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*Commentary*

# A New Era of Science Philanthropy

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**Abstract**

Science philanthropy is entering a period of rapid change and transformation and is increasingly playing a more central role throughout the contemporary scientific enterprise. During this period of experimentation, new tools, approaches, and institutional forms are being tried alongside and in connection to more traditional modes of philanthropic grantmaking. Reflecting on this burgeoning new era of science philanthropy, this article outlines an emerging, five-pronged research and action agenda that identifies novel questions in need of attention, pressing knowledge gaps, and next steps for further examination. These topics include: ensuring that the underlying core of scientific research infrastructure is secure; supporting interdisciplinary, collaborative research to promote new discoveries at the intersection of fields and knowledge domains; further experimenting with a wide range of alternative approaches to grantmaking and grant award allocations; instilling a culture of measurement, evaluation, and impact assessment within science philanthropy to enhance field-wide progress; and continually enhancing the public, civic, and community relevance of their grantmaking. The article concludes by emphasizing the need to continually foster an iterative, forward-looking perspective within science philanthropy, one that prioritizes strategic planning, foresight, and agile responses as the research and funding landscape evolves in the years ahead.

**Keywords**

Science philanthropy, science funding, research trends, responsible research and innovation, science and technology policy, strategic planning, technology foresight

## Rising Relevance in a Changing World

For decades, philanthropy's role in the science research and funding ecosystem has been largely ignored. Science philanthropy has not received the same widespread degree of attention and prominence as government research funding when it comes to understanding how foundations shape the scientific landscape, in part due to the relatively smaller scale of funding. However, today there is a growing and deepening appreciation for philanthropy's distinctive role in influencing the direction of science and technology research from the very beginning (Conn et al., 2023). Science philanthropy has come to the forefront in recent years. It is a field that encompasses a wide range of institutions, including independent philanthropic entities with endowments that support scientific research, new research-funding and research-conducting organizations, and a range of other science-supporting activities backed by the philanthropic community. At this moment, given the disruptions and uncertainty associated with government funding for science globally, science philanthropy is poised to play a greater role in bolstering science in the years ahead. In a recent article published in the *Stanford Social Innovation Review*, titled "Philanthropy's Sputnik Moment," the authors emphasize this point, noting that "times like these play to philanthropy's strengths: its ability to take risks, to take the long view, [and] to convene critical conversations" (Simon & Seybert, 2025). As science philanthropy enters a period of transforma-

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tion, many uncertainties remain, requiring the development and implementation of a forward-looking research and action agenda that identifies novel questions in need of attention, pressing knowledge gaps, and next steps for additional examination.

Coupled with the promise of playing a more central role in the research system as a whole, science philanthropy has entered a period of rapid change, experimentation, and evolution (Fleming, 2026; Gewin, 2026). New tools and mechanisms for allocating resources across a growing and more competitive backdrop, such as through randomization or alternative peer review processes, are being tried (Bendiscioli et al., 2022). New institutional forms for pooling funds are being developed, and deliberately directing research efforts toward achieving difficult-to-accomplish goals, such as through focused-research organizations, are being encouraged (Marblestone et al., 2022). Newly formed foundations that did not exist even just a few years ago are becoming essential players in supporting science, often deploying new modes of identifying and funding research ideas (Kaiser, 2022).

Practices and tactics deployed in the field have also morphed substantially, becoming more collaborative as science philanthropies demonstrate an increased willingness to learn from one another, share emerging insights, and leverage their respective resources and areas of expertise. This is also evident by the establishment and expansion of various field-connecting organizations that have arisen recently. These include the Science Philanthropy Alliance, a group that currently has nearly 50 members after starting with just six when it was formed in 2014. It is devoted to increasing the number of philanthropic resources going to discovery science. Another new science philanthropy advising organization is Renaissance Philanthropy, which a new was established in 2024 and is designed to help direct resources toward cutting-edge, breakthrough-oriented efforts. Finally, the Impact Funder Forums is a global network of aligned philanthropic and public funders interested in advancing the use and application of evidence in decision-making.

All this activity has led to a growing interest in, and appreciation of, the application of metascience to better understand the role of science philanthropy. Metascience is generally understood to be efforts that look to “turn the data and methods of science back towards analyzing and improving science itself” (Research on Research Institute, 2026). Increasingly, there are a number of academic and policy-oriented research centers—including the Federation of American Scientists, the Institute for Progress, and the Research on Research Institute—that are dedicated to advancing this metascience perspective and examining how science philanthropy might influence the direction of science. The following section presents a series of research needs and implementation recommendations collectively chart a path to illuminating philanthropy’s distinctive role in advancing scientific research in the years ahead. For each of the identified areas, it is imperative to anticipate emerging questions and challenges that need to be addressed. Doing so will ensure that a thoughtful, structured approach to learning will guide the evolution of science philanthropy.

## A Research and Action Agenda for the Future of Science Philanthropy

As science philanthropy enters this new era, one in which foundations are likely to play a more significant role within the contemporary research environment, there are five crucial areas for research and action that the field needs to pursue in the years ahead. This research agenda, while not intended to be complete, signifies some of the principal questions and challenges that science philanthropies will inevitably have to grapple with as they determine how to best position their organizations and navigate competing priorities and demands on their resources. The components of this research agenda are informed by decades of professional

and scholarly experience working in, and collaborating with, a number of science philanthropies, providing extensive insight into the strategic and operational needs facing the field (Michelson, 2020). In addition to identifying these key issues, also outlined here are a handful of representative questions—in the recognition that taking a question-oriented approach to philanthropy is essential to opening new lines of investigation and grantmaking (Siegel Family Endowment, 2026)—and a suggested set of action items that can help advance progress in these areas.

The first opportunity is *securing the underlying stability of scientific research infrastructure.* The notion of scientific research infrastructure should be viewed broadly and from a multidimensional perspective. In addition to encompassing the elements that are traditionally viewed as scientific infrastructure—such as instrumentation and research facilities—contemporary notions of scientific infrastructure also include workforce development, training programs, and collaborative networking opportunities. Importantly, directing resources toward these core components does not mean avoiding change or returning to outdated ways of funding and conducting science. Instead, it means placing science philanthropy in a position to resource both the tangible and intangible factors that are indispensable to a thriving scientific enterprise. All stakeholders within this ecosystem—students, faculty, universities, independent laboratories, and so on—will come under pressure to do more with less and will struggle to contend for scarce resources. Science philanthropies must recognize that individual and institutional capital take a long time to build and are often irreplaceable when lost (Azoulay, 2026).

Fellowships provided at all stages of the research pipeline—to help graduate students complete dissertations, faculty plan their research agendas, and senior scholars explore new lines of inquiry—will be important to maintaining the health of science. Resources that provide students with experiential learning opportunities and that contribute to strengthening research networks will be even more critical. Science philanthropies will also have to respond to central questions, such as: How can science philanthropies effectively support students through some of the most tenuous moments of their scientific career? What resources do institutions need to undertake groundbreaking science? How can scientific instrumentation be developed, utilized, and shared more widely? What institutional structures are indispensable for science to flourish? One tangible intervention that science philanthropies should take on this front is to provide foundational resources to support the development of necessary scientific instrumentation and set the expectation that the utilization of such scientific instrumentation is shared across researchers and institutions.

The second topic focuses on *supporting interdisciplinary, collaborative research to promote new discoveries at the intersection of fields and knowledge domains*. Much innovation happens when scholars, methods, and techniques from different fields are brought together to examine a problem from alternative, yet complementary, points of view. As new technologies such as artificial intelligence, materials science, and quantum computing, and become more widely available, it will be vital to support research that fosters this kind of interdisciplinary research perspective, accelerating new discoveries that will become some of the highest value resources that philanthropies can provide. Resourcing interdisciplinary research is consistently a challenge for government agencies, regardless of field. Interdisciplinary research proposals often do not fit well within discipline-based funding calls and often do not fare well in traditional peer review processes. For these very reasons, the flexibility that foundations enjoy in terms of how they frame program areas, select grantees, and allocate resources makes this an ideal focal point for science philanthropies (Michelson & Gee, 2024). Interdisciplinary research also lends itself to generating a variety of scholarly outputs that can deepen

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and extend the impact of scientific research, with results that can be published in top-tier journals and the imagination needed to develop interdisciplinary research projects. Research that brings together perspectives and methodologies from different fields often leads to the production of other outputs that can increase the impact of scholarship or disseminate it to more stakeholders (Xiang et al., 2025). Key questions to be asked here include: What factors are needed to ensure interdisciplinary research efforts can be successfully implemented? How can the value of interdisciplinary research be better communicated to multiple constituencies? How can the adoption of interdisciplinary research approaches be incentivized early in a scholar's research journey? To break down disciplinary silos, science philanthropies should dedicate specific funding calls or grantmaking opportunities to advance such interdisciplinary scholarship, requiring the representation of expertise from different disciplines to be competitive for such awards.

Building on these themes of supporting the core infrastructure of science and encouraging more interdisciplinary work, a third topic is *further experimenting with a wide range of alternative approaches to grantmaking and grant award allocation mechanisms*. As noted above, science philanthropies have begun to trial a variety of novel approaches to sourcing ideas and awarding grants, and these experiments showcase a host of different ways to support new research should continue and expand. For instance, the randomization of grant awards can greatly improve the transparency of grant selection procedures, especially given high submission rates and the desire to avoid the biases of peer review (Stafford, 2026). Other efforts are occurring that engage scientists in ideating and proposing innovative ideas to funders quickly through the writing of brief proposals in real time over the course of a multiday conference, which are then presented to philanthropy for support (Michelson et al., 2021). Funders are exploring new financing vehicles that encourage the development of big-picture, high-risk-oriented research programs designed to tackle especially complex research challenges (Kalil & McKelvey, 2025). By establishing a roster of these interventions, science philanthropies have the potential to shed light on various conditions that lead to success or failure, when such alternative mechanisms can or should be deployed, and how to make improvements over time. Questions to address include: What, if any, spillover effects arise from the adoption of these alternative grantmaking mechanisms compared to more traditional modes of grantmaking? How do applicants and grantees react and adjust to the growing utilization of different funding tactics being tested? How might these new funding strategies be combined, and how do they interact when employed in tandem? How rapidly should new funding experiments adjust based on initial findings, and how relevant are they to different disciplines or types of research endeavors? Science philanthropies should continue to experiment with a variety of these interventions and create pilot-scale interventions across their portfolios in order to bring innovative funding practices further into the mainstream.

This notion of learning from novel practice leads to a fourth topic area, namely the importance of *instilling a culture of measurement, evaluation, and impact assessment within science philanthropy to enhance field-wide progress*. Many science funders are mainly concerned with promoting discovery and knowledge generation and ensuring the quality of research supported. In addition, there is also the need to more generally infuse the field with an appreciation of program evaluation and emphasize the importance of disseminating lessons learns about what works most effectively. The highly specialized structure of many science philanthropy programs has hindered this kind of systematic learning in the past, and historically, many science philanthropies did not sufficiently emphasize evaluation or impact assessment activities. That disposition is beginning to change. More science philanthropies are not only conducting program evaluations to

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assess how their grantmaking is impacting a field, but they are also willing to then publish and share these results, as evidenced by recent examples from the Moore Foundation (Alexander et al., 2025), Sloan Foundation (Gale & McGuire, 2023), and Research Corporation for Science Advancement (Zajdela et al., 2022). Many first-order questions exist in this area, including: How should science-oriented grantmaking programs be be designed to better promote learning and evaluation, and how can these lessons learned influence the design of future grantmaking programs? What are the most informative metrics to use when assessing the impact of scientific funding, especially given the often-stated goal of generating new findings and the high degree of uncertainty when conducting scientific research? How frequently should evaluations and impact assessments be conducted given the long-term nature of many scientific undertakings? How broadly or narrowly should evaluations be framed in order to capture primary, secondary, or tertiary impacts? Science philanthropies should demonstrate their continued commitment to infusing an impact assessment perspective within the field by dedicating staff time to capturing such insights and sharing findings with the field.

The final area of attention for science philanthropies going forward is *continually enhancing the public, civic, and community relevance of their grantmaking.* Increasingly, science philanthropies are prioritizing community-engaged scholarship and encouraging scientists to integrate these perspectives as key elements of their research programs (Bednarek et al., 2024; Meyer & Michelson, 2025). Science philanthropy has helped to amplify the presence of civic science fellows across an array of institutions (Civic Science Funders, n.d.) and increase the number of positions that situate scientists in policy advisory positions (Tyner, 2025). There are numerous avenues that funders and scientists are advancing in this domain, such as actively involving the public as participants in research projects and making science advisory committees more representative of the public at large (Kaplan et al., 2021; Tyler et al., 2026). These trends indicate that science philanthropies are committed to advancing such bridge-building enterprises that link science with society. Additional investment is needed to scale these communities of practice, and these institutions could learn from related movements in the field, such as the rise of participatory philanthropy (Gibson et al., 2024). Questions to explore include: What innovative strategies exist that can more effectively strengthen connections between scientists, communities, and community stakeholders? How can piloted approaches linking science and society be scaled or disseminated further? How do research efforts change and transform once civic and community preferences are accounted for and considered? Integrating broader public perspectives within science philanthropy can be facilitated by more comprehensively integrating end users and community stakeholders throughout the science philanthropy lifecycle, ranging from initial proposal development to proposal review to research project implementation to project evaluation.

## The Need for Foresight in Science Philanthropy

In conclusion, science philanthropies will need to continue prioritizing strategic planning activities, adopting iterative foresight practices, and testing agile grantmaking responses to help them regularly adjust as the scientific landscape evolves. In this next phase, the research and action agenda laid out here—bolstering the infrastructure of science, advancing interdisciplinary research, experimenting with alternative grantmaking approaches, instilling a culture of learning, and enhancing civic and community engagement—will be imperative. By doing so, science philanthropies can truly exemplify the spirit of giving for research: to generate knowledge that improves people’s lives and create a better world.

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