

OPINION

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Research Shows How to Advance Public Understanding of Science

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Foundation leaders

The first image of a black hole; new vaccines for Ebola; research that reveals the potential of psychedelics to treat depression — there is no doubt that effectively communicated scientific breakthroughs can capture the attention of the world.

But much of the time, communicating science is a challenge. While communication prizes the clear and concise, the scientific process is long and subject to change when experiments fail or new findings counter existing hypotheses. The topics can be complex, the jargon obscure, and the relevance to everyday life difficult to grasp. But the challenges are amplified these days because of striking levels of political polarization and the fact that nearly 70 percent of adults get their news from social media.

Yet science, in the form of medical breakthroughs, new technologies, and more, does play a key role in everyone's life. As today's science develops at a rapid pace, with profound implications for society, communicating effectively about it must be a priority for all who care about the future of research as well as the public good — especially grant makers, donors, and the scientists they support.

Philanthropy plays a critical role in advancing scientific research in the United States. While federal agencies such as the National Institutes of Health and the National Science Foundation provide significant funding for science, philanthropy gives crucial support for new ideas and major efforts to accelerate scientific discovery. Yet too often communications has been an afterthought for science philanthropy.

Informed Decision Making

As the information ecology continues to shift, it is critical to plan strategically about how to communicate the work of science philanthropy.

The recent measles outbreak, the ongoing lack of action to address climate change, and annual threats to slash federal research budgets demonstrate what happens when we fail to build effective bridges between science and public decision making. Advancing the public's understanding of science and its role in society, and ensuring that the important work being conducted by our grantees and their colleagues informs broader public debate, is a collective responsibility.

The growing field of science-communications research can provide important insights to enhance these efforts. Research by the National Academies of Sciences, Engineering, and Medicine, the American Academy of Arts and Sciences, and many experts points the way toward approaches to strengthen the role of science in society. Research on science communication demonstrates that simply explaining science isn't enough to foster a future in which society values science, trusts the scientific process, and places science at the heart of decision making on complex issues.

Scientists and their supporters must learn to have more meaningful conversations — rooted in listening — with a wide range of people, including parents, patients, local officials, nonprofit executives, business owners, and people from communities that have historically been excluded from decision making about science. It is what we call creating a culture of civic science, and it is as important a goal as funding scientific research.

What Research Reveals

As leaders of foundations that support a range of programs to advance science, we believe it is critical for science-philanthropy organizations to develop these capacities. To identify particular challenges and opportunities in science-philanthropy communications, the Rita Allen, Albert and Mary Lasker, and John Templeton foundations collaboratively supported research examining what's happening now and what approaches are promising. We also explored the strategies and communication skills needed for science philanthropies to deliver on this promise.

We worked with two scholars of science communication, Anthony Dudo of the University of Texas at Austin and John Besley of Michigan State University, who conducted interviews with 19 professionals working at U.S.-based science philanthropies.

Their report captures a growing consensus within science philanthropy that communications must be central to strategy.

Here are key points to consider when advancing critical but often difficult social change:

Communications should not be an afterthought. Communications must be central to any philanthropic strategy, and science grant making is no different. Communications experts should be included at the highest level of the leadership team, and communications should be embedded from the earliest stages of designing grant-making efforts and then considered in every other key step of the work.

Science grant makers need to identify their target audiences. Policy makers who need to understand scientific findings to take smart actions, donors who might support continuing research, and patients seeking new treatments each require different information and communication approaches. Too often, scientists and their supporters have broadcast science, overlooking differences of interest, knowledge, and experience that can form the basis of connection. Tailoring communications to specific groups requires listening to understand what they value and how they learn. Most people don't want the same lecture a researcher gives to get tenure or teach undergraduates.

Diversity strengthens communications teams. A diverse set of personal and professional backgrounds supports efforts to reach broader audiences and provides communications teams a wider range of insights and experiences to draw from when planning outreach and engagement efforts.

The best communications teams draw on a variety of skills. Embedding communications in strategy requires building communications capacity that goes beyond technical skills, such as writing and science interpretation, to include expertise in marketing, evaluation, and public relations. Philanthropies might consider seeking staff members with experience in developing strategic frameworks for reaching people other than their grantees and creating unique ways to engage them; developing systematic efforts to monitor the effectiveness of communications; and testing what messages work best with specific audiences.

Partnerships can increase effectiveness. Collaboration with science-communication trainers and with social scientists can provide important perspectives. These professionals can help foundations communicate more effectively, support better communication among the scientists and organizations we support, and develop communications research that will help all of us learn how to improve our work.

Learning never stops. Particularly as the communications environment continues to evolve, sustained effectiveness of communications by philanthropies requires regular professional development opportunities for staff members to expand their communications skills. Increasing shared learning among foundations will enhance the collective knowledge base of our organizations.

Rapid advances in science — such as gene editing and artificial intelligence — are paving the way for tremendous benefits to society. However, to ensure that these benefits are realized for everyone and supported by all, we must strengthen the role of science in public life. As a society, we must enable people from diverse backgrounds to engage with the fruits of research, apply science to critical decision making, and support ongoing investment in research. As philanthropists, making communications a priority is necessary if we are to accomplish these goals — and ensure that the science we support connects with the world.

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