

# Was “science” on the ballot?

Labeling dissent as “anti-science” is bad social science and bad politics

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**O**n 7 November 2020, moments before Kamala Harris and Joe Biden began their victory speeches, giant screens flanking the stage proclaimed, “The people have chosen science.” Yet, nearly 74 million Americans, almost half the voters, had cast their ballots for Donald Trump, thereby presumably not choosing science. Prominent scientists asserted that “science was on the ballot” and lamented that “a significant portion of America doesn’t want science” (1). But before despairing at the loss of trust in science, we should be sure we are worrying about the right problem. Was “science” really on the ballot? Is it useful to imagine U.S. citizens as divided into pro-science and anti-science camps? Does the label anti-science serve the purposes of deliberative democracy? The answer to these questions is plainly no. A correct diagnosis is essential to repairing the sorry state of science-society relations in the United States.

Campaign slogans notwithstanding, science was not on the ballot. If the election contested any aspect of science, it was not the worth of scientific knowledge but the authority of experts to decide how people should live their lives. What looks like an attack on science may simply be the pursuit of politics by other means. Americans are indeed divided, but the division is not between those who march for science and those who march against science. It is between competing understandings of how to balance collective responsibility and individual liberty. That division runs so deep that, for some, it even justifies violence and insurrection. Insisting on facts is not by itself an adequate response. Indeed, it fundamentally misconceives the role and power of science in modern democracies.

## A PROXY WAR

The pandemic has seen much hand-wringing about Americans’ unwillingness to “accept science” and follow public health directives: wear a mask, obey lockdowns, accept job loss, homeschool children, let loved

ones die alone. Dissent from such mandates should not come as a surprise. Acceptance of intrusive public health policies, no matter how essential, depends on trust, not merely in “the facts” but also in the institutions that produce and evaluate evidence and weigh trade-offs. Epidemiological measures of deaths averted don’t capture other essential dimensions of life—economic, social, political, and even spiritual. Policies aimed primarily at reducing health risks are suspect to those who see other critical needs as being unjustifiably neglected.

In America, factual controversies in policy contexts are often less about the credibility of science than they are proxies for disagreements about competing ways of life. Policy stalemates about climate change, gun control, or mask wearing were not caused by citizens’ refusal to accept expert-certified facts. These disputes signal dissatisfaction with trade-offs that some citizens see as elevating expert values above their own.

It is tempting to treat matters of health, safety, and environmental policy as if they are primarily about facts, because this transforms intractable social disputes into seemingly answerable technical questions. But such moves are inimical to democracy. When the key issue is who decides, acting as if disagreements are mainly about evidence is bad politics and bad social science. It turns expertise into an object of distrust and exacerbates American culture’s tendency to alienate people from the perceived elitism of science (2). This creates fertile ground for alternative facts and conspiracy theories that reframe problems and relocate the focus of blame.

Science advice thus occupies a precarious position on the boundary between asserting facts and making policy. It faces the structural problem of being authoritative without becoming authoritarian. It divides power between scientists, who are mainly accountable to their peers, and authorized political representatives, who are accountable to the citizens they serve. This allocation of authority is fundamentally political, even constitutional. We should not be surprised if expert advisers find their claims being questioned, given their consequential role in contemporary governance.

## PUBLIC HEALTH SOVEREIGNTY

For more than a century, Americans have agreed that safeguarding public health justifies granting health officials extraordinary powers to restrict liberty. This “public health sovereignty” (3) rests on a view of citizens as biological entities who must be protected or controlled to contain infection. But that reading sidelines the reality that citizens are also political subjects with individual rights. It downplays impacts on liberty, privacy, and solidarity unless institutional means are provided to let these considerations in.

The history of public health policy is full of controversies in which communities sought to rebalance their rights and interests against public safety. During the HIV-AIDS epidemic, for example, states debated whether to criminalize sexual behavior that spread the virus. It took a large, well-organized gay community to advocate for personal privacy, promote the value of open sexual expression, and challenge discrimination under the guise of public health protection. Where such communities existed, restraints tended to be weak. Elsewhere, public health sovereignty prevailed (4).

Restricting liberty in the name of public health becomes especially fraught when scientific knowledge is unsettled but policy responses are urgently needed. It is tempting to move fast, invoking expert authority to short-circuit deliberation. The challenge in such circumstances is not simply to persuade citizens to accept prepackaged expert judgments as fact; it is also to ensure that responsible institutions explicitly and visibly consider competing priorities when determining how to gather, interpret, and apply evidence. Labeling resistance as “anti-science” does little to further this goal. It separates experts from publics instead of building common ground.

## AN ANTI-SCIENCE PUBLIC?

What stands in the way of improving science-society relationships during a public health emergency? The answer is certainly not that a substantial portion of America simply “doesn’t want science.” That diagnosis dangerously misses the mark. When decision-makers try to ground policy in scientific facts rather than in the trustworthiness of the essential (but fallible) institutions that produce them, any technical missteps make the policies more vulnerable. And missteps are inevitable when science is moving fast.

The “anti-science” label conflates normative dissent about which values matter with

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epistemic dissent on matters of fact. It corrodes democracy and risks producing dissenters with contempt for experts. Instead of admonishing people to buy the science, we need a more robust politics of persuasion that requires experts to publicly address the competing values and interests at stake in setting policy agendas. When should protecting public health override individual freedom? Does the health risk of opening schools outweigh children's social needs? How should the power to decide be distributed among legislatures, courts, the executive, and scientific experts?

In our study of 16 countries' responses to COVID-19 (5), we found widely varying approaches based on the same evidence. In Sweden, Netherlands, and South Korea, citizens' priorities concerning what is essential for a good society substantially influenced the stringency of measures such as masking, lockdowns, and school closures. In Germany and Australia, opposing political parties came together to agree on policies serving a perceived national interest. In India, Japan, and the United Kingdom, dissent focused on the wisdom, efficacy, and motivations of government actions but not the seriousness of the disease or the need for decisive action. Only in the United States was policy disagreement consistently recast as being "for" or "against" science, as if all politics could be reduced to that simple litmus test.

Our study shows that policy preferences cannot be segregated into two distinct silos: informed versus ignorant, rational versus irrational, scientific versus anti-scientific. Yet, American public health discourse too often labels policies as either "evidence-based" or baseless. Decision-makers may find it expedient to shield themselves behind such characterizations, but hiding the value choices only inspires resistance and denialism (6).

## REBUILDING THE POLITICS OF SCIENCE

How then can we build a more progressive politics of science? We must first recognize that trust cannot be produced on demand. It grows slowly out of strong social relationships. History shows that science fares best when it is responsive to skepticism, not insulated from it. Building a less paternalistic, more inclusive dialogue between science and citizens is crucial for informed, democratic governance. Three moves are essential: make science more attentive to citizens' real concerns, make citizens smarter about how science works in governance, and make spaces for deliberating different interpretations of science without polarizing conflicts.

President Biden has already taken praiseworthy steps toward the first goal. By nominating Eric Lander and Alondra Nelson, two prominent spokespersons for science in society, he laid the groundwork for a more intellectually diverse and socially inclusive channel of science advice at the highest levels of government. His nominees should now build a President's Council of Advisors on Science and Technology in Society, comprising not only scientists and engineers but also a more expansive range of experience to set the agenda for policy-relevant science. Expertise in advisory bodies should include, besides science, perspectives that



illuminate the social, historical, ethical, and political dimensions of technical decisions.

A second step is to bring society back into the curriculum of science education. Science and democracy harmonize best when both scientists and nonscientists learn how to participate in debates with technical components. Educational institutions must train all students—scientists included—to develop a wider imagination of the constitutional power of science to define the very terms in which we frame and debate social problems (7).

Expert elites who view the public as willfully ignorant and irredeemably irrational need richer resources for understanding those who feel marginalized. Otherwise, like a self-fulfilling prophecy, policy institutions will tend to call forth the kinds of resistant citizens that they imagine they are addressing. When scientists or policy-makers insist that a policy is right because it is evidence-based, they should expect citizens to question: Who made that claim? On what authority? With what evidence? And subject to what oversight or opportunity for criticism? These are legitimate questions that enhance democracy, and our educational institutions

should teach scientists to respect them. Here, again, the president's advisers can help by placing science and society education high on the agenda.

Lastly, better dialogue between science and society requires forums where technical analysis and democratic deliberation can proceed in harmony. A wholesale appraisal of the role of such bodies in the U.S. government is long overdue, but one should note that before the present era of deregulation, government agencies consulted widely with civil society and tended to enjoy greater trust (8). Advisory bodies in both Europe and the United States have proved effective when they include a broad cross-section of the perspectives and priorities of citizens. Reviewing experience at home and abroad, the president's advisers should rebuild interactive fora where publics can freely question science, and science must give persuasive answers.

These three steps offer promise of creating common ground and achieving the legitimacy needed to guard against groundless and capricious dissent. To shore up the norms that support an enlightened society, we need to build better foundations for deliberation on the reliability and relevance of science for governance (9). In this time of national emergency, we must move beyond the distortions of the pro-science-anti-science frame and transition to more conversational relations

between science and society. It is a time for respectful partnership, not ill-informed division, between science and its publics. ■

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