



NEW BIOLOGICAL BOOKS

The aim of this section is to give brief indications of the character, content, and cost of new books in the various fields of biology. More books are received by *The Quarterly* than can be reviewed critically. All submitted books, however, are carefully considered for originality, timeliness, and reader interest, and we make every effort to find a competent and conscientious reviewer for each book selected for review.

Of those books that are selected for consideration, some are merely listed, others are given brief notice, most receive critical reviews, and a few are featured in lead reviews. Listings, without comments, are mainly to inform the reader that the books have appeared; examples are books whose titles are self-explanatory, such as dictionaries and taxonomic revisions, or that are reprints of earlier publications, or are new editions of well-established works. Unsigned brief notices, written by one of the editors, may be given to such works as anthologies or symposium volumes that are organized in a fashion that makes it possible to comment meaningfully on them. Regular reviews are more extensive evaluations and are signed by the reviewers. The longer lead reviews consider books of special significance. Each volume reviewed becomes the property of the reviewer. Most books not reviewed are donated to libraries at Stony Brook University or other appropriate recipients.

The price in each case represents the publisher's suggested list price at the time the book is received for review, and is for purchase directly from the publisher.

Authors and publishers of biological books should bear in mind that *The Quarterly* can consider for notice only those books that are sent to The Editors, *The Quarterly Review of Biology*, 111 Nassau Hall, 100 Nicolls Road, Stony Brook NY 11794-5004 USA.

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HISTORY, PHILOSOPHY, AND ETHICS OF BIOLOGY

EVOLVING BRAINS, EMERGING GODS: EARLY HUMANS AND THE ORIGINS OF RELIGION.

By E. Fuller Torrey. New York: Columbia University Press. \$35.00. xix + 291 p.; ill.; index. ISBN: 9780231183369 (hc); 9780231544863 (eb). 2017.

This book takes a brain-centric approach to the evolution of religion, where the evolution of religion is the evolution of cognitive capacities and the evolution of these is rooted in that of the brain. The first five chapters articulate five stages of hominin brain evolution: *Homo habilis*: A Smarter Self; *Homo erectus*:

An Aware Self; Archaic *Homo sapiens* (Neandertals): An Empathic Self; Early *Homo sapiens*: An Introspective Self; and Modern *Homo sapiens*: A Temporal Self. The chapter titles here do a decent job of summarizing the view: a sequential progression of cognitive innovations, concluding 40,000 years ago with *Homo sapiens* "becoming aware of their own death for the first time" (p. 117). The following two chapters describe the "spiritual self" and God-belief as the result of these brains crashing into Holocene-era large-scale society, culminating in axial age religions.

Torrey is a psychiatrist and a researcher on the biological basis of mental health. His basic approach—mapping operationally distinct elements of modern

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human cognition to preidentified phases of evolutionary history—is seductive, and has some precedent. Steven Mithen’s classic (although now outdated) *The Prehistory of the Mind: A Search for the Origins of Art, Religion and Science* (1996. London (UK): Thames and Hudson) trod similar ground using a modularity of mind framework. Torrey’s book is less self-reflective, however, being linearly focused on the evolutionary narrative and a paragraph-by-paragraph description of selected evidence from cranial archeology, contemporary neuroscience, and psychiatry. The evolution of brain regions is the central focus but uncritically so, and the various lines of evidence are touched on with breezy momentum.

A cluster of criticisms arise. First, the author’s preferred evolutionary narrative is questionable—even assuming the primacy of brain regions and an “in-serial” (rather than “in-parallel”) model of cognitive evolution. Especially controversial is the sequencing of theory of mind, autobiographical memory, and death awareness, for which extensive literature exists. Archeologists such as Mary Stiner, for example, describe evidence of ceremonial burial (implying death awareness and perhaps spirituality) 100,000 years ago or earlier. Although Torrey’s tour of the evidence is always interesting, it is unsystematic and his moves from evidence to conclusion are sometimes unsatisfying. Finally, the need for this precise evolutionary backstory is unclear, given that the author ultimately sees death fear as the main driving force for religion’s emergence. The book’s two parts sit somewhat awkwardly as a result.

Torrey is clearly interested in telling a specific story rather than comparing and contrasting it with others, which is fair enough, but the relative lack of hedging along the way (and spotty engagement with the existing literature) paints too neat a picture. A final chapter offers a brief survey of “other theories,” but dispenses with them in a few pages, concluding with an emphatic statement that “Humans need gods” (p. 221).

In summary, this is an entertaining book but it lacks authoritative force. Although its thesis is an interesting one, the lack of methodological self-awareness undermines the credibility of the overall effort.

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MORAL JUDGMENTS AS EDUCATED INTUITIONS.

By Hanno Sauer. *Cambridge (Massachusetts): MIT Press.* \$50.00. xiii + 312 p.; ill.; name and subject indexes. ISBN: 9780262035606. 2017.

Precisely what is involved in moral discourse is a perennial question. Some moral psychologists maintain that our moral discourse is grounded in reason.

Philosophers worry, however, that moral convictions have motivational, imperative content. And expressions in the imperative mood, in contrast to the declarative, are not true (or false). Insofar as reason would seem to have for its object what is true and what is false, it seems reason has little role to play. And, thus, Hume’s famous dictum, standing in direct opposition to Plato, is that reason cannot but be a slave to the passions. The view that moral convictions issue from the gut, so to speak, rather than the mind, receives support, some maintain, from recent experimental evidence. In *Moral Judgments as Educated Intuitions*, Hanno Sauer makes a case for the view that moral reasons play a significant, important role.

There is some experimental evidence suggesting that moral reasons are invoked post hoc, well after a moral conviction is made. The inference that might be drawn is that moral reasons are epiphenomenal, or play a marginal role in our normative lives. Moral convictions stem, as Hume thought, from the passions, from the gut; they are the cause of our engaging in reason rather than the effect. However, Sauer takes this inference to be hasty. And I read his rejection of moral sentimentalism to take the following lines. First, one can distinguish between post hoc reasoning and confabulation. The latter is understood as a case where the reasoning in question is not responsible for the conviction. Some advocates of sentimentalism cite, as evidence of their view, that subjects in experimental conditions frequently seem to lack (at least initially) reasons for their convictions. There is, however, another way to look at the phenomena and it is, I think, at least as old as Aristotle’s *Nicomachean Ethics*. On the basis of reason people can, and with some frequency do, form convictions. Habits develop out of these convictions. And, so long as the habits serve their purpose, one need not consult the reasons upon which the habituation was originally based. So, to put matters simply, the fact that a subject cannot, when asked, directly produce reasons for his or her convictions does not entail that the conviction does not bear the right kind of causal relation to their reasons. At the very least, it seems that sentimentalists should be thinking about a way to control for this possibility of reasons being efficacious on the front end. Furthermore, it would seem that as one searches for reasons, when scrutinized, this can and with some frequency does, over time, involve revision of one’s moral convictions. So, the mere fact that a subject considers reasons for a view, when scrutinized, does not render moral reasons, educated intuitions on Sauer’s account, inefficacious.

The primary virtue of the author’s treatment is that alternate etiologies, other than those advanced by moral sentimentalists, such as those adumbrated herein, are taken seriously and defended in an em-