

#### REVIEW

# Reviewed book: "Science with impact: how to engage people, change practice, and influence policy"

#### **Reviewed Book**

Toomey, A. H. (2024). Science with Impact: How to Engage People, Change Practice, and Influence Policy. Washington, DC, USA: Island Press

### Reviewed by Joanna Kelly Huxster

#### Abstract

Science with Impact explores how scientists and researchers can extend the applicability of their work beyond academia to diverse audiences and policymakers. The book addresses the challenges faced in making findings relevant, the ways in which those challenges can be overcome, and the importance of community collaboration in the creation of impactful science.

#### Keywords

Public perception of science and technology; Citizen science; Public engagement with science and technology

Received: 3rd June 2025 Accepted: 4th June 2025 Published: 18th July 2025 Perhaps now more than ever, the importance of effective science communication cannot be overstated. In *Science with Impact: How to Engage People, Change Practice, and Influence Policy,* Anne Helen Toomey offers a well-researched, practical guide for helping scientists and researchers communicate their work to the public and policymakers. This accessible book addresses the challenges that scientists and science communicators face in making research findings relevant and understandable beyond academia.

Toomey, an Associate Professor of Environmental Studies at Pace University, has a clear and engaging writing style and the necessary expertise to successfully navigate the complexities of the process of effective science communication. In her introductory chapter, she skillfully intertwines her love of Star Trek with her belief in the necessity of a society shaped by the best that science can offer, while acknowledging that the discipline has its own shortcomings. The rest of the book is broken into three parts: "Searching for Impact", "The Spaces of Scientific Impact", and "The End is Just the Beginning".

The first section of the book, "Searching for Impact", delves into the challenges that many scientists face in attempting to communicate their work, while also highlighting the importance of understanding the audience's perspective. Chapter one is entitled "Will You Please Just Listen to Me?" and explores the difficulties climate scientists have faced in attempting to garner public attention and concern for climate change. Toomey explains how public acceptance is not simply a matter of ignorance or knowledge, but is rather rooted deeply in cultural and political ideologies, which have acted as barriers to effective climate communication. She uses this narrative to explain why the instinctual practice of "just giving more facts" doesn't always work. In chapter two, Toomey uses the history of polio vaccination communication in India as an example of effective practice in making science impactful. Chapter three takes the reader with Toomey as she "researches research" in Bolivia. The chapter highlights the unequal distribution of the products of science and details successful citizen science that has brought meaning and actionable results to local and indigenous groups.

The second section of the book, "The Spaces of Scientific Impact", contains four chapters that discuss methodologies and ethical considerations in research, emphasizing the significance of participatory approaches to science. Chapter four is about asking the right questions. Using agricultural examples, Toomey asserts that research with impact asks and answers the questions of diverse publics and practitioners, rather than solely those formulated inside of academia. In chapter five, Toomey explains the ways in which scientists choose the places, people, and methods of their research, why that matters, and the importance of consent. Chapter six explores the ways participatory science can bring science beyond the ivory tower, and chapter seven asks the reader to reimagine whose evaluation, collaboration, and knowledge is valuable. She argues that science with impact should be influenced by, include the voices of, and be accessible to those who have a stake in the research outcomes, not just academic experts, and that public communication should be better incentivized in academic work.

Part three of Science with Impact is entitled "The End is Just the Beginning". It focuses on the application of science communication research findings, advocating for scientists to engage with communities and policymakers to ensure that their work is, indeed, impactful. Chapter 8 examines public perceptions of scientists and advocates for researchers to engage in two-way communication with members of the public. In chapter 9, Toomey

reframes scientific discussion of uncertainty while delving into psychological research on how individuals receive and interpret data. Chapter 10 dives "into the belly of the beast" to help researchers make their science impactful in the realms of policy and advocacy. Toomey rounds out her book with a conclusion that encourages engagement, tying everything up in a Star Trek bow.

Throughout the book, Toomey provides actionable advice for researchers. This guidance includes recommendations for how to craft compelling narratives that resonate with diverse audiences, direction on building trust through transparency and acknowledging uncertainty, advice for engaging in dialogue rather than relying on the one-way "deficit model" approach, and emphasis on collaborating with communities to co-create knowledge and solutions. With humility, a little humor, and a sage voice, *Science with Impact* serves as a call to action for scientists to reach beyond the academic arena and communicate their research in a way that makes a difference.

## About the author

Jo Huxster is an Associate Professor of Environmental Studies at Eckerd College in St. Petersburg, Florida. Huxster's research focuses on public understanding and communication of ideologically-entangled scientific issues. She is particularly focused on effective communication of climate change. Her forthcoming book explores the narratives of "climate converts" — people who have shifted from away from climate denialism. Huxster holds a Ph.D. from the University of Delaware.

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#### How to cite

Huxster, J. K. (2025). 'Reviewed book: "Science with impact: how to engage people, change practice, and influence policy". *JCOM* 24(04), R01. https://doi.org/10.22323/167920250604093541.



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