McIntyre Lee (2022) How to Talk to a Science Denier. Conversations with Flat Earthers, Climate Deniers, and Others Who Defy Reason. Cambridge: MIT Press. 280 pages. ISBN: 9780262545051

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Lee McIntyre's *How to Talk to a Science Denier* comes out at a time of growing international concern regarding the diminishing faith in scientific organizations. The COVID-19 pandemic, intense debates over climate change, and the rise of conspiracy theories have turned science denial into a significant obstacle for democratic societies. From the perspective of his expertise as a philosopher of science, McIntyre argues that science denial is a complex issue with substantial philosophical consequences, reaching beyond social and political discussions. Acknowledging the significant dangers that denialism presents to scientific advancement and the integrity of democratic systems, McIntyre asserts that it is crucial not only to challenge science denial but also to actively engage in efforts aimed at lessening its impact. He contends that these initiatives should focus on fostering trust, showcasing intellectual humility, and encouraging clear and effective communication regarding scientific methods and standards.

At the core of McIntyre's thesis lies the assertion that science denial is not merely a consequence of irrationality or informational deficits but is fundamentally rooted in the framework of identity-protective cognition. Drawing on his own unsuccessful attempts to persuade Flat Earthers through the presentation of empirical evidence, he concludes that "facts alone are not enough to change minds that are motivated by something deeper" (p. 29). Instead, McIntyre situates science denial within a broader context of motivated reasoning, ideological entrenchment, and distrust of scientific authority, aligning his perspective with a substantial body of social science research that demonstrates the limited efficacy of fact-based interventions in the presence of strong identity commitments and affective polarization (Braman et. al., 2010; Kahan, 2017).

One of the most distinctive and philosophically significant aspects of McIntyre's approach is his sustained emphasis on empathy and respectful engagement as foundational strategies for addressing science denial. Rather than advocating for confrontational or derisive tactics, McIntyre insists that "respect, trust, warmth, engagement […] are the common threads that run through such first-person accounts" (p. xv). He is explicitly critical of approaches that rely on ridicule, confrontation, or displays of intellectual superiority, contending that such strategies tend to reinforce defensive attitudes and further entrench epistemic divides. Drawing on both empirical research and his own field experiences, McIntyre argues that building trust through patient, empathetic dialogue is essential for overcoming the deep-seated distrust that often underlies science denial. This commitment to engagement and mutual respect not only distinguishes McIntyre's intervention from more traditional, information-centric models of science communication, but also aligns with contemporary scholarship that emphasizes the relational and affective dimensions of effective public engagement with science.

The book offers a nuanced array of case studies that illuminate both the diversity and complexity

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inherent in science denial. While public discourse often associates science denial with specific political orientations, McIntyre is careful to demonstrate that the phenomenon transcends partisan boundaries. In particular, he devotes significant attention to skepticism regarding genetically modified organisms (GMOs), critically examining whether this form of skepticism can be classified as a type of science denial more commonly attributed to liberal ideological perspectives (p. 122). Through detailed accounts of his discussions with friends who express anti-GMO views, McIntyre explores the discomfort and cognitive dissonance that emerge when deeply held beliefs are challenged (pp. 124–130). These episodes underscore the importance of adopting an empathetic and patient approach when engaging individuals across the ideological spectrum.

McIntyre's work makes a significant contribution by establishing a dual-axis framework for engaging with science deniers. The first axis concerns communication style. Drawing on science communication theory, McIntyre advocates for dialogic and interactive engagement as opposed to the traditional one-way, monologic dissemination of information. This approach acknowledges that effective science communication involves not only imparting knowledge but also fostering genuine dialogues that recognize and address the audience's values, beliefs, and cognitive biases. The second axis involves the strategy of rebuttal. McIntyre differentiates between content-based and technique-based rebuttals, both of which he suggests are most effective when delivered with empathy and within authentic conversational exchanges (p. 152). This model is grounded in philosophical and psychological research on reasoning and attitude change (Lewandowsky and Oberauer, 2016) and empirical studies on mutual learning in science communication (Schmid and Betsch, 2019). By synthesizing these insights, McIntyre offers a framework that bridges normative theory and practical strategies for real-world science communication.

While McIntyre's focus on interpersonal strategies is a notable strength, it also limits the scope of *How to Talk to a Science Denier*. The book centers on practical, one-on-one engagement as a vital tool against science denial in everyday contexts, yet it pays comparatively little attention to broader structural and institutional factors—such as media dynamics, political polarization, and organized disinformation—that sustain denialism. McIntyre recognizes these broader issues (p. 178) but does not delve into them extensively in this book, though he does explore them more thoroughly in other publications such as *The Scientific Attitude* (2019) and *On Disinformation* (2023). Readers interested in a thorough examination of structural factors may find this book somewhat limited. For wider insights into how disinformation campaigns and broader (media) environments bolster denialist trends, Naomi Oreskes and Erik M. Conway's *Merchants of Doubt* (2010) and Maya J. Goldenberg's *Vaccine Hesitancy: Public Trust, Expertise, and the War on Science* (2021) offer valuable supplementary perspectives.

A further area for consideration involves the scalability and generalizability of McIntyre's methodology beyond immediate interpersonal contexts. While McIntyre recognizes potential difficulties in translating empathetic dialogue and technique rebuttal to digital platforms, he does not thoroughly examine the degree to which these methods can be effectively adapted for online environments, where communication dynamics differ significantly. Specifically, the increased anonymity, rapid information spread, and significant polarization typical of many online spaces may compromise the trust-building and subtle conversational interactions that McIntyre deems crucial for overcoming science denial (p. 182). These considerations underscore the practical limitations of McIntyre's framework and highlight the need for considering how relational and rhetorical strategies might be adapted or supplemented to address the distinctive challenges of digital communication environments. As recent scholarship demonstrates, the unique affordances of online platforms can amplify misinformation and hinder the development of productive dialogue (Lewandowsky et al., 2017; Vraga and Bode, 2020).

The author's longstanding engagement with the subject matter is evident in the depth and sophistication with which the topic is addressed throughout the work. *How to Talk to a Science*

Denier is a lucid, accessible, and philosophically rigorous exploration of one of the most urgent challenges of our time. McIntyre combines personal narrative, empirical research, and philosophical analysis to offer a practical and ethical framework for engaging with science deniers. Notably, McIntyre's emphasis on empathetic, practice-oriented engagement with science deniers resonates with STS discussions about the role of the researcher as a 'diplomat'—someone who navigates contested knowledge spaces and fosters dialogue across epistemic divides. This approach aligns with STS's longstanding interest in the social processes through which trust, credibility, and expertise are negotiated in public controversies. Although the book's emphasis on micro-level interactions leaves certain macro-level issues insufficiently addressed, its dual-axis model provides substantial insights into bridging discursive divides and fostering epistemic resilience within contemporary information environments. For this reason, the volume is highly recommended for scholars and practitioners in STS, philosophy of science, and science communication, as well as for general readers seeking to comprehend and confront the challenges posed by science denial in the present era.

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