Note from the Publisher

This volume is a guidebook of sorts, providing an introduction to the science of the evolution of religion. It documents a scholarly dialog that occurred at a resort nestled into the volcanic foothills of Oahu during a week long conference in early 2007. While its basic form is a compilation of the proceedings from that conference, the general effect is greater than what that form would typically imply. The scope of the subject matter is expansive and the result is a highly inclusive survey, culling from a range of research results and methods, propositions, apologies, rebuttals, and critiques. A broad range of questions necessary to the maturation of this field were posed, together for the first time it seems.

My interest in this subject and this dialog as publisher is at first glance oblique to my organization's expressed goals. The mission of the Collins Family Foundation (www.collinsf.org) and its publishing segment, the Collins Foundation Press (www.collinfoundationpress.org) is to provide leadership in humanity's efforts to live sustainably. This is executed in a number of ways, including the support of Russ and Cheryl Genet, the co-chairs of this conference. Russ is an accomplished polymath and a dear friend of long standing. His formidable scientific mind is exceeded only by his skill at identifying prescient and underdeveloped lines of inquiry and rallying experts together, making space for progress and innovation. With his background as an accomplished astronomer and student of evolution, he provides me with important perspectives on the topic of sustainability. Cheryl, a scholar of science and spirituality, connects the disparate pieces of conference implementation, thereby melding the fruits of Russ' skills into a viable vessel for the meeting of the experts' minds.

The connection between the contents of this book and the goal of promoting sustainability is direct. Over the last century it has become increasingly apparent that as a species, sustaining the fruits of our global civilization on this resilient but finite planet is challenging our capacity for cooperation in ways that humanity has never faced. Specifically the likelihood of impending dramatic changes in climate presents such a challenge. We are entering a bottleneck shaped by the collision of our material success and the planet's
finite resources, where the opportunity for reversing current climate trends is steadily diminishing. Over the course of human history, religious institutions have been a major vehicle for managing large scale cooperation. In our predisposition to be religious, I see a potential that needs to be studied and understood in sympathetic ways on a much broader scale. Navigating our way through this bottleneck, to a condition of sustainable human endeavor on our planet, requires a wisdom and understanding that we as a civilization currently lack.

In particular, how could our scientific understanding of the role of religion in human behavior help us become sustainable? Consider the example of the tribal social instincts hypothesis proposed by Peter Richerson and Robert Boyd in Not by Genes Alone, How Culture Transformed Human Evolution. Pete and Rob point out that these within-tribe instincts that evolved through the dynamic of gene/culture co-evolution predispose us to (1) exhibit guarded altruism to non-relatives, (2) show limited tolerance for leadership, (3) conform to social institutions, (4) sufficiently trust to permit division of labor, and (5) enforce rules of fairness. Simultaneously, other ancient instincts predispose us to make war inter-tribally when the survival of our own tribe is threatened. In what ways can our ancient warring instincts yield to our within-tribe social instincts to help us cooperate more globally? In this context, what would it take for populations of the world to perceive themselves as the one tribe that they truly are relative to the finite natural resources of this unique planet?

It is an honor for me to have been a part of the January 2007 International Conference on the Evolution of Religion, and to sponsor the publication of this book, The Evolution of Religion: Studies, Theories, & Critiques. I applaud its more than 50 authors for their initiative in coming together and for their scholarship in producing this comprehensive record.

Dwight Collins,
President,
Collins Family Foundation
November, 2007
Preface

Bringing the Evolution of Religion into Being

The International Conference on the Evolution of Religion and these proceedings were conceived in February 2006, when Dwight Collins, our close friend of three decades, visited us here in Hawaii. It was only natural, when considering our futures, that our discussion turned to conferences, for we had worked together organizing several in the past.

Some eleven years earlier, in February of 1995, Dwight joined us for a conference held at the Lazy-K-Bar Guest Ranch in Arizona. Russ, on retiring from the directorship of the Fairborn Observatory on Mt. Hopkins, Arizona, was able to pursue his lifelong interest in cosmic evolution—science's integrated "story" of physical, biological, and cultural evolution. What better way to learn than to organize (with Brian Swimme and Loyal Rue) a conference on The Epic of Evolution?

In 1996, Dwight flew half way around the world to New Zealand to attend The Evolution of Humanity, a conference Russ organized with Michael Corballis (Auckland University), held on the beach at Awaroa in Able Tasman National Park. Subsequently, with Dwight, we organized a Profitable Sustainability retreat, held in 2003 at the Hacienda, William Randolph Hearst's picturesque Spanish ranch house inland from his more famous castle on the California coast. In 2004, we organized a conference with world historian David Christian entitled Cosmic Evolution and Big History, also held at the Hacienda. Dwight and our good friend Peter Richerson (University of California, Davis) attended. Finally, we were pleased to help Connie Barlow and Michael Dowd organize the "evolutionary salon," Evolutionary Directionality, held at The Hacienda in 2005.

As we considered possibilities for future conferences with Dwight, the evolution of religion arose as a natural topic. Russ has a keen interest in cultural evolution, and religion is a key, even central facet, of all human cultures. Cheryl's focus is science and human meaning, and Dwight has an interest in the religious dimensions of sustainability. As the President of the Collins Family Foundation, Dwight kindly agreed, on the spot, to fund the publication of the conference proceedings. His foundation's generosity launched this conferences.

On returning to the mainland, we immediately contacted Peter Richerson. Who were the experts on the scientific study of the evolution of religion? Pete suggested we contact Richard Sosis (University of Connecticut
Rich sent us his review paper on the topic and put us in touch with Joseph Bulbulia (Victoria University, Wellington) who also furnished his own review paper. We contacted the authors in these review papers, inviting them to the Hawaii conference on the Evolution of Religion.

Developing and bringing the conference and proceedings to completion required the work of many individuals. Joseph Bubulia, Richard Sosis, and Armin Geerrz (University of Aarhus, Denmark) served as the program organizing committee. It was this team that organized the sessions and set up and directed panels and workshops. In addition, Joseph and Rich lent their expertise to the technical editing and final organization of the conference papers. We were also joined, early-on, by two graduate students, Karen Wyman (Claremont Graduate School) and Erica Harris (Boston University) who handled logistics and implementation. Erica served as the initial copy and format editor for these proceedings. Vera Wallen provided the final copy edit of the entire fifty papers and the front matter. Dan Wyman built and maintained the conference website with exceptional skill and dedication. Michael Dowd supported speakers in the technical and time-limit aspects of their presentations to help the conference run smoothly and on schedule.

The heart of the conference was the speakers themselves. Each brought a unique perspective to the scientific study of religion, to the evolution of religion in the larger evolutionary trajectory, and to the ultimate meaning of religion. They prepared their presentations, traveled (in some cases halfway around the world), shared ideas, and met deadlines for their proceedings papers.

The John Templeton Foundation provided honoraria for graduate students and other financial support, and Paul Wason and Barnaby Marsh, Templeton Foundation scientists, spoke at the conference. The Collins Family Foundation and the Orion Observatory sponsored the daily morning refreshments, and the International Association for the Study of Science and Religion funded the poolside welcome reception that launched the conference. The Orion Institute and the North American Science and Religion Foundation provided logistical support.

As should be evident from this volume, the conference was a dramatic success. Another conference, The Evolutionary Epic, will be held at the Makaha Resort on January 3-8, 2008. It will be a reprise, over a decade later, of the earlier Epic of Evolution. In that time, science’s story has been refined, and is now more widely understood by the public at large. We will, in this upcoming conference, consider both the Epic and how it is faring in its telling and incorporation into education, religion, and humanity’s sustainable presence on planet Earth (www.EvolutionaryEpic.org).

Russell M. Genet and Cheryl L. Genet
Conference Co-chairs
Introduction
Religion in Eden
Richard Sosis and Joseph Bulbulia

In early January 2007, scholars from around the world gathered in Makaha Valley, Hawaii to attend the first International Conference on the Evolution of Religion. Scientific research on the origin and evolution of religion has made rapid advances in the past two decades. The conference assessed how far the biological and social sciences have come toward explaining religiosity and religious culture, and looked for ways of improving and integrating distinctive naturalistic approaches. The conference also provided venues for those with philosophical and theological interests to raise questions about the relevance of this new research to questions internal to religious faith and practice.

Scholars came from Canada, Israel, Mexico, New Zealand, United States, and throughout Europe. They represented an array of religious backgrounds (Islam, Christianity, Judaism, and Buddhism) and beliefs (secularists, humanists, atheists, agnostics, theists, and even a self-proclaimed "creatheist"). More importantly, the spectrum of disciplines represented was extraordinarily wide, including cognitive psychologists and anthropologists, evolutionary psychologists, behavioral ecologists, anthropologists, evolutionary biologists, religious studies scholars, philosophers of science, historians, physicists, astrophysicists, neuroscientists, ecologists, archaeologists, and theologians.

One of the most successful aspects of the conference was that it brought together three scholarly groups who have otherwise had little sustained contact: religious studies scholars, cognitive scientists of religion, and evolutionary scientists interested in studying religion. While there have been fruitful collaborations between religious scholars and cognitive scientists, and evolutionary and cognitive scientists have also lately begun a productive dialogue, scholars from all three areas rarely find themselves under the same roof. This is unfortunate for many reasons. While evolutionary scientists have garnered considerable media attention from their recent forays into the study of religion, this work has often been pursued independently of, and often uninformed by, current religious scholarship. At this January 2007

1 For recent reviews of anthropological research on the evolution of religion, see Dow (2006) and Sosis & Alcorta (2003); and for reviews of evolutionary cognitive studies of religion, see Atran (2006); Barrett (2000); Bering (2006); Boyer (2003); and Bulbulia (2004, 2007).
conference, evolutionary scholars were pleasantly surprised at the depth of empirical research that already exists within the field of religious studies, and encouraged by the openness of some religious scholars to evolutionary ideas, but were somewhat dismayed by the recurrent misunderstandings of how selectionist theories are applied to human behavior. For their part, many religious studies scholars were skeptical about the potential of evolutionary approaches in explaining diverse religious patterns and trends. Most were curious about the possibilities of integrating evolutionary perspectives into their work, but many were cautious, and others were openly antagonistic. As would be expected in an emerging field such as the evolutionary study of religion, calls for more empirical and theory driven research were heard almost daily. Also heard were claims that religious scholarship has already produced an abundance of descriptive materials ready for evolutionary analyses and available to test rival theories. However, that debate is decided, all would agree that the number of exciting studies and promising theories presented each day of the conference was impressive.

A fourth group of participants contributed to our understanding of the implications of evolutionary research to practical, political, and spiritual life. These individuals were interested in the furore of religion, including its impact on sustainable development, the role that evolutionary science can play in the spiritual transformations of contemporary religions, and the dynamic relationship between humanism and religion. For those of us with our heads buried in research, it was refreshing to see how those outside the academy are interpreting, grappling with, and employing our findings.

As all participants will attest, the conference was physically and intellectually exhausting. There were more than 50 talks over five and half days, and no sessions were run in parallel. Sessions and workshops ran all morning and afternoon, and the daytime activities were capped off every evening with a distinguished plenary address.

Harvey Whitehouse (Oxford University) opened the conference on January 3, with a detailed overview of cognitive and evolutionary studies of religion. He carefully laid out the major issues confronting evolutionary studies of religion, summarizing the leading hypotheses, assessing the current state of understanding, and presenting critical methodological and empirical questions future research must address. The next morning we began the first full day of the conference. By lunchtime we had considered several scenarios for the evolution of religion and initiated discussions about whether religion is adaptive. That evening, noted historian and religious studies scholar, Luther Martin (University of Vermont and ICC, Queens University Belfast), delivered an impassioned and illuminating attack on evolutionary analyses of religion. He thoroughly outlined the concerns that evolutionary scientists
must deal with and resolve if evolutionary studies of religion are to successfully impact traditional historical scholarship. His talk stimulated equally impassioned discussion and debate.

The second full day of the conference focused on the adaptive benefits of supernatural beliefs, commitments, and practices. We also considered the application of signaling and sexual selection theories for understanding the evolution of religion. In the evening, Anne Taves (UC Santa Barbara) directed our attention to under-examined questions about cognition and the body, the construction of the self through narratives, and the role of “religious experience” in religious life. Taves urged that the “sui generis” model of this category impairs scientific progress. In its place, Taves motivated an “attributive model of religious experience.” Successful re-introduction of “religious experience” to naturalistic approaches appears to provide one of the more promising horizons for scientific exploration.

The third full day of the conference focused on cognitive research in the evolutionary study of religion, including new experimental and observational studies. Renowned philosopher Daniel Dennett (Tufts University) was the evening speaker. Dennett reinforced an important theme of the conference, namely that the intergenerational flow of information is not restricted to lineages of genes. He also presented an account for the taming of wild religion, urging that substantive transformations in the nature of religious information occurred during the major transition from foraging to agrarian and urban lifeways. Dennett’s talk generated a spirited discussion on many fronts, about the utility of memetics for understanding the evolution of religion, the relationship between evolutionary research on religion and the lay public, as well as the relationship between evolutionary researchers and their (religious) study populations.

On the penultimate day of the conference, we focused on the transmission of religious concepts and the narratives through which religion is understood. We also looked at the function of supernatural concepts and practices through the study of religious brains. That evening, North America’s ‘evolutionary evangelist’, the Rev. Michael Dowd, shared his experience of teaching and preaching a sacred, meaningful view of cosmic, biological, and human evolution. He offered a possible solution to the dead-end debates between theists and atheists, and argued that evolutionary theory may be essential for a deeply inspired life. It was a rare meeting between academic and religious worlds, for both audience and speaker. Despite having delivered hundreds of talks to secular and religious audiences across the theological spectrum, this was Dowd’s first presentation to an academic audience.

We closed the conference by addressing foundational questions about the naturalistic study of religion, as well as questions about the economic,
Introduction  Richard Sosis and Joseph Bulbulia

spiritual, and political benefits and costs of religious belief and practice. Biologist and religious scholar, Jeffrey Schloss (Westmont College), closed the conference by detailing the various threads of argumentation linking naturalistic (generally functionalist) inquiry about religion to wider theological questions. Schloss also used the example of laughter—which he skillfully induced frequently in his audience—to illustrate an important theme of the conference: the role of commitment signals in authenticating genuine religious commitments. The talk stimulated much discussion over the relationship of religious commitment to science and morality, the reliability of religious signaling, and the role of religious feeling in its evolutionary history.

In addition to the research sessions and evening talks, there were three scheduled afternoon workshops aimed at assessing recent advances in the evolutionary study of religion, and setting an agenda for areas of progress and integration. The three sessions were distinguished by their focus on anthropology, psychology, and overall reactions to the evolutionary study of religion. Popular demand initiated a fourth workshop on group selection and cultural evolution, which was gratefully organized by David Sloan Wilson (SUNY Binghamton) and Peter Richerson (UC Davis). This workshop afforded an opportunity for conference participants to ask questions about selectionist theories and their application to the study of religion.

There were numerous healthy debates that permeated discussions throughout the conference. One of the most constructive debates concerned whether or not religion should be considered an adaptation or a by-product. While no consensus was reached in this debate, various positions were clearly articulated, and future research that will be necessary to resolve this issue was discussed. There were also sustained discussions on the applicability of various evolutionary models to religious phenomena, including sexual selection and signaling models, cultural group selection, and meme theory. One of the livelier debates centered on defining religion, and the claim that if we cannot define it, then it is incoherent to claim we can develop its evolutionary study, for there is no stable “it” to study.

This volume offers many of the excellent talks that were presented in Hawaii. Chapters are intentionally short, at least shorter than the authors would have wished. Our task was to keep the volume affordable, while capturing the full range of conference presentations. Nevertheless, we are impressed by the clarity, scope, and precision consistently displayed throughout this volume. During the conference there were significant theoretical and methodological disagreements among scholars, but we think that all would agree that the new interdisciplinary study of evolution and religion is off to an outstanding start, and its future looks very promising. We hope this volume attests to that.
References

Attran, S. 2006. The cognitive and evolutionary roots of religion. In P. McNa-
mara Ed., Where God and science meet: How brain and evolutionary studies
alter our understanding of religion, Vol. 1, 181-207. Westport, CT and

tive Sciences, 4, 29-34.

Bering, J. 2006. The folk psychology of souls. Behavioral & Brain Sciences, 29,
453-493.

Boyer, P. 2003. Religious thought and behavior as by-products of brain func-


Oxford handbook of evolutionary psychology. New York, NY: Oxford Uni-
versity Press.


Sosis, R., & Alcorta, C. 2003. Signaling, solidarity and the sacred: The evolu-
tion of religious behavior. Evolutionary Anthropology, 12, 264-274.