parties may not have time or interest to read entire books on each of these critical issues, but they would find the concise arguments proffered here to be powerful and manageable. The editors introduce the volume by saying that “readers will decide for themselves whether the effort was worthwhile” (p. ix). I am convinced that it was.


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In academic discourse and common parlance alike, the term “religion” can refer to three related yet distinct entities. It can refer to religious beliefs or religiosity (intra-individual cognitive processes inside the brain, such as a belief in supernatural beings), religious behavior or practices (individual and interindividual social behavior, such as rituals and prayers), or religious organizations (supra-individual collectivities gathered for the purpose of collective religious practices, such as churches, synagogues, and other denominations). In the typical academic division of labor, psychologists mostly study religious beliefs, anthropologists usually focus on religious beliefs and behavior, and sociologists and economists typically concentrate on religious behavior and organizations. Now Jonathan Turner, Alexandra Maryanski, Anders Klostergaard Petersen, and Armin Geertz, a multidisciplinary quartet of scholars, have written The Emergence and Evolution of Religion: By Means of Natural Selection, an ambitious book that simultaneously and comprehensively seeks to explain all three aspects of religion and more by effortlessly gliding from the genetic to world-system levels of analysis.

The “natural selection” in the book’s subtitle is not your father’s natural selection. Even though the book is entirely devoted to explaining religion, the authors intend their general theoretical framework to be applicable to the evolution of all institutions. In this endeavor, the authors define, in addition to the familiar Darwinian (genetic) selection, four other types of natural selection. Type-1 Spencerian selection is the teleological and purposeful invention of solutions to new environmental problems confronting societies. (This is the old functionalist sociological explanation translated into the language of modern evolutionary theory.) Type-2 Spencerian selection refers to the geopolitical competition between societies where the winners of the competition impose their institutions on the losers and sometimes adopt institutions of the losers. Durkheimian selection captures the processes in organizational ecology where different organizations compete for resources and niche markets, often leading to division of labor and specialization among them. (This process might as well be called “Hannanian selection.”) Marxian selection is the failed Marxist logic of class struggle applied to (often violent) conflict between organizations where some organizations seek to overthrow the entire organizational system.

The authors use Darwinian selection to explain religious beliefs (religiosity) and behavior (practices); Type-1 Spencerian selection to explain the institutionalization of religion in order to satisfy basic human needs created by Darwinian selection; Durkheimian selection to explain the competition among religious organizations (or “cult structures,” in the authors’ language) for members, resources, and ideological niches; Type-2 Spencerian selection to explain how religion, polity, and economy coevolve when certain religions spread throughout the world as their host nations vanquish and conquer others in warfare in modern human history (think the Roman Empire); and, finally, Marxian selection to explain the violent acts undertaken by religious organizations when they act as social movement organizations and the negative emotions experienced by their members that motivate and fuel such violent acts (think ISIS).

The authors use the linguistic method of cladistics very carefully to reconstruct the brain and behavioral tendencies of hominin
ancestors of humans, and then they explain
the emergence of religiosity and religious
behavior as a consequence of some of these
brain structures (or “pre-adaptations”) and
behavioral tendencies, such as the sense of
justice, the ability to see self as an object
and to make external causal attributions
(assigning causes to external entities for
events that have consequences for self), and
the propensity to engage in rhythmic interac-
tions with others and experience collective
emotional arousal. Perhaps reflecting their
sociological perspective, the authors con-
ceive of religiosity as an interpersonal, social
process rather than an intrapersonal, cogni-
tive process (pp. 130–35). Put differently, for
the authors, religious behavior comes before reli-
gious beliefs (the authors refer to “the profane
origins of the sacred and supernatural”);
whereas for psychologists, religious beliefs
come before religious behavior. Do we pray
because we believe, or do we believe because
we pray? This question should stimulate fur-
ther theoretical development and empirical
research.

One currently active debate in the evolu-
tionary psychology of religion is whether
religiosity is an adaptation or a byproduct.
Do we believe in gods because those who
did in the past survived longer and achieved
greater reproductive success, or do we
believe in gods because religiosity emerged
as a nonadaptive byproduct of some other
adaptations? On this question, the authors
squarely fall on the byproduct side; religios-
ity became possible because of the evolution
of the human brain for other reasons (p. 134).

Ultimately, of course, the value of any sci-
entific theory is its empirical validity, and
the authors’ theory must be empirically test-
ed. In this sense, the Achilles’s heel of their
theory might be its extreme complexity,
which is a necessary and unavoidable conse-
quence of its comprehensive explanatory
scope. The authors themselves do not derive
any testable hypotheses in their book or pro-
vide any hint as to how their theory might be
tested empirically. It will therefore be up to
future generations of scientists to subject the
theory to empirical tests. I would particularly
be interested in the empirical validity of the
authors’ conclusion, derived from their clad-
istic analysis, that humans, like orangutans,
are naturally solitary, not group-oriented
(pp. 63–72), as this seems to go against most
assumptions of human nature in behavioral
sciences, which hold that humans have been evolutionarily designed to be inherently
social.

As impressive and ambitious as the book
is, it is not impossible to nitpick. For my taste,
too many insightful theoretical gems, such as
the devastatingly fatal critique of Dunbar’s
widely accepted theory of the evolution of
human language (p. 105, n10), are buried in
footnotes. But the most annoying problem
with the book, although this is as much the
publisher’s fault as the authors’, is that there
appears to have been no careful copyediting
of the text before publication. As a result,
along with a few occasional typos and a mix-
ture of American and British spelling, there
are many references cited in the text, particu-
larly those by the authors themselves, that
are missing or are incorrectly identified by
publication year in the bibliography at the
end of the book, making it impossible for
readers to look up key references. I consider
serendipitous discovery of new references
to be one of the pleasures of reading academ-
ic work, but sadly this was often impossible
with this book.

The Emergence and Evolution of Religion
promises a lot at the outset of the book,
and, quite remarkably, by its end, it delivers
everything it promised. I highly recommend
the book to anyone interested in the evolu-
tionary origins of all three aspects of religion
and believe that it will provide the sources
and foundations for countless PhD disserta-
tions in the near future.