BIOGRAPHY TECHNOLOGY BOOKS & THE ARTS DECEMBER 12/19, 2022, ISSUE

Fortress of Logic

How the game theory of John von Neumann transformed the 20th century.

By David Nirenberg

NOVEMBER 28, 2022

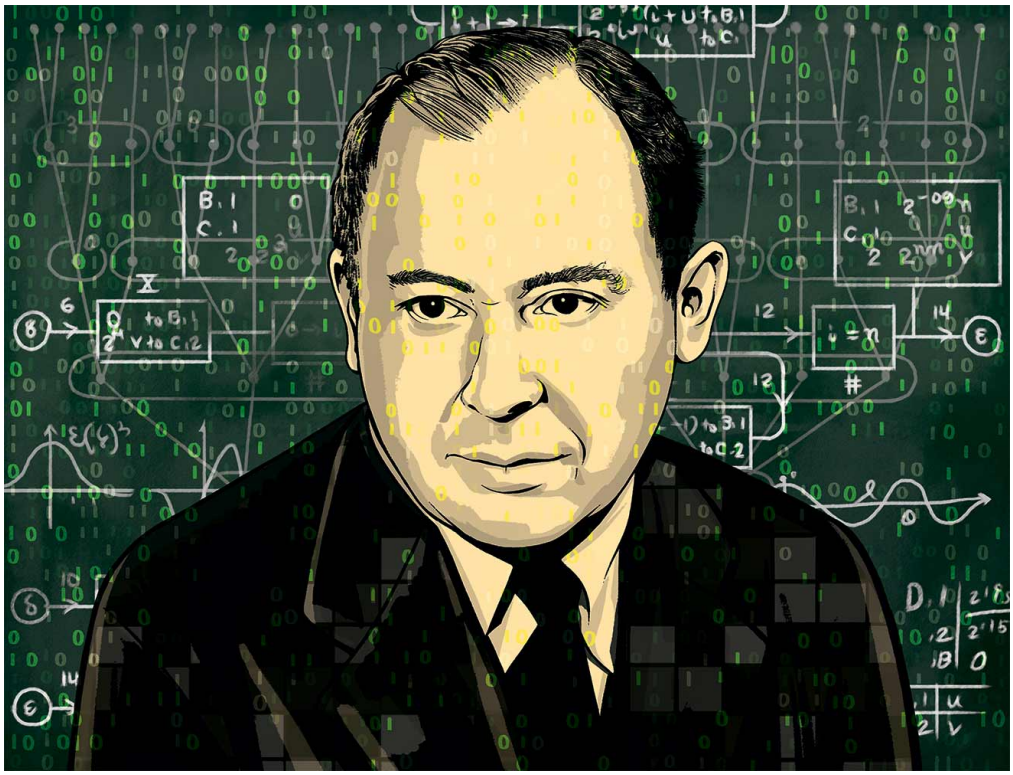

Illustration by Lily Qian.

Unlike his much more famous colleague Albert Einstein, John von Neumann is not a household name these days, but his discoveries shape the possibilities of life for every creature on this planet. As a teenager, von Neumann

provided mathematics with new foundations. He later helped teach the world how to build and detonate nuclear bombs. His invention of game theory furnished the conceptual tools with which superpowers today decide whether to wage war, economists model the behavior of markets, and biologists predict the evolution of viruses. The pioneering programmable computer that von Neumann and his employer, the Institute for Advanced Study in Princeton, N.J., completed in 1951 established "von Neumann architecture" as the standard for computer design well into the 21st century, making first IBM and then many other corporations fabulously wealthy.

Von Neumann was not only a wildly insightful scientist; he was also prescient about the threats that some of his discoveries posed to the planet. "What we are creating now," he said to his wife Klári after returning home from bomb work at Los Alamos in the spring of 1945, "is a monster whose influence is going to change history, provided there is any history left." He then changed the subject to the computing machines of the future and became even more agitated, foreseeing disaster if "people [could not] keep pace with what they create." Klári gave him some sleeping pills and a strong drink to calm him down, but von Neumann's fears did not go away. "Can We Survive Technology?" was the question that he asked the readers of *Fortune* magazine in 1955, predicting (among other things) "forms of climatic warfare as yet unimagined."

The Man From the Future, Ananyo Bhattacharya's new biography, attends to von Neumann the scientist and von Neumann the prophet, and to many other von Neumanns as well: husband, father, friend, and colleague. From his birth in

Budapest in 1903 to his death in Washington, D.C., at the age of 53, the book offers us a striking portrait of a man who contributed as much to the technological transformation of the world as any other scientist of the 20th century. Along the way, *The Man From the Future* also explains the science and why that science still matters.

Popular scientific biography is a difficult genre, because its heroes often speak a language that is hard for mere mortals to understand. Some of von Neumann's colleagues joked that he was "descended from a superior species but had made a detailed study of human beings so he could imitate them perfectly." In fact, not only von Neumann but a whole group of extraordinary Hungarian Jewish scientists who emigrated to the United States during the war were sometimes referred to as "the Martians," on account of their extraordinary abilities (and thick accents). Bhattacharya proves to be a skilled translator from "Martian" to human. His descriptions of the scientific questions are always engaging and generally illuminating—a real achievement, especially given the variety of topics that intrigued von Neumann. The book carries us from field to field, from set theory and the logical

foundations of mathematics at the beginning of his career, through the quantum revolution in physics and the computing revolution in calculation, to game theory and its implications for strategists (think *Dr. Strangelove*) and economists (think *A Beautiful Mind*), to the influence of von Neumann's late work in fields like neuroscience, evolutionary biology, and theories of self-replicating systems (whether genes or machines).

The tour is as rapid as the questing mind of its subject—imagine traveling to Kruger National Park, the Taj Mahal, Easter Island, and the Dome of the Rock all in one week—and every stop is fascinating, though some of the scientific subjects, unsurprisingly, are better covered than others. Through it all, there runs a simple and elegant explanation of von Neumann's greatest strength: In the words of the mathematical physicist Freeman Dyson, who overlapped briefly with von Neumann at the Institute for Advanced Study and was in some ways his successor, "Johnny's unique gift as a mathematician was to transform problems in all areas of mathematics into problems of logic."

Mathematics was not the only field to which von Neumann applied that gift. In fact, he transformed nearly all of the problems that interested him throughout his life into problems of logic. To put it in his own words, chosen by Bhattacharya as the book's epigraph: "If people do not believe that mathematics is simple, it is only because they do not realize how complicated life is." Over and over again, from his early paper establishing a new approach to mathematics's foundations by building on the axioms of logic and the concept of the "empty set" to his later contributions to economics and the social sciences, von

Neumann proceeded by reducing problems of intractable complexity to ones of logical simplicity. Bhattacharya suggests that this was true even of his child custody arrangements, citing Marina von Neumann Whitman, whose fascinating autobiography *The Martian's Daughter* speaks of her father's "lifelong desire to impose order and rationality on an inherently disorderly and irrational world."

That lifelong desire emerged early. János (von Neumann's Hungarian name) was born into a Jewish family that had become prosperous by pioneering catalog sales of hardware and farm machinery. His father, Max, a doctor of law turned banker, "believed in the life of the mind," as John's brother Nicholas put it, and insisted that his children learn ancient Greek and Latin as well as French, Italian, and English. János mastered all of these (on his deathbed he could still recall large portions of Thucydides's *History of the Peloponnesian War* in the original Attic), but some abilities, such as multiplying two eight-digit numbers in his head when he was 6, astounded more than others. His prodigious mathematical talent was noted as soon as he started high school, and he was immediately sent, as a young teen, to the University of Budapest, where three top mathematicians undertook his education. Von Neumann was 17 when he published his first paper, and he was still 17 when he took on the challenge issued by the great David Hilbert, then the elder statesman of mathematics, to find a logical basis for the field that would be free of any possibility of paradox. "If mathematical thinking is defective," Hilbert had asked, "where are we to find truth and certitude?" In 10 short pages, von Neumann set out to build a fortress of logic capable of defending mathematics, deploying set theory to

articulate a new definition of ordinal and cardinal numbers that avoided the paradoxes and complexities that had plagued all earlier definitions. It remains the standard today.

Von Neumann's doctoral dissertation in 1925 took on another foundational project: the systematization of all of set theory, a task he achieved with a single page of axioms from which vast palaces of mathematics could be built. A few years later, in 1928, he applied a similar approach to developing a theory of parlor games. In this early work of "pure mathematics," one can already see the insights he would deploy decades later in creating an architecture for computing machines that could, on the basis of a minimal set of logical instructions, inputs, and outputs, carry out any conceivable set of computations. In his *Theory of Self-Reproducing Automata* (published posthumously in 1966), von Neumann went even further, describing the conditions under which, with no more than eight parts (four structural and four dedicated to logical operations), complex creatures could emerge capable of executing any type of computation and even of replicating themselves. One of the glories of Bhattacharya's book is that it makes abundantly clear how von Neumann's early explorations into the deepest foundations of pure mathematics became the springboard for his contributions to so many other fields, from quantum physics to economics, from theories of computing to theories of biological life.

Bhattacharya guides us through all of these discoveries and the uses to which they were put, providing us with a vivid sense of the impact this singular figure has had on scientific thought. Each of von Neumann's insights is approached more or less the same way: as a cue ball shot into a waiting

rack of brilliant minds, its force knocking them into insightful paths and fantastic pockets of discovery. This model of writing about science has the advantage of narrative clarity and power, but it has some shortcomings as well. One of these is that, by concentrating so heavily on the genius of individuals, it misses the important role that institutions—from schools and universities to corporations and national governments—play in making discovery possible.

It is indeed exciting to follow the extraordinarily energetic von Neumann from one intellectual encounter to another, seemingly propelled by chance meetings at train stations and courageous voyages across a war-torn Atlantic. But we should not forget that those encounters took place within the vast network created by two government agencies scarcely mentioned in the book: the National Defense Research Committee and its successor, the Office of Scientific Research and Development, which coordinated nearly all US research related to World War II and in the process initiated a new age in the history of science.

Similarly, the institution that employed von Neumann (as well as Einstein, Kurt Gödel, and numerous others who people Bhattacharya's pages) from 1933 until his death in 1957 appears in the book primarily in envious caricature ("the Institute for Advanced Salaries") or as an obstacle to von Neumann's more applied ambitions. But his creativity would have looked very different had he not found refuge in that particular institution, designed to attract the best minds from across the globe regardless of religion, gender, nationality, or race; to let them pursue their interests in whatever direction they wished; and to ensure that the

results were made freely available to the world. The Institute for Advanced Study funded von Neumann's computer. It insisted on what we today call "open access," sending regular reports about its progress to hundreds of research centers in the United States and abroad, and it shared von Neumann's commitment to not patenting the results. How different would the history of computing have looked if von Neumann's programming architecture had been developed for the military, for a corporation, or for a university more intent on securing intellectual property rights than on promoting the free exchange of ideas? *Life* magazine was being hyperbolic when, in 1947, it called the Institute for Advanced Study "one of the most important places on the earth." But it was right in suggesting that research institutions and their values matter, given how much they shape our possibilities for learning, for discovery, and for the circulation of knowledge.

Perhaps the most significant shortcoming of Bhattacharya's approach is that his celebratory tone sometimes precludes serious critical engagement with the ways in which our world has been profoundly altered by the ideas he is writing about. This is most evident in his treatment of von Neumann's pioneering work in the social sciences, the 1944 book *Theory of Games and Economic Behavior*, written in collaboration with the economist Oskar Morgenstern. Like von Neumann, Morgenstern was a product of the collapsing Austro-Hungarian Empire, although from its aristocratic rather than its Jewish corners (his mother may have been the illegitimate daughter of Emperor Friedrich III). As an economist, his quest was—to borrow the title of a paper he published in 1935—to achieve

a science capable of “Perfect Foresight and Economic Equilibrium.” When Morgenstern presented that paper in Vienna, a mathematician in the audience suggested an article he thought might prove helpful: von Neumann’s “On the Theory of Parlor Games,” which outlined a set-theory approach to strategic choices in games like poker. As Morgenstern read the article, he began to wonder: Could theories of strategic choice by players in a game be extended to the choices of agents in an economy? Morgenstern started “to read a lot of logic and set-theory” and to write papers with titles like “Logic and the Social Sciences.” But it was only after he’d emigrated to the United States in 1938 that he received what he called “a gift from heaven,” namely a meeting with von Neumann.

Thus began the collaboration that produced *Theory of Games and Economic Behavior*. The coauthors state their goal plainly: “We hope to establish satisfactorily...that the typical problems of economic behavior become strictly identical with the mathematical notions of suitable games of strategy.” Before reading further, let’s pause to make sure we understand the massive implications of this claim. If you assume that the behavior of economies is built out of the desires and choices of individuals, then establishing “strict identity” means demonstrating that “the motives of the individual”—that is to say, basic aspects of human psychology—are entirely reducible to “mathematical notions.” This reduction is what von Neumann and Morgenstern set out to provide.

Invoking the example of physics, they begin by creating a radically simplified model, an economy of just one isolated individual who, following Marx and other earlier

economists, they named after Robinson Crusoe, the shipwrecked sailor of Daniel Defoe's famous novel. They then describe the axioms, the "assumptions which have to be made" in their model, about "the behavior of the individual, and the simplest forms of exchange." Here are some of those assumptions: First, the individual seeks to "obtain a maximum of utility or satisfaction" of various desires and wants within the given constraints. How do we know that the maximization of utility is a universal law of human nature? No reason is given. Next assumption: "Utility or satisfaction" must be quantifiable or at least rankable; otherwise it could not be maximized. But why should we think that desires are quantifiable or rankable, either by human agents or by the economists studying them? The axiom is not forced upon us by our psychological experience or empirical observation. It is necessary so that economics can become a mathematical science, much as in physics time needs to be thought of as the real number line, not because this corresponds to your sense of time (or Einstein's, or Marcel Proust's), but because it makes important aspects of modern physics mathematically tractable.

To give you a flavor of the argument, let me put yet another assumption in the more formal terms favored by von Neumann and Morgenstern: Given any two objects of desire (u and v), the subject can always say which one she prefers, or else that she has no preference. And what of cases where there are more than two options on the table, as there so often are? For any three or more commodities, objects, or imagined events—call them a, b, c, and so on—all rational agents who prefer a to b and b to c will also prefer a to c. This assumption is called the "transitivity of preference," axiom

3:A:b in *Theory of Games and Economic Behavior*. The meager justification: "Transitivity of preference [is] a plausible and generally accepted property." With this axiom about humanity in hand, von Neumann and Morgenstern proclaim that "a primarily psychological group of phenomena has been axiomatized."

Bhattacharya agrees. He offers a clear and accessible description of *Theory of Games and Economic Behavior*, avoiding formalism and using examples like the choice between watching TV or ordering take-out in order to narrate how "von Neumann quickly invented a revolutionary theory that allowed an individual's likes and dislikes to be assigned a number on a 'happiness' or utility scale, just as a thermometer reading gives the temperature of a bowl of soup." But can human happiness be measured like a bowl of soup's temperature? Bhattacharya appears to endorse this view, moving from description to celebration without once passing through criticism: "Von Neumann," he writes, "had achieved the supposedly impossible—a rigorous way to assign numbers to nebulous human desires and predilections."

Yet in making questions of human desire strictly identical to numbers, Bhattacharya, like von Neumann, has forgotten a basic truth about the relationship of logic to the complexity of life. In the words of an earlier logician and philosopher of astounding talent, Charles Sanders Peirce:

> *An engineer, or a business company...or a physicist, finds it suits his purpose to ascertain what the necessary consequences of possible facts would be; but the facts are so complicated that he cannot deal with them in his usual way. He calls upon a mathematician and states the question.... It frequently happens that the facts, as stated, are insufficient to answer the question that is put. Accordingly, the first business of the mathematician, often a most difficult task, is to frame another simpler but quite fictitious problem...which shall be within his powers, while at the same time it is sufficiently like the problem set before him to answer, well or ill, as a substitute for it.*

Every mathematical rendering of objects that are not purely mathematical is a simplification, an "as if," and that "as if" should always come with a caution. When you produce or encounter such a logical simplification, do not forget to ask: How "sufficiently like" is the similitude to the object of study? And how do I decide whether the difference is for good or ill? A great deal hinges on the answers to those questions, not least when the simplification on offer is of the human psyche.

Rather than ask these questions, however, Bhattacharya moves on to explore some of the more extreme applications of game theory, such as "gaming nuclear war." This chapter is important: Bhattacharya's explanations of the role of the RAND Corporation in strategic modeling, of John Nash's generalization of the theory to noncooperative conflicts and *n*-person games, and of the emergence of gamelike models for cooperation and conflict such as the "Prisoner's Dilemma," all help us to understand how game theory became and continues to be a key decision-making tool of

military strategy and international relations. But the more basic questions are never asked: Can a strict identity between human psychology and mathematical notions be established? And what is at stake in the answer?

No biography can do everything, so let us imagine what a more critical engagement with the *Theory of Games* would look like. One might notice, for example, that unlike the case in physics, von Neumann and Morgenstern's goal of "prediction by theory" in economics remains almost as far out of reach today as it was when the book was written some 70 years ago. Or one might ask whether their transitive and axiomatized man rings truer to our experience than the novel from which they drew his name, Defoe's *Robinson Crusoe*, published in 1719. From beginning to end, that book's eponymous hero is presented as a weather vane, unable to order, maintain, or even recognize his preferences. Years of shipwrecked self-reflection on his desert island do not erase the fluctuating nature of Crusoe's desires and aversions, as here, near the end of the novel:

> *From this moment I began to conclude in my mind that it was possible for me to be more happy in this forsaken, solitary condition than it was probable I should ever have been in any other particular state in the world; and with this thought I was going to give thanks to God for bringing me to this place. I know not what it was, but something shocked my mind at that thought, and I durst not speak the words. "How canst thou become such a hypocrite," said I, even audibly, "to pretend to be thankful for a condition which, however thou mayest endeavour to be contented with, thou wouldst rather pray heartily to be delivered from?"*

Speaking for myself, this moment feels familiar: a moment in which one becomes aware of the inadequacy, inconstancy, contradiction, and even self-deception of one's most intimate desires and convictions of happiness. Such conflicts within the self are often the very subject of literature and biography. Which is simply to say that in addition to explaining and even celebrating the powers of von Neumann's logic, *The Man From the Future* might also have pointed out that in many important aspects of his thoughts and desires, Defoe's Robinson Crusoe is not von Neumann's axiomatized man, and neither are we.

To understand why this is so important to remember, we need only return to the problem that so agitated von Neumann in 1945 as he considered the future of the technologies he was unleashing: "It would be unethical for the scientist not to do what they know is feasible," he declared, "no matter what terrible consequences it may have." So how could "people keep pace with what they create" in order to avoid those terrible consequences? Von Neumann returned to that question in his 1955 *Fortune* essay "Can We Survive Technology?," in which he asserted that changes in weaponry, communications, and climate meant that the world needed new political forms and ideals if it wished to avoid catastrophe.

The only recipe for surviving technological change, von Neumann concluded, was relying on "human qualities." But what are those qualities? What is "human" about them? And how can they help us achieve the political forms and ideals necessary to ensure our survival? Von Neumann and his powers of logic did not address those questions. On the contrary, he encouraged us to imagine a strict identity

between mathematics and the human, and he gave us the tools to extend one particular kind of human activity—games of strategy—into ever-greater domains of life. Today, game theory and its computational algorithms govern not only our nuclear strategy but also many parts of our working world (Uber, Lyft, and many others), our social lives (Meta, TikTok) and love affairs (Tinder), our access to information (Google), and even our sense of play. Von Neumann's ideas about human psychology provided the founding charter for the algorithmic "gamification" of the world as we know it. By concealing the distance between logic and the complexity of being rather than minding the gap, his axiomatized "psychology" heightened the very dangers he feared.

What does minding the gap look like? The first step is simply to notice that there is one, as J. Robert Oppenheimer did in 1960, a few years after von Neumann's death. "What are we to make of a civilization," he asked, "which has always regarded ethics as an essential part of human life, and... which has not been able to talk about the prospect of killing almost everybody, except in prudential and game-theoretical terms?" Oppenheimer had collaborated with von Neumann for many years, first leading the Manhattan Project, which produced the atom bomb, and then as director of the Institute for Advanced Study. This did not prevent him from realizing the dangers of reducing the human to a series of axioms, or from despairing—like Cassandra—of the possibility of making his warnings heard.

I suspect that both von Neumann and Bhattacharya would agree that we need logic and technology, but that we also need a better understanding of the human if we are to survive. If the human is not entirely reducible to logic or

algorithm, then that understanding cannot come from mathematics and technology alone. What quests for knowledge can produce it? What kinds of inquiries, collaborations, and research institutions are necessary if humanity is to "keep pace"? *The Man From the Future* does not ask these questions, but it may provoke others to do so.

I write these pages in the director's office at the Institute for Advanced Study, where von Neumann spent the bulk of his career. I am sitting at a desk that once belonged to Oppenheimer, who served as director from 1947 to 1966. The office itself hasn't changed much since Oppenheimer and von Neumann's day, though since I am a historian and not a mathematician or a physicist, I have added more bookshelves to supplement the blackboard favored by my predecessors. Perhaps there is a metaphor in the furniture, one capable of generating the "human qualities" that von Neumann thought so critical if we are to "survive technology." We need the bookshelves to interact with the blackboard. We need to engage the Robinson Crusoe of von Neumann and Morgenstern's economics with the Robinson Crusoe of Defoe's novel; Oppenheimer's "ethics" with game theory's algorithms; the drive toward logic and axiom with a recognition of those parts of the human psyche that cannot be reduced to noncontradiction or strict identity. We need institutions capable of generating such engagements between the different ways of discovering the human, and we need disciplines open to such interactions. Bhattacharya's book serves to remind us that this fundamental need is as urgent today as it has ever been. N

David Nirenberg David Nirenberg is the director and Leon Levy Professor at the Institute for Advanced Study.

To submit a correction for our consideration, click *here*.
For Reprints and Permissions, click *here*.

COMMENTS (2)

TECHNOLOGY SOCIETY FREE SPEECH

Who's Afraid of the Big Bad Twitter Files?

Just because the mainstream media decided to ignore them doesn't mean the files aren't newsworthy—or important.

By Ross Barkan

DECEMBER 20, 2022

Elon Musk and his Twitter profile. *(Muhammed Selim Korkutata / Anadolu Agency)*

It became quite easy, in the days after the so-called Twitter Files were dumped across the Internet, to dismiss entirely all of their revelations. For many progressives, the whole affair was a right-coded distraction, and therefore worth deriding or ignoring altogether. First, it was an Elon Musk production, and Musk has evolved into a puerile reactionary, suspending journalist accounts at will and tossing off idiotic gibes to his 122 million followers. The recipients of the Twitter Files were either apostates from the left or actual conservatives; major news organizations did not disseminate

the documents. So while the likes of Matt Taibbi and Bari Weiss bellowed the importance of what was found, the mainstream could collectively consign their reporting to a psychological backwater—safely ignored or, at most, angrily gestured at.

There are certainly some dubious aspects to the Twitter Files—which is why even a serious discussion of the reporting must be preceded by some throat-clearing. Twitter itself is used by less than 30 percent of Americans; it is still a narwhal swimming up against the blue whale of Facebook. Musk himself is no Jeff Bezos—the owner of the most consequential corporation on Earth and a major American newspaper, or even a Koch brother, forever trying to dominate the Republican Party. And the arrangement Taibbi, Weiss, and author Michael Shellenberger made with Musk to publish the Twitter Files remains questionable. Rather than post the documents to their Substack publications first—both Taibbi and Weiss run highly successful, independent newsletters—they agreed to the conditions imposed by Musk: All documents must leak on Twitter. Effectively running a public relations campaign for the billionaire's social media platform, Taibbi, Weiss, and Shellenberger published their reporting as unwieldy 30- and 40-part Twitter threads. The average person, not on Twitter at all, was destined to never properly apprehend what happened. Even obsessive users of the platform were left to sift through scores of tweets in reverse chronological order, sorting through the noise to find a few nuggets.

The Twitter Files, however, do matter. They matter because Twitter has become the de facto public square for a fourth or so of America—and for the many influential politicians,

journalists, pundits, and celebrities who continue to populate the platform. Twitter has the power, as was revealed in 2020, to determine how far news travels. The files showed how Twitter deliberated over banning certain accounts (Donald Trump's being the biggest) and ultimately suppressed—through the removal of links and even the blocking of direct messages—reporting by the *New York Post* on Hunter Biden's laptop, which turned out to be a valid news story, in the sense that the younger Biden's laptop was *real* and so were all of its contents. Most liberals did not care, because it was October 2020 and the defeat of Trump mattered more than any commitment to free speech principles; the locking of the account of a daily newspaper in New York City for weeks on end simply did not register as a crisis with a vital election looming. The reasoning was autocratic: For the greater good, a few must suffer, especially if their views are undesirable. (The Twitter Files held other smaller, if notable, revelations, including that the Stanford epidemiologist Jay Bhattacharya was placed on an internal backlist, his tweets artificially suppressed, because he was a critic of Covid-19 lockdowns.)

It is simply not enough to say Twitter is a private company and it can do what it wants. As the progressive California congressman Ro Khanna pointed out, this is the kind of answer that gets you an A on a high school exam but fails to account for the obligation a private entity of enormous consequence has to the public. Public discourse occurs on private platforms, but these platforms—in their scale and reach—behave like public utilities. The telephone company

can't stop a neo-Nazi from ever placing a phone call. Con Edison can't shut off a Proud Boy's electricity if he's still paying his bills.

There's the conflation, too, of the First Amendment and free speech. As the many liberals who now aggressively favor social media moderation point out, constitutional protections refer to what the government can and cannot do. Twitter isn't the federal government. But *free speech*, as a concept, dates back many centuries, encompassing the various philosophies and theories concerned with the protection of the individual's right to freely think and communicate. Corporate power over speech arguably matters just as much as the governmental regulation of speech; the former cannot be simply waved away as a private matter. Freedom of speech is not absolute, and there are reasonable regulations related to criminality, as well as mores restricting bullying and harassment. The question, as always, is how far these regulations should go when applied to what is now the *privately* controlled digital *public* square. Twitter, Facebook, Google, and TikTok are not like the newspapers of old, where editors decided daily what was fit for print. They are much more all-encompassing.

As the Twitter Files show, both the Biden campaign and the Trump administration took aggressive steps to control the flow of information, as did the FBI and the Department of Homeland Security, which have behaved similarly under both presidents. What we don't know is how Twitter is acting today, apart from Musk's public declarations and his various attempts to rescue what appears to be a severely damaged business model, thanks to his alienation of advertisers. Is the Biden administration having back-channel communications

with Twitter today? What concessions is Musk making now? In this regard, the otherwise swashbuckling Taibbi has behaved like any conventional journalist, covering for the powerful source that offered him such precious leaks. In the future, perhaps Taibbi will go rummaging around Muskworld to tell us what Twitter looks like in 2022 and 2023—not just what it looked like in 2020.

What is to be done now? These debates have been scrambled so much along ideological lines—with the right wing disingenuously appropriating civil liberties rhetoric, while the left appropriates the arguments of censorious cultural conservatives—that honest debate feels impossible. If there is any principle to glean from this morass, it's that *less* regulation, suppression, and censorship of speech is better than more. Before Trump defeated Hillary Clinton in 2016, social media moderation was not a cause that particularly animated the left. In fact, Barack Obama's exploitation of Facebook in 2008 was regarded in almost mythical terms: the handsome young candidate seizing the tools of the future for the benefit of the commonweal. Trump's victory was ascribed to his campaign's embrace of Facebook misinformation, the fake news that poisoned the minds of so many voters. If there was truth in this tale—plenty of false information churns through Facebook and the Trump camp really did outflank Clinton there—it was also simplistic, forever attributing age-old ills like racism and nativism to technology that wasn't needed for any of those ills to flourish.

Twitter and the rest of the Internet are simply too big for anyone—whether Musk or the left-leaning tech workers recently purged from the company—to properly regulate

when it comes to the flow of speech. There's an absolute danger in allowing a select few human beings to decide, rapidly and arbitrarily, what is "good" speech or "bad." Liberals didn't care in 2020 because the *New York Post* is Rupert Murdoch's toy. But what if a future Republican administration pressures Musk or anyone to start locking the account of *The New York Times*? *The Washington Post*? The possibilities for abuse are endless. The Twitter Files, at the minimum, should push us closer to reckoning with the gravity of these unsettling questions.

Correction: An earlier version of this story referred to Hunter Biden's laptop as stolen. The laptop in question was brought by someone to a computer repair shop; it has not been determined that it was stolen.

Ross Barkan Ross Barkan is a *Nation* contributing writer. He also writes a column on national politics for *The Guardian* and is a contributing writer at *New York Magazine*.

To submit a correction for our consideration, click *here*.
For Reprints and Permissions, click *here*.

COMMENTS (12)