

AN OVERVIEW OF DIMITRIS XYGALATAS' *RITUAL: HOW SEEMINGLY SENSELESS ACTS MAKE LIFE WORTH LIVING* (2022)

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In his latest book *Ritual: How Seemingly Senseless Acts Make Life Worth Living* (2021), Dimitris Xygalatas brings together his various research programs with colleagues and the history of ritual theory to explain why humans engage in apparently pointless rituals. His core thesis is that rituals are not pointless activities whatsoever but rather cultural technologies that make our lives better, whether they assuage anxieties or render our communities more prosocial. Drawing from an interdisciplinary body of scholarship, Xygalatas offers a compelling argument as to why we humans are a ritual species. Furthermore, Xygalatas' extensive laboratory and ethnographic research from over the last two decades provides strong empirical evidence for his thesis and other longstanding theories in ritual studies. The result is a book that delivers a captivating introduction to ritual studies, reasons for seriously considering the power of rituals, and how to research rituals with philosophical rigor and methodological precision.

Introduction

In his 2022 publication, *Ritual: How Seemingly Senseless Acts Make Life Worth Living* (*Ritual*, henceforth), Dimitris Xygalatas draws from ritual theory and his extensive research with colleagues to answer a longstanding question in anthropology: why do humans routinely engage in the apparently senseless acts of ritual? Here, we offer a summary of Xygalatas' answer by tracing the

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argument developed in each chapter of *Ritual*. Although our précis is a brief synopsis, we wish to conclude by stressing that *Ritual* makes at least two major contributions to the cognitive and evolutionary science of religion: a guide for combining the precision of cognitive experiments and the contextual sensitivity of ethnographic research, and a concise introduction to the science of ritual.

Xygalatas begins his book with a paradox. Human institutions, whether religious or secular, are replete with rituals, which are costly and, at first blush, do not produce many obvious practical results on the external world. So, why do we humans waste so much time and energy performing them? To be sure, Xygalatas is careful to distinguish rituals from habits. Both involve fixed and repetitive patterns, but while habits, such as brushing one's teeth daily, are causally transparent and have a direct effect on the world, rituals are causally opaque. They command our attention, and we must likewise focus on our symbolic actions when performing them. After all, they must be performed accurately to maintain their symbolic significance (p. 6). Rituals, as thus understood, are meaningful for performers – oftentimes the most meaningful behaviors for humans – but when asked to explain why, most people resort to the mantra commonly heard by anthropologists in the field: “We just do them. It is our tradition. It is who we are. That’s what we do” (p. 16).

Most anthropologists have stopped there, concluding that rituals are indeed vital and sacred, a fundamental part of what makes us human, and ultimately meaningful for cultures the world over. But in explaining exactly why this is true, anthropologists prior to Xygalatas engaged more in philosophical argumentation than scientifically measuring how exactly rituals would yield such profound meaning for humans. Part of what separates Xygalatas from his forebears, and how he has advanced the field of ritual studies, is his reliance on bringing the laboratory into the ethnographic context. Instead of relying on participant observation and participant (emic) reports alone, he and his colleagues have triangulated scores of (etic) data using biometric sensors, hormonal sampling, behavioral measurements, and psychometric tests. Xygalatas also includes his own phenomenology at times, explaining his experiences of partaking in rituals such as firewalking (pp. 144–146). The result, as Xygalatas stresses, is that the new science of ritual, which he has spearheaded with others in anthropology “can help us understand and celebrate a primordial and fundamental part of what makes us who we are,” as well as “harness its full potential in our lives” (p. 17).

After delineating the above points in the first chapter of *Ritual*, Xygalatas moves to a discussion of humans as a ritual species in the second. There, Xygalatas argues that ritual behaviors are analogous across species, but collective rituals in particular are common only to social species. Collective rituals

are those performed repeatedly by the group, which requires even more time and energy than individually performed rituals. Of course, this makes the ritual paradox all the more paradoxical for social species such as primates and hominids. Why would these intelligent animals engage in seemingly pointless activities? Xygalatas answers that it is the very cost of collective rituals that gives them power. We “have the mental surplus required to engage in behaviors that function as cognitive gadgets,” which allow us to outwit ourselves (p. 27).

This is a rather sophisticated argument that builds upon four foundational ideas in ritual studies. First, according to anthropologists such as Roy Rappaport (1999) and Terrence Deacon (1997), ritual is in fact a protolanguage that allows humans not only to signal group commitments to shared norms, rules, and values, but also to reinforce those commitments through the performative acts of ritual. Second, rituals provide the means for humans to experience collective effervescence and thereby create moments and spaces for the sacred. In turn, humans can leverage the sacred to forge what Rappaport called the basic social act of committing to group endeavors that are greater than the self. Third, rituals in the form of rites of passage – which appear universal – serve as the means to symbolically separate people's previous modes of life and to create new identities for them in the eyes of the collective. Finally, the ethnographic record attests that performing rituals is valuable for both celebrating transitions and assuaging the grief and anxieties that inevitably come with suffering and death (see pp. 27–49).

From Chapter Three to Chapter Six, Xygalatas' narrative shifts to threading his own remarkable findings into the four previously mentioned, foundational ideas of ritual studies. It is here, in these four chapters of *Ritual*, that we see the contributions that Xygalatas has made to the field, including his example of combining experiments and ethnographic fieldwork. What is perhaps most remarkable of all is that Xygalatas' research appears to carry the torch from previous generations of anthropologists into a new century of research on religion.

Specifically, Xygalatas' advocacy of taking the laboratory into the field is continuous with Branislaw Malinowski's (1922) advocacy of stepping off the veranda and living with the natives. And like Malinowski, Xygalatas finds that once in the field, it becomes obvious that rituals stem from a deep-seated need to exercise some control over the world around us, which seems to offer practitioners some form of therapeutic value (p. 57). Combining the work of Sir James Frazer (1890) and George Gmelch (1978), Xygalatas argues that what Malinowski and other anthropologists of the past got right was that humans turn to rituals to relieve stress and anxiety, but what previous scholars got wrong was this: they did not progress from the correlational observation that ritual provides relief to asking, and thoroughly investigating, how it does so.

Taking inspiration from studies like Matthew Anastasi and Andrew Newberg's (2008) Rosary usage to reduce anxiety, Xygalatas then suggests something profound. Ritual may be a mental technology that allows us to live in a variety of ecologies and thus achieve behavioral flexibility to adapt to any environment on the planet (p. 77). This is a provocative claim that seems to follow from foundational ideas in ritual studies, but the challenge is testing it. As Xygalatas observes, if rituals are causally opaque, we can't just invent them for the sake of study, nor can we manipulate living-and-breathing rituals in the field. Rather, we as researchers must work with them to detect their effects. But what effects would we expect besides reducing anxieties?

Drawing on Henry Tajfel's (1970) minimal group paradigm and Harvey Whitehouse's (2004) modes of religiosity, Xygalatas argues that rituals must also increase group commitments, for better or worse. What's more, anthropologists since Émile Durkheim (1915) have claimed that ritual increases group effervescence or *communitas*, in which individuals share in the joyous spirit of the community. And further still, Xygalatas agrees with Richard Sosis (see Sosis, Kress, & Boster, 2007) and Joseph Henrich (2009) that rituals must serve as costly signals that functionally advertise important social information. Nevertheless, these together raise two conundrums: first, how could we possibly study these multifaceted aspects of collective rituals in living cultures; and second, how does one go about studying the inner states of everyone in the crowd of a collective ritual (p. 120)?

Xygalatas' respective answers are breaking down the aspects of ritual and studying each individually, and using precise measures, including biomarkers, to identify shared experiences in participants of collective rituals. In what follows, we highlight the results from several of Xygalatas' studies that are summarized in Chapters Three through Six of *Ritual*. For the sake of brevity, we cannot do justice to the depth of analysis covered in *Ritual*, and thus we hope that our summaries here invite readers to read Xygalatas' outstanding book firsthand.

In Chapter Three, Xygalatas explains how he isolated aspects of ritual and used biomedical devices to highlight the process by which rituals create order and assuage anxieties. In a seaside village in Mauritius, where Xygalatas has returned for extensive fieldwork, he and his colleagues, many of whom have become major contributors themselves to the cognitive science of religion, conducted a field experiment. Participants wore biomedical devices while writing an essay about experiencing a natural disaster. While one group wrote in a controlled lab environment, the other contemplated and wrote about the disaster in a local temple. Results indicated that imagining a dysphoric natural disaster increased anxiety for both groups, but the temple group recovered significantly

quicker, such that the ritual space allowed participants to reassert control and predictability over events.

Turning to the ties that bind or what Xygalatas describes in Chapter Four as the “glue” of rituals, Xygalatas explains how he and colleagues examined synchronic movements through another experiment. In this case, participants were assigned to treatments in which they danced by themselves or with partners. The latter included a treatment of steady-speed dancing with a partner who committed minimal errors or a treatment with a partner who committed multiple errors. Xygalatas and his team found that those who engaged in the high synchronous activity exhibited in higher levels of analgesia, indicating they experienced more endorphin release than the non-synchronic treatments. Accordingly, this experiment, along with others conducted by Xygalatas, demonstrate that synchrony, which is central to collective rituals, directly increases endorphins and, in turn, lowers pain thresholds in participants.

Xygalatas then addresses the intense emotional arousal or effervescence of collective rituals in Chapter Five. It is here that Xygalatas' approach of using mixed methods shines in his now famous case study of firewalking in San Pedro Manrique, Spain. Having fitted both performers and observers with heart rate monitors, Xygalatas and colleagues found that heart rates spiked for firewalkers when they walked across the hot coals. However, the most remarkable finding was observers' heart rates spiked at the same time as loved ones or close friends fire walked. Such affective mirroring demonstrates that ritual not only functions to bind individuals in a community, but also amplifies shared inner states to the point that they engender intense group experiences.

As Xygalatas notes, the effervescence of ritual relate conceptually to flow, or the feeling of being in the moment in which a heightened sense of focus is experienced. Flow is also what causes ritual to be autotelic, or without external motivation, in which “the actions become the goals themselves” (p. 147). According to Xygalatas, effervescence and autoteleology together resolve the ritual paradox: ritual may be causally opaque, but the emotional bonds engendered by rituals are genuinely felt. That is why, when Xygalatas' team showed their firewalking data with the people of San Pedro Manrique, they understood the resonance created by ritual participation. As one participant remarked, “I told you it was hard to express the feelings that I experience during this ritual. *This* is how I feel. Our hearts become one” (p. 139).

In Chapter Six, Xygalatas turns to what he calls “superglue,” which concerns the intense social bonding that result from collective participation in high-intensity dysphoric rituals. Connecting to Whitehouse's (2021) work on identity fusion, Xygalatas explains that:

When people become highly fused with a group, they come to align themselves not merely with the collective in an abstract way but with its individual members, with whom they form personal ties, whether real or imagined, as if they were their own kin (p. 178).

Here, Xygalatas begins to consider the dangers of ritual, which we address more extensively in this journal (see Kiper & Mauro, 2024). Xygalatas observes that increasing the costliness of ritual increases the strength of identity fusion and that, in turn, can have positive or negative effects relative to evaluations of justifiable violence. On the one hand, identity fusion can contribute to overcoming collective action problems. On the other hand, when individuals are fused into a group, an attack on either is an attack on the other, leading to an increased likelihood of extremism and willingness to engage in sacrifice on behalf of the group.

Be that as it may, Xygalatas is well-known for his research in Mauritius, especially during the Thaipusam Kavadi festival, when participants engage in a variety of low-intensity doctrinal rituals, such as collective prayer, and high-intensity imagistic rituals such as the Thaipusam Kavadi. In the latter, individuals use hooks, darts, and poles to pierce their skin and often attach themselves to heavy idols that are carried or pulled to the Maha Kali Mata Mandir, a local temple dedicated to Kali. After observing these rituals, Xygalatas and his team of field researchers would intercept and pay participants to complete surveys assessing levels of pain experienced during the ritual, after which a confederate would solicit donations. Xygalatas found that pain was highly correlated with dysphoric rituals but also with the amount of charitable donations given.

In Chapter Seven, Xygalatas connects this finding to costly rituals and their capacity to overcome collective action problems and signal trustworthiness to the group. Using the Thaipusam Kavadi festival as a context for further investigation, Xygalatas examined the extent to which participation in the Thaipusam Kavadi functioned as a successful costly signal, namely, for mate attraction. He and his colleagues did so by creating dating profiles for men and women using either naturalistic photos that represented their commitment to a religious tradition, such as bearing a tilak on the forehead, or engagement in ritual such as participating in the Thaipusam Kavadi. According to Xygalatas, results showed that families of would-be partners preferred individuals who participated in costly rituals, because they signaled the potential for serious commitment.

While Xygalatas also explores the connection between costly rituals and Joseph Henrich's (2009) Credibility Enhancing Display (CRED) and Leon Festinger's (see Festinger et al., 1956) cognitive dissonance, another original contribution comes in Chapter eight when Xygalatas considers how ritual provides health benefits. Again, studying the Thaipusam Kavadi, Xygalatas investigates

the health outcomes of those who engaged in bodily piercing. Using portable health monitors with extended batteries, Xygalatas and colleagues were able to track physiological data of participants, including stress, one month prior to and one month after the Kavadi ritual (p. 226). They found that the intensity of the ritual caused participants extensive physical stress, but that stress quickly dissipated after the ritual while the psychological benefits of the ritual lasted significantly longer. Thus, Xygalatas infers that the short-term costs of rituals provide long term mental benefits.

Making broader connections to current mental health crises, Xygalatas observes that ritual can reframe mental illness into socially acceptable terms. By linking mental illness to external forces, such as spirits, afflictions are normalized and interpreted as a blessing. Furthermore, ritual creates social bonds that are directly correlated with improved mental health. And yet, like a double-edged sword, Xygalatas recognizes that rituals can harm mental health. To illustrate, he outlines the negative outcomes of nocebos, or negative placebos, when a person or object, such as a voodoo doll, negatively affects their health and manifests into a social reality. Nevertheless, the antidote to these harmful outcomes is ritual – they can be alleviated through ritual cures.

With these adaptations clearly elucidated, Xygalatas concludes in Chapter Nine by pondering the ways in which the power of ritual can be harnessed for social good. New rituals are created all the time, he notes. To illustrate this, he gives an extended discussion of Burning Man, which raises several questions about the effects of newly emergent behaviors that are collective and ritualistic in contemporary western nations, especially given the decline of religion therein. Thinking forward, Xygalatas looks at these new rituals, giving special attention to those that developed amid the COVID epidemic. In the loss of other typical rituals, such as graduations, new ones were created by schools and families, such as impromptu graduation processions by vehicle, which offered graduates a similarly ritualized experience. Xygalatas acknowledged that when it comes to these new rituals, some may stick, while some will not. But what matters is that rituals will continue to provide benefits when they are needed. Along these lines, he considers other minor rituals, such as those honoring organ donations and those centered around divorce, to show that novel rituals can be effective.

By delinking ritual from religion and showing the clear benefits that ritual poses to our physical and mental health, Xygalatas ultimately argues that ritual is absolutely a tool we can use to face current issues. Whether we fall back on older rituals or invent new ones, we are ritual animals. As such, ritual plays and will likely continue to play an important role in our success as individuals, as groups, and as a species.

To conclude, we wish to stress that *Ritual* is an important book for the cognitive science of religion. We believe the book itself makes two major contributions. First, Xygalatas, having now conducted decades of research on ritual cognition and behavior, offers an effective guide in *Ritual* for combining the meticulousness of lab experiments, which he takes to the field, and the concerns for local cultures. The latter based on Xygalatas' *modus operandi* for doing good work, is not neglecting ethnographic fieldwork when studying religious phenomena and making inferences about how religion works. Second, with new insights from his experimental and ethnographic research, Xygalatas updates the standard canon of ritual studies, thereby synthesizing work that has come before and offering a path for moving forward, and in so doing, delivers a concise introductory to the science of ritual. For these reasons, we believe *Ritual* is and will remain an essential book for researchers of religion.

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