

Editor:	Jay R. Feierman
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Review:

In recent years, interdisciplinary studies on the evolution of religion (commonly defined as behavior towards supernatural agents) made some encouraging progress, with two European conferences leading to shared projects and publications. In September 2007, a range of scientists from diverse fields convened at the Hanse-Wissenschaftskolleg (HWK) in Delmenhorst, Germany, exploring “The Biological Evolution of Religious Mind and Behavior” (Springer 2009) especially from empirical perspectives. Among the participants, zoologist Jay R. Feierman advocated a deeper understanding of the “behavioral” side of religion, organizing another conference in July 2008 at Bologna University, leading to the volume “The Biology of Religious Behavior” reviewed here. Owing to this perspective, the volume is structured according to the five-step concept of Nobel Laureate ethologist Niko Tinbergen (1907-1988): 1. Describe the behavior. 2. Explore its evolutionary history. 3. Explore its development in the individual life-cycle. 4. Explore the behavior’s immediate, mechanistic causes. 5. Explore the adaptive (reproductive and survival) potentials of the behavior. The volume offers an exciting read, running the whole gamut from seriously empirical to wildly speculative.

Chapter 1, the description of religious behavior, is opened by sociologist Stephen K. Sanderson showing that religious behavior is evolving in socioecological contexts. Analogous to, e.g., music or speech, religious behavior turns out to be a biocultural trait that adapts to factors such as population density, economics and the availability of scripture. While already accepted in the field, it was a wise choice to put Sanderson’s contribution at the beginning, because he explains to new readers that “evolution” doesn’t mean a linear progression in biology or culture (as wrongly assumed by early ‘evolutionists’ in the scientific study of religion as Tylor or Frazer), but is a process of interaction with the respective environments.

Chapter 2 has been written by Craig Palmer, Lyle Steadman and Ryan Ellsworth who emphasize the importance of mythological talk in a field which had long been dominated by neurological and genetic perspectives on biological traditions. They rightfully point out that the link between nature

and culture is to be found in the “descendant leaving success” – those cultural traditions handed down to many offspring (e.g. a God commanding to be fruitful and multiply), in turn benefiting the biological foundations of a behavior (such as speech or the readiness to accept supernatural claims). Mythological talk is therefore as important as are the genetic or cognitive aspects of religious life.

Chapter 3, by Thomas Ellis, focuses on ocular behavior – the “exchange” of gazes between natural agents and the depictions of the supernatural ones -, a concrete, new and tremendously valuable aspect of ethological description. As Ellis is an assistant professor of religion, his contribution is an example that progress in evolutionary studies on religion is depending on cultural specialists, too. Offering surprising metaphors in contrast, Magnus S. Magnusson seeks analogies between biological and cultural traditions of information in Chapter 4, especially in the comparison of DNA and Holy Scriptures.

Starting the second main part of the book, the evolutionary history of religious behavior is addressed by the editor, Jay R. Feerman in Chapter 5. He offers another “modular” approach, which tries to explore the evolution of religious behavior by disentangling elements that in evolutionary combination lead to the emergence of new behaviors. His thorough theoretical arguments deserve to be tested on the basis of archaeological samples, as they have been brought forth recently i.e. by David Lahti and Matt Rossano in the Springer book (2009).

The development of religious behavior in individuals is explored by Benjamin Abelow contributing Chapter 6. The author speculates whether religious traditions might reflect childhood experiences of corporal punishment. Offered as open-minded “food for thought” (Abelow), the hypothesis oscillates between psychological trauma theory, historical hypothesis and the possible role of corporal punishment in the perseverance of (bio-)cultural traditions. Chapter 7, by evolutionary anthropologist Candace S. Alcorta, is combining insights from neurological, cultural and sociological studies concerning “the adolescent brain” and rites of passage, comparing religious and musical structures and emphasizing powerful points of biocultural interactions with socioecological conditions in individual biographies.

Her work resonates with ideas presented in Chapter 8 about the causes of religious behavior. Michael T. McGuire and Lionel Tiger explore specific religious behaviors as “neurophysiological events” coping with stress. Lluís Oviedo emphasizes the role of emotions as a motivational layer of religious behavior, a perspective sometimes overlooked by declining number of reductionists who present humans as mere “gene-executing machines”. Adding to the rich field of cognitive studies that focus on the neurological model of agency-detection and bias as a major building block of supernatural agency - as has been assumed by David Hume and Charles Darwin as a biological concept of animism at the very start of evolutionary studies on religion. Burgess Wilson points to the prominence of mirror neurons and other modules of spontaneous empathy in human nature and culture. His text is another strong contribution to the debate over whether religious behavior is “just” the consequence of individuals avoiding supernatural punishments by threatening presences

or rather is driven by our evolved instincts and needs of social interaction, which eventually incorporated a variety of supernatural agents. In fact, these insightful parts of the book should be made mandatory reading for psychologists in the habit of applying reason to religious cognitions in an individual's brain, quite often missing the social and empathic dynamics of religious life.

The final part of the book about potentially adaptive effects of religious behaviors is opened by psychiatrist John S. Price who recounts stories of patients adopting firm religious beliefs in order to cope with crises and changes – with varying outcomes. Then Rick Goldberg ponders the signaling functions of fasting and feasting rituals throughout the world of religions. His chapter is a carefully executed addition to his eminent “Judaism in Biological Perspective” (Paradigm 2009) – another reminder of the interesting fact that Jewish and Buddhist colleagues in the field are exploring their own traditions from the perspective of evolutionary monism, while those of us raised in Christian or Western secular traditions tend to repeatedly retreat into Aristotelian and Cartesian dualisms. In contrast to this case-study-approach, Klaus Jaffe and Luis Zaballa present theoretical approaches. Using the agent-based computer simulation model Sociodynamica, they calculate how the believed presence of supernatural agents as punishing transgressors enforce prosocial behavior and higher levels of in-group cooperation. As their results neatly fit into ethnological and experimental observations of Sanderson, Norenzayan, Shariff, Johnson, Kruger and Bering, they add to an increasingly strong body of studies that would have delighted Emile Durkheim. So does a team of Yamamoto, Leitao, Castelo-Branco and Lopes, whose experimental computer game supports already strong hypotheses about religious behaviors signaling in-group cooperativeness.

The book concludes with an insightful review by Feierman who admits that the tome “has only been able to present a fragmentary overview of some of the many potential applications of the biobehavioral sciences to the understanding of religious behavior.” Nevertheless, it is an inspiring overview, combining valuable pearls of empirical and theoretical work with open-minded forays into possible paths of future inquiry. It is a strong testimonial to recent dynamics in the field of evolutionary religious studies. And if combined with its companion from Delmenhorst, it brings the reader to the forefront of the respective studies and debates. Those interested in bringing the scientific study of religion beyond outdated, disciplinary stagnations are recommended to enter this fray!

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