

REFERENCE

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Vaccine Hesitancy: Public Trust, Expertise, and the War on Science

by Maya J. Goldenberg

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At a book event in March last year—one year into the pandemic and four months after mass immunization programs began—Goldenberg voiced her concerns about the timing of her book's launch into the world ([UC Centre for Public Engagement with Science 2021](#)). This anxiety is echoed in the preface of the book itself, where she notes that the emergence of a global pandemic as she completed five years of work threatened to introduce a whole new set of issues that might fundamentally alter the book's arguments. Goldenberg's concern is understandable: since the publication of her book, it is undeniable that public trust in vaccines and the experts who advocate for them have been constant topics of debate.

This engagingly written and deeply researched monograph argues that "much of what the members of the publics know about vaccines pivots on epistemic trust"; that is, vaccine hesitancy is better understood as a "crisis of trust" than as a "war on science" ([Goldenberg 2021](#), 128). It is, at its core, an argument with positive ramifications. It provides a framework for a sympathetic understanding of vaccine hesitancy and a firm foundation for optimism: a crisis of trust is more amenable to action than the intractable problems presented by a war on science.

The book is divided into two parts. The first part sets up the war on science and the rejection of expertise as the dominant framework for understanding vaccine hesitancy, identifying and exploring separate-but-related narratives that comprise the purported war. In the first three chapters, Goldenberg teases out these narratives: scientific "ignorance" and misunderstanding among the public (chapter 1); the stubbornness of anti-vaxer and the role of cognitive biases (chapter 2); and the alleged rise of anti-expert sentiment (chapter 3). Chapter 4 then examines the relationship between science and politics and the

consequences of using “science” as an arbiter in debates that are fundamentally normative and values based.

This leads into the second part of the book, in which Goldenberg argues for the crisis of trust framework as “an alternative and enabling” way of understanding and addressing vaccine hesitancy (17). Chapter 5 explains that trust is critical to the process of establishing and legitimating knowledge and identifies a range of sources of mistrust that contribute to undermining public confidence in the scientific consensus on vaccines. Where trust deficits arise, there develop spaces for “alternative expert voices,” and chapter 6 explores the role of scientific heroes and mavericks in this context and as a marker for when experts and expert institutions may have failed in their public relations.

On the basis of her conclusions, Goldenberg offers recommendations for a path forward. She suggests that “blaming, shaming, and punishing the wayward publics hardens anti-vaccine views and entrenches polarities rather than encouraging community” (171) and that addressing mistrust/promoting trust offers a more productive way forward. She offers specific recommendations for improving public trust in five areas: healthcare provider-patient encounters; public health messaging; vaccine mandates; diversity, inclusion, and representation in health sectors; and industry influence on healthcare.

I found the framing of the book somewhat distracting, and the positioning of the war on science framework a bit of a red herring. As Goldenberg herself notes, the phrase “war on science” is mostly used in American journalism, and researchers in this area have long recognized both the limitations of the knowledge deficit model and the importance of public trust in explaining public attitudes to vaccination (11, 39). While the war on science argument is somewhat overstated, her actual argument is more nuanced than the book’s structure suggests: Goldenberg notes that trust has long been recognized as a factor in vaccine hesitancy but argues that it is actually central to understanding the phenomenon, rather than one cause among many. It presents a persuasive account that draws on research from a diverse range of scholarly disciplines, resulting in recommendations that are both practical and achievable.

The strengths of this book lie in its articulation of epistemic trust and the centrality of relationships of trust to understanding public responses. As countries with relatively advanced rollouts of COVID vaccine identify discrepancies in coverage between different populations, with Indigenous and other marginalized communities frequently significantly less vaccinated than white populations, it is of particular value to reflect on the legacy of medical distrust resulting from historical—and ongoing—mistreatment. Goldenberg highlights the lasting effects of medical racism on trust through examples, such as the Tuskegee Syphilis Study and the violent treatment suffered by Chinese immigrant communities in nineteenth century San Francisco, who were accused of being the source of epidemic disease (131–32). Other countries will have their own shameful examples to contribute.

Similarly, Goldenberg traces the origins of American vaccine skepticism to the women's health movement that arose in reaction to patriarchal and paternalistic norms within medicine and to a culture of healthcare that failed to take women's perspectives into account. Given the centrality of mothers to vaccine hesitancy debates, it is good to see Goldenberg draw some links between this common site of failed trust and the work of feminist scholars in the literature on trust as part of her efforts to address gaps in the theorizing of public trust in vaccine hesitancy. The ramifications of this medical culture are particularly significant in relation to vaccine hesitancy given that women have historically been the ones making decisions about vaccination, not just for themselves, but for their families. And prior to the present pandemic, most of the debate focused on childhood immunization, centering the role of mothers. This has been a longstanding issue, as demonstrated by the Superintendent of Vaccinations in nineteenth-century New South Wales, Dr. [Francis Campbell \(1867–68\)](#), who had no doubt as to who was to blame for low vaccination rates in the colony: "The legitimate cause is ignorance—primordially the ignorance of *mothers*; a truism, by the way, which, as a little reflection will shew, goes far to resolve the problem of compulsory general education" (833).

Campbell may have been quick to judge, but it is worth noting that smallpox was not endemic to New South Wales and vaccination at that time carried significant risks, including transmission of syphilis, as vaccine lymph was taken directly from one child's arm and inserted into the next. A century and a half later, the media was quick to link signs of vaccine hesitance among 30–39-year-old women to wellness culture and social media, at the same time as the World Health Organization and peak bodies for obstetrics and gynecology were advising pregnant women not to get vaccinated because of a lack of safety data ([Rubin 2021](#); [Osborne-Crowley 2021](#)). Safety data was lacking, of course, because of the systematic exclusion of pregnant women from clinical trials, undermining trust in COVID vaccines among this key group. These examples speak to Goldenberg's broader point, that a lack of public trust is an issue we can do something about, and which can be remedied through attention to the various facets of public health that intersect with public experiences with, and perceptions of, vaccines.

As the pandemic continues to drag on, and the levels of vaccination coverage needed to inhibit community transmission remain elusive in so many jurisdictions, it becomes increasingly evident that the [World Health Organization \(2019\)](#) was prescient in declaring vaccine hesitancy one of the top ten threats to global health in 2019. Goldenberg needn't have worried about the timing of this book: with the benefit of hindsight, it is clear that her core message that vaccine hesitancy is best addressed through building and maintaining public trust is absolutely critical to the next stage of the global public health response and one that policy-makers and the general public need to hear.

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