



Author's response: On the varieties of ritual studies

Dimitris Xygalatas

*Department of Anthropology and Department of Psychological Sciences, University of Connecticut,
Cognitive Science Program, University of Connecticut*

Abstract

In this article, the author responds to review articles dedicated to the book “Ritual. How Seemingly Senseless Acts Make Life Worth Living,” published in 2022., featured in this issue of the e-rhizome journal.

Keywords

ritual, Cognitive Science of Religion, interdisciplinarity, fire-walking

Contact Address

354 Mansfield Road Unit 1176, Storrs, CT 06269, USA
email address: xygalatas@uconn.edu

I am grateful to the editors for putting together this book panel, and to those who took the time to review by latest book, *Ritual. How Seemingly Senseless Acts Make Life Worth Living*. In this book, I present a multidisciplinary synthesis of research on one of the most pervasive, evolutionarily ancient, and, from the point of view of practitioners, meaningful aspects of human nature.

My motivation for writing this book was two-fold. First, ritual presents a puzzle: it has tangible costs without immediately apparent benefits. Yet, people generally take it for granted. From the cradle to the grave, we live our lives shrouded in ceremony (both religious and secular), but rarely reflect on why. Second, while a lot of ink has been spilled on the topic, research on ritual has been severely limited by the lack of theoretical and methodological integration (McCauley, 2014; E Slingerland, 2008; Edward Slingerland, 2008; Snow, 1961; Xygalatas, 2019). On the one hand, experimentally-minded scholars either neglected the topic or approached it ways that often lacked relevance and ecological validity, with the exception of biologists, who focused primarily on animal rituals. On the other hand, scholars interested in cultural forms largely eschewed explanatory methods and engaged in descriptive and/or interpretative approaches that do little to advance a systematic

understanding of ritual (Boyer, 2002; Bulbulia & Slingerland, 2012; Wilson, 2002). As a result, scientific knowledge about one of the most ancient and pervasive aspects of human nature remained fragmentary.

This situation began to change in recent decades (in no small part thanks to the development of the field of the Cognitive Science of Religion), first as scholars from the humanities engaged with cognitive and evolutionary scientific theories, and later as researchers from the sciences and the humanities began to work closely together (Xygalatas, 2014). This interdisciplinary perspective has traditionally been atypical in religious studies, and those on either side of the epistemological divide may often be unsure what to make of it. Take, for instance, the way the members of this panel classify the approach outlined in this book.

Joel Mort begins his review with the surprising statement that my work falls under the tradition of hermeneutic anthropology. Surely, no one familiar with that tradition would recognize my own work as part of it. Incidentally, both of the other two reviewers identify the approach advanced in this book as the exact opposite of what Mort sees. Luther H. Martin notes that it offers “empirical explanations for what has previously been observational descriptions and subjective interpretations” (p. 4); and Andrej Mentel affirms that *Ritual* “moves consistently within a naturalistic research agenda, *almost completely bypassing hermeneutical or interpretive approaches* to ritual studies” (p. 20, emphasis mine). Indeed, Mort’s assessment seems so out of touch that one must wonder whether it is due to a peculiar understanding of anthropological terminology or a superficial reading (or both). Although I cannot speak to the former, there is plenty of evidence for the latter, ranging from trivial misquotes to glaring misrepresentations, and even confabulation.

The most striking example of misrepresentation can be found in Mort’s discussion of the *sui generis* view of culture. I have never shied away from criticizing that view myself (Xygalatas, 2010, 2012, 2016b; Xygalatas & McCorkle, 2013), and this book too is essentially one long refutation of it. Apparently, however, the reviewer understands it as making an argument *in favour* of this view. According to his reading, the book is “appealing to a persistently vague Durkheimian fallacy ... that *only social facts may explain social facts*” (emphasis mine). But although the term “social facts” appears five times (once in scare quotes) in Mort’s review, it never does so in my book. More substantially, it is truly perplexing that anyone would read a book examining the biological and cognitive underpinnings of social phenomena and walk away with that impression.

As for confabulation, take for instance Mort’s claim that *Ritual* ignores “work by Don Braxton (2012), which used advanced mobile technologies to study heart rate variability and stress indicators in ‘extreme’ rituals in the field.” (p. 14) However, no such Braxton 2012 publication can be found in Mort’s list of references –or anywhere else, for that matter. Perplexed that I would have missed it, I contacted Don Braxton, who informed me that there were once plans for such a study but they never materialized. In fact, it appears that Mort himself was involved in that project, so surely, he must be aware that it never happened. It is therefore all the more bewildering that he describes this non-existent study

in detail, down to the participants and the place where it supposedly took place, and even attributes it a citation!

Moreover, Mort laments the fact that *Ritual* does not engage with Boyer and Liénard's by-product theory of ritual at any considerable length. This much is true. No doubt, theirs is one of the most influential cognitive accounts of the topic to date. However, Boyer and Liénard would be the first ones to stress that they offer a theory of *ritualization* rather than of cultural rituals (Boyer & Liénard, 2006). And while they acknowledge that rituals may serve a variety of functions, they are rather interested in identifying the cognitive capacities involved in ritualized behaviour (Liénard & Boyer, 2006). Mine, on the other hand, is a book about the functions of ritual. Still, of course, to understand those functions one must first account for the cognitive appeal of ritualization, which is why there is an entire chapter in *Ritual* devoted to presenting an alternative model of ritualization that my colleagues and I have proposed and tested (Krátký, Lang, Shaver, Jerotijević, & Xygalatas, 2016; Lang & Chvaja, 2022; Lang, Krátký, Shaver, Jerotijević, & Xygalatas, 2015; Lang, Krátký, & Xygalatas, 2020, 2022).

Later, Mort writes: "It is definitely arguable, as *Ritual* does, that fieldwork is often desirable for data acquisition. But that determination should not be made by employing a simple ranking scheme that always values experiments done in the forest over those in the lab. Rather parsimonious theory generation and stringent methods of experimental design and evaluation are necessary, a component of which is the building of inclusive frameworks for interdisciplinary data integration." (p. 15) As someone who has done several years of fieldwork but has also directed two research laboratories, I am certainly in agreement with this statement, and I have explicitly argued for a methodological paradigm that consists in not merely bringing the lab into the field but, more broadly, moving back and forth between the laboratory and the real world in an attempt to balance between control and relevance (Xygalatas, 2013, 2016a, 2019). Besides, anyone who reads through *Ritual* will find no shortage of laboratory experiments there, conducted both by yours truly and by numerous others.

These misrepresentations aside, what is the substance of Mort's criticism? A clue might be found in his choice of words in the above-quoted passage, where naturalistic and controlled studies are reduced to working in "the forest" vs the lab. Needless to say, doing fieldwork is not just pitching a tent in the jungle (although it can also be that), any more than doing laboratory work is just having people watch lines on a screen (although it can also be that). Anthropological fieldwork takes place wherever real life takes place. I doubt that Mort is unaware of this nuance, suggesting that the wording is intentionally dismissive of fieldwork as mucking around, as opposed to the real science conducted in the lab.

It is no wonder, then, that Mort's list of scholarship which, in his view, exemplifies a true interdisciplinary science of ritual is mostly confined to studies of rodents and theoretical models of psychopathological conditions, most notably Obsessive Compulsive Behaviour. From this perspective, the cultural aspects of ritual are deemed as falling outside the purview of science. Indeed, Mort enumerates a list of "nonsecular causal entities", concepts that, according to him, "fall squarely out of line with actual, credible scientific endeavours".

(p.12) What are those sinful concepts? They include anything from shared emotional arousal, values and interpersonal attachments, to terms like transcendent societies (context: certain human groups transcend, i.e. extend beyond, their members' own place and time); primordial parts of human nature (context: evolutionarily ancient behaviours); life rhythms (context: life rhythms, i.e. the pace of life, are faster in modern societies); human needs (context: human needs); and power of ritual (context: certain cultural practices have the power to change behaviours and dispositions). Why such things would be considered “nonsecular”, I do not know. But it seems that Mort's grievances with *Ritual*, and with the Cognitive Science of Religion more generally, have to do with an epistemological stance that attempts to wish away rather than to explain culture.

There is, however, one point of agreement with Mort. Specifically, he writes: “there are scholars willing to engage in methods and theories outside constructed disciplinary boundaries, including Boyer, Lawson, McCauley, and others.” (p. 15) But a more careful reading of their work would reveal that the interdisciplinarity those scholars endorse involves precisely what Mort objects to when (mis)quoting my words: “an anthropological stance perfectly summed up by the author in a recent NPR interview as the need to study ritual in a ‘scientific AND human’ [vs the original *humanistic*] way”. (p. 15) Indeed, those scholars argued for a science of religion that is firmly grounded in the humanities (Boyer, 2012, 2014; Bulbulia, 2014; Martin, 2014; McCauley & Lawson, 2002) and engages in earnest with traditional social theory (Xygalatas & McCorkle, 2013) and ethnographic fieldwork (Boyer, 2007).

Far from being a weakness, this interdisciplinary integration is, as Mentel stresses, a sign of maturity for the Cognitive Science of Religion, which “is by now a sufficiently diversified field, with a variety of theoretical approaches covering different aspects of the phenomena under study. [When] these diverse approaches and sub-theories agree in their basic premises, [this] makes their mutual discussion productive”. (p. 20) Explanatory pluralism and consilience are necessary for any truly scientific inquiry of culture (McCauley, 2009, 2014; Edward Slingerland & Collard, 2012). For this reason, avoiding physics envy is just as important as moving away from sheer interpretivism. Or, as Lawson and McCauley put it, “for all of the froth that accompanies encounters between the humanities and the cognitive sciences on university campuses, everyone knows that the best work in each area regularly looks to the other for inspiration and correction.” (McCauley & Lawson, 2002, p. ix)

This brings me to Martin's question, who wonders whether the integrative approach outlined in *Ritual* can be expanded to religion more generally. His own feeling is that, while the advent of the cognitive sciences has provided new tools to study of religious beliefs and behaviours, those tools “will never become enthusiastically embraced by scholars of religion, fully adopted by academic departments of religion, or completely accepted by professional organizations devoted to the study of religion. Rather such study seems consigned to individual venturesome scholars or to ensembles of those scholars; and a scientific approach to the study of religion is flourishing, not so much among scholars of religion but

among those from kindred fields who have an interest in the study of religion, primarily anthropologists, psychologists, cognitive neuroscientists, and philosophers.” (p. 3)

I agree with Martin on both those points, but while I understand his disappointment, I would argue that there is cause for optimism. The Cognitive Science of Religion was kickstarted by scholars who wanted to see the discipline of religious studies become more scientific. Admittedly, this has not happened. Save for a few researchers scattered around a handful of places, religious studies departments are as science-averse today as they have ever been. But this aversion has also forced those researchers to reach out to colleagues from other disciplines and forge deeper and stronger interdisciplinary connections and collaborations. Those collaborations have proven highly productive in terms of publications, grants, and their overall impact. Attesting to this, a cursory look at the *scopus* database shows that the vast majority of the top-cited CSR publications are multi-authored, and this trend is becoming stronger every year. Perhaps even more importantly, these collaborations helped highlight the importance of studying religion to scientifically-minded scholars from other disciplines. I have often heard colleagues from the psychological sciences say that when they were graduate students, their mentors warned them that studying religion would be professional suicide. This no longer appears to be the case. Research on religion is regularly published in flagship scientific journals and psychologists of religion are getting jobs in various departments. So, the good news is that, although the Cognitive Science of Religion did not succeed in making religious studies more open to science, it has had a positive impact in making religion a legitimate topic of scientific inquiry.

It is perhaps due to this renewed psychological attention to religion and spirituality that experience has recently become a topic of particular interest in the cognitive science of religion (Luhmann, 2012; McNamara, 2022; Taves, 2009; Yaden & Newberg, 2022). Both Martin and Mort trace the origins of this interest back to William James’ thought and wonder about the implications with regards to my arguments. Mort refers to James’ claim that extraordinary religious experiences, such as those involving altered states of consciousness, are the only authentic religious experiences and warns against generalising their motivations to all ritual behaviours. To be sure, most of my own research has focused on high-arousal rituals. Naturally, then, discussions of these rituals occupy a substantial part of the book. While I agree with James that such rituals are far more common than a Western-centric lens would have us think, as well as in that participants’ experience should be taken seriously, I depart from James in that not all high-arousal rituals involve such radical experiences as trance or possession. More often than not, these rituals may involve sensory stimulation, music and dancing, physiological exertion or pain, and intense emotions (Boyer & Bergstrom, 2008). Nor do the motivations generated by those experiences (as compelling as they can be), generalize to all rituals. In fact, in describing the distinct features, key functions, and specific mechanisms involved in different types of rituals, the book explicitly argues that there is no single recipe to their effects. To turn James’ own words on their head, religion can exist not only as an acute fever, but also as a dull habit.

Martin, on the other hand, points to James' emphasis on individual experiences and wonders how it can be reconciled with a more Durkheimian view that puts collective experience at the forefront. There is, indeed, a tension between those two perspectives. It is worth noting, however, that James outlined an embodied view of cognition (including religious cognition specifically) that foreshadowed modern cognitive theories (Tan, 2018), even as his Protestant biases led him to prioritize interiority and prevented him from seeing the full implications of this stance in terms of what is known today as "4E cognition" (embodied, embedded, enactive, and extended) (Carney, 2020). From this perspective, ritual practices evoke certain experiences by manipulating the body and the environment in which it is situated and, crucially, this environment includes other people as well as the symbolic systems in which they are embedded. Raw experience can cause strong emotions, but it is context that makes those emotions meaningful. Without belief, there can be exaltation but not possession. Similarly, without a group, there can be flow but not effervescence. My own fire-walking experience reported in the book is not meant to demonstrate the effects of walking on fire but the effects of walking on fire *with a group of people*, just like my experience of getting goosebumps while chanting in a packed stadium was not due to chanting but due to being part of a chanting crowd.

Finally, Martin notes that, "like virtually all scholars of religion, [*Ritual*] generally emphasizes the positive social religious rituals over their potentially detrimental effects." (p. 5) Yet, he argues, echoing Jonathan Z. Smith, religion has "rarely been a positive, liberal force." What about all the carnage, oppression, and human suffering that religious beliefs and practices have brought over the ages? Indeed, the dark side of religion is undeniable, as is the fact that scholars of religion have generally been more interested in the positive aspects of religion. This can be for a number of reasons. One such reason is that many of them *want* to see religion as a force for good, perhaps because they are religious themselves. I have no interest in that (Xygalatas & Lang, 2016); I am rather interested in explaining its historical and cross-cultural success. But it is precisely those obviously detrimental effects of religion that make it all the more interesting to ask: *cui bono*? If there is such a high price to be paid, why do those practices persist, and who do they benefit? Keep in mind, however, that this book is not about religion: it focuses on ritual, which, as I argue, both predates and extends far beyond religion, and for this reason I have intentionally left doctrine mostly out of the picture. In doing so, I refer to ritual as a social technology, which, like all technologies, can be used for better and for worse. And religious doctrines are indeed very adept at using ritual for their own, often very dark, purposes –in fact, this may have even been a key reason for religion's success.

But, Martin asks, what about those rituals that might have served our ancestors well but no longer have the same function? "When, in other words, does an evolutionary adaptation subsequently survive in the modern world as a maladaptation?" (p. 5) What he alludes to is known as an evolutionary mismatch. For instance, isn't the Tamil Hindu ritual of Thaipusam Kavadi, he wonders, "with its gruesome practices of disfiguring piercings with needles and hooks that are so meticulously documented by Xygalatas, not a similar

example of adaptive practices that were adaptive in the archaic world being maladaptive in the modern world?” (p. 6) In this case, the evidence suggests otherwise. In various studies, my colleagues and I in Mauritius, as well as studies by others conducted in India, have demonstrated tangible benefits of participation in this ritual (Power, 2017a, 2017b, 2018; Xygalatas et al., 2019, 2013). And for that matter, even practices that appear to be evolutionary dead-ends, such as celibacy, martyrdom, or suicide, have often been shown to offer inclusive fitness benefits by allowing one’s living siblings to have more offspring (Micheletti et al., 2021). So, the question is always an empirical one.

Having said that, there is no doubt that some rituals can and do become maladaptive. Historically, for warriors who frequently needed to trust each other with their lives in the battlefield, the benefits of enduring a brutal initiation ritual might offset the physical and emotional costs involved. For members of a modern military unit trained to fly unmanned drones, not so much. Similarly, early college fraternities were highly selective, making membership and the social capital it brought more valuable. They were also often secretive, as many colleges threatened their members with expulsion, so ensuring honest commitment through hazing rituals was crucial to their survival. In the absence of such high stakes, fraternity hazing nowadays merely amounts to harassment.

Clearly, then, there is a threshold beyond which the benefits of any ritual may no longer compensate for its costs. Alas, this threshold is not easy to assess, as the costs (emotional, material, and physical resources) and benefits (cooperation, status, psychological wellbeing) are not directly comparable. Ultimately, this is a question that may be best answered using historical data. As Mentel notes (p. 26), the forces of cultural selection will inevitably have the last word: although cultural traditions are often maintained due to inertia, in the long run, the types of practices that no longer have value will become extinct and those that continue to serve their practitioners will be more likely to persist.

Bibliography

- Boyer, Pascal. *Religion explained: The evolutionary origins of religious thought*. New York: Basic Books, 2002
- Boyer, Pascal. *Explaining Religious Ideas: Elements of a Cognitive Approach*, 2007.
- Boyer, Pascal. “From Studious Irrelevancy to Consilient Knowledge: Modes of Scholarship and Cultural Anthropology.” In *Creating Consilience: Evolution, Cognitive Science and the Humanities*, edited by E. Slingerland & M. Collard, 113–129. Oxford: Oxford University Press, 2012.
- Boyer, Pascal. “Explaining religious concepts Lévi-Strauss the brilliant and problematic ancestor.” In *Mental Culture. Classical Social Theory and the Cognitive Science of Religion*, edited by Dimitris Xygalatas & William McCorkle, 164–175. New York: Routledge, 2014.
- Boyer, Pascal., & Brian Bergstrom, “Evolutionary Perspectives on Religion.” *Annual Review of Anthropology*, no. 37 (2008): 111–130.
- Boyer, Pascal & Peirre Liénard, P. “Why ritualized behavior? Precaution Systems and action parsing in developmental, pathological and cultural rituals.” *Behavioral and Brain Sciences*, no. 29 (2006): 595–650.

- Bulbulia, Joseph. “The Arts Transform The Cognitive Science of Religion.” *Journal for the Cognitive Science of Religion*, no. 1 (2014): 141–160.
- Bulbulia, Joseph, & Edward Slingerland. “Religious Studies as a Life Science.” *Numen*, no. 59 (2012): 564–613.
- Carney, James. “Thinking avant la lettre: A Review of 4E Cognition.” *Evolutionary Studies in Imaginative Culture*, no. 4 (2020): 77–90.
- Krátký, Jan, Martin Lang, John H. Shaver, Danijela Jerotijević, & Dimitris Xygalatas. “Anxiety and ritualization: Can attention discriminate compulsion from routine?” *Communicative & Integrative Biology*, no. 9 (2016): e1174799.
- Lang, Martin, & Radim Chvaja. “Hazard Precaution. Examining the Possible Adaptive Value of Ritualized Behavior.” In *The Routledge Handbook of Evolutionary Approaches to Religion*, edited by Yair Lior & Justine Lane, 164–184. New York: Routledge, 2022.
- Lang, Martin, Jan Krátký, John H. Shaver, Danijela Jerotijević, & Dimitris Xygalatas. “Effects of Anxiety on Spontaneous Ritualized Behavior.” *Current Biology*, no. 25 (2015): 1892–1897.
- Lang, Martin, Jan Krátký, & Dimitris Xygalatas. “The role of ritual behaviour in anxiety reduction: an investigation of Marathi religious practices in Mauritius.” *Philosophical Transactions of the Royal Society B*, no. 375 (2020): 20190431.
- Lang, Martin, Jan Krátký, & Dimitris Xygalatas. “Effects of predictable behavioral patterns on anxiety dynamics.” *Scientific Reports*, no. 12 (2022): 19240.
- Liénard, Pierre, & Pascal Boyer. “Whence collective rituals? A cultural selection model of ritualized behavior.” *American Anthropologist* 108, no. 4 (2006).
- Luhrmann, Tanya M. *When God talks back: Understanding the American Evangelical relationship with God*. New York: Vintage, 2012.
- Martin, Luther. “Introduction to the Issue.” *Journal of Cognitive Historiography*, no. 1 (2014): 10–13.
- McCauley, Robert. “Time is of the essence: Explanatory pluralism and accommodating theories about long-term processes.” *Philosophical Psychology*, no. 2 (2009): 611–635.
- McCauley, Robert. “Explanatory pluralism and the cognitive science of religion.” In *Mental Culture. Classical Social Theory and the Cognitive Science of Religion*, edited by Dimitris Xygalatas & William McCorkle, 11–32. London and New York: Routledge 2013.
- McCauley, Robert, & Thomas E. Lawson. *Bringing ritual to mind: Psychological foundations of cultural forms*. Cambridge: Cambridge University Press, 2002.
- McNamara, Patrick. *The Cognitive Neuroscience of Religious Experience*. Cambridge: Cambridge University Press, 2002.
- Power, Eleanor A. “Discerning devotion: Testing the signaling theory of religion.” *Evolution and Human Behavior*, no. 38, (2017a): 82–91.
- Power, Eleanor A. “Social support networks and religiosity in rural South India.” *Nature Human Behaviour*, no.1 (2017b): 0057.
- Power, Eleanor. A. “Collective ritual and social support networks in rural South India.” *Proceedings of the Royal Society B*, no. 285 (2018): 20180023.
- Slingerland, Edward. “Who’s Afraid of Reductionism? The Study of Religion in the Age of Cognitive Science.” *Journal of the American Academy of Religion*, no. 76 (2008): 375–411.

- Slingerland, Edward. *What science offers the humanities: integrating body and culture*. Cambridge: Cambridge University Press, 2008.
- Slingerland, Edward, & Mark Collard (Eds.). *Creating Consilience: Integrating the Sciences and the Humanities*, Oxford: Oxford University Press, 2012.
- Snow, Charles Percy. *The two cultures and the scientific revolution*. Cambridge: Cambridge University Press, 1961.
- Tan, Tobias. “William James and Embodied Religious Belief.” *Contemporary Pragmatism*, no. 15 (2018): 366–386.
- Taves, Anne. *Religious experience reconsidered: A building block approach to the study of religion and other special things*. Princeton: Princeton University Press, 2009.
- Wilson, David. S. *Darwin’s Cathedral: Evolution, Religion, and the Nature of Society*. Chicago: University of Chicago Press, 2002.
- Xygalatas, Dimitris. “Can the Study of Religion be Scientific?” In *Chasing Down Religion: In the Sights of History and the Cognitive Sciences. Essays in Honour of Luther H. Martin*, edited by Donald Wiebe & Panayotis Pachis, 531–549. Thessaloniki: Barbounakis, 2010.
- Xygalatas, Dimitris. *The Burning Saints: Cognition and Culture in the Fire-Walking Rituals of the Anaste-nari*. Sheffield / Bristol: Equinox Publishing, 2012.
- Xygalatas, Dimitris. “Přenos laboratoře do terénu: Využití smíšených metod během terénního studia náboženství (Bringing the Lab into the Field: Using Mixed Methods to Study Religion in the Wild).” *Sociální studia*, no. 2 (2013): 15–25.
- Xygalatas, Dimitris. “Special Issue on the Experimental Research of Religion.” *Journal for the Cognitive Science of Religion*, no. 1 (2014): 137–139.
- Xygalatas, Dimitris. “Bridging the gap between laboratory and field.” *Cliodynamics*, no. 2 (2016a): 267–270.
- Xygalatas, Dimitris. “Cognitive Science of Religion.” In *Encyclopedia of Psychology and Religion*, edited by David A. Leeming, London: Springer, 2016b.
- Xygalatas, Dimitris. “Strong Interdisciplinarity and Explanatory Pluralism in Social Scientific Research.” *Items*, (April, 2019).
- Xygalatas, Dimitris, Sammyh Khan, Martin Lang, M., Radek Kundt, Eva Kundtová-Klocová, Jan Krátký, & John Shaver. “Effects of Extreme Ritual Practices on Psychophysiological Well-Being.” *Current Anthropology*, no. 60 (2019): 699–707.
- Xygalatas, Dimitris, & Martin Lang. “Prosociality and Religion.” *Mental Religion*. (2016).
- Xygalatas, Dimitris, & William McCorkle (Eds.). *Mental Culture: Classical Social theory and the Cognitive Science of Religion*. London: Routledge, 2013.
- Xygalatas, Dimitris, Panagiotis Mitkidis, Ronald Fischer, Paul Reddish, Joshua Skewes, Armin W. Geertz, Andreas Roepstorff, and Joseph Bulbulia. “Extreme rituals promote prosociality.” *Psychological Science*, no. 24 (2013): 1602–1605.
- Yaden, David. B., & Andrew Newberg. *The Varieties of Spiritual Experience: 21st Century Research and Perspectives*. Oxford: Oxford University Press, 2022.