For this Sunday, March 17, the Today's Issues group will discuss two essays from the March 21 issue of the New York Review of Books

Page 22 "The Body Strikes Back" on new discoveries about the immune system

Page 44 "Fall from Grace" about trends in news, network propaganda and the newspaper business

The group meets in the parlor of the Religious Education building next to the church at 9:30 on Sunday mornings. Please read the essays and join our lively discussion

A copy of the readings follows:

The Body Strikes Back
Jerome Groopman MARCH 21, 2019 ISSUE
An Elegant Defense: The Extraordinary New Science of the Immune System: A Tale in Four Lives
by Matt Richtel
William Morrow, 425 pp., $28.99
The Beautiful Cure: The Revolution in Immunology and What It Means for Your Health
by Daniel M. Davis
University of Chicago Press, 260 pp., $25.00

National Institutes of Health
Killer T cells—part of the body's immune system—surrounding a cancer cell
The 2018 Nobel Prize in Physiology or Medicine was awarded jointly to James Allison of MD Anderson Cancer Center at the University of Texas at Houston and Tasuku Honjo of Kyoto University for work that "established an entirely new principle of cancer therapy." Each independently discovered that our immune system is restrained from attacking tumors by molecules that function as "brakes." Releasing these brakes (or "brake receptors") allows our body to powerfully combat cancer.

This remarkable advance has been a long time coming. The idea that our natural defenses could be mobilized against tumors extends back more than a century, to the case of a young woman named Elizabeth Dashiell. In 1890 Dashiell, then seventeen years old, consulted a Manhattan surgeon, William Coley, for a painful swollen hand. After several weeks of conservative measures, Coley operated on her hand and found her bones encased by a sarcoma—a cancer of the connective tissue. He sought to cure the cancer by amputating Dashiell's arm just below her elbow, but tumors soon appeared in her neck and abdomen. Several months later she died at home, with Coley at her bedside.

Dashiell's death had a profound emotional impact on the young surgeon. He began to comb through the records of New York Hospital, searching for cases of sarcoma with better outcomes.

One success stood out from the expected fatalities: Fred Stein, an immigrant housepainter, had undergone multiple operations for a sarcoma that had been rapidly spreading in his neck. His case was labeled “absolutely hopeless” by his surgeon. Then Stein developed a bacterial infection in the region of the tumor. Antibiotics didn’t exist at the time, but his own white blood cells were able to eradicate the bacteria. As they did, the cancer shrank and ultimately disappeared.

This stunning outcome prompted Coley to search for a way to make the body combat tumors, as Stein’s apparently did. The surgeon initially inoculated cancer patients with what he called “laudable pus,” extracts of bacterial abscesses, and then with bacteria themselves. While Coley documented occasional instances of tumors shrinking, he never arrived at a reproducible way to cure cancer by stimulating a patient’s natural defenses.1

Over the ensuing decades, cancer treatment largely consisted of surgery to excise tumors, radiation to burn them, or chemotherapy to poison them. There were moments, though, when it seemed that Coley’s dream would be realized. Researchers studying the immune system discovered the molecules interferon and interleukin-2; each was initially hailed as a promising treatment based on their dramatic effects in shrinking tumors in rodents. But both failed to have robust and broad benefits when used to treat cancer in humans.

Such frustrating setbacks did not deter James Allison, a young scientist from the small town of Alice, Texas. Counseled by mentors to stay away from studying the relationship between the immune system and cancer, which they claimed would be a dead end, Allison rejected their advice.2 He was intrigued by a molecule called CTLA-4 that was thought to stimulate immune cells, but he came to an opposite view: CTLA-4 was a brake rather than an accelerator. In an elegant series of experiments in mice, he showed that releasing the CTLA-4 brake allowed the rodent’s immune system to attack and eradicate tumors. Working independently in Japan, Tasuku Honjo identified a different molecule, PD-1, and proved that it too was a brake on immune cells; once PD-1 was counteracted, the rodent immune system was freed to combat cancers.

In 2004 the first human trials of agents that released these brakes were conducted, and were initially declared failures. When patients receive radiation or chemotherapy, the treatment is judged successful if tumors shrink by at least 50 percent in diameter; this shrinkage occurs within weeks to a few months. Patients with metastatic melanoma who received blockers of CTLA-4 had no significant shrinkage after months. The failure seemed to be another example of the differences between a rodent’s immune system and a human’s. Pfizer, one of the companies producing a potential blocker, then abandoned it.

But clinicians conducting another apparently failed trial noticed that many months after treatment with the blockers was suspended, the tumors either stopped growing or began to shrink. Instead of assessing efficacy in the short term, as was usual for radiation and chemotherapy, the researchers measured patient survival over a period of years. In 2010 the

study results were presented at a major cancer meeting: a quarter of the patients treated with blockers for widespread melanoma were alive after two years; their predicted survival had been a mere seven months.

One of the most stunning successes of this treatment is the case of President Jimmy Carter. In the summer of 2015 he was diagnosed with melanoma that had spread to his liver and brain. With standard radiation and chemotherapy his prognosis was dismal, measured in weeks to a few months. Carter received a new PD-1 blocker and remains in remission nearly four years later. Metastatic melanoma has proved to be one among several previously intractable cancers that has yielded to immune therapy. Clinical trials in lung cancer, Hodgkins lymphoma, bladder cancer, Merkel cell carcinoma, and others have shown dramatic remissions and raised the prospect of some patients being cured. In general, a quarter to a third of treated patients react positively.

The advent of successful immune therapy for cancer comes with a price. It often causes toxic side effects, as the unleashed immune system attacks not only the tumor but normal tissues as well. Patients can suffer intense inflammation of the bowels, skin, and thyroid and adrenal glands. Then there is the cost of the treatments, typically more than $100,000 per year.

The work of Allison and Honjo inspired Matt Richtel to write An Elegant Defense. A Pulitzer Prize–winning journalist at The New York Times, he “picked up [his] pen,” hoping for a happy ending, that the new immune therapy would save the life of his best buddy from childhood, Jason Greenstein, who had advanced Hodgkin’s lymphoma. In addition to Greenstein, Richtel introduces the reader to Merredith Branscombe, a businesswoman with lupus; Bob Hoff, a former government lawyer with HIV whose immune system suppresses the virus; and Linda Segre, a golfer with rheumatoid arthritis. Each case poses a fundamental question in immunology. Why doesn’t Greenstein’s body recognize his lymphoma as dangerous and fight it? What causes Branscombe’s and Segre’s immune systems to damage their healthy tissues? How does Hoff naturally contain a pathogen like HIV without the need for antiviral drugs?

To address these questions, Richtel first explicates for the lay reader the intricate biology of our immune system. He explains how important immune cells—T cells, macrophages, and dendritic cells—distinguish endogenous entities from foreign ones, and how pathogens trigger the immune cells into a defensive response. He also explains how our antibodies are made by B cells, a process involving the reshuffling of DNA, and highlights recent findings on the microbiome, the bacteria in our gut that coexist with our immune system.

He succeeds in this formidable task using colloquial prose with touches of humor. While the word “immunity” connotes defense, Richtel writes:

The war metaphor is misleading, incomplete—even arguably dead wrong. Your immune system isn’t a war machine. It’s a peacekeeping force that more than anything else seeks to create harmony…. This is not just because we don’t want to hurt our own tissue. It is also because we

need many of the alien organisms that live on and in us, including the billions of bacteria that live in our guts….

But what specifically does the microbiome help with?

Digestion, nutrition, obesity—broadly, how much energy we take from foods and how effectively we squeeze nutrients from them.

These commensal microbes, Richtel continues, do not threaten us but serve as essential allies. By unnecessarily eradicating them with excessive use of antibiotics or antibacterial soaps, “we risk impairing bacteria that contribute to the effectiveness of our immune system’s function.” This is the so-called hygiene hypothesis, which argues that excessive efforts at cleanliness may, ironically, weaken our defenses and increase our risk for allergic and autoimmune disorders.

In contrast to the bacteria of the microbiome are pathogenic microbes. When they try to invade us,

immune cells show up in force and devour the infection. Some immune cells blow themselves up in the process. Others nip off parts of the infection and carry them away to be assessed in a defense hub called a lymph node. There, the bits of infection are shared with swarms of passing defenders called T cells and B cells. These are the immune system’s most advanced fighters; they are, in fact, two of the most effective biological structures in the world. What makes T cells and B cells so remarkable is that they are extremely specific. Each one of the billions of them in your body is tailored through a quirk of genetics to recognize a very specific infection. Once a T cell or B cell finds its evil mate, its infection doppelgänger, it can set in motion a powerful defense, following hard on the innate reaction, bringing defenders trained specifically to bounce out this particular antigen.

The conundrum posed by cancer—why can tumors with characteristics distinct from healthy tissues evade the immune system’s surveillance?—is answered by Richtel, who draws on Honjo’s and Allison’s research:

The last few decades of immunology…have taught us [that] the immune system…can be duped. Sometimes a disease takes root and starts to grow and spread and then tricks the immune system into thinking it isn’t so bad after all. It deceives the entire defense system into helping it grow. This is what happened to Jason.

Delving deeply into this phenomenon, Richtel interviews oncologists who elaborate that cancer cells can look like healthy ones:

Part of the way that Hodgkin’s and other cancers disguise themselves is by tricking the T cells that would ordinarily help kill off the mutation. What the cancer does is send a signal to the T

cell to self-destruct…. At the same time, now that the immune system had received a message that the cancer was “self” and not alien, the immune system actually set out to protect and support the cancer…. The tumor co-opts the immune system and says, “I’m okay. I just want you to help me grow.”

The patient stories in An Elegant Defense are vividly told. The impact of lupus on Merredith Branscombe is painfully apparent: “Merredith’s immune system had turned on her own body as if it were itself an alien threat…. There were middle-of-the-night emergency room visits with inflammation around her heart, blood in her stool, and pain ‘like someone had plunged knives into both sides of my body and were just…turning and driving those knives deeper and deeper into my muscles.’” Like some patients with lupus, Merredith manifests photosensitivity:

She pulled her black shirt over her left hand, protecting it from the sun. She held her right hand out in front of me, palm down…. The uncovered hand began to swell. It turned red…. She withdrew her left hand from her shirt, and put the pair of them side by side. Now it was more glaring, her left hand white and a touch puffy, which reflected the regular inflammation, her right hand red and visibly swollen.

“My immune system,” she said, “is always attacking me.”

Linda Segre’s autoimmune disorder, rheumatoid arthritis, is marked by profound pain and swelling with destruction of her joints. Of the genesis of her malady, Richtel writes:

The clues to and the catalyst of her illness were actually there all along to be discovered if given proper scrutiny. In addition to her family history, she suffered extreme stress, sleeplessness, and a case of strep throat that might have kicked her immune system into overdrive.

This list of possible causes should come with a prominent caveat, as the reason why most people develop autoimmune disorders is still obscure. As for Bob Hoff, despite intensive study of his immune system at the NIH, precisely how his body prevents HIV from behaving in its typical destructive way remains a mystery.

While successfully communicating the science of Allison and Honjo and related clinical advances to a lay reader, Richtel occasionally lapses into hyperbole: he calls Greenstein “one of the first fifty patients to try one of the greatest developments in the history of medicine…. He stood at the very edge of human achievement as modern science challenged one of the most enduring and effective killing techniques in the pantheon of disease.” Richtel places our new understanding of the immune system “on par with the greatest human achievements” and quotes an immunologist at UCLA asserting that recent discoveries are “as significant as the discovery of antibiotics.”

His enthusiasm reflects that of other writers on the immune system. Books on the subject are often marketed with the promise that we can fine-tune our defenses by adopting a specific

lifestyle, such as daily meditation, a diet of “anti-inflammatory” foods, and precisely measured hours of sleep. Daniel Davis, a professor of immunology at the University of Manchester in the UK, is refreshingly sober in assessing such popular notions in The Beautiful Cure:

All kinds of stresses have been linked with diminished immune responses, from burnout at work to unemployment…. Well over a hundred clinical studies have reported that stress can contribute to poor health, which leads many to suppose that a super-charged lifestyle perhaps increases our risk of all kinds of illnesses, from autoimmune disease to cancer. The topic remains controversial, however, because so many factors affect our ability to fight disease that it is difficult to assess the effect of any one.

Rather than accept stress as a distinct cause of immune system impairment, Davis rightly cautions us not to “explore the relationship between stress and health, without the added complication of stressed individuals being more likely to exercise less, sleep poorly, drink alcohol or smoke.” The same caveats hold for the alleged salubrious effects on immunity of mindfulness and exercise: “There is good evidence that t’ai chi can help improve pain and physical mobility for elderly arthritis patients. Whether or not t’ai chi impacts the immune system, however, is controversial.”

Davis emphasizes that most published reports on the effects of lifestyle changes on the immune system are methodologically flawed: they involve small numbers of subjects, not selected randomly and without an appropriate control group. Davis quotes from a review of sixteen clinical trials: “Because of methodological flaws in existing studies, further vigorously designed large-scale placebo-controlled, randomized trials are needed.” He warns against “exaggerating the positive effects of mindfulness meditation on immune system dynamics until these effects are further replicated and additional studies are performed.”

While Davis enthusiastically applauds the landmark discoveries of Allison and Honjo, he also offers an intelligent and insightful analysis of the field’s unknowns:

This is still only a beginning. We now know of over twenty other brake receptors in the immune system. Most of these switch off specific types of immune cell: Natural Killer cells, macrophages, dendritic cells, T cells, B cells or others. We must now test, in academic labs and companies large and small, whether or not antibodies that block these receptors, individually or in combination, will unleash immune cells to tackle different types of cancer.

Furthermore, Davis writes that we are unable to predict which types of cancer will be most affected by releasing the brakes on a particular type of immune cell. The system, he avers, “is too complex and our understanding too slight.”

In that regard, there is a pressing need to “personalize” the use of current CTLA-4 and PD-1 blockers, given their toxic side effects. The goal is to select patients most likely to benefit and spare those who won’t. Davis imagines identifying

which brake receptors are present at the surface of a person's immune cells. This would allow us to select a[n]…inhibitor that targets those particular receptors. A person's tumour can also be analysed to determine whether or not it contains the protein molecules that trigger particular brake receptors on immune cells. This could, in principle, predict whether or not blocking the PD-1 brake system, for example, is likely to benefit a patient.

As straightforward as this seems, Davis states that "this has not proved to be so easy." He explains:

First, the brakes are dynamic; knowing what is keeping the immune system in check one day might not reflect the situation the next day. Also, things can change as a result of treatment; as one brake comes off thanks to a[n]…inhibitor, a tumour may adapt to exploit another brake system.

In addition, there is biological variability among cancer cells even within an individual patient:

A single tumour is sometimes said to be not a single disease but over a million different ones, with each of its millions of cancer cells being slightly different…. We don't yet know which molecules on a person's cancer are the best to target, we don't yet know whether or not every cancer cell would have to possess the same signature, we don't yet know how to limit the possibility of healthy bystander cells being attacked, causing unwanted side effects.

Importantly, Davis does not ignore the economics of these novel immune therapies:

It would be deceptive—dishonest—to write about new medicines without mentioning the financial problems that stand in our way: we sorely need new international institutes and different ways of funding medical research and medicines, where the well-being of humanity, and other life on earth, is paramount and financial profit irrelevant. I hope this is the brave new world that awaits us.

This is an honorable hope but realistically elusive, as societies struggle to incentivize the high-risk endeavor of developing breakthrough treatments, with their high rate of failure, while containing unregulated greed when success occurs.

The research honored by the 2018 Nobel Prize is a historic advance that already has restored the lives of many with cancer. But sadly, Davis notes, there are still large gaps in our knowledge of how to optimally unleash the immune system. After treatment with a PD-1 blocker, Jason Greenstein's lymphoma shrank, but then rapidly grew again, ending his life.

1
For a detailed description of Coley's life and work, see Charles Graeber, The Breakthrough: Immunotherapy and the Race to Cure Cancer (Twelve, 2018). ↩

2
See my “The T-cell Army: Can the Body’s Immune Response Help Treat Cancer?,” The New Yorker, April 23, 2012. ↩

Fall from Grace
Paul Starr MARCH 21, 2019 ISSUE
Merchants of Truth: The Business of News and the Fight for Facts
by Jill Abramson
Simon and Schuster, 534 pp., $30.00
Network Propaganda: Manipulation, Disinformation, and Radicalization in American Politics
by Yochai Benkler, Robert Faris, and Hal Roberts
Oxford University Press, 462 pp., $27.95 (paper)

Drew Angerer/Getty Images
Members of the BuzzFeed staff at the company’s headquarters a month before major layoffs were announced, New York City, December 2018
Since the early 2000s, journalism has been a precarious and embattled profession. The news industry has suffered staggering losses of revenue and employment, and journalists have become the targets of scorn and even hatred. The entire field has been politically reconfigured, as media outlets identified with different ideological positions provide their audiences with alternative versions of reality.

The profession’s fall from grace and the industry’s transformation have been all the more dramatic because of the advantages the news media enjoyed in the late twentieth century. Newspapers in most cities had consolidated down to one or two dailies, leaving the survivors with a near monopoly on print advertising in metropolitan markets. Although cable was making inroads, the three big broadcast networks still dominated television news. High-quality journalism itself was never very profitable in print or on TV, but it gave media organizations prestige and influence, and with their profits from advertising, they could afford it.

The monopoly held by the major news media also had the effect of marginalizing radical views on both ends of the ideological spectrum, creating the appearance and to some extent the reality of a broad bipartisan consensus in public life. Bolstered by healthy profit margins, the press was also able to cast itself as uncompromised by any commercial or partisan interest. Journalists and publishers who lived up to that standard of independence in the publication of the Pentagon Papers, the revelation of the Watergate scandal, and other great exposés became heroes.

This was the world that today’s older journalists knew when they were young. It was a world that concentrated power and profits but also enabled the press, insofar as its leaders were willing, to keep watch on government and business. David Halberstam’s The Powers That Be (1979),

which focused on four exemplars of the era (CBS, Time Inc., The Washington Post, and the Los Angeles Times), was a chronicle of that world at its height.

In the early stages of the digital revolution, the print media saw the new technology as a means of reducing production costs and expanding their audience, and they were so self-confident that they gave away the news for free online. But print circulation began falling, and as the Internet developed in the early 2000s, Google and sites such as Craigslist siphoned off ad revenue the newspapers had depended on, and Facebook would drain away more. The full force of the digital wave hit a decade ago, at the same time as the Great Recession, plunging many newspapers into bankruptcy and leaving others struggling to survive.

Yet there were promising signs too. New online media were creatively applying the unprecedented capabilities of digital technology, fostering new forms of public exchange, and receiving major infusions of capital. Since then, some of the new media organizations have begun to produce serious journalism and become genuine rivals to the traditional news giants, which have adapted to compete in the current environment. In the last few years, journalists who adhere to the profession's norms have also had a revived sense of mission. Amid the torrent of lies from the highest reaches of government and disinformation on social media, journalism's leaders are making unabashed claims that their business is "truth," using that word without apology or qualification.

But because journalism has not been a lucrative business for some time, its ideals of truth-telling have become harder to uphold. The majority of digital ad revenue goes to Google, Facebook, and other companies that do not put it back into producing content; most newspapers no longer have the resources even for many of the routine stories they used to cover, much less for costly investigations. News organizations of all kinds are preoccupied with the new metrics of the digital economy and the old imperatives of revenue and profits. Survival depends on monetizing organizational assets, which in practice often means calling on editorial staff to work on business projects, ending the separation that was once a cardinal principle of journalistic ethics.

This tension between editorial autonomy and profit lies at the heart of Jill Abramson's Merchants of Truth. Taking Halberstam's book as her model, Abramson uses four news organizations—BuzzFeed, Vice, The New York Times, and The Washington Post—to tell the story of how journalism has evolved since around 2007, the point when newspapers began getting desperate and social media began taking off. The book has been dogged by charges of plagiarism and carelessness that have deflected attention from its argument. Several passages in the chapters on Vice all too closely follow other writers' language; Abramson also got details wrong about a number of young journalists, making them appear inexperienced and unqualified. There is no excusing these failures, but not every damaged vessel should be sunk. For all its deficiencies, Merchants of Truth sheds considerable light on the news in this dark time; anyone who wants to understand what has been happening to journalism will learn a great deal from it.

Abramson is not a detached observer. She was in the thick of journalism's crisis of survival as executive editor of the Times from 2011 to 2014, when she was summarily fired by the publisher, Arthur Sulzberger Jr. Folded within Merchants of Truth is a personal memoir of her tenure that has inevitably drawn attention for its gossipy details and its significance in the age of women's demands for equality in the workplace (she was the first woman to hold the Times's top editorial post). But this is not what her book is about. Abramson believes she was underpaid and judged unfairly on sexist grounds, yet she also acknowledges so many limitations and mistakes of her own that she makes a fairly strong case for Sulzberger's decision to replace her. What connects her personal story to the book's larger theme is that she frames her difficulties as arising chiefly from the pressure at the Times to prioritize business concerns.

To broaden her account beyond the struggles of the traditional press, Abramson recounts the seemingly improbable transformation of two media upstarts into important journalistic outlets. BuzzFeed and Vice have followed a course that actually has old precedents. Innovation in the media often comes from the bottom of the market in cheap forms that the established institutions initially regard as unserious and vulgar. The penny press in the 1830s and later popular newspapers won mass audiences by catering to their readers' emotions, inventing new genres such as crime reporting, and adopting visually arresting changes in graphic design.

BuzzFeed was the brainchild of Jonah Peretti, who as a graduate student at the MIT Media Lab had become interested in what he called "contagious media." He first made a name for himself as one of the founders of The Huffington Post, where his mastery of techniques for gaming Google searches was invaluable in boosting traffic for the startup's cheap fare, mostly celebrity posts and rewrites of stories from other news outlets. He then saw an opportunity for a new media enterprise based on the viral spread of memes, and in 2006 set up BuzzFeed, originally as a laboratory for creating the tools to detect trends in online sharing faster than anyone else. This was just as Facebook was emerging: "It's like we happened to start surfing a few minutes before a great wave rolled in," Peretti said.

When BuzzFeed began offering content, it had no pretensions to journalism, aiming instead to get people to share its cat videos, weird news items, quizzes, and listicles. (Criticized for relying so heavily on lists, Peretti defended them as "an amazing way to consume media," citing the Ten Commandments and the Bill of Rights.) BuzzFeed's staff competed not just to go viral but to go "mega-vi"; no website was better at creating million-view posts out of likable or, even better, "relatable" trivia. Abramson mentions that BuzzFeed even discovered an emotion for which no word exists in the English language: "the feeling of having one's faith in humanity restored." Posts conveying that feeling went mega-vi. Whether BuzzFeed itself at that point restored one's faith in humanity was another matter.

Vice, which began as a counterculture paper in Montreal in the 1990s (its founders eventually moved it to New York), appealed to entirely different emotions. It sought to be edgy and provocative, oblivious to political correctness, and indeed intentionally offensive with articles like "Was Jesus a Fag?" and a "Racist Issue" featuring stereotypical racial images. Of Vice's three

cofounders—Shane Smith, Gavin McInnes, and Suroosh Alvi—McInnes was the one responsible for many of the provocations until his colleagues forced him out; he went on to found the Proud Boys, a far-right white-nationalist, antifeminist group. Smith was the dominant force in turning Vice into a media empire. His vision, Abramson writes, was for Vice to be "a bad-boy brand," but it was also a "laddie magazine" that was somehow a "bible for hipsters" too.

From these unpromising beginnings, BuzzFeed and Vice became respectable enterprises with high ambitions. In 2011 Peretti brought in Politico's Ben Smith as news editor and gave him the budget to hire accomplished young journalists and a mandate to do news in a way that would be as relatable and shareable as BuzzFeed's other content. Although BuzzFeed News at first specialized in little scoops that earned fleeting attention, Peretti authorized Smith to create an investigative reporting unit to do more substantial stories. In 2016, through the work of Craig Silverman, BuzzFeed also played a critical part in identifying and debunking "fake news" in its original sense as pure scams and fabrications. Vice's move up the ladder of respectability came chiefly through its expansion into video and development of international reporting "from the edge," often exotic and dangerous locations—even North Korea—where other news organizations would not go.

These undertakings were feasible only because BuzzFeed and Vice attracted capital from patient investors and advertising from major brands. With no tradition of strict separation between the editorial and business sides, both organizations created their own in-house staff to produce "native ads" that told stories in the same style as their editorial content and therefore had the same potential to be shared virally. For example, in a charming BuzzFeed video ad, "Dear Kitten," an older, wiser cat explains to a newly arrived kitten the pleasures and dangers of the house, eventually describing the delicious Purina Friskies that humans magically unlock from armored cans. (That ad, a classic of viral advertising, has been viewed more than 30 million times on YouTube.) Vice's video ads were so similar to its documentary reports that viewers could hardly tell the difference.

According to Abramson, BuzzFeed deleted posts that might offend sponsors, while Vice also killed stories or "sanitized" them when they jeopardized relationships with potential advertisers. The business of being provocative apparently did not include a readiness to provoke business. In one respect, these new practices were contagious; despite their misgivings, newspaper publishers were soon creating their own in-house agencies to produce native ads too.

By the early 2000s, financial pressures were forcing the owners of traditional media to sell or adapt. Several newspaper-owning families—the Chandlers of the Los Angeles Times, the Bancrofts of The Wall Street Journal, and the Ridders of Knight Ridder, for example—decided to cash in while they could, but the Sulzbergers at the Times and the Grahams at the Post held on. At first the Post seemed to be on a steadier course because of Katharine Graham's purchase in 1984 of the Stanley Kaplan test prep company, which became a gold mine, at least for a while, by expanding into for-profit education. Meanwhile, the Times made a series of blunders, including the disastrous decision to pay $1 billion in 1993 for the Boston Globe, which it would

be able to unload twenty years later for only $70 million. But the ensuing reversal of fortune is where Abramson's story holds its main interest. Chiefly because of different decisions about their core news business, the Sulzbergers succeeded in righting the Times, while the Post floundered and the Grahams decided to sell.

The Post's story, as Abramson tells it, is a case study in strategic short-sightedness. Determined to keep up the paper's profit margins to satisfy shareholders, the Grahams—first Donald E. Graham, Katharine's son, and then Katharine Weymouth, Don's niece—made round after round of cuts in the newsroom. Don Graham also insisted on maintaining the paper's focus on the local Washington area, rejecting advice to turn the Post into a global brand. In another bad decision, he turned down the proposal for what became Politico, which has developed into a formidable rival to the Post itself in Washington reporting. When Kaplan became implicated in the deceptive practices of the for-profit education industry and the Obama administration changed the rules for federal student loans, what had seemed like the Post's salvation became a curse. Kaplan's profits plummeted, and the Post's entanglement with the company damaged the paper's reputation. With no answer to the Post's difficulties, the Grahams in 2013 turned to a buyer whom they trusted to uphold the paper's traditions, Jeff Bezos, under whom it has rebounded.

In contrast to the Grahams, Arthur Sulzberger Jr. refused to make deep editorial cuts at the Times in the belief that if it maintained its standards, people would continue to pay to read it. The Times sold off its other assets, slashed its dividends, and cut its business staff. "Sulzberger was certain his paper could be 'the last man standing,'" Abramson writes, "as long as he was careful not to damage the quality of the news." Even though an initial effort in 2005 to establish a paywall on the website had failed, Sulzberger took the risk of imposing one again in 2011, this time with a design that allowed free access for infrequent visitors but required regular readers to pay. The new paywall proved wildly successful, generating a new stream of income from digital subscriptions.

But the financial pressures continued, and it was against that background that Abramson's conflicts with Sulzberger developed, especially over the pressure for closer collaboration between the editorial and business staffs. Abramson objected to journalists being "distracted from their work by endless meetings with product managers" who were trying to come up with money-making ventures such as apps and sponsored events. None of the incidents she relates, however, appear to have involved decisions that compromised the paper; her struggles with Mark Thompson, the Times CEO, were as much over turf as principle. She resented being imposed upon. During a discussion with Sulzberger and Thompson about apps for monetizing the Times's content, she "snapped" at Thompson: "If that's what you expect, you have the wrong executive editor." Although she claims that she was unwilling to sacrifice her "ethical moorings for business exigencies," it's not clear that any ethical sacrifice was being asked of her.

Yet in writing her book, or perhaps not writing enough of it, Abramson has landed herself in an ethical controversy. Her critics have been hard on her, and it's not surprising. A writer on lapses in journalism who becomes an illustration of the profession's problems is like a preacher revealed to be a sinner. No one in the congregation will talk about anything else.

Ruby Washington/The New York Times/Redux
Jill Abramson (center) with Gerald Boyd, Joe Lelyveld, and others in the newsroom of The New York Times as the Pulitzer Prizes were announced, April 2004

The sermonizer's sins, however, are sometimes a distraction from bigger problems. The major limitation of Abramson's book is that it offers too reassuring a picture of journalism. During her two years of work on it, she caught the Times and the Post on an upswing in their finances and BuzzFeed and Vice on an upswing in their editorial standards. In her conclusion, Abramson briefly discusses cuts in newsrooms elsewhere, but the general drift of the book is that things are looking up.

A wide-angle view would bring out a darker story. Newspapers around the country continue hurtling toward collapse, and digital media are not replacing them. Since 2004, according to a study by Penny Abernathy of the University of North Carolina, about 20 percent of newspapers have shut down, while many of the survivors have become what Ken Doctor of Harvard's NiemanLab calls NINOs (newspapers in name only): diminished ad shoppers with hardly any local reporting. Private equity firms have bought many of these to suck the last profits from them. The new year has also brought editorial cuts in digital news media, including layoffs at both BuzzFeed and Vice.

While the Times and the Post may navigate the digital transition successfully, they belong to a limited class of national news organizations large enough to generate substantial subscription revenue from their readers. There is no sign that the digital market can support local or even regional journalism at anything like the level it had in print.

The picture of the news that Abramson provides is also too reassuring because it leaves out the radical transformation of the right. The problem is not just the omission from her book of any sustained discussion of the major right-wing outlets such as Fox; Abramson is also missing a larger change. When Halberstam wrote The Powers That Be, it made sense to focus on a few individual news organizations. Most Americans got their news from a paper they subscribed to, an evening news program they watched regularly, and perhaps a weekly news magazine. Now they get news from more diverse and only hazily known sources, and much of it via social networks.

In Network Propaganda, Yochai Benkler, Robert Faris, and Hal Roberts illuminate this new "media ecosystem" through an analysis of how political news was linked, liked, and shared from 2015 to 2018 and how the news media either amplified or checked the diffusion of falsehoods.

The study is based on four million political stories from 40,000 online sources, as well as case studies of conspiracy stories, rumors, and outright disinformation.

The pattern that emerges from the data contradicts the idea that there are two symmetrical echo chambers on the right and left. On the right, Benkler and his colleagues find an insular echo chamber skewed toward the extreme, where even the major news organizations (Fox and Breitbart) do not observe norms of truth-seeking. But from the center-right (for example, The Wall Street Journal) through the center to the left, they find an interconnected network of news organizations that operate under the constraint of established journalistic norms.

The result is two different patterns in how falsehood travels. On the right, major news organizations amplified stories concocted in the right's nether reaches, such as Pizzagate (Democrats were purportedly operating a child-trafficking ring out of a pizza shop in Washington) and the Seth Rich murder conspiracy (an aide at the Democratic National Committee was killed supposedly because he divulged its e-mails to WikiLeaks). False stories originated on the left as well, but they were generally not relayed to a wider public. The right-wing media failed to correct falsehoods or to hold their journalists accountable for spreading them, whereas the rest of the media checked one another, corrected mistakes when they made them, and in several cases disciplined or fired those responsible for errors. These differences contributed to the greater susceptibility on the right not only to home-grown propaganda but also to Russian disinformation and commercially fabricated clickbait whenever these were consistent with what the authors call the "tribal narrative."

The analysis in Network Propaganda does not, however, exonerate mainstream journalism from all that has gone wrong in the media. In 2016, Benkler and his colleagues argue, the right was able to "harness" the press to its cause because of journalists' preoccupation with "balance" and eagerness for scoops. They note that the press had an institutional problem: How would it maintain balance if reporters did hard-hitting stories about Trump? Borrowing from a study by Thomas E. Patterson, they conclude that the solution was to run equally hard-hitting stories about Hillary Clinton. Journalists "performed" neutrality with harshly negative coverage of both candidates. In fact, according to Patterson's analysis, negative coverage of Clinton outpaced positive coverage 62 percent to 38 percent, while coverage of Trump was 56 percent negative to 44 percent positive.

The interest of mainstream journalists in balance created a market for scoops about Clinton that the right was able to help satisfy. A clear instance of this pattern is the coverage of the Clinton Foundation. The Times entered into an arrangement that gave it advance access to Clinton Cash, a book by a Breitbart editor, Peter Schweizer, sponsored by a project founded by Schweizer and Steve Bannon and funded by Robert Mercer. The resulting Times article insinuated that in exchange for money for the Clinton Foundation, Hillary Clinton had enabled a Russian firm to acquire control of American uranium assets, even though the Times had no evidence that she had intervened in the decision to approve the deal, which a committee representing nine government agencies had made. The Times article and other overwrought

and often misleading pieces in the mainstream press about the Clinton Foundation and the Clinton and DNC e-mails became some of the most widely shared news items in 2016, thus helping the Republican effort to depict Clinton and the Democrats as corrupt.

The negative mainstream coverage of Clinton, according to Network Propaganda, mattered far more than Russian disinformation to the outcome of the 2016 election. The authors' point is not to deprecate the value of professional journalism, which they recognize is indispensable. Even though perfect objectivity is impossible and truth is "necessarily provisional," Benkler and his colleagues write, truth-seeking organizations function differently from organizations set up to produce propaganda. While they are not always successful, the media that observe journalistic standards of truth make it possible to stop lies in their tracks. They give us some hope that a democratic society can reach a rational understanding of the world.

Yet the truth about our truth-seeking media, as Abramson's book rightly emphasizes, is that they are also profit-seeking; our merchants of truth operate not only under journalistic norms but also under commercial constraints. When a publisher succeeds financially, as Sulzberger did, by protecting the quality of the news, we ought to celebrate that achievement as a victory for democracy itself. When an organization like BuzzFeed hunts down and exposes fabrications, that is a victory too. But when so much of journalism is at risk of disappearing and so many Americans inhabit a right-wing echo chamber, we ought to recognize that our country is in a crisis that strikes at its foundations.