## **Book Reviews**

that are *prima facie* about science and religion are really about values and cultural authority, and will discover the origins of some of the assumptions and strategic moves that shape popular science-faith discourse. They will also be invited to enlarge their repertoire of science-faith thinkers (e.g., John Dewey, Reinhold Niebuhr, B.F. Skinner) and topics (behaviorism, debates over Keynesian economics as a backdrop, and how science's value-free ideal was invented and leveraged).

Nevertheless, readers should be aware that Jewett's near-exclusive focus on sweeping intellectual tendencies and the social sciences (with occasional forays to reflect on genetic technology and the atomic bomb) means that Science under Fire is not an entirely balanced account of science, politics, and religion in America. Some chapters focus on major streams of thought to the point that the story of individual movements, thinkers, and their interactions with one another is lost. Fundamentalist and conservative evangelical reactions to scientism are treated relatively perfunctorily compared to liberal Christian responses (e.g., the Institute for Religion in an Age of Science is mentioned while the American Scientific Affiliation is not). A bias toward sociological explanations occasionally leads to a degree of mischaracterization. For example, Thomas Kuhn is mentioned only in connection with the 1960s counterculture, and the Vietnam-era Strategic Hamlet Program is characterized as an attempt to "make proper citizens out of Vietnamese peasants" rooted in modernization theory (p. 181), without mentioning it as a counterinsurgency strategy inspired by Britain's successful use of "New Villages" in the Malayan emergency. Finally, although most of the book is lucid, it is occasionally meandering, repetitive, and convoluted. This is particularly true for the introduction, which readers might consider skipping on the first read.

These criticisms are not meant to be dismissive. *Science under Fire* is a unique and uniquely important book. Those who are willing to mine its depths will be rewarded with a treasure trove of insight into the social and political factors that continue to shape conversations about science, technology, and faith in the United States today.

Reviewed by Stephen Contakes, Associate Professor of Chemistry, Westmont College, Santa Barbara, CA 93108.

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CREATING CONSPIRACY BELIEFS: How Our Thoughts Are Shaped by Dolores Albarracín et al. New York: Cambridge University Press, 2022. 308 pages. Paperback; \$39.99. ISBN: 9781108965026.

Conspiracy thinking is a prominent topic of discussion in American life today—and Christians, with their concern for truth, should not only be informed about, but

contributing to, this discussion. This includes awareness of how scholars in the neuro-psychological and social sciences are contributing to our understanding of the nature of conspiracy thinking.

This book investigates the causes of conspiracy thinking in the United States. Its authors draw their findings from existing social scientific literature on conspiracism, general social psychology research, and six empirical statistical studies conducted during the last two years of the Trump presidency (2019–2021): three cross-sectional online surveys, a longitudinal phone panel survey on "deep state" conspiracy claims, a "manipulation" of fear experiment on the alleged relationship between the COVID-19 virus and 5G technology, and a social media study of Twitter hashtags and "fear words."

This book shares many similarities with previous academic works on conspiracy thinking—for example, Hofstadter (1965), Pipes (1997), Robins and Post (1997), Sunstein and Vermeule (2008), Barkun (2013), and Uscinski and Parent (2014) – but distinguishes itself by relying extensively on recent polling data and statistics instead of interviews, case studies, newspaper op-eds, or conspiracist media. Indeed, the authors consciously dispute psychological works that scrutinize the personality traits and life experiences of conspiracy believers, and political science works that link conspiracy fears to power asymmetries. Such approaches, they contend, insufficiently explain the process through which conspiracy beliefs are spread. They argue, instead, that psychological and political factors are themselves shaped by a mixture of personal, media, and social media contacts.

Their central aim is thus to examine how patterns of media consumption shape conspiracy beliefs, habits that are themselves affected by one's pre-existing feelings of anxiety, which is herein defined as a nonspecific

perception of threat [that] depends on relatively stable psychological motivations of *belief defense* [the desire to maintain a coherent set of beliefs], *belief accuracy* [the desire to maintain a realistic view of the world], and *social integration* [the desire for trust, status, and acceptance within a group], as well as sociopolitical factors and situational factors like communications and media exposure. (p. 163)

When these needs are not met, anxiety rises. But whereas desire for belief accuracy produces, on its own, an increase in critical discernment—and hence a decrease in false conspiracy beliefs—the combination of pre-existing anxiety (e.g., feelings of ostracism) with shared conspiracy narratives increases one's predisposition to believe conspiracy claims. When one's need for closure and community trumps their need for belief accuracy, new information will be interpreted in ways

## **Book Reviews**

that justify their emotional state and existing beliefs. The emotional turmoil and social discomfort of anxious individuals make them more prone to accept conspiracist interpretations for troubling situations, drawing them into an alternative "media ecosystem."

Assent to conspiracy claims occurs when anxiety is assuaged by theories that offer plausible and unfalsifiable "proofs" of "hidden hand" driving events. Plausibility is achieved when a theory offers the believer historic similarity (similar plots occurred in the past), psychological similarity (the enemy's alleged motive is conceivable), and normative plausibility (other members of one's community share the same belief). The unfalsifiable nature of conspiracy claims lies in their assertion that proofs of a nefarious plot have been hidden or destroyed by the conspirators; such claims dovetail with the believer's existing distrust of authoritative sources of information. The repetition of conspiracist messages by like-minded others (friends, social networks, etc.), and by popular media (e.g., Fox News) reinforces these beliefs. The believer's wounded ego can further elicit schizotypy, paranoia, and narcissism, which serve as means of self-defence against debunkers and skeptics.

The influence of various media is proportional to time spent with, and trust placed in, these sources of information, along with the consumer's prior levels of neuroticism, suspiciousness, and impulsivity. Online media have an additional influence via their use of bots, individually tailored algorithms, and various forms of "information laundering" in reply threads and chatrooms. Heavy media consumption aligns the consumer's view of the world with the one shown in their preferred media.

The prime contribution of this book is its postulation that anxiety precedes conspiracy thinking (rather than the inverse), a psychological explanation for conspiracy belief that does not lead its authors to conclude, as others have, that conspiracism is inherently a form of neurosis. However, its heavy use of statistics, jargon, and unduly complicated flowcharts renders the text onerous, especially for those without statistical training. Given that this is meant to be the book's most important new input into the literature, it is also its greatest weakness.

Despite the great efforts made by its authors to produce a detailed empirical study of the effects of media on conspiracy beliefs, the book's conclusions are somewhat underwhelming as they echo the findings of many previous studies and offer few new insights into the topic. For instance, their claim that social interaction is the "proverbial elephant in the room" (pp. xiii, 205) is hardly convincing. The media consumption habits of conspiracy believers are a recurring theme throughout the literature, and none make the claim that conspiracy

beliefs develop in an information vacuum. The book's conclusion that anxiety serves as an "intervening mechanism" (p. 87) between conspiracy claims and a person's needs for closure and social integration in not particularly revelatory either. That humans are social animals is an argument as old as Aristotle, and that conspiracy myths help insecure individuals improve their sense of social cohesion is at least as old as Karl Popper's "conspiracy theory of society."

The book's statistical data also exhibits several flaws, leading its authors to wrongly conclude, as Hofstadter did in 1965, that the phenomenon of conspiracy thinking is essentially a product of conservative angst<sup>2</sup>-a claim that has been powerfully disproven by many of Hofstadter's critics. This may be due to the timeframe of the authors' research studies, which were conducted mostly during and after President Trump's first impeachment trial (in 2019-2020), which elicited a massive conservative media backlash. It could also be due to their failure to examine long-term patterns of conspiracy chatter, which would have shown (see Uscinski and Parent, 2014) that conspiracy ideation ebbs and flows along political lines over longer periods of time. Their data also contains some unrepresentative samples, namely, the overrepresentation of low-wage earners, the unemployed, and the highly educated, and the underrepresentation of working-class high school graduates and Hispanics (pp. 243-44).

One could surmise that such flaws are due to an extraordinary historical context (the Trump presidency and COVID-19 restrictions), but they are also likely attributable to the implicit political biases of current social psychological research, which, as Duarte et al. demonstrated,3 is strongly skewed to the political left. This is made evident in the authors' clearly stated opinion that conservative media is the primary cause of conspiracy beliefs and related violence (pp. 224, 169-70) from which its audience-akin to cultists and terrorists-should be deprogrammed with "corrective alternatives" and ridicule (p. 215). This seems to contradict their primary claim that anxiety is the underlying cause (and not the product) of conspiracy beliefs, which should presumably be allayed with kinder methods than these. By identifying conspiracy theories as both a product of right-wing media and, simultaneously, as a "type of misinformation" (p. 11), the authors leave themselves open to the charge of circular reasoning. Indeed, their political bias is shown in their frequent use of contested progressive concepts and phrases such as "racialized," "Latinx," "pro-social behavior to reduce [one's] carbon footprint," and by connecting peaceable conservative media such as Focus on the Family to the use of gun violence by Edgar Maddison Welch in a Washington pizzeria (p. 219).

## **Book Reviews**

The small number of conspiracy theories on which the authors based their surveys is another example of skewed sampling. Most of these represent themes that cause far more anxiety to conservatives than liberals (for example, the "deep state," COVID-19 restrictions, illegal immigration, President Obama's birth certificate), while little attention is given to conspiracy theories that traditionally appeal to the political left (for example, JFK, 9/11, GMOs, "BigPharma," CIA malfeasance, Hurricane Katrina) or to progressives' fears about policing, systemic racism, abortion rights, or gender identity, making it all the more likely that their research subjects who displayed conspiracist thinking stood on the right side of the political fence.

Finally, the book spends too much time discussing tangentially pertinent psychological research (for example, the influence of music on pain and imitative suicide) and too little detailing the content and origins of the few conspiracy theories their research is based on (with the exception of the 2016 "Pizzagate" panic). This makes the book difficult for the layperson to follow, when it is compared to academic works such as those of Barkun<sup>4</sup> or Uscinski and Parent,5 which are accessible to a nonspecialized audience. Few details are given, for instance, of the Tuskegee syphilis experiments, which are mentioned frequently but never in detail as an example of a genuine government conspiracy (rather than a significant but nonsinister breach of medical ethics). In the end, the book complements the rest of the literature but falls short of providing significant new insights, and is unlikely to elicit interest among laypersons, especially those who hold conspiracy beliefs.

## Notes

<sup>1</sup>Karl R. Popper, Conjectures and Refutations: The Growth of Scientific Knowledge (New York: Routledge & Kegan Paul, 1963).

<sup>2</sup>Richard Hofstadter, *The Paranoid Style in American Politics*, *And Other Essays* (New York: Knopf, 1965).

And Other Essays (New York: Knopť, 1965).

<sup>3</sup>José L. Duarte et al., "Political Diversity Will Improve Social Psychological Science," Behavioral and Brain Sciences 38 (2015): e130, https://doi.org/10.1017/S0140525 X14000430.

<sup>4</sup>Michael Barkun, *A Culture of Conspiracy: Apocalyptic Visions in Contemporary America* (Berkeley, CA: University of California Press, 2013).

<sup>5</sup>Joseph E. Uscinski and Joseph M. Parent, *American Conspiracy Theories* (Oxford, UK: Oxford University Press, 2014).

Reviewed by Michel Jacques Gagné, Champlain College, St. Lambert, QC J4P 3P2. Michel is a historian and author of Thinking Critically about the Kennedy Assassination: Debunking the Myths and Conspiracy Theories (Routledge, 2022).



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**12 BYTES: How We Got Here, Where We Might Go Next** by Jeanette Winterson. New York: Grove Press, 2021. 336 pages. Hardcover; \$27.00. ISBN: 9780802159250.

Throughout a set of twelve essays, Jeanette Winterson explores computing through history, culture, and philosophy. She focuses on the values and stories built into technology. She begins with a section titled "The Past" which refers to Ada Lovelace and Mary Shelley, explaining the origins of computing. The section that follows is about "superpowers" and computing. This second section is the most philosophical of the four parts of the book, navigating relationships between current and past philosophies, and explaining how technology influences the way people will think about the world. The third section is called "Sex and Other Stories," which discusses sex and gender and sexism. The concluding section of the book titled "The Future" comprises three concluding essays.

Though I certainly did not agree with all of Winterson's claims, the book felt like one side of a respectful dialogue rather than imposing a singular view of the world. She does not directly state her current religious beliefs, but shares that she grew up as a Christian. Although her current view of the Bible is not clearly stated, she brings it into the discussion frequently and uses a respectful tone to discuss religion. For leaders in faith and technology, 12 Bytes provides thoughtful insights on many different aspects of the assumptions, history, and future of technology and how it shapes society.

Chapter 4: "Gnostic Know-How" is a discussion of religions, AI, and the religion of AI. Winterson compares the faith that many people place in technology to the Christian hope of the resurrection. She is far more critical of the Church of Big Tech than she is of any traditional religion. She very clearly states that faith placed in AI is misplaced, saying, "We could create a god (AI) in our own image—warlike, needy, controlling. It isn't a good idea" (p. 113).

In addition to religion, women are a recurring theme of the book. She starts by introducing the author Mary Shelley and the computing pioneer Ada Lovelace, who are mentioned in later essays as well. In other essays she focuses on women as a group, with trademark sass: "Why wouldn't we want an able, considerate, smart helper who is always available, and mostly free? That used to be called a wife. But then feminism spoiled the party" (p. 78). Multiple essays focus primarily on women, as in "Hot for a Bot," which discusses sex bots as encouraging the objectification of women by building actual objects as replacements. She also discusses