

EDITOR'S JOURNAL

A 40-Year Conversation

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In the fall of 1984, National Academy of Sciences president Frank Press introduced the first copy of *Issues in Science and Technology*, writing that this magazine would be “dedicated to the broadening of enlightened opinion, reasoned discussion, and informed debate of national and international issues in which science and technology play a critical role.”

As *Issues* begins its fortieth year of publication, the conversation Press envisioned continues. Technology has altered the forms that discussion and debate now take, with paper pages now extending onto the internet, social media, podcasts, and webinars. This is a testament to Press’s goal for the “provocative, informative, and lively” magazine to itself be a conversation: in that first issue he invited *Issues*’ readers to be its writers.

To celebrate this anniversary, *Issues*’ editors have been pawing through our archives. The first table of contents listed articles on ballistic missile defense, air bags, reindustrializing America, reconsidering Medicare, and export controls. Often our trawl through the archives was profoundly hopeful—thoughtful policies *can* change the trajectory of technology and create better lives. It was also an opportunity to take the long view of how policy change happens and why it sometimes doesn’t.

Reading the archive is an opportunity to imagine alternative universes with different policies, where, for example, air bags were not adopted; where failure to secure agreements on arms control risked nuclear war; or where efforts to combat AIDS never happened. Or an alternate world in which policies to limit greenhouse gas emissions began as early as 1987, the year *Issues* published an article about climate change by Jessica Tuchman Mathews, who was then the vice president and research director of the World Resources Institute.

Mathews’s thoughtful article did not lead to policy change, making for painful reading today. With careful and rapid adoption of what we would now call decarbonization strategies, “the prospects for averting an unacceptably large greenhouse warming might soon appear dramatically better than they do today,” she wrote.” The task itself will be easier to accomplish now than later. And if, by some completely unexpected turn of events, the greenhouse warming disappears as a global concern, the world will still be better off.”

As senior editor and then editor-in-chief of *Issues* from 1987 to 2019, Kevin Finneran had an extended and up-close view of what Press called “the inextricable relationship between science and technology and society.” He describes how science policy’s political context shifted as science lost the privileged position it held early in the postwar era. By the 2010s, Finneran reflects in this issue, science had accepted that social engagement required “a two-way conversation, not a lecture.” The last ten years, amid the pandemic and powerful new technologies, brought further shifts: “We can expect to recalibrate the relationship between science and society many times in the next 20 years.”

Issues’ fortieth birthday also offers a chance to consider the cycles of policy itself. In 1984, Arati Prabhakar, the subject of this issue’s interview, first came to Washington, DC, as a fellow at the Office of Technology Assessment, a congressional service that operated from 1974 to 1995. There she contributed to a report on research and development in microelectronics, where growing Japanese dominance in semiconductors was considered a vulnerability.

Now director of the White House Office of Science and Technology Policy (OSTP), Prabhakar is once again working on semiconductor policy, but in the context of the 2022 CHIPS and Science Act and a reinvigorated industrial policy.

Prabhakar brings insights from a career that has spanned government, industry, and nonprofits and a sense of how policy, technology, and the market interact. “Our work is to look from a systems perspective across the ecosystem and see what needs to be strengthened, what needs to be maintained, what needs to be shifted,” she explains. She sees OSTP’s job as ensuring that “the whole ecosystem is working in a vibrant, really robust way, because it’s not just about discovering marvelous new things. Making sure that this investment that we make in federal R&D ultimately changes the lives of Americans—that’s the job.”

This issue also includes the voices of elected officials who play essential roles in setting science policy. *Issues* asked four first-year Congresspeople (two Republicans and two Democrats) with backgrounds in science, engineering, and medicine to answer a short list of questions. The responses—from pediatrician Yadira

passed away in 2020. Over the next year, the *Issues* team will be exploring new ways to broaden the conversation that he started.

Ever since the second issue, the magazine’s Forum section has been a place for debate about the ideas expressed in its pages. We’re now working to extend that discussion online by making it more timely, bringing in new voices, and creating easy ways to share it on social media. We welcome your thoughts on this process.

We will continue adopting digital tools to continue the conversation in new forms. Our podcast features thoughtful discussions led by *Issues* editors. Recent guests have included former US energy secretary Ernest Moniz; artist Rebecca Rutstein and oceanographer Mandy Joye; and Center for Open Science cofounder Brian Nosek. We also host regular webinars on important topics in science policy. These events are open to all and video is archived at issues.org. And our newsletter

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Caraveo from Colorado, Navy helicopter pilot and nurse practitioner Jen Kiggans of Virginia, meteorologist Eric Sorensen of Illinois, and nuclear submarine naval officer Brandon Williams of New York—all acknowledge the difficulty of working in a deeply divided, partisan Congress. But their thoughtful responses suggest that science and technology policy is still a place where the two parties can find common ground.

As these representatives advance in their political careers, they will shape how the relationship between science and society evolves. Echoing Prabhakar, Rep. Williams praised systems thinking as a tool. “Too often in government policies,” he writes, “the legislative ‘cure’ to a problem fails to anticipate its adverse effects. Thinking in terms of a system helps me ask questions and seek alternatives that respect the realities revealed by physical and social science.”

After a career that included advising four US presidents and serving as president of the National Academy of Sciences from 1981 to 1993, Frank Press

brings the conversation—along with announcements of upcoming events—to your inbox every Friday.

We’re also inviting you—our readers and contributors—to visit our archives and share your thoughts on what was, what might have been, what never should have happened. Our online archives go back to 1997. If you’re looking for an earlier piece, let us know and we’ll happily dig it out and publish it.

As with any good conversation, we don’t know where this project will lead, or what form the exploration will ultimately take. It is a powerful way to reflect on the deeper purpose of science policy: building a better world.

And on that note, in August, *Issues* welcomed Charlotte Marie Lloyd and Henry Hieu Quach-Yealy to the world. Charlotte was born to managing editor Jason Lloyd and Elizabeth Lloyd and Henry to digital engagement editor Kimberly Quach and Chris Yealy. As we look ahead to the next 40 years, this next generation inspires us to continue engaging deeply with the ongoing transformation of the world by science and technology.