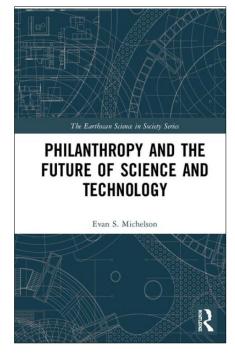
Evan S. Michelson, **Philanthropy and the Future of Science and Technology**, New York, NY: Routledge, 2020, 428 pp., \$44.05 (eBook).

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Philanthropy and the Future of Science and Technology by Evan S. Michelson, a program director at the Alfred P. Sloan Foundation, follows logically from his previous work, Assessing the Societal Implications of Emerging Technologies. The author's recent work bares science philanthropies' determinant role in scientific public interest pursuits concerning the risk remediation initiatives philanthropies willingly fund and, throughout, contests the long-held discourse about philanthropies as controversial yet well-positioned creatures of time that refract wealthy donors' wishes onto society from institutional shadows.

The author uses Responsible Research and Innovation (RRI) to outline an instructive ethic for philanthropies' relationship to the public interest. The RRI framework implores that organizations ought to consider their social and environmental impacts on those historically marginalized—an



idea comparable to what Anthony Giddens might deem a *reflexive project of the self*. Here, entities must readily adjust their actions to project a tangible sense of responsibility into society, through social practice. But as Michelson underscores this notion of reflexive responsibility, he ushers in a perspective on science from the critical literature of philanthropy as more than a determinant of what science-led risk remediation initiatives are funded. Philanthropies are covertly shown as vessels that allow elites to achieve salvation through donation toward ameliorating the universal curses of global environmental, social, political, economic, and cultural depravity.

Chapter 1 addresses philanthropies' renewed giving for science to grant a historical overview of foundations and the wealthy donors that sustain them. Chapter 2 surveys philanthropies' historical roles in society that suggest philanthropic foundations emerged in parallel to facilitate these arbitrary gifting activities, ranging from politics to science. These chapters situate scientific enterprise as a big business of giving and gifting to global issues. Chapter 3 extrapolates the concept of contingent science philanthropy and scientific enterprise in the modern age. Michelson elucidates readers about the contemporary scientific grantmaking typologies that often determine the type of research that scientists can undertake across the anticipatory, deliberative and inclusive, and reflexive and responsive dimensions.

Though Michelson emphasizes prospects for iterative remediation, it is essential to acknowledge the need for such iterative responsibility by highlighting some key texts that challenge philanthropies'

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legitimacy as infringements on democracy. Conversations tend to center on philanthropies' privately sought goals, often to the discretion of business magnates who could afford to fund these grants, which do not always align with those marginalized. So rather than retaining the identity as a pathway to salvation, the literature increasingly showed how philanthropic work became a question of organizational power, political influence, and social transformation, as Rob Reich (2018) argues in *Just Giving: Why Philanthropy Is Failing Democracy and How It Can Do Better*.

Michelson engages with these prevalent criticisms questioning philanthropies' moral obligations to society regarding sustainable and secure human futures coming through philanthropic underwriting for scientific research. The author tends to this work with a critical eye toward addressing these foundations' moral legitimacies. Michelson is reflexive in his approach and affirms the consensus that philanthropies exist outside of regulation and are, as a result, difficult to control. But to assuage the critique, he re-emphasizes the book's central thematic frame of the RRI framework that "can serve as [helpful guideposts] for science philanthropies [in the United States] that have substantial freedom when it comes to their activities" (p. 12). The author moves beyond reformation and, in a way, positions RRI as a mechanism of moral restructuring.

In chapter 4, Michelson highlights individuals, complex institutions, and networks acting responsibly to finance society's future scientists who are dedicated to social change. This chapter addresses how these organizations support early career researchers. Familiar organizations such as the Ford Foundation, the Meyerhoff Scholars Program, and the Sloan Foundation are highlighted as organizations in line with providing anticipatory, deliberative and inclusive, and responsively-oriented grants for individuals, institutions, and networks. Chapter 5 develops a case study of the Rockefeller Foundation's Searchlight Networks—a group of future-oriented research organizations concerned with identifying the trends, opportunities, and implementations of science and technology research. The author also explores the Sloan Digital Sky Survey—another large-scale, future-oriented research network that works within space exploration and astronomy toward a more sustainable future. This chapter shows how the RRI framework guides mindful collaborative networks so that internetworked organizations can act as checks and balances to uphold iterative notions of responsible science-philanthropy.

This published edition forgoes some theoretical discourse about risk societies and scientific realism—and understandably so. The seminal works of sociologists Ulrich Beck (1992) and Anthony Giddens (1999) help fill this gap and recontextualize the social, natural, economic, cultural, political, and environmental interests that often concern these science philanthropies. The work of Beck and Giddens explicates a thorny development of wealth accumulation through capitalism to wealth redistribution toward science philanthropy.

For this reason, I offer a brief and necessary theoretical survey showing that Beck (1992) and Giddens (1999) prod a critical conception of the risk society. For Beck, the risk society concerns how highly agentic organizations address worldly hazards postindustrialization. According to Giddens (1999), it is "a society that is increasingly preoccupied with the future (and also with safety), which generates the notion of risk" (p. 3). Beck and Giddens jointly identify organizations as cause and solution, and identify solution as being the cause of more chaos and risk. The late British media scholar Roger Silverstone (2007) joins

the conversation in *Media and Morality: The Rise of the Mediapolis* to contest the disconnection between private organizations and society, and how organizations ought to develop this responsible orientation to considering those least agentic. He casts a net of media work as any form of social mediation and communication, whereby global organizations are called to take on roles of answerability, attributability, and accountability for global risks at the turn of the 21st century. This was a revived demonstration of utilizing wealth's undoing abilities concerning the existing looming albatrosses of global-social inequalities, as posed by David Callahan (2017) in *The Givers: Wealth, Power, and Philanthropy in a New Gilded Age*.

As shown in *Philanthropy and the Future of Science and Technology*, science philanthropy grows from an elite funnel to salvation to forms of underregulated global influence. In Chapter 6, Michelson assesses the present and forecasts a comforting future for science philanthropy. He credits the critical scholarship on big-ticket philanthropy and suggests that the work of science philanthropy, however controversial, remains vital for addressing the social problems and the issues that arise from how social problems are mitigated. Science philanthropies must for this reason become undoubtedly accountable for their gifting actions. They must "broadly [and inclusively] scan for ideas [in all parts of society] and develop new ways of identifying and funding research that may be high-risk yet high reward [for a society at risk]" (p. 19). Philanthropic organizations are encouraged to position issues of marginalization before and after vested interests. Chapter 7 undertakes a progressive outlook on moralizing science philanthropy, particularly how the RRI framework ought to steer this new philanthropy's organizational ethic in the proper direction. Chapter 8, the final chapter, also highlights the critical points of the book to underscore science philanthropy's unfathomable influence on global risk remediation. The author provides opportunities and challenges ahead for this work.

Overall, Michelson pens a nascent, necessary, and comprehensive introduction to 21st-century science-philanthropic work. He canvasses the risk society's theoretical interventions to accentuate pragmatic concerns that have long-troubled scientific practitioners. Michelson grapples with societal responsibility, power, and scientific remediation that comes about through research funded by big-ticket philanthropy and is carried out by organizations that live outside regulation. The author is optimistic, but not overly so, that an applied RRI framework will remedy moral issues of philanthropic practice that often forgoes consideration of marginalized publics.

Philanthropy and the Future of Science and Technology is a necessary read for scholars in media and communications, science and technology studies, philosophy of science, organizational and management studies, political sociology, and ethics. Readers should be sure to set this book against theoretically normative assessments of the critical and complex systems animating global risk. Understanding such critical debates provides the reader with source material to access a richer taste of the book. Without any reservation, I recommend this book to early-career scholars, grant writers, and theorists interested in understanding the relationship between their work and the work that philanthropic foundations are willing to support.

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