

## Editor's Journal

The United States is now experiencing the most important political debate about science policy since the years after World War II. This time around, the debate is driven by concerns that include competition with China, economic and social inequity in America, and COVID—not to mention the apparent willingness of Congress and the Biden administration to put billions of dollars toward science and innovation.

Three competing agendas are now coming into focus in this debate. One looks toward supporting the institutions that were successful in the past, one considers solving the problems of the present, and the third proposes to prepare for the unknown. Taken together, they suggest an extraordinary moment for new alignments and goals for the nation's scientific enterprise.

The first of these three policy axes seeks to meet the challenges to the nation, particularly competition with China, by bolstering the institutions generally credited with having made the United States the unquestioned global leader in science and innovation. Architects of this perspective come from leading research universities and research advocacy groups. Their plan, which emphasizes getting new money into research universities, enhancing partnerships between universities, government, and industry, and focusing effort on economically important and globally competitive areas of research and technology, such as artificial intelligence, quantum computing, and energy, was presented in spring 2020 as the Endless Frontier Act. Introduced by Senator Chuck Schumer (D-NY) with bipartisan support in the Senate and House, a revised bill is now being readied for introduction in the Senate.

The second perspective looks not toward China as a motive for innovation policy, but to internal problems that have grown despite the nation's history of science and technology leadership. This view, brought into sharp focus during COVID, is motivated by decades of rising income inequality, the disappearance of good jobs, persistent disparities in health, and the consequent economic and social marginalization of large swaths of the populace. From this point of view, science and innovation policy—long predicated on its contributions to social well-being—needs to be explicitly tailored to meeting the urgent needs of Americans. The National Science Foundation for the Future Act, recently introduced by Representative Eddie Bernice Johnson (D-TX), adopts this perspective.

The third approach, which is still taking shape, questions whether the institutions that the United States has depended on for the past 75 years are equal to the task of competing in a world of globalized research and innovation. Instead, in this view, the success of China and other nations should be met by rapidly enhancing the nation's ability to participate in a globalizing innovation enterprise where new knowledge and technologies can emerge from almost anywhere at any time. Old ways of assessing the health of the nation's activities, such as levels of spending, numbers of publications, PhDs, patents, and Nobel prizes, are seen as reinforcing an inward focus that may have the effect of further locking us into an innovation system that has become obsolete. Instead, we should position the United States as a nimble player in a global innovation endeavor, where the measure of success is in applying knowledge and innovations—wherever they are created—to meeting the economic and social needs of the nation. As Melissa Flagg, of the Center for Security and Emerging Technology at Georgetown University, and Paul Harris, of the Australian National University, summarized it in a piece for us last spring, “Rather than dominating investment and controlling the participants in the system through federal policy, leadership is now more about seeing the entire system as a whole and leveraging it wisely.”

The emergence of these competing perspectives is evidence of newly arising political opportunities. As Andrew Schrank explains in his article on the politics of industrial policy, legislators may “decide to exploit the current moment to build a broad coalition of disparate actors marked by diffuse goals—including geopolitical competition, environmental sustainability, economic security, and social justice—in an effort to pursue their shared vision.” That’s exactly how good politics works.

Whether this energized debate will translate into science and innovation policies suited to an extraordinarily complex, rapidly evolving global context remains to be seen. In the coming months, *Issues* authors will present a broad range of perspectives and visions aimed at nourishing and improving the quality of debate and policymaking as it takes place. In the meantime, we invite you dig into our spring edition, which explores the weirdness of the cognitive ecosystem, the unpredictable politics of nuclear power, and the daunting ethics of ventilator allocation—all further evidence of a world remaking itself before our eyes.