

The Hardest Part Is Always People

Sandra González-Bailón

Technological innovation has a dual nature: it is propelled by visionary inventors but its ultimate trajectory is shaped by human behavior, which is messy, unpredictable, and resistant to neat explanations. Information infrastructures reflect this same tension: their design alone cannot guarantee purpose or alignment with collective goals. Only by asserting authority over how priorities are defined can we ensure that information architectures serve the social infrastructures they are meant to support.

Technological change is perhaps most aptly described with two aphorisms: “the best way to predict the future is to invent it” and “the hardest part of predicting technology is predicting people.” The first conveys the hubris with which technological elites (tech founders, investors, high-ranking engineers) try to shape our shared trajectories. It is also a call for action: the future needs to be actively shaped by creating the conditions that will allow preferred scenarios to flourish. The second aphorism highlights the difficulty of anticipating what those conditions are. Hubris or the inclination to act does not make it easier to manage people. Ultimately, only people can manage themselves. And so it is that you may deploy new technology thinking it will do *this* and it ends up doing *that* because of how people decide to use it.

The past twenty years of digital innovation offer many examples of the hubris that has shaped the world we live in and its many blind spots because, well, social behavior is difficult to fully envision.

The web was created to put the world’s information at our fingertips, only to then allow us to open the garden gates to platforms personalized for us. There we remain, unable to leave. Internet networks spanned continents to bridge time and space, but most users decided to stay parochial, committed to narrow views. Social media once promised to liberate the world, but we got stuck to their feeds like flies to a glue strip. Liberation, it turned out, was never the point.

Yes, there are structural factors that do not leave much space to maneuver. As users, there is only so much we can do to counter the network effects of technology: its value increases with the people who use it and resisting the pull is like resisting a powerful wave. There is also little we can do to resist economic pressures to get on board with the latest tool promising to transform society (exhibit A: AI chatbots). Nobody wants to miss the gold rush. But what we pay attention to is still in the realm

of the things we control. We may feel forced to use a technology, but we decide to what end we put it.

Information infrastructures like the internet exist to enable communication and disseminate knowledge, support coordination, and facilitate innovation. The press is one of the key pillars of modern society because it created that type of infrastructure. The newswire allowed information to move faster than traditional mail, and it enabled newspapers (national and local) to create a shared public understanding of events as they unfolded. The muscle of the Fourth Estate owes much of its strength to the old cousin of the internet: the telegraph.

Journalism as an institution holds society together by helping establish what is shared reality. Journalism as practice faces many difficulties, and the internet has proven to be a much more challenging medium for the press than the telegraph was in its day. Drowned in screens full of competing content, we – the common people – seem to be paying less attention to the news. Our feeds offer unlimited material to look at, and although we choose what we pay attention to, we still do not always choose wisely.

The *Our Common Purpose* report, published in 2020, asked what we can do today that will strengthen American political and civic life in the world to come.¹ It presented six strategies and thirty-one recommendations for reinventing American constitutional democracy. The fifth strategy focuses on how to build civic information architecture that supports common purpose and sets 2026 as the time horizon for achieving “significant progress toward its recommendations.”²

Writing these lines in 2026, it is difficult not to read the report with the same retrospective smugness with which we read old diary entries, that dubious pleasure of knowing how the story turned out. The report’s recommendations indeed resemble the aspirations of an ambitious younger self. You wake up one day contemplating where those ambitions actually landed.

In his contribution to this volume of *Daedalus*, Ethan Zuckerman describes the reality of the past six years with well-chosen pearls: tech elites and political elites are today more intertwined than ever; platforms’ increasing secrecy is eroding attempts to hold them accountable; public media are being defunded, tightening the lid on society’s Fourth Estate; and the AI beast is pulling at its chain, threatening to devour everything that makes us human.³ How is all this compatible with the lofty goal of rebuilding the information architecture to strengthen a shared civic mission?

The “common purpose” that gave title to the report seems even more elusive today than six years ago. (Not that the report offered an explicit definition of *purpose*, other than coming up with “creative and innovative solutions to democracy’s greatest challenges.”)⁴ Who decides on shared priorities as we look for those solutions? This question, alas, defies agreement.

Those who believe in the invisible hand of the market will argue that it is all of us self-interested people who ultimately determine how value is ranked. As if we didn't contain multitudes.

Yes, we may want to have more control over privacy, but no, we don't invest the time or energy to customize the privacy settings on the apps that crowd our days. Yes, we may want to be informed citizens, but no, we are not willing to pay the subscriptions that fund journalists nor spend time reading their reporting. Yes, we may want to build engaged civic communities, but no, we do not want to deal with the inevitable fatigue and friction required to keep them cohesive. We may want to be better versions of ourselves, but we do not always have it within us to change: life is demanding. Technological markets cannot resolve these paradoxes, so they often misread what we want, our actual priorities, and the values we hope to see elevated.

Those who believe in the power of corporations to manufacture demand (who, again, asked for ChatGPT?) will argue that our needs are engineered. As if the need to connect and communicate did not define the core of our existence. We may not have asked for ChatGPT, but there was no difficulty coming up with uses once it was available to us. AI breakthroughs are already indispensable. As Zuckerman writes, "It's unclear whether any institutions have the power to halt a societal adoption of powerful AI systems."⁵ Look at how universities – from professors to students to administrative leadership – are all embracing the AI age.⁶

Building on the observations of legal scholar Evelyn Douek, Zuckerman singles out 2020 as the year that changed the internet.⁷ It was the year of the COVID-19 pandemic and the many false claims that were being made about the virus, so platforms turned up the dial on content moderation, with cascading consequences, including the deplatforming of political figures that came back with more power. I see other turning points. Most prominent for me are 2013 and 2016. It is in 2013 that we saw the start of the #BlackLivesMatter movement but also Edward Snowden's revelations on mass, global surveillance programs; the launch of the Internet Research Agency, a Russian company engaged in online propaganda and influence operations; and the purchase of *The Washington Post* by Amazon founder Jeff Bezos. In 2016, we saw Brexit, Donald Trump's first electoral success, and AlphaGo (created by DeepMind, an AI research lab acquired by Google in 2014) winning against the Go master Lee Sedol. The latter victory was one of the breakthroughs that allowed AI to become the reality it is today, a reality we praise and fear. The AlphaGo episode is not mentioned in Zuckerman's essay, but it created the conditions (the capital, the public expectation) for what he calls "the next big shift": the public release of ChatGPT in late 2022.

All these events – and many others over the course of the last twenty-five years – changed the nature and possibilities of the information architectures we have today. What happened in 2020 was just another turn. There are many such turning points. There are also many forking paths, moments when the outcome was decided rather

than delivered. Breakthroughs and discoveries happen unpredictably, information architectures are designed. The question is by whom and with what incentives.

In the end, what the *Our Common Purpose* report and Zuckerman's essay advocate for is something everybody agrees on: information infrastructures can support and erode common purpose; in other words, we need to keep the good stuff and hold off the bad stuff. How can we maximize the benefits of information infrastructures while protecting the resilience and integrity of the underlying social fabric? Achieving this balance requires designing systems that enhance connection and trust rather than fray them.

In his recent book *How to Save the Internet*, Nick Clegg (former president of global affairs at Meta) opens with what he calls the Power Paradox: "On the one hand, digital technologies, from the internet and social media to generative AI, have greatly democratized power, and promise to continue to do so, loosening the control of political and media gatekeepers...; on the other, they have centralized economic and political power in the hands of a small number of vast internet platforms."⁸

We can easily agree that these two realities coexist. Diagnosing what went wrong in two decades of platform disruption is far more difficult.

Clegg's account of what he learned during his time at Meta is very different from that of Sarah Wynn-Williams – a senior public policy executive at Meta prior to Clegg's arrival – in her memoir *Careless People*.⁹ Clegg talks about platform power: that is, the influence these technologies have over public life. Wynn-Williams talks about the power of people: specifically, the people choosing which fork in the path to take. Both cherry-pick their recollections to create a different narrative of the power dynamics keeping platforms afloat, but the data points they decide to focus on are indicative of the nature of the problem: technologies without people are like words without air. Just silence. Technologies only become consequential when animated by purpose and social meaning. The question again is whose purpose and meaning these infrastructures are built to serve.

(On the topic of cherry-picking evidence or, rather, how to prevent it: one of the *Our Common Purpose* recommendations was to require, through federal legislation, data openness to allow researchers to measure what happens in digital contexts. Not only is such legislation nonexistent in the United States but the U.S. government is currently actively opposing European attempts to make tech firms more accountable. As said: the aspirations of a younger self.)

Yet there is a deeper read on technology's ability to support or destroy, not different from how we look at science and the rationality that drives it. Sometimes ideas run away from their creators (like algorithms running amok). Sometimes technological breakthroughs carry moral ambiguity: they are neither good nor evil but can be both. In *The MANIAC*, a fictionalized biography of polymath John von Neumann, Chilean writer Benjamín Labatut recounts the birth of artificial

intelligence through the lives of those who brought it into existence.¹⁰ He writes: “Technology . . . is a part of us, just like the web is part of the spider. . . . It is not the particularly perverse destructiveness of one specific invention that creates danger. The danger is intrinsic. For progress there is no cure.” (This last sentence is borrowed verbatim from von Neumann’s essay “Can We Survive Technology?” published in 1955.)¹¹ The point is: there is no cure for human inventiveness, which is good because that is also our hope.

To return to the aphorisms that began this response: the future we want needs to be actively shaped by creating the conditions that will allow it to flourish. That future starts with claiming authority over how we define priorities. Zuckerman closes his essay with an example of how this can be accomplished through “civic-participation efforts to ensure that AI adoption considers social impacts.”¹²

The state of New Jersey has been using All Our Ideas, a crowdsourcing platform, to collect information on the hopes and concerns workers have about the impact of generative AI on work.¹³ This platform was originally created by sociologist Matthew J. Salganik at Princeton University to scale up survey research and combine it with voting and ranking mechanisms so that different ideas can not only be considered but also prioritized. This tool is now hosted by the nonprofit Citizens Foundation, whose stated mission is to connect governments and citizens.¹⁴

That is a great example of how technology can serve the shaping of civic information architectures. The power of technology lies not just in building the future but in helping us stay focused on what matters most.

ABOUT THE AUTHOR

Sandra González-Bailón is the Carolyn Marvin Professor of Communication and Associate Dean for Doctoral Studies at the University of Pennsylvania’s Annenberg School for Communication. She is also Co-Director of the Center for Information Networks and Democracy (CIND) and has a secondary appointment as Professor of Sociology in the Department of Sociology at Penn. Her research has been published in journals like *Science*, *Nature*, *PNAS*, *Political Communication*, and *Social Networks*. She is also the author of *El Vuelco: Historia personal y política de cómo las redes han cambiado el mundo para siempre* (with *El País* tech journalist Jordi Pérez Colomé, 2026) and *Decoding the Social World: Data Science and the Unintended Consequences of Communication* (2017). She is also the coeditor of *The Oxford Handbook of Networked Communication* (with Brooke Foucault Welles, 2020).

ENDNOTES

- ¹ American Academy of Arts and Sciences, *Our Common Purpose: Reinventing American Democracy for the 21st Century* (American Academy of Arts and Sciences, 2020), <https://www.amacad.org/ourcommonpurpose/report>.
- ² Ibid., iv.
- ³ Ethan Zuckerman, “Civic Information Architecture,” *Dædalus* 155 (3) (Summer 2026): 134–151, <https://www.amacad.org/daedalus/civic-information-architecture>.
- ⁴ American Academy of Arts and Sciences, *Our Common Purpose*, 51.
- ⁵ Zuckerman, “Civic Information Architecture,” 144.
- ⁶ Keigo Kusumegi, Xinyu Yang, Paul Ginsparg, et al., “Scientific Production in the Era of Large Language Models,” *Science* 390 (6779) (2025): 1240–1243, <https://doi.org/10.1126/science.adw3000>; and Helen Pearson, “Universities Are Embracing AI: Will Students Get Smarter or Stop Thinking?” *Nature*, October 21, 2025, <https://www.nature.com/articles/d41586-025-03340-w>.
- ⁷ Evelyn Douek, “COVID-19 and Social Media Content Moderation,” *Lawfare*, March 25, 2020, <https://www.lawfaremedia.org/article/covid-19-and-social-media-content-moderation>; and Evelyn Douek, “The Year That Changed the Internet,” *The Atlantic*, December 28, 2020, <https://www.theatlantic.com/ideas/archive/2020/12/how-2020-forced-facebook-and-twitter-step/617493>.
- ⁸ Nick Clegg, *How to Save the Internet: The Threat to Global Connection in the Age of AI and Political Conflict* (Vintage, 2025).
- ⁹ Sarah Wynn-Williams, *Careless People: A Cautionary Tale of Power, Greed, and Lost Idealism* (Flatiron Books, 2025).
- ¹⁰ Benjamín Labatut, *The MANIAC* (Penguin Press, 2023).
- ¹¹ John von Neumann, “Can We Survive Technology?” in *Volume VI: Theory of Games, Astrophysics, Hydrodynamics and Meteorology of John von Neumann: Collected Works*, ed. A. H. Taub (Pergamon Press, 1963), 504–519, https://sseh.uchicago.edu/doc/von_Neumann_1955.pdf.
- ¹² Zuckerman, “Civic Information Architecture,” 144.
- ¹³ Dane Gambrell, “AI and You: How New Jersey Is Using Collective Intelligence to Get Smarter on AI,” *The Reboot Blog*, July 30, 2024, <https://rebootdemocracy.ai/blog/ai-and-you-all-our-ideas-new-jersey>.
- ¹⁴ All Our Ideas, “About This Project,” <https://allourideas.org/about> (accessed June 3, 2026). In 2024, it was announced that the project would move from Princeton University to be housed within the Citizens Foundation. See Matthew Salganik, “allourideas.org Is Being Reborn,” All Our Ideas blog post, April 15, 2024, <https://blog.allourideas.org/post/747830324389691392/allourideasorg-is-being-reborn-as>.