

---

## EDITORIAL

### REFLECTIONS ON THE COGNITIVE SCIENCE OF RELIGION

ARMIN W. GEERTZ

Aarhus University, Denmark

[awg@cas.au.dk](mailto:awg@cas.au.dk)

Welcome to volume 10.1–2 of the *Journal for the Cognitive Science of Religion*! In looking back at the first ten volumes of this journal, one is struck by the excitement and diversity of this ever-growing research field.

Our first issue appeared in 2013, and it clearly sketched out what would become the main focus of this journal, namely, method, theory, and experimental studies. The first article by Ilkka Pyysiäinen (Pyysiäinen, 2013) brought readers up to date on the status of the foundational theories of the CSR and described how the CSR had developed from a theoretical endeavor to an interdisciplinary, empirical field of study. The next article by Chris G. Sibley and Joseph Bulbulia (Sibley & Bulbulia, 2013) demonstrated how methods developed by empirical psychologists could stimulate theory testing and generating in the CSR. The next article by Jeppe Sinding Jensen (Jensen, 2013) introduced a new understanding of human cognition as being mutually constituted by cognition *and* culture. He argued that two evolved foundations of human cognition – dual processing and cultural coding – are essential components of making sense of the complexities of religious thought and behavior. That article was followed by an approach quite different from earlier CSR research. Kristoffer Laigaard Nielbo, Uffe Schjoedt, and Jesper Sørensen (Nielbo et al., 2013) introduced the role of predictive processing in human perception and how ritual behavior contributes to cognitive resource depletion. In their experimental study, they demonstrated that understanding the actual processes of the brain is crucial to hypotheses about cognitive mechanisms. The final article of the issue by Benjamin Grant Purzycki (Purzycki, 2013) provided an analysis of empirical data collected in a largely unstudied population in the Tyva Republic and encouraged CSR scholars to pursue a cognitive ecological account of religion. In many ways, that issue was a watershed event highlighting promising new methods and theories that have since been successful in improving the explanatory power of CSR research, and more broadly, our understanding of human cognition.

Our second issue focused on the development of new methods in the CSR. This issue was dedicated to showcasing what an experimental approach could accomplish in answering questions about religion with a whole array of new and exciting studies (Xygalatas, 2014). Since then, the JCSR has published thought-provoking theories and models of cognition together with detailed empirical studies on a variety of topics. Theoretical topics included, among others, religion and sociality (Martin & Wiebe, 2014), philosophy (Gardiner & Engler, 2015), evolution (Turner, 2016), imagination (van Mulukom, 2017/2019), mental disorders and religious experiences (Geertz, 2019/2021), embodiment (Van Cappellen & Edwards, 2018/2021), and enactive cognition (Ciolkosz, 2021/2023).

The exuberance and dedication of new generations of scholars also led to important methodological developments including, among others, the above-mentioned experimental fieldwork, studying understudied populations (Newson et al., 2018/2021; Visuri, 2017/2019a), EEG studies (van Elk, 2014), the neuroscience of religion (Nenadalová & Geertz, 2021/2023), cognitive ethnography (Turpin & Stanford, 2018/2021), cognitive historiography (Ambasciano, 2015; Chilcott, 2015), computational science (Lane & Shults, 2018/2021; Lane, 2013), and encouraging replication, preregistration, and open science (Hoogeveen & van Elk, 2018/2021; Kavanagh & Kapitány, 2018/2021).

Many of the above-mentioned articles were updated and republished together with methodological articles published in the *Journal of Cognitive Historiography* in an anthology published in the JCSR book series *Advances in the Cognitive Science of Religion*. This anthology represented state-of-the-art cognitive science of religion (Geertz et al., 2022).

Since its inauguration, the JCSR has also highlighted innovative experimental studies. Mention can be made of the study of religious practice, personality, and social cognition (Sibley & Bulbulia, 2013); cognitive resource depletion during ritual (Nielbo et al., 2013); memory and minimally counterintuitive ideas (Harmon-Vukić & Upal, 2017/2019; Porubanova-Norquist et al., 2013); attribution of intentionality to natural phenomena (Nieuwboer et al., 2014); induced spiritual experiences and somatosensory processing (van Elk, 2014); mentalizing and belief (Greenway, 2016); imagination and autism (Visuri, 2017/2019b); mentalizing and mysticism (Coleman et al., 2017/2019); dopaminergic excitation and religious experiences (Hunter, 2020/2022); and embodied representation of existential concepts (Harmon-Vukić & Spitalnic, 2021/2023), among others.

This tenth volume continues the vibrancy of prior volumes with commentaries and authorial replies in two book panels. The first panel concerns Benjamin

Grant Purzycki and Richard Sosis' *Religion Evolving: Cultural, Cognitive, and Ecological Dynamics* (Purzycki & Sosis, 2022), and the second panel concerns Dimitris Xygalatas' *Ritual: How Seemingly Senseless Acts Make Life Worth Living* (Xygalatas, 2022). The authors of both books are pioneers in expanding the methodological palette of the CSR, and the lively discussions among the panelists demonstrate that the CSR is becoming ever more successful in probing the depths and causes of religious behavior.

### References

- Ambasciano, L. (2015). Mapping Pluto's Republic: Cognitive and epistemological reflections on philosophy of pseudoscience: Reconsidering the demarcation problem. *Journal for the Cognitive Science of Religion*, 3(2), 183–205. <https://doi.org/10.1558/jcsr.27091>
- Chilcott, T. (2015). Reappraising objects of desire through practices of devotion: A cognitive historiographical approach to religious claims in Medieval India. *Journal for the Cognitive Science of Religion*, 3(2), 155–181. <https://doi.org/10.1558/jcsr.31055>
- Ciołkosz, M. (2021/2023). Gods of participation: Participatory sense-making and an enactivist reframing of the religion and morality problem. *Journal for the Cognitive Science of Religion*, 9(2), 83–110. <https://doi.org/10.1558/jcsr.27225>
- Coleman, T. J., III, Bartlett, J. E., Holcombe, J. M., Swanson, S. B., Atkinson, A., Silver, C. F., & Hood, R. W., Jr. (2017/2019). Absorption, mentalizing, and mysticism: Sensing the presence of the divine. *Journal for the Cognitive Science of Religion*, 5(1), 63–84. <https://doi.org/10.1558/jcsr.37551>
- Gardiner, M. Q., & Engler, S. (2015). The philosophy and semantics of the cognitive science of religion. *Journal for the Cognitive Science of Religion*, 3(1), 7–35. <https://doi.org/10.1558/jcsrv3i1.21033>
- Geertz, A. W. (2019/2021). The fine lines between mental disorders and religious experiences. *Journal for the Cognitive Science of Religion*, 7(1), 1–2. <https://doi.org/10.1558/jcsr.20531>
- Geertz, A. W., Ambasciano, L., Eidinow, E., Martin, L. H., Nielbo, K. L., Roubekas, N. P., van Mulukom, V., & Xygalatas, D. (Eds.). (2022). *Studying the religious mind: Methodology in the cognitive science of religion*. Equinox Publishing Ltd.
- Greenway, T. S. (2016). Mentalizing domains and belief in God. *Journal for the Cognitive Science of Religion*, 4(1), 91–110. <https://doi.org/10.1558/jcsr.31063>
- Harmon-Vukić, M., & Spitalnic, K. (2021/2023). Vastness as an embodied representation of existential concepts. *Journal for the Cognitive Science of Religion*, 9(1), 5–31. <https://doi.org/10.1080/2153599X.2015.1015044>
- Harmon-Vukić, M., & Upal, M. A. (2017/2019). Understanding the role of context on memory for maximally counterintuitive concepts. *Journal for the Cognitive Science of Religion*, 5(2), 238–254. <https://doi.org/10.1558/jcsr.39064>
- Hoogeveen, S., & van Elk, M. (2018/2021). Advancing the cognitive science of religion through replication and open science. *Journal for the Cognitive Science of Religion*, 6(1–2), 158–190. <https://doi.org/10.1558/jcsr.39039>

- Hunter, J. (2020/2022). SEEKING God's presence: The dopaminergic-defense hypothesis. *Journal for the Cognitive Science of Religion*, 8(1), 32–68. <https://doi.org/10.1558/jcsr.22411>
- Jensen, J. S. (2013). Normative cognition in culture and religion. *Journal for the Cognitive Science of Religion*, 1(1), 47–70. <https://doi.org/10.1558/jcsr.v1i1.47>
- Kavanagh, C., & Kapitány, R. (2018/2021). Promoting the benefits and clarifying misconceptions about preregistration, preprints, and open science for the cognitive science of religion. *Journal for the Cognitive Science of Religion*, 6(1–2), 130–157. <https://doi.org/10.1558/jcsr.38713>
- Lane, J., & Shults, F. L. (2018/2021). The computational science of religion. *Journal for the Cognitive Science of Religion*, 6(1–2), 191–208. <https://doi.org/10.1558/jcsr.38669>
- Lane, J. E. (2013). Method, theory, and multi-agent artificial intelligence: Creating computer models of complex social interaction. *Journal for the Cognitive Science of Religion*, 1(2), 161–180. <https://doi.org/10.1558/jcsr.v1i2.161>
- Martin, L. H., & Wiebe, D. (2014). Pro- and assortative-sociality in the formation and maintenance of religious groups. *Journal for the Cognitive Science of Religion*, 2(1), 5–16. <https://doi.org/10.1558/jcsr.v2i1.1>
- Nenadalová, J., & Geertz, A. W. (2021/2023). The neurotheology of contemporary spirituality: A review essay of *The Varieties of Spiritual Experience*. *Journal for the Cognitive Science of Religion*, 9(2), 139–162. <https://doi.org/10.1558/jcsr.29595>
- Newson, M., Buhrmester, M., Xygalatas, D., & Whitehouse, H. (2018/2021). Go WILD, not WEIRD. *Journal for the Cognitive Science of Religion*, 6(1–2), 80–106. <https://doi.org/10.1558/jcsr.38413>
- Nielbo, K. L., Schjoedt, U., & Sørensen, J. (2013). Hierarchical organization of segmentation in non-functional action sequences. *Journal for the Cognitive Science of Religion*, 1(1), 71–97. <https://doi.org/10.1558/jcsr.v1i1.71>
- Nieuwboer, W., van Schie, H. T., & Wigboldus, D. (2014). Priming with religion and supernatural agency enhances the attribution of intentionality to natural phenomena. *Journal for the Cognitive Science of Religion*, 2(2), 97–119. <https://doi.org/10.1558/jcsr.v2i2.24483>
- Porubanova-Norquist, M., Shaw, D. J., & Xygalatas, D. (2013). Minimal-counterintuitiveness revisited: Effects of cultural and ontological violations on concept memorability. *Journal for the Cognitive Science of Religion*, 1(2), 181–192. <https://doi.org/10.1558/jcsr.v1i2.181>
- Purzycki, B. G. (2013). Toward a cognitive ecology of religious concepts: An example from the Tyva Republic. *Journal for the Cognitive Science of Religion*, 1(1), 99–120. <https://doi.org/10.1558/jcsr.v1i1.99>
- Purzycki, B. G., & Sosis, R. (2022). *Religion evolving: Cultural, cognitive, and ecological dynamics*. Equinox Publishing Ltd.
- Pyysiäinen, I. (2013). Cognitive science of religion: State-of-the-art. *Journal for the Cognitive Science of Religion*, 1(1), 5–28. <https://doi.org/10.1558/jcsr.v1i1.5>

- Sibley, C. G., & Bulbulia, J. (2013). Healing those who need healing: How religious practice interacts with personality to affect social belonging. *Journal for the Cognitive Science of Religion*, 1(1), 29–45. <https://doi.org/10.1558/jcsr.v1i1.29>
- Turner, J. H. (2016). Using neurosociology and evolutionary sociology to explain the origin and evolution of religions. *Journal for the Cognitive Science of Religion*, 4(1), 7–29. <https://doi.org/10.1558/jcsr.35721>
- Turpin, H. D., & Stanford, M. (2018/2021). Cognitively informed ethnography: Using mixed methods to capture the complexity of religious phenomena in two ecologically valid settings. *Journal for the Cognitive Science of Religion*, 6(1–2), 107–129. <https://doi.org/10.1558/jcsr.38498>
- Van Cappellen, P., & Edwards, M. E. (2018/2021). The embodiment of worship: Relations among postural, psychological, and physiological aspects of religious practice. *Journal for the Cognitive Science of Religion*, 6(1–2), 56–79. <https://doi.org/10.1558/jcsr.38683>
- van Elk, M. (2014). An EEG study on the effects of induced spiritual experiences on somatosensory processing and sensory suppression. *Journal for the Cognitive Science of Religion*, 2(2), 121–157. <https://doi.org/10.1558/jcsr.v2i2.24573>
- van Mulukom, V. (2017/2019). The cognitive science of imagination and religion. *Journal for the Cognitive Science of Religion*, 5(1), 5–20. <https://doi.org/10.1558/jcsr.39503>
- Visuri, I. (2017/2019a). The Nordic issue: Eclectic, non-WEIRD, and culturally sensitive. *Journal for the Cognitive Science of Religion*, 5(2), 136–141. <https://doi.org/10.1558/jcsr.42612>
- . (2017/2019b). A room of one's own: Autistic imagination as a stage for para-social interaction and social learning. *Journal for the Cognitive Science of Religion*, 5(1), 100–124. <https://doi.org/10.1558/jcsr.37518>
- Xygalatas, D. (2014). Special issue on the experimental research of religion. *Journal for the Cognitive Science of Religion*, 1(2), 137–139. <https://doi.org/10.1558/jcsr.v1i2.137>
- . (2022). *Ritual: How seemingly senseless acts make life worth living*. Profile Books Ltd.