaid Android phone—with cash from a nonchain store in an area you've never been to before. Don't carry your regular phone and the burner at the same time, and never turn on the burner at home or work. Create a Gmail and Google Play account from the burner, then install the encrypted calling and texting app Signal. When you're done, destroy the burner and ditch its corpse far from home.

SNAIL MAIL

Pick a distant mailbox, don't carry your phone on the trip, and—duh—don't include a real return address.



25.03

The News in Crisis

BY
Samanth Subramanian

Welcome
to Veles,
Macedonia,

fake

News Factory
to the World.

photographs by GUY MARTIN



THE FIRST ARTICLE about Donald Trump that Boris ever published described how, during a campaign rally in North Carolina, the candidate slapped a man in the audience for disagreeing with him. This never happened, of course. Boris had found the article somewhere online, and he needed to feed his website, Daily Interesting Things, so he appropriated the text, down to its last misbegotten comma. He posted the link on Facebook, seeding it within various groups devoted to American politics; to his astonishment, it was shared around 800 times. That month—February 2016—Boris made more than \$150 off the Google ads on his website. Considering this to be the best possible use of his time, he stopped going to high school. Boris isn't his real name. He prefers the anonymity because he doesn't want to break ranks with the other people in his town of Veles, in the Balkan nation of Macedonia. Nobody here wants to dwell on Trump anymore.

000

Veles has the feel of a small community clamming up out of a suspicion that it's being talked about for all the wrong reasons.

In the final weeks of the US presidential election, Veles attained a weird infamy in the most powerful nation on earth; stories in *The Guardian* and on BuzzFeed revealed that the Macedonian town of 55,000 was the registered home of at least 100 pro-Trump websites, many of them filled with sensationalist, utterly fake news. (The imminent criminal indictment of Hillary Clinton was a popular theme; another was the pope's approval of Trump.) The sites' ample traffic was rewarded handsomely by automated advertising engines, like Google's AdSense. An article in *The New Yorker* described how President Barack Obama himself spent a day in the final week of the campaign talking "almost obsessively" about Veles and its "digital gold rush."

Within Veles itself, the young entrepreneurs behind these websites became subjects of tantalizing intrigue. Between August and November, Boris earned nearly \$16,000 off his two pro-Trump websites. The average monthly salary in Macedonia is \$371.

Boris is 18 years old, a lean, slouching youth with gray eyes, hair mowed close to his skull, and the rudiments of a beard. When he isn't smoking a cigarette, he's lighting one. He listens to a lot of gangsta rap: the Notorious B.I.G., Puff Daddy, Wu-Tang Clan; after watching *Notorious*, the 2009 biopic of B.I.G., he decided he would like to visit Brooklyn, a New York City borough he imagines overrun more by gangsters than hipsters. He is an affable raconteur, with a droll sense of humor and a clear-eyed view of himself and his town. Someday he wants to leave Veles, because of how little there is to do. You can live with your parents and have them pay for your evenings in a bar, or

you can bus tables in a café. If you're a gym rat, you might work security. A few factories on the outskirts of town still offer regular employment, but nothing lavish. "We can't make money here with a real job," Boris says. "This Google AdSense work is not a real job."

At best, Boris' English is halting and fractured—certainly not good enough to turn out five to 10 articles about Trump and Clinton every day for weeks on end. Fortunately for him, the election summoned forth the energies of countless alt-right websites in the US, which manufactured white-label falsehoods disguised as news on an industrial scale. Across the spectrum of right-wing media—from Trump's own concise lies on Twitter to the organized prevarication of Breitbart News and NationalReport.net—ideology beat back the truth. What Veles produced, though, was something more extreme still: an enterprise of cool, pure amorality, free not only of ideology but of any concern or feeling about the substance of the election. These Macedonians on Facebook didn't care if Trump won or lost the White House. They only wanted pocket money to pay for things—a car, watches, better cell phones, more drinks at the bar. This is the arrhythmic, disturbing heart of the affair: that the internet made it so simple for these young men to finance their material whims and that their actions helped deliver such momentous consequences.



SAMANTH SUBRAMANIAN (@samanth_s) is a Dublin correspondent for *The National*.

Veles was once a town of modest glory, alive with industry. Its residents recall with perverse pride that, for a time, Veles was the second-most polluted town in the former Yugoslavia.

A moribund brick factory on the outskirts of Veles, Macedonia.



V

VELES LIES PLUMB in the center of Macedonia, on either side of the Vardar River, and its red-shingle-roofed buildings appear to be climbing the slopes of low knuckled hills. It was once a town of modest glory, turning out revolutionaries and intellectuals and alive with industry. One of its largest fac-

ories, a ceramic works named Porcelanka, employed 4,000 people. For a time, its residents recall with perverse pride, Veles was the second-most polluted town in the former Yugoslavia.

After Macedonia became independent in 1991, though, Veles began to decline. The factories closed; the jobs evaporated. The local soccer team, FK Borec, won so infrequently that it was dropped from the first division to the third. The town's only movie theater folded a decade and a half ago. Its downtown withered. Briefly, in the mid-2000s, the economy shook itself awake when a few men splashed around money they'd made selling heroin in Germany and

Austria, but the police soon broke up that drug ring and Veles returned to its state of morose dilapidation.

For Boris, growing up here, Veles didn't have much to offer. His father worked for the town as a plumber. Like other kids, Boris wandered around up near the old Ottoman clock tower or down by the river, loitering in one coffee bar after another. He played soccer but later discovered that he was more proficient at the videogame version of the sport. He joined a *Counter-Strike* club; nine or 10 teenagers gathered in a room, sitting behind their laptops and shooting each other up.

One day a couple of summers ago, Boris was walking to school when he saw a BMW 4

For a week in July, Boris experimented with fake news extolling Bernie Sanders. "Bernie Sanders supporters are among the smartest people I've seen," he says. "They don't believe anything."

Series parked by the side of the road. "What the fuck?" he thought. "My favorite car is in this town?"

He asked around, but no one seemed to know who owned the BMW. Later, in a café, he met a *Counter-Strike* acquaintance named Aleksandar Velkovski. "Aleksandar, I saw this BMW 4," Boris told him. Velkovski revealed that the car was his. He'd bought it, he said, with the money he made off his website.

In Veles, Aleksandar and Borce Velkovski are so renowned for the health food website they started that they're known as the Healthy Brothers. *HealthyFoodHouse.com* is a jumble of diet and beauty advice, natural remedies, and other nostrums. It gorges on advertising as it counsels readers to put a bar of soap under their bedsheets to relieve nightly leg cramps or to improve their red-blood-cell count with homemade beet syrup. Somehow the website's Facebook page has drawn 2 million followers; more than 10 million unique visitors come to *HealthyFoodHouse.com* every month.

After seeing the BMW, Boris decided to start some websites of his own. He already knew there was money to be made off the

internet; for a while, when he was 17, he'd been one of the many teens around the world laboring online for *MicroWorkers.com*, earning something like a tenth of a cent for liking a YouTube video or leaving a comment. Now he bought a succession of domains from GoDaddy—*GossipKnowledge.com*, then *DailyInterestingThings.com*—built basic WordPress sites, and stuffed them with sports, celebrity, health, and political news, the articles all pilfered from elsewhere. (Boris pulls out his phone and logs into WordPress to show that he does, in fact, own the sites he mentions.) When the piece about Trump slapping a man turned briefly white-hot, he sensed the intrinsic viral potential in the American election and founded *NewYorkTimesPolitics.com*, a website that resembled *The New York Times* homepage and carried plagiarized articles on American politics. The *Times* sent Boris a cease-and-desist order; Boris received the email when

he was out somewhere, and he was so terrified that he took down the website right away, from his phone. In August, Boris set up *PoliticsHall.com*, and a couple of months later, he added *USAPolitics.co* to his portfolio. That was when the money really began to roll in.

Boris developed a routine. Several times a day he dredged the internet for pro-Trump articles and copied them into one of his two websites; if JavaScript prevented an easy copy-paste, he opened a Notepad file and typed the articles out. After publishing a piece, he shared the link in Facebook groups with names like *My America*, *My Home*; the *Deplorables*; and *Friends Who Support President Donald J. Trump*. Trump groups seemed to have hundreds of thousands more members than Clinton groups, which made it simpler to propel an article into virality. (For a week in July, he experimented with fake news extolling Bernie Sanders. "Bernie Sanders supporters are among the smartest people I've seen," he says. "They don't believe anything. The post must have proof for them to believe it.") He posted under his own name but also under the guise of one of 200 or so bogus Facebook profiles that he'd purchased for this purpose. (A fake profile with a Russian name cost about 10 cents; for an American name, the price went up to 50 cents.) The most shares one of his posts ever aggregated, across various Facebook groups, was 1,200; Boris dimly recalls only that the post had something to do with Trump's proposed wall on the Mexican border. Boris learned tricks to better monetize his websites: big ads breaking the text up, for instance, so that one in five visitors to a page would end up clicking on an ad. His RPM—revenue per 1,000 impressions—hovered around \$15, he says. He fed the beast with diligence. "At night I would make four or five posts to share the next day. When I woke up, I shared them.

Reputable Sources

Percentage of Americans who trust the information they get from ...



Source: Pew Research Center

1. The Central Market in Veles. The town's economy declined throughout the 1990s after Macedonia gained its independence.



RELATED PODCAST



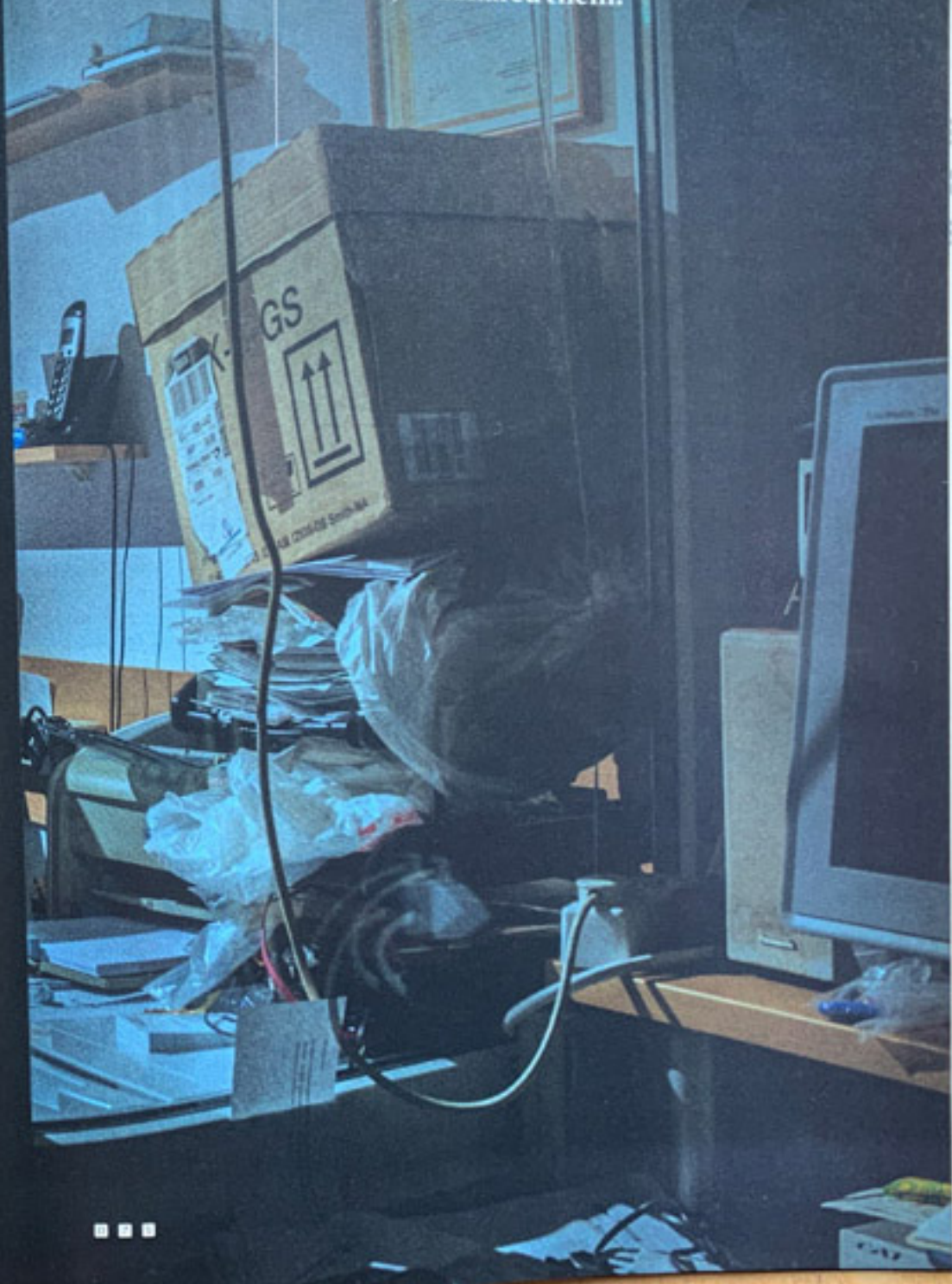
Trumpcast

Psychiatrists, historians, and business experts weigh in on our unpredictable master-in-chief in *State's* quasi-daily, somewhat snarky series.

2. An office at a local TV station, which broadcasts basketball and handball games.



Boris fed the beast with diligence. "At night I would make four or five posts to share the next day. When I woke up, I shared them. I went to drink coffee, came back home, found new articles, posted those articles on the website, and shared them."



Ceselkoski built seven or eight websites—all oriented toward the American reader. This made sense. In web-advertising terms, an American click is roughly three times more valuable than a non-American click.



2.

Making Fake News Pay

Here's how advertisers follow you around the web—and how their money flows to fake news sites. —DAVEY ALBA

BRANDS used to designate exactly where they wanted their ads to appear. Now they increasingly rely on automated

advertising—a system that matches ads to anonymized profiles of consumers, based on data like what they have searched for.

1. Men gather in a garden shed for moonshine and winter caroling. Holding the mic is a resident who profited from political websites.

2. The same man shows the ad revenue he earns from his websites, which churn out (sometimes fake) content.

I went to drink coffee, came back home, found new articles, posted those articles on the website, and shared them. Then I went out with friends, came back home, found articles, and shared them to Facebook."

When his ad engines started to pay out, Boris bought himself things: new clothes, an Acer laptop to replace his old Toshiba, a vacation at a resort on Lake Ohrid. His phone carries a photographic record of the life he could briefly afford. "It was like: 'Buy! Buy! Buy!'" At one point, practically all of Boris' friends had set up similar websites, and they all had money to blow. As a posse, they'd go to one of Veles' three nightclubs—Tarantino or Club Avangard or Club Drama—and order \$100 bottles of Moët to shake and spray. "I don't drink champagne," Boris says. "I bought it for spraying. All eyes on me!" It was nothing but the best for Boris. "Moët! Moët! Roberto Cavalli! Jack Daniel's!" he says, making a gesture with his hand as if hailing a bartender. "It's part of life. You must live once."

Boris still goes to the clubs, but he says he has lost his taste for expensive things. "It isn't interesting anymore." Which is just as well, because on November 24, after an eruption of concern about the malign effects of fake news, Google suspended the ads from his websites. The last item Boris posted to USAPolitics.co was a poll that inquired: "Do you support immediate deportation of all criminal illegals?" In one of the Facebook groups where Boris shared the link, the post received 292 shares and 361 responses. It

looked like another blockbuster from USAPolitics.co. But then the Google ads vanished, so Boris lost interest and consigned his websites to the deep oblivion of the Internet.

I

IN MACEDONIA, wringing money out of web advertising is a game that long predates Trump's bid for the presidency—and will probably outlast it as well, despite Facebook's and Google's postelection efforts to crack down. Mirko Ceselkoski began to play in the early 2000s. He built seven or eight websites—about muscle cars or celebrities or superyachts, all oriented toward the American reader, because an American reader is roughly three times more valuable than a non-American one. For five or six hours of daily toil, Ceselkoski says, you can earn approximately \$1,000 a month. Many Macedonians can spare the time; the unemployment rate is around 24 percent.

Ceselkoski turned to coaching in 2011—first with a six-week classroom course in the Macedonian capital of Skopje, where he lives, and now online, in dense three-week modules. For around \$425, his students learn how to prepare, populate, and promote

their websites. A full third of the syllabus is dedicated to the mastery of Facebook. The Healthy Brothers once took Ceselkoski's course. So did, in early 2006, a few members of the Veles squad who went on to operate pro-Trump sites. They surprised him. "I never instructed my students to write fake stories," he says. "Maybe they discovered they could get away with this kind of practice and increase their virality." He sounded like a delighted physics professor talking about how a pupil had stumbled upon a brand-new law of thermodynamics. After the election some of Ceselkoski's students called him, panicking because Google had yanked its advertising without paying them all the money they had already earned. One young man, Ceselkoski says, believed he was owed more than \$60,000.

Ceselkoski was visiting Las Vegas around the time of the election, and Trump's victory stunned him. He thought about the website operators in Veles. "It's possible, maybe, they changed a few percentages."

Boris will have none of that. The so-called news he and his colleagues were filching was already on American websites, heating up the American bloodstream. How could their duplications of these articles, on their rinky-dink websites, upset the election of such a powerful country? "If Americans wanted Hillary Clinton to win, Hillary Clinton would have won. They voted for Donald Trump. Donald Trump won." But now that everything has come to pass, Boris finds it difficult not to care about the result. "Some

crazy man has won the election. Maybe the guy will start World War III."

He sits in a coffee bar on a December afternoon, two days after a parliamentary election in Macedonia. Here too a minor pestilence of fake news swept through the campaigns. Websites run out of Serbia and Croatia alleged that the leftist opposition leader, Zoran Zaev, wanted to divide the country between Macedonians and ethnic Albanians. Voters got taken in; Zaev's coalition lost, narrowly. Boris feels disenchanted with the whole process. There is too much politics in life, he thinks. "People are fighting each other. One brother is for one party, the other brother is for the other party, they argue." He shakes his head. "The media is washing our brains, and the people are following like sheep."

Boris' days are now consummately unoccupied. Mostly, he and his friends convene in this coffee bar or in one of the others clustered on the same street. They always pick a table on the veranda, despite the cold, so that they can smoke and smoke. They fiddle with their phones for about the same proportion of time that they spend talking to one another. Boris hasn't yet considered returning to school, but he thinks, vaguely, that he wants to study coding and go on to work at a company like Microsoft or Apple. First, though, he wants to construct more websites. Facebook and Google have unveiled new systems for screening out misinformation, but they're not built for catching every low-level fib circulating around the Internet. Boris won't focus on political fake news, in all probability—but there are plenty of other topics of interest, plenty of websites from which to swipe content, and plenty of potential readers around the world who may click in sufficient numbers to finally buy him his BMW. ■

AD TECH COMPANIES track consumers as they browse the Internet, serving ads on any site they visit—provided it hasn't been blacklisted.

WEBSITES that traffic in hardcore violence, hate speech, or pornography tend to get blacklisted, but sites with content that is less clearly objectionable

are often fair game. Which is why even sites publishing fake news can profit by hosting ads based on your browsing history.

**SCENE
STEALERS
INSIDE
THE
DEEPLY
NERDY-AND
INSANELY
EXPENSIVE
WORLD
OF
HOLLYWOOD
PROP
COLLECTING**

PHOTOGRAPHS
BY
DAN WINTERS



FILM: BLADE RUNNER (1982) | PROD: Rick Deckard's Producers | DESIGNED: Terry Lewis
and Ridley Scott | MATERIALS: 22-caliber Stern-Magnum SL rifle, Charter Arms Building .44
magnum revolver | MORE GREAT SELLING PRICES: \$275,000

When the *Blaster Runner* gun surfaced, it was a big deal for the sci-fi geek community. "I purchased a right-left, left-right gun," says Langer. "I sold it and gave myself to the idea that Rick Deckard's hand cannon was a right-left, left-right gun, like bars in rain. Then suddenly there it was, displayed under glass at the 2006 Comic-Con convention. Not only was this an authentic 68 gun, it was the authentic 68 from Blaster—Aero being prep work for the detailed model used for close-ups. Three years later, Deckard's PWD is in my room to Philip K. Dick, the author of *Blaster Runner*'s source material sold at auction for \$270,000. The winning bidder was Dan Langer, a collector known for bidding up bids that pass \$100,000. This number looks like a feverish lie, but your mother would recognize that bid price point. It's the same as the \$100,000 bid for the real gun. That's a 222-caliber S&W Manlicher .50, close to action target fire. Other donor organs were taken from a Chester Avenue Building 44 Special. It's flycatcher scifi mixed with pure garbage rock.



FILM: ROBOCOP (1987) | **PROP:** ED-209 VFX miniature | **DESIGNER:** Craig Hayes
MATERIALS: Resin, wire, rubber, and foam over a metal armature
MOST RECENT SELLING PRICE: Unknown

The protagonist of Paul Verhoeven's low-budget hit is the titular cyborg tasked with cleaning up the mean streets of Detroit, but the dysfunctional, homicidal ED-209 really stands the show. Langen purchased his ED-209 model directly from RoboCop's VFX supervisor, Phil Tippett, in a private sale. One of only two fully articulated ED-209 miniatures made, this black-and-silver model is an exact duplicate of the full-size (7-foot-tall, 300-pound) but mostly static fiberglass ED-209 used for the live-action scenes. An obsessive attention to detail—from the four hydraulic "arms" containing each leg to the exhaust vents and radiator—was necessary so the stop-motion and live-action footage would perfectly in postproduction. It's not just the history that gets collectors excited. "ED is a badass Corvette with legs," Langen says. "He's a villain but also badass, because he's built a comical robot."

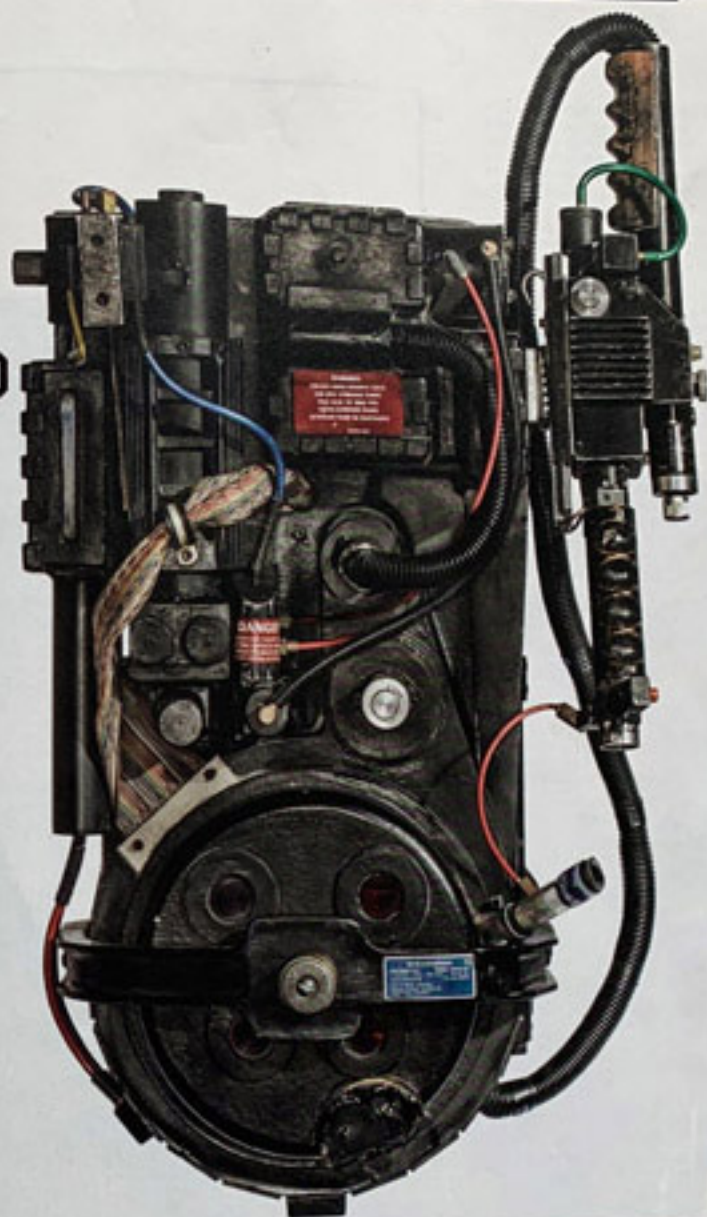
WHU
WOULD N'T
WANT
THEIR
OWN P
TABLE
UNLIC
NUCLE
ACCEL
TOR?

SHOW: STAR TREK (1966-69)
PROP: Phaser
DESIGNER: Wei Chang
MATERIALS: Resin, metal, popsicle sticks
VALUE: \$200,000

There are plenty of bogus Star Trek props in circulation, but there's nothing fake about this phaser from "TOS," as true fans call the original series. The provenance is stellar: purchased by a prop artist directly from Paramount in the 1970s. It's a screen-used hero constructed mostly of aluminum, fiberglass, and cast resin. The handle is a hand-painted brass tube embellished with popsicle sticks. (Yes, really. Look closely.) There were other phasers made, including midgrade fiberglass models used for longer shots and the VacuForm plastic ones used for stunt work—the kind of piece Kirk would brandish whenever he needed to pistol-whip a Klingon. But this detailed, intricate variant was employed for close-ups. Only two hero phasers were built, so an original specimen like this is worth a bundle—at least \$200,000. The anonymous owner isn't selling, though. His screen-used phaser is part of a massive sci-fi-prop collection that includes classics like a prized space suit from 2001. If you must have a TOS phaser of your own, you're going to need very deep pockets.



0 8 0



FILM: GHOSTBUSTERS (1984) | **PROP:** Proton pack | **DESIGNERS:** Stephen Dane and Ivan Reitman
MATERIALS: Fiberglass, aluminum, lights, rubber tubing, and computer parts | **MOST RECENT SELLING PRICE:** \$169,900

Now more than three decades old, the original Ghostbusters still resonates like a giant tuning fork—which goes a long way toward explaining why the proton pack is so revered by prop collectors. After all, who wouldn't want their own portable unlicensed nuclear accelerator? Inspired by a military-issue flamethrower, hardware consultant Stephen Dane purchased a backpack frame from an Army surplus store in Hollywood and made a rough prototype. Director Ivan Reitman then added his tweaks. The molded fiberglass shell was attached to an aluminum backplate, which was then bolted to a US Army-spec backpack frame. Dane added paint, aluminum warning labels (DANGER: HIGH VOLTAGE 1 kV), flashing lights, crank knobs, and enough electronic parts to make the thing pop onscreen: Sage and Dale resistors, Clippard pneumatic tubing, Arcoelectric indicators, and Legris banjo bolts (on the neutrona wand). It's as heavy as it looks—with the battery, a hero weighs over 30 pounds. Four years ago Langen added this screen-used hero proton pack to his collection. Price: \$169,900. Congrats, Dan, but remember: Don't cross the streams. It would be bad.



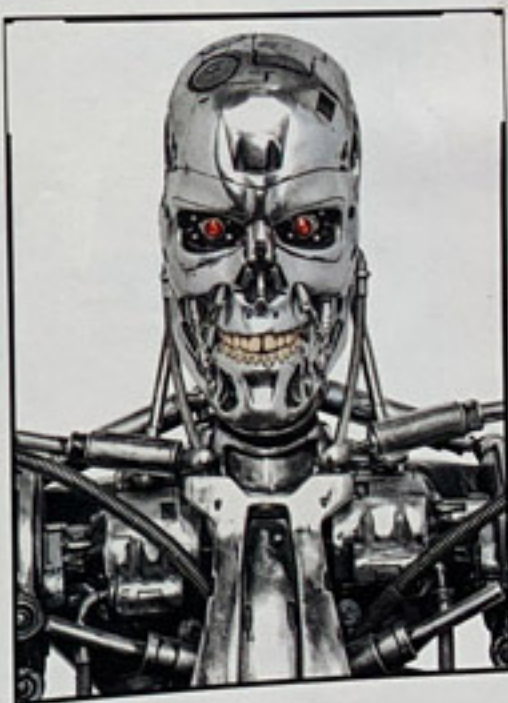
FILM: 2001: A SPACE ODYSSEY (1968) | **PROP:** Aries 18 transluxer shuttle | **DESIGNERS:** Harry Lange, Fred Ordway, and others | **MATERIALS:** Wood, plexiglass, acrylic, steel, brass, aluminum, and plastic | **MOST RECENT SELLING PRICE:** \$344,500

Stanley Kubrick's masterful tale of human evolution catapulted the humble sci-fi genre from B-movie fodder to serious art, thanks largely to the groundbreaking visuals pioneered by the auteur and his fix master, Douglas Trumbull. Most of the original miniature models used in the film's eerily realistic space travel scenes were destroyed, but one of the 2001 miniatures survived: the screen-used Aries shuttle that transports Dr. Heywood R. Floyd from the space station to the Clavius extension site on the moon. When the prop was eventually consigned to auction in 2015, the final paddle price greatly exceeded the expected high mark of \$100,000. The winning bidder, at \$344,500, was the Academy of Motion Picture Arts and Sciences. The prop will be restored before being displayed at the new Renzo Piano-designed Academy Museum, which opens in 2018. The hulking Aries model—it weighs 100 pounds and measures 94 inches in circumference—is finished with plastic bits cherry-picked from off-the-shelf scale-model kits. Look closely and you'll also see wires, tubing, flexible metal foil, decals (BATTERY LOCATION POINT HERE), and plenty of heat-formed plastic cladding.

THE
T-800 IS
DESIGNER
STAN
WINSTON'S
MONSA-IT'S
PART OF
HOLLYWOOD
LORE.

FILM: TERMINATOR 2 (1991) | **PROP:** T-800 | **DESIGNER:** Stan Winston | **MATERIALS:** Plastic, copper paint, and nickel and chrome electroplating | **VALUE:** \$488,750

Every generation has its childhood demons. The release of *The Terminator* in 1984 introduced a new bogeyman to the silver screen (and VHS): the T-800. Seven years later the film's sequel, *Terminator 2: Judgment Day*, cemented the reputation of the crimson-eyed grim reapers. An original full-scale T-800 endoskeleton sold at auction in 2007. Bidding started at \$80,000 and topped out at \$488,750, crushing production estimates. Why so much for a shiny puppet? Because it was a screen-used T-800. Also, the T-800 happens to be Stan Winston's Mono Unit. The late designer's fix wizardry is part of Hollywood lore (Lumina Park III, *Alien*, *Predator*), and one of his four Oscars was thanks to this 6' 2" animatronic skeleton. This T-800 is made mostly of plastic that's been sprayed with a high-pigment, conductive copper paint, then submerged in an electroplating bath, first nickel, then chrome.



FILM: RETURN OF THE JEDI (1983) | **PROP:** Luke Skywalker's lightsaber | **DESIGNERS:** Norman Harrison and Norank Engineering | **MATERIAL:** Resin casting of original | **VALUE:** \$30,000

In the world of vintage collectibles, there's always a marquee brand that demands insane prices. In the sci-fi-prop world, that brand is Star Wars. The prices for production artifacts with a Lucasfilm provenance make a mockery of presale estimates. A TIE fighter miniature from *Star Wars: A New Hope* sold for \$402,500, nearly twice the expected price. More impressive, back in 2005, a lightsaber used by Mark Hamill in the same film sold for \$200,600, three times its estimate. That first-generation weapon (the one lost along with most of Luke's forearm in the showdown with Vader in *Cloud City*) was fashioned by set decorator Roger Christian out of an old flashgun handle for a Graflex camera, along with other doodads. This one, Luke's green-bladed Excalibur, was a new design crafted for Jedi by Norman Harrison and Norank Engineering at England's Elstree Film Studios. But this saber wasn't built piece by piece—it's a casting. In this process, a plaster mold is made of the original prop, then that mold is used to produce identical copies in hard rubber, resin, and even metal. Castings are often used in place of hero props in stunt scenes; they're lighter, and the original doesn't get damaged. This resin casting was used in the Sarlacc sequence at the Great Pit of Carkoon.

