



Dimitris Xygalatas' Scientific Study of Ritual **A review on Dimitris Xygalatas, *Ritual: How Seemingly Senseless Acts Make Life Worth Living*, London: Profile Books, 2022.**

Luther H. Martin

University of Vermont

Abstract

Xygalatas identifies religious ritual as a special type of human ritualized behavior generally, the scientific study, of which, he maintains, is “in full development.” While I have been less convinced that this is the case with any ‘scientific’ study of religion, Xygalatas has been a pioneer among those who have, in fact, engaged in a truly scientific study of religious ritual, both in the laboratory as well as, more interestingly, in the field. His overview of the state of this research, including his own, presents a wealth of investigative conclusions in an informative and engaging manner.

Keywords

ritual, religious ritual, scientific study of ritual, rituals and prosociality, the dangerous effects of ritual

Contact Address

Luther H. Martin, Professor Emeritus of Religion, The University of Vermont, 161 St. Paul Street, #304, Burlington, VT 05401 (USA); e-mail address: luther.martin@uvm.edu

Dimitris Xygalatas argues in his recent study of ritual that “a scientific study of ritual is [now] in full development” (9).¹ Since the preponderance of examples with which Xygalatas is concerned are religious rituals, a larger question is the possibility of developing a science of religion generally. Religion, as an “object of study,” has traditionally been separated into myth and ritual. Myth, what practitioners believe and/or think, is an explicit as well as conceptual construction disseminated and codified by theologians and philosophers throughout the ages. Ritual, what practitioners do, is a human behavior and human behaviors have long been an object of study, primarily by social scientists. A scientific

¹ Dimitris Xygalatas, *Ritual. How Seemingly Senseless Acts Make Life Worth Living*, (London: Profile Books, 2002).

study of both myth and ritual have now become facilitated by the advent of the cognitive sciences, the methodological perspective embraced by Xygalatas (9, 83).²

I have previously argued (somewhat cynically, perhaps) that, apart from a few graduate and research centers, a scientific approach to the study of religion 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.³ Rather such study seems consigned to individual venturesome scholars or to ensembles of those scholars;⁴ 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. Xygalatas, an anthropologist, is one of the pioneers of that study.

A Scientific Study of Ritual

Ritual, Xygalatas argues “is a true human universal” (5) with evolutionary foundations (17, Ch. 2). Ritual is documented from the earliest records of human history (217, 222) and is detectable in the behavior of modern infants (93). Xygalatas’ fundamental question is to understand why people engage in rituals, especially the extremely costly (and potentially painful) ones that he had been familiar with from his youth in Greece (9). However, when ritual participants are asked why they do them, they give any number of answers. While affirming their importance, participants will nevertheless most often answer that they do so simply because they always have. “It is our tradition. It is who we are. That’s what we do” (16). While rituals seemingly have no explicit purpose or goal (5), anthropologists have observed over the years that they nevertheless seem to function as “a vehicle for personal fulfilment, empowerment, and transformation, and also as a mechanism for cooperation and the maintenance of social order” (7).

The scientific study of such “causally opaque” (6, 93) human behaviors as rituals has generally been confined to systematic observation, or to the artificial conditions of laboratory experimentation far removed from their actual practices in the field. However, their observations and their theories about them were rarely able to be tested (7). Xygalatas has

² Whereas a scientific study of religion was initially facilitated by the cognitive sciences, other approaches are now expanding that study e.g., behavioral economics, cognitive historiography, network theory, computer simulations, and big data approaches (Luther H. Martin, “Is There a Future for a Scientific Study of Religion?” *Step Back and Look Beyond: Studying Religion after 2020*, eds. Frederik Elwert, Tim Karis, Martin Radermacher, Jens Schlamelcher, and Maren Freudenberg, [Leiden: Brill, forthcoming]).

³ The sole exception to professional societies devoted to a scientific study of religion is the International Association for the Cognitive Science of Religion, recently renamed as the International Association for the Cognitive and Evolutionary Sciences of Religion. While other professional societies of religion might include sections devoted to a cognitive science of religion, these sections often meet conjointly with those having religious agendas.

⁴ Martin, “Is There a Future for a Scientific Study of Religion?” forthcoming article.

not only studied religion in the laboratory (primarily as Director of the Laboratory for the Experimental Research of Religion, Masaryk University and, subsequently, as Director of the Experimental Anthropology Lab, University of Connecticut), but he brought the laboratory into the field (122, 158), especially in Greece and Spain with his research on fire-walking rituals,⁵ and in the relatively small island nation of Mauritius where numerous ritual traditions are represented, especially extreme rituals (159).

Initially, Xygalatas used unobtrusive, wearable biometric sensors to measure physiological changes among his subjects while they were in the midst of actually performing a ritual. Subsequently, he expanded his technologies of in-field biometrics to include hormonal sampling (16), advanced statistical analyses, and even brain imaging techniques (9, 16). Xygalatas' innovative experimental approach in the field has allowed him to test and to offer empirical explanations for what has previously been observational descriptions and subjective interpretations.

Ritual and Prosociality

“Ritual actions,” Xygalatas argues, “are intuitively perceived to be *special*,” that is, they “command more attention and are described in greater detail” than are “ordinary actions” (91, *italics original*). They do so because of their causal opacity, that is, rather than having some instrumental physical goal, ritual actions themselves are the goal. They are the consequence of prolonged cultural conventions (93) which provide somatic and cognitive reinforcements for perpetuating socially organizing practices. It is this social organizing function of ritual that underlies the view of ritual as facilitating a social need to cooperate. And, since cooperation requires a harmonious coordination of behavior, synchrony is especially important (99–102). Significantly, Xygalatas has documented this socially galvanizing effect of ritual not only for ritual participants but for spectators of ritual as well (135–136).

Synchrony produces states of cognition in which sentient perceptions of reality become relaxed, like more explicit techniques for inducing altered states of consciousness—drugs, wine, fasting, meditation (231). Historically, such altered perceptions of reality could be construed as alternative domains, frequently inhabited by superhuman agents, e.g., ancestors, spirits, gods, that were construed in social relations with, and considered to be significant for, this life. Commerce claimed with superhuman agents is, of course, a necessary component of that universal social formation “religion.”

⁵ Dimitris Xygalatas, *The Burning Saints: Cognition and Culture in the Fire-walking Rituals of the Anastenaria*, (London: Routledge, 2014).

Rituals and Health

In addition to the prosocial benefits of religious rituals, Xygalatas documents positive claims of benefits for the health of individual practicers (Ch. 8), specifically with relief from depression and anxiety in the face of stress (219).⁶ Subjective well-being reported by practicers on “survey instruments” (225) might, of course, be anticipated as self-validation for the causally opaque rites they had just performed. Xygalatas recognizes this self-validation in reported cases of relief from stress as an example of the well-known placebo effect (228, 234). Ritual can even actuate a nocebo effect, in which a practicer succumbs to negative effects of ritual, as in the well-documented cases of “voodoo death” (235). Xygalatas notes that “experimental research confirms that [such] expectations can have major effects on health, both positive and negative” and that rituals validate such expectations in their practicers (237).

Xygalatas concludes that attributions of maladies to such external forces as spirits or witches “allows patients to reinterpret their condition in ways that may be more socially acceptable as well as more palatable to themselves” (299). However, this socially acceptable and/or personally satisfying reinterpretation by religio-social interventions may also deter patients from receiving appropriate biomedical interventions (234). Conversely, might the increased availability and acceptance of modern biomedical interventions eventually render such religious rituals and their causally opaque practices obsolete? Should this possibility of religious desuetude be a research focus for religious studies scholars?

Deleterious Effects of Ritual

Xygalatas, like virtually all scholars of religion, generally emphasizes the positive social religious rituals over their potentially detrimental effects; they promote social bonding, contribute to good health, influence mate selection (194), and deter free-riders (200). Such “strong bonds forged in the face of shared human suffering,” Xygalatas concludes, “may be an evolutionary adaptation that helped early human communities pull together and overcome adversity when faced with existential threats such as war, predators, or natural disasters” (174). The eminent historian of religion, Jonathan Z. Smith, has even argued that any negative deviations from those benefits are simply not considered to be “religion.” Rather, religion and its practices, Smith concludes, have “rarely been a positive, liberal force.” Since their origin, he argues, they have “been responsible for more death and suffering than any other human activity.”⁷ When, in other words, does an evolutionary adaptation subsequently survive in the modern world as a maladaptation? For example, a successful adaptation to an abundant food supply resulted in a heightened vulnerability to predators that led to the extinction of Dodo birds on Mauritius. And, aren’t such extreme rituals as

⁶ For a similar discussion from the perspective of the biology of religion, see Thomas B. Ellis, *Religion, Disease, and Immunology*, (London: Bloomsbury, 2022).

⁷ Jonathan Z. Smith, *Imagining Religion: From Babylon to Jonestown*, (University of Chicago Press, 1982), 110.

the Mauritian Tamil Hindu *Thaipusam Kavadi*, with its gruesome practices of disfiguring piercings with needles and hooks that are so meticulously documented by Xygalatas (160–174, 223–227), not a similar example of adaptive practices that were adaptive in the archaic world being maladaptive in the modern world? And what about religiously motivated suicides, e.g., Jonestown, Branch Davidians, the Solar Temple cult, Heaven’s Gate, etc.,⁸ not to mention numerous examples of religious martyrdom. Xygalatas recognizes that “It would be remiss to talk about the noble aspects of” ritual “without also acknowledging its potential to foster division, discrimination and hatred” (150). He concludes that “an interdisciplinary science of ritual allows us to appreciate that behaviors that seem wasteful may be both meaningful and beneficial” (268), but they may also be both inconsequential and dangerous. For example, the initiatory hazing rituals among college fraternities have been prohibited by most universities, as they have among most branches of the military, as understandings of the negative effects of such practices have begun to surmount their prosocial utility (268). Nevertheless, the bulk of Xygalatas’ discussion of ritual addresses “how seemingly senseless acts make life worth living”—the subtitle of his book—while neglecting any extended analyses of their negative aspects, to which he devotes only four pages out of 268 (150–153, 180).

Harnessing the Power of Ritual

Xygalatas asks whether the obscure benefits of archaic, even extreme, ritual might be adapted for the modern (secular) world, unfettered from their negative encumbrances. He references the “Burning Man,” an event focused on “radical *self*-expression” and “*self*-reliance,”⁹ which is held annually in the desert of the western United States, to document an example of religious-like ritual in the “post-modern world.”¹⁰ He cites Burning Man co-founder Larry Harvey’s conclusion concerning the “transformative power of ritual.” “Beyond the dogmas, creeds, and metaphysical ideas of religion,” Harvey contends, “there is immediate experience. It is from this primal world [of experience] that living faith arises” (255). This understanding of immediate experience as the foundation of religion recalls the proposal by William James over 100 years ago, that the basis of religion is the “experiences of individual men in their solitude,”¹¹ a view that has proven problematic for modern scholars.¹² And apart from the Protestant—and hence quintessentially American—bias of

⁸ Ellis, *Religion, Disease, and Immunology*, 160–161.

⁹ (Wikipedia), “Burning Man.” <https://en.wikipedia.org/wiki/Burning_Man> (accessed 8/27/2022).

¹⁰ Larry Harvey, “Burning Man 2017. Radical Ritual.” <<https://journal.burningman.org/2016/12/black-rock-city/participate-in-brc/burning-man-2017-radical-ritual/>> (accessed 7/13/2022), emphasis added.

¹¹ William James, *The Varieties of Religious Experience*, (New York: Modern Library, 1902), 31.

¹² E.g., Wayne Proudfoot, *Religious Experience*, (Berkeley, University of California Press, 1985); Ann Taves, *Religious Experience Reconsidered: A Building-Block Approach to the Study of Religion and Other Special Things*, (Princeton: Princeton University Press, 2009).

his proposition,¹³ James doesn't attempt to clarify what he means by "religious experience" until some 500 pages later in the "Conclusions" to his study, where he offers his dubious characterization of religious experience as "feelings" of "union" with a "More."¹⁴ Similarly, Xygalatas refers to a "human need for transcendence" (108, 148, 231).¹⁵ He reports that his own—if at first unplanned—walk on fire, was an "experience" that he describes as "thrilling, almost intoxicating. I felt the adrenaline rushing through my body and a kick of euphoria strong enough to last the rest of the day and beyond....I was amazed at how this short burst of activity produced such strong, long-lasting emotions" (145). However, James' (and Harvey's) arguments for immediate experience as the foundation of rituals (and of religion), Maslow's formulation of self-actualization as "individualistic," as well as Xygalatas' own personalistic experience of fire-walking, would seem to diminish Xygalatas' (Durkheimian) argument for the importance of their *collective* performance.

More perspicacious than "Burning Man" experientialism is Xygalatas' example of productivity in the Danish workspace. According to the Organisation for Economic Co-operation and Development (260), Danish workers in 2021 averaged 26.5 hours of work per week while the average hours worked per week by Americans was 34.5.¹⁶ And, yet, Denmark has one of the world's most innovative workforces with its highest rates of productivity (260–261). Xygalatas attributes this favorable situation of the Danish workforce to intentional ritualizations of their workplace (261), e.g., shared morning and afternoon coffee breaks, communal meals at lunch, set times and places for meetings accompanied by food and drink whether or not such meetings were actually required for the business at hand, celebratory acknowledgements of promotions and retirements, Friday afternoon social events, holiday parties, etc. (262–263). Xygalatas concludes that "These collective activities effectively harness the power of ritual to solidify interpersonal relationship and boost team cohesion" (264). He cites research confirming that such a deliberate integration of "rituals into their organizational structures allows companies to build a more organic,

¹³ Theorizing the Reformation theological principle of justification by faith alone as confirmed by an experience of grace (Eph. 2: 8)—Martin Luther's "a changed heart" (Rom. 2: 29). The influential American philosophical theologian Jonathan Edwards, for example, wrote in 1746, that "[t]rue religion consists so much in the Affections," a Puritan expression for feelings or experiences, "that there can be no true Religion without them" (Jonathan Edwards, "Treatise Concerning Religious Affections" [1746], *American Christianity: A Historical Interpretation with Representative Documents*, Vol I: 1607–1820, eds. H. S. Smith, R. T. Handy, and L. A. Loetsche, [New York: Charles Scribners, 1960], 342).

¹⁴ James, *The Varieties of Religious Experience*, 511.

¹⁵ Whereas James notion of a "More" is mystically-tinged (James, *The Varieties of Religious Experience*, 508) and definitionally-tenuous, Xygalatas' reference to "transcendence" is to Abraham Maslow's contention that the highest human "need" is *individualistic* "self-actualization" (108; Abraham H. Maslow, "A Theory of Human Motivation," *Psychological Review* 50.4 [1943]: 370–396, emphasis added); shortly before his death, Maslow expanded his hierarchical model to include a level of "transcendence" that is as mystically-tinged as is James notion of a "More" (Abraham H. Maslow, *Religion, Values, and Peak Experiences*, [Columbus, OH: Ohio State University Press, 1964]).

¹⁶ OECD (Organisation for Economic Co-operation and Development), 2022. "Hours worked." doi: 10.1787/47be1c78-en (accessed 7/23/2022).

democratic and collaborative culture” (264).¹⁷ Xygalatas is clear that a scientific understanding of the beneficial roles ancient rituals have played, and continue to play, in many cultures, might be adapted for modern societies devoid of their deleterious effects, as have the Danes with their workplace practices. What remains uncontested is whether modern scholars of religion should moderate their empathetic descriptions of ancient rituals, even their romanticization of such rites, to acknowledge their banality for modernity, even their demonstrable dangers, and to seek alternative possibilities. Although Xygalatas spends the major part of his discussion on ritual’s prosocial and therapeutic benefits, at least his lesser but clear acknowledgement of their negative aspect is a refreshing contribution to a scientific study of religion.

And, despite their disavowals, might Xygalatas nevertheless have explored the beliefs of ritual participants, i.e., the shared *cognitive states* that are intrinsic to any collective behavior, however subjective these beliefs may be.¹⁸ For example, the typical emic response for why participants perform the *Thaipusam Kavadi* rites was “We are Tamils, and this is what Tamils do” (161). Such responses nevertheless entail a nonreflective *belief* of participants that the pilgrimage is held in honor of the Hindu god Murugan (160), whether or not that belief references any of the various extensive legends of this ancient Vedic deity. What is the role of such belief in the ritual performances? Are there other shared (and implicit) beliefs that are operative?

So, is a scientific study of religion possible? Xygalatas is one of those individual scholars, of whom I spoke at the opening of this review, who, with his research teams, has clearly demonstrated that it is, both in the laboratory and, perhaps more significantly, in the field. He presents an overview of two decades of his research—and that of others—on ritual, and his conclusions about their role in and contributions to various cultures, including the modern west. He helpfully frames his discussions with anthropological anecdotes of various rituals from around the world by earlier, well-known social scientists—e.g., Malinowski (53–58), Evans-Pritchard (60, 212), and, of course, Durkheim (119–120, 137–138, 148–149). He even refers to historian William McNeill’s reflections on his earlier (1941) experiences of social bonding in a military context as an effect of close-order drill (99–100),¹⁹ a seminal work often neglected in studies of ritual. And, he helpfully situates those accounts in the theoretical explanations of the authors he cites. Xygalatas’ admirable overview of the state of scientific research on ritual presents a wealth of investigative conclusions in an informative and engaging manner, accessible to all readers—academics and their students as well as nonprofessionals—that is as edifying as it is enjoyable.

¹⁷ Fatih Kursat Ozenc and Margaret Hagan, “Ritual Design: Crafting Team Rituals for Meaningful Organizational Change,” *Advances in Intelligent Systems and Computing: Proceedings of the Applied Human Factors and Ergonomics International Conference*, (New York: Springer Press, 2017), 146–157.

¹⁸ Jacob L. Mackey, *Belief and Cult: Rethinking Roman Religion* (Princeton: Princeton University Press, 2022).

¹⁹ William H. McNeill, *Keeping Together in Time. Dance and Drill in Human History*. (Cambridge, MA: Harvard University Press, 1995).

Bibliography

- Edwards, Jonathan. "Treatise Concerning Religious Affections." In *American Christianity: A Historical Interpretation with Representative Documents*, edited by H. S. Smith, R. T. Handy, and L. A. Loetsche, Vol I: 1607–1820. New York: Charles Scribners, 1960 [1746].
- Ellis, Thomas B. *Religion, Disease, and Immunology*. London: Bloomsbury, 2022.
- Harvey, Larry. "Burning Man 2017. Radical Ritual." <<https://journal.burningman.org/2016/12/black-rock-city/participate-in-brc/burning-man-2017-radical-ritual/>> (accessed 7/13/2022).
- James, William. *The Varieties of Religious Experience*. New York: Modern Library, 1902.
- Mackey, Jacob L. *Belief and Cult: Rethinking Roman Religion*. Princeton: Princeton University Press, 2022.
- Martin, Luther H. "Is There a Future for a Scientific Study of Religion?" In *Step Back and Look Beyond: Studying Religion after 2020*, edited by Frederik Elwert, Tim Karis, Martin Radermacher, Jens Schlamelcher, and Maren Freudenberg. Leiden: Brill, forthcoming.
- Maslow, Abraham H. "A Theory of Human Motivation." *Psychological Review*, no. 50.4 (1943):370–396.
- Maslow, Abraham H. *Religion, Values, and Peak Experiences*. Columbus, OH: Ohio State University Press, 1964.
- McNeill, William H. *Keeping Together in Time. Dance and Drill in Human History*. Cambridge, MA: Harvard University Press, 1995.
- OECD (Organisation for Economic Co-operation and Development). 2022. "Hours worked." doi: 10.1787/47be1c78-en (accessed 7/23/2022).
- Ozenc, Fatih Kursat and Margaret Hagan. "Ritual Design: Crafting Team Rituals for Meaningful Organizational Change." In *Advances in Intelligent Systems and Computing: Proceedings of the Applied Human Factors and Ergonomics International Conference*, 146–157. New York: Springer Press, 2017.
- Proudfoot, Wayne. *Religious Experience*. Berkeley: University of California Press, 1985.
- Smith, Jonathan Z. *Imagining Religion: From Babylon to Jonestown*. Chicago: University of Chicago Press, 1982.
- Taves, Ann. *Religious Experience Reconsidered: A Building-Block Approach to the Study of Religion and Other Special Things*. Princeton: Princeton University Press, 2009.
- Wikipedia. "Burning Man." <https://en.wikipedia.org/wiki/Burning_Man> (accessed 8/27/2022).
- Xygalatas, Dimitris. *The Burning Saints: Cognition and Culture in the Fire-walking Rituals of the Anastenaria*. London: Routledge, 2014.
- Xygalatas, Dimitris. *Ritual. How Seemingly Senseless Acts Make Life Worth Living*. London: Profile Books, 2022.
- Zor, Rama, Keren Hila, Haggai Hermesh, Henry Szechtman, Joel Mort, and David Eilam. "Obsessive-Compulsive Disorder (OCD): A disorder of pessimal (non-functional) motor behavior.' *Acta Psychiatrica Scandinavica*, no. 180 (2009): 288–298.