

publications, including drawing contrast, establishing reciprocity with the audience, using a likable person to deliver the message, invoking authority, and claiming the possibility of future scarcity. Specifically, he highlights the use of first person plural language (we/our) as an attempt to project a message of egalitarianism rather than the organizational hierarchy traditionally seen in militant organizations whereby leaders dictate to followers. Similarly, by using images and videos showing attractive, happy looking, smiling men carrying the organization's message, the IS reinforces group norms of violence as socially desirable.

One striking example involves Aggarwal's study of the concept of martyrdom in IS publications. The Muslim religion traditionally views suicide as prohibited and culturally unacceptable. This view posed a challenge to terrorist organization preceding the IS in their efforts to make suicide attacks culturally acceptable and to recruit suicide attackers. In contrast, the IS challenged that idea and presented IS fighters as "devoted actors of the will of God who sacrifice themselves to defend the group's cultural identity rather than maximize their personal safety and material gains" (p 16). They reframed the concept as a culturally and religiously desirable goal.

Aggarwal notes that the wide scale violence perpetrated in Syria and Iraq by the IS is promoted by IS leaders as acts of self-defense against a narrative of perceived Western aggression. IS followers acting violently on such messaging inappropriately perceive having a patriotic or otherwise protective intent. The author contrasts such acts of violence with military interventions lead by Western nations, where the official justification for the use of force is often global safety, justice, or achieving peace.

The author's conclusions carry significance for public policy and clinical practice. He finds that the interaction between environmental or cultural factors and violent acts of terrorism is dynamic rather than static and, as such, solutions should be carefully adapted to the dynamic cultural factors at play. Lawmakers seeking to implement effective and meaningful policies to protect against violent terrorism ought to pay special attention to the ways in which violence is perceived in a given culture. Further, terrorist groups like the IS can present a challenge for psychiatrists performing risk assessments and thinking about violent acts committed by IS followers. Environmental and contextual factors underlie the extent to which

one finds normalcy in cognitive, behavioral, and emotional processes. This book challenges the traditional methodology in risk assessment evaluations. It is a very valuable read to any forensic psychiatrist interested in better understanding the role of media in influencing cultural beliefs and modulating considerations in assessing risk in forensic evaluations. The themes reviewed can be used to draw parallels in thinking about the role of social media in shaping social and political beliefs.

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Denying to the Grave: Why We Ignore the Facts That Will Save Us

By Sara E. Gorman, PHD, MPH and Jack M. Gorman, MD, Oxford, UK: Oxford University Press, 2017. 312 pp. \$29.95.

Reviewed by Farah Tabaja, MD, and John Bonetti, DO

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Key words: social science; science denial; bias; misinformation

Denying to the Grave is an exploration of science denial that focuses on health, medicine, and the psychological and neurobiological mechanisms underlying how people make decisions that can affect their health. This book, written by public health specialist Sara Gorman and her psychiatrist father Jack Gorman, uses evidence from psychological research to describe the many factors that lead people to reject scientific data. The book also proposes seven guiding principles and six solutions to help sway people in the direction of accepting scientific evidence and rejecting the allure of "junk" science.

The authors use recurrent examples of so-called controversial scientific topics to serve as prototypical examples of science denial. These topics include the safety of vaccines, the risks associated with guns, the

debate about genetically modified food and antibiotic misuse, the safety of nuclear power, the risks of unpasteurized milk, and the safety and efficacy of electroconvulsive therapy. In the introduction, the authors explain their views on each of these topics and offer an overview of what is to be discussed in each chapter.

In the opening chapter, “Conspiracy Theories,” the authors contrast two well-known distorted scientific claims aimed at obfuscating science for financial or political gain. The first is an examination into the claim that tobacco companies and a group of scientists conspired in the 1960s to hide evidence of health risks associated with tobacco use. The second is the claim by Dr. Andrew Wakefield that vaccinations are harmful and that pharmaceutical companies and doctors are misleading the public. This chapter highlights the myriad characteristics that make people more prone to believe conspiracy theories and suggests strategies for how scientists can respond to antiscience conspiracy theories. Forensic psychiatrists can be expected to encounter conspiracy theorists because they often become entangled with the legal system. It has been suggested that a distinction should be made between extreme overvalued beliefs and delusions, which is a critical but often challenging task because of the implications for the diagnostic and legal processes.¹

Chapter Two, “Charismatic Leaders,” elaborates on the group psychology that fosters conspiracies and science denial, specifically exploring leaders of such groups, what they have in common, and what makes them successful in amassing a following. The authors present Peter Duesberg, Andrew Wakefield, Jenny McCarthy, Gilles-Eric Seralini, and Wayne LaPierre as illustrative examples of the various strategies that compelling individuals utilize when propagating a message.

Chapter Three is arguably the most relevant to forensic psychiatric practice and focuses on confirmation bias or “our tendency to attend only to information that agrees with what we already think is true” (p 107). The authors argue that while this can be a useful adaptive trait in everyday life, it can also have devastating effects on the scientific method. Confirmation bias is often the hurdle that expert witnesses must overcome in court when testifying to a lay public that has been shaped by historical misinformation about mental illness and its treatments. In a similar fashion, such implicit biases

have been linked to racially biased policing and criminal sentencing, and to the fallibility of eyewitness accounts.²

In the next two chapters, the authors examine basic principles of the scientific method, including cause and effect, how a scientific hypothesis is generated and tested, and different types of error. This examination is done in simple language intended to be clear to the lay reader. This type of language can be readily utilized when challenged on the witness stand and when experts are asked to explain the basis for their conclusions to lay jurors. The authors argue that the complexity of certain aspects of the scientific method can often be a barrier to the general public’s understanding scientific literature.

Chapter Six, “Risk Perception and Probability,” explores why people overestimate small risks (e.g., an adverse reaction to a vaccine) but underestimate much larger risks (e.g., traffic accidents). The authors argue that people (even scientists) have a tendency to favor anecdotes and stories over statistics when they are presented with new information. Stories readily capture a reader’s attention and utilize the recipient’s emotion to reinforce the information’s significance. The overlap with the work of forensic psychiatrists in this chapter is clear to see. It is the job of the psychiatrist to not only gather, review, and analyze the relevant facts, but, perhaps of greater importance, to provide a narrative history that ties all of the relevant facts together in a cohesive package.³

In the final chapter, the authors present “guiding principles” that are the major takeaway points of the book and nicely summarize the authors’ main arguments. The authors also propose a series of solutions and strategies that can be used to help people make informed medical decisions and prevent the spread of misleading and inaccurate information.

Overall, *Denying to the Grave* is an easy and enjoyable read thanks to a lighter tone and a generous use of interesting examples and anecdotes. The case studies on charismatic leaders in Chapter Two are particularly thought-provoking. The bibliography section at the end of the book is a great reference for further reading on the plethora of data cited throughout the book. For the forensic psychiatrist, this book offers a view into factors that affect people’s decision-making process and influence an individual’s opinions. Beyond that, it offers strategies that can be utilized to help experts make the most compelling argument

and communicate in a manner that best reflects and articulates their position when testifying in court.

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Trauma versus Immorality: A Review of *The Sinner*

Developed by Derek Simonds. A Midnight Choir Inc., Zaftig Films, Iron Ocean, and Universal Content Production. USA Network. First episode of three seasons aired on August 2, 2017.

Reviewed by Chandler Hicks, DO, Susan Hatters Friedman, MD, and Karen B. Rosenbaum, MD

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Key words: PTSD; boundary violation; cult; competency; dissociation; psychiatric defense

In the crime drama series, *The Sinner*, the first season is based on the German novel by Petra Hammesfahr (New York: Penguin Books, 1999). Now in its third season, Bill Pullman plays Harry Ambrose, an empathic police detective who is a constant throughout the series. Each season is a discrete story, and thus other characters change with each new season's storyline. Season Three premiered on February 6, 2020, and was not yet complete at the time this review was submitted.

The first season of *The Sinner* begins as Cora Tannetti (Jessica Biel) visits a beach with her husband and young son. A playful couple is sitting in front of the family listening to music. The song "Huggin and Kissin" by Big Black Delta is played, and it appears to unleash a dramatized dissociative state in Cora, who then stabs the man sitting in front

of her, in view of many eyewitnesses, with the knife she was using to cut her pear seconds earlier. She is subsequently arrested and charged with second-degree murder. Although the motive is unclear, her guilt appears clear-cut to most. This opinion is not shared by Detective Ambrose, who believes there is a deeper reason behind Cora's actions. As Detective Ambrose begins to search for a motive, often extending beyond the scope of his job with actions that border on unethical, the audience learns about Cora's childhood traumas. In the book (but not in the USA series), this includes a father who was a former Nazi and who molested her. In both the book and the television series, her mother is abusive. In the show, Cora is eventually found guilty and sentenced to a minimum of 30 years in prison. Later, through Detective Ambrose's work, the judge determines that Cora "acted under extreme emotional disturbance" (Season 1, Episode 8). Extreme emotional disturbance is a diminished-responsibility defense in New York state (where the show takes place) that, if accepted, can lower a charge of murder I or murder II to manslaughter. In the show, the criteria for establishing such a defense are not defined. In reality, someone who is convicted of manslaughter usually serves time in prison. In the show, despite previously having been sentenced to prison, Cora is sent to serve her sentence in a psychiatric facility.

In the second season of *The Sinner*, 13-year-old Julian Walker (Elisha Henig) is traveling to Niagara Falls with his parents. In the first episode, he murders them with jimson weed. As in the first season, Detective Ambrose believes there is a bigger picture. As the season unfolds, a woman claiming to be his real mother comes forward and describes a utopian commune (really a sinister cult) and explains that the people he murdered were not actually his parents but former members of the cult attempting to escape. Detective Ambrose delves deeper into the story of the commune, its relationship to the community, and its effect on Julian. Although found guilty, Julian, "in light of extenuating circumstances" (Season 2, Episode 8), is sentenced to a treatment facility rather than prison.

Multiple unifying themes from the first two seasons make *The Sinner* interesting from a forensic psychiatry perspective, including public misperceptions about competency to stand trial, the insanity defense, and *mens rea* defenses, as well as boundary violations,