



## ENVIRONMENT

**IGNORING THE APOCALYPSE: Why Planning to Prevent Environmental Catastrophe Goes Astray** by David Howard Davis. Westport, CT: Praeger Publishers, 2007. 228 pages, bibliography, index. Hardcover; \$49.95. ISBN: 0275996638.

I would imagine that most environmental scientists marvel at the ability of human beings, and most especially American human beings, to be cavalier about their damage to the planet in the face of strong scientific evidence and worrisome trends. As D. H. Davis points out, scientific consensus was achieved on the basic facts of global warming by 1985, but in the ensuing twenty-three years, frustratingly little effective action has been taken to limit greenhouse gas emissions. Why not?

Setting out to answer questions such as this, Davis, a political scientist, dispassionately lays out the history of a handful of central ideas: the use of statistics and modeling to predict catastrophes and shortages, the tools of planning especially as they relate to energy supplies, efforts to limit population growth through controls on immigration and reproduction, the implications of nuclear war and disarmament treaties, and the long-delayed international efforts to address global warming. Each section begins with a timeline, which is followed by a detailed political history that focuses largely on post-war US administrations and their approaches to the issue at hand. This is all treated as data from which a few modest conclusions are mined in the last few pages of the book: grand problems tend to be dealt with when the solutions are not costly and the US takes a leading role (e.g., ozone depletion, nuclear disarmament). On the other hand, if solutions are expensive and the US intentionally obstructs progress due to perceived self-interest (global warming) or moral qualms (overpopulation), failure to make progress is almost guaranteed.

With careful research, Davis reveals a US government that seems unable to work consistently to prevent environmental catastrophes. Planning indeed goes astray. Why? Curiously, answers beyond those stated above are never spelled out, and the author attempts to stay strictly impartial. This bland neutrality is reflected in the closing sentences of the book:

Looking back, it is easy to see that many environmental catastrophes have been ignored in spite of multiple warnings, and that the results have been bad. Planning to prevent them would have been good, but often does not occur.

Again we ask, why not? The strength of the author's neutral stance is that readers can draw their own answers from the history assembled. Davis ultimately paints a portrait of a government dominated by political expediency, short-term interests, and the military-industrial complex that Eisenhower warned us about. We see how attempts to confuse the public about issues on which scientists have reached consensus came first from industry but more recently from the government itself, which has become adept at distorting the scientific language of uncertainty to justify delays in taking action.

Davis opens the book with a comparison of biblical prophets with modern environmental predictions of environmental catastrophe. Like the prophets of old, these warnings are largely unheeded, and our governments seem inclined, like we are, to ignore bad news and calls for sacrifice. While *Ignoring the Apocalypse* is in no way a call to action, it does serve as a useful, if ultimately depressing, history of government inaction in response to the some of the most pressing issues of our time.

*Reviewed by David O. De Haan, Associate Professor of Chemistry, University of San Diego, 5998 Alcala Park, San Diego, CA 92110.*



## ETHICS

**IMITATING JESUS: An Inclusive Approach to New Testament Ethics** by Richard A. Burridge. Grand Rapids, MI: Eerdmans, 2007. 490 pages. Hardcover; \$35.00. ISBN: 9780802844583.

*Imitating Jesus* offers a comprehensive and methodologically careful review not only of New Testament ethics but also of contemporary New Testament research, in at least three areas: Jesus studies, Pauline studies, and gospel studies (Matthew, Mark, Luke, and John, each receiving separate and detailed treatment). This prodigiously researched book, with its thousands of footnotes and biblical references, and its massive overview of biblical research in multiple languages and cultures, will become one of the most important resources in New Testament studies, and certainly in New Testament ethics, of our generation. Moreover, as a kind of dessert added to this hearty main course, the book concludes with a provocative turn toward the near-contemporary scene by testing its thesis against the use and abuse of the scriptures in apartheid-era South Africa.

The thesis of the book is carried forward from beginning to end with metronomic efficiency. Burridge argues first that genre matters profoundly in the interpretation of the New Testament, and that the genre of the Gospels is biographical, at least as biography was done in the ancient Greco-Roman world. The figure whose story is being told is the historical Jesus, whose life left such a powerful imprint that all of these Gospel writers, and Paul, felt compelled to tell that story. They did so in various ways with various purposes specific to their particular contexts, but all combined the words and deeds of Jesus. The purpose of any biographical writing of this type was to encourage *mimesis*, or imitation, of the life of its central figure. Burridge argues then, that the New Testament writers each attempt to tell the story of Jesus in such a way that readers will imitate his life in response. New Testament ethics finds its unity in the effort of the writers to present the life and words of Jesus so that communities of his followers can be inspired and instructed toward his imitation.

In exploring the details of the actual "ethics" one finds in Jesus' life and teachings, Burridge finds a consistent pattern. Jesus offers extraordinarily rigorous moral teaching about important matters of everyday life, grounding all teachings in the love command; but he creates a mixed, inclusive community of quite flawed followers who

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respond as best they are able to this man and his demanding teachings. A symbol of this creative tension between demand and grace is found in the way that parallel texts (Matt. 5:48, Lk. 6:36) summarize the disciples' obligations as "be[ing] perfect" over against "be[ing] merciful." This tension between the quest for moral perfection and the need for mercy toward ourselves and each other as we ever fall short of that goal is the place where New Testament ethics (and the church) lives and has always lived.

Burridge gently but firmly criticizes any New Testament ethics (including one of my own co-authored books, *Kingdom Ethics*) that attempts to find Jesus' ethical import only in his words, as in the Sermon on the Mount, as opposed to in the impact of his entire life. He thinks this is fundamentally a genre error—a misunderstanding of what kind of literature the New Testament contains (biography, not ethical treatise). I think Burridge misreads *Kingdom Ethics* here, because we do often discuss Jesus' entire life, using the rubric of his inauguration of the kingdom of God and the way Jesus incarnated that kingdom in his life as well as in his words. But I gained much from this sharpened emphasis on genre, and it rings true to say that what created the church and marked its ethos was the entire story of Jesus' life, not just his ethical teaching. The God-man came to earth, offered love and mercy to "sinners" in every moment of his life, gathered a motley crew of grateful friends around him, was then cruelly tortured and murdered for such sinners (us), and somehow by God's power gained victory over death itself. Christianity at its best has always been about responding to that life, in its entirety, and attempting, however inadequately, to "go and do likewise."

At the end of the book, when Burridge turns to the South African situation as a kind of case study of bad New Testament ethics, he shifts gears. He introduces a different literature, sometimes called the "use of the Bible in ethics" literature, which emerges mainly from the field of Christian ethics, and tries to offer guidance for the constructive application of scripture to contemporary contexts and problems. He shows how the primary options available for employing the Bible in ethics—moral rules, moral principles, moral examples, and an overall symbolic worldview—all proved susceptible to abuse by pro-apartheid South African scholars and church leaders. However, lest we fall into despair that the Bible is infinitely malleable and abusable, Burridge goes on to argue that one path remains: "reading together in an inclusive community." What matters is not just that we read scripture looking for clues for what it might mean to imitate Jesus, but that we do so in as inclusive a "reading community" as possible. It would have been impossible to sustain the tortured pro-apartheid readings of scripture if, for example, oppressed black South African Christians had been invited to participate in the community of those reading and interpreting the Bible. This is a hopeful move, though sadly no such strategy is foolproof. Even inclusive communities will find ways to mess up the reading of scripture.

*Imitating Jesus* is a hugely important book that belongs in the library of everyone who is serious about the Bible and about Christian ethics. It is like a cathedral in its massiveness and in the care taken in its construction over many years of research and writing. There was no haste in

writing this book; neither can it be read hastily. But for both writer and reader, it is well worth the effort.

*Reviewed by David P. Gushee, Distinguished University Professor of Christian Ethics, Mercer University.*



## GENERAL SCIENCES

**THE AGE OF EVERYTHING: How Science Explores the Past** by Matthew Hedman. Chicago: University of Chicago Press, 2007. 249 pages; index, glossary of terms. Hardcover; \$25.00. ISBN: 9780226322926.

This book, based on a series of popular lectures, "explores how researchers in a wide variety of fields determine the ages of things" (p. 2). "It is not intended to provide an exhaustive catalog of every single dating technique." I found this book to be an enjoyable and informative read.

In addition to the introduction, the book is divided into eleven chapters. Some illustrate one primary method of assessing an age of an object or an event. Many, however, demonstrate how one dating procedure can be utilized to constrain another to provide acceptable estimates of age. Thus, for example, historic dates for Egyptian artifacts are utilized to correct radiocarbon ages while in general validating the radiocarbon technique (pp. 63–5).

The overall organization to the book is logical and draws the reader in. The author begins with Maya calendric glyphs, specifically examining the chronology of the ruler of the Mayan city of Calacmul, Yuknoom Ch'een (circa CE 600–686). Hedman then turns his attention to means for dating the Great Pyramids of Egypt (circa 2500 BCE), introducing radiocarbon dating in the process. The next few chapters extend the use of radiocarbon, corrected by tree rings (dendrochronology), back to the late Pleistocene (circa 15,000 BCE). Beyond that point, chapter by chapter, he leapfrogs his prehistoric report by orders of magnitude of years, tackling potassium-argon dating and the ages of fossil hominids, molecular dating and divergence times for mammalian lineages, meteorites and the age of the solar system, and the use of color-magnitude diagrams for assessing ages of collections of stars. Finally, he assesses our evidence for the age of the universe.

My one dissatisfaction with the volume was the general absence of text describing how most of the various dating techniques were originally discovered. The Mayan calendar glyphs, for example, are depicted, translated, and promptly utilized to interpret the life history of Yuknoom Ch'een without any reference to some of the lengthy history of their decipherment by Foerstemann and others. Willard Libby is mentioned in passing but his development of the radiocarbon technique is not narrated. I would have appreciated perhaps two extra pages per chapter, offering a reader the opportunity to understand some of the dynamics of discovery for many of these methods. Some readers more inclined to skepticism might thus suspiciously ask questions like, "how can we trust these translations of the Mayan characters?" To Hedman's credit, he includes avenues for further reading

at the end of each chapter, and these include sources for investigating the histories of the various techniques.

Based as it is on a series of lectures, the book is written in a straightforward, unpretentious, and friendly style. Sources of error in dates are plainly outlined, as well as means for assessing confidence in a technique or a particular chronology. Each particular case discussed is intriguing in its own right.

I think the book should appeal to many kinds of potential readers. Compiling cases from many different fields has yielded an overview that will retain the interest of most scientists and students. The writing style will permit the nonscientist to grasp the principles for many of these techniques. The book is recommended.

*Reviewed by Ralph Stearley, Professor of Geology, Calvin College, Grand Rapids, MI 49546.*



## HEALTH & MEDICINE

**FAITH AND HEALTH: Religion, Science, and Public Policy** by Paul D. Simmons. Macon, GA: Mercer University Press, 2008. 293 pages, index. Paperback; \$30.00. ISBN: 9780881460858.

Paul Simmons is a clinical professor in the department of family and geriatric medicine at the University of Louisville. He works through the division of medical humanism and ethics and has a history of publication and hospital consultant work in the field of medical ethics. This latest book looks at various aspects of medical care as well as current medical ethics controversies.

I found the book to be well rounded in regard to the subjects that are covered in eleven chapters. The first two chapters deal with human suffering and end-of-life decision making in the ICU. Both chapters are well written, and I would highly recommend them to medical students who are starting their clinical rotations and are beginning to have patient interactions. Chapter 3 evaluates United States healthcare and its potential for reform. The chapter is mostly a review for those who work in our country's healthcare system (i.e., expensive treatment for rare diseases, soaring pharmaceutical costs, abundance of subspecialists, etc.), and I found that it summarized well-known facts with minimal emphasis on solutions, which, to be honest, would probably require a book in itself.

Chapters 4 through 6 can be summarized as addressing end-of-life and aging issues, the patient right-to-die debate, and physician-assisted suicide. Again, I thought that chapter 4 ("Aging as an Assault on Human Dignity: Spirituality and End-of-Life Decision-Making") was particularly intriguing, and it should be required reading for pre-medical college students or medical students. The reader should be aware that Simmons does have strong opinions about right-to-die issues as well as physician-assisted suicide. These chapters are not objective but are extremely well researched. Any physician who has significant objections to physician-assisted suicide would disagree with some of the author's beliefs about how far suffering prevention should occur, as there will always be moral constraints placed by many health-care providers.

Yes, physicians always should want to remove suffering, but not all would agree that helping end a patient's life should fit in the spectrum of treatment options.

Interestingly, chapters 7, 8, and 11 deal with artificial organs and the potential of cyborg creation, composite tissue allotransplants (for example, face and hand transplants), and demonic exorcism as a treatment option for psychiatrists. These chapters are extremely entertaining, informative, and a quick read.

Sections that deserve particular mention are chapter 9 dealing with stem cells and chapter 10 discussing abortion. The author makes many clear points about the validity of stem cell research and makes excellent arguments, in a manner similar to Francis Collins, regarding their therapeutic use. He poses intriguing thoughts about the difficulty of deciding when an embryo can realistically be called a human as he points out that "An acorn is not an oak tree, nor is an egg a chicken" (p. 203). I did find that I disagreed with his observations of the abortion debate. Many political experts will agree that the "Pro Choice" and "Pro Life" factions will most likely never come to an agreement on this issue. However, it is simplistic to state that the evangelical movement in the United States appears to protect the embryo or fetus under any situation, while ignoring maternal risks and the horrors faced by children born to mothers who do not want to care for them. Yes, fetal abortion is a medical necessity for some maternal conditions, but such events are rarer that Simmons would have the reader believe. Also, one can simply look through news or entertainment magazines as well as watch Christian church-sponsored or nondenominational television commercials to see that there is real Christian awareness regarding impoverished children in our country and worldwide.

In conclusion, this book is an excellent overview of current medical ethics issues that deal directly with Christianity. I would put it in a "must read" category for Christian physicians and health care workers although Simmons' opinions will not be congruent with all readers.

*Reviewed by John F. Pohl, Associate Professor of Pediatrics, Scott and White Hospital, Texas A&M Health Sciences Center, Temple, TX 76508.*

**THE LIGHT: How Stress Poisons the Central Nervous System and Causes ADHD, Parkinson's Disease, Schizophrenia, Autoimmune Response and More** by Ruth Whalen. www.lulu.com: Lulu Enterprises, 2007. 196 pages. Paperback. ISBN: 9781430329916.

This book is a unique opening into the world of patients who have suffered from central nervous system disease, including mental illness, written from the perspective of Ruth Whalen, a medical laboratory technician who has suffered from a variety of symptoms that she relates to caffeine toxicity. Her life story is interesting, and she is very open about her history of horrific child abuse and subsequent stress-related illnesses that she relates to caffeine ingestion.

Whalen's hypothesis is that she has an allergic reaction to caffeine. Interestingly, the foreword of her book is written by Abram Hoffer, MD, PhD, who is the president of the International Schizophrenia Foundation. He describes



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her theory fairly clearly. Catecholamines (the so-called “stress hormones”) are methylated to reduce damage to the human body caused by oxidative stress; however, Whalen believes that a surplus of methylated compounds such as a continued presence of methylated catecholamines and methylated dopamine eventually cause diseases such as ADHD, schizophrenia, depression, autism, and other well-known mental health disorders as well as other diseases. The “methyl surplus,” exacerbated by substances such as caffeine, hinges on the belief that excess methyl groups cause a variety of diseases, especially in individuals who are under constant stress. The author is not particularly even-handed in her theory. Yes, excess methylation may cause or signal certain cancers, but methylation also is necessary for early embryo function.

The book begins by describing the life history of Whalen and how she made the connection between her symptoms and a possible caffeine/methyl allergy. Several chapters then describe her theory and the research originally developed by Hoffer. There is a lengthy discussion of standard blood tests that are obtained when a patient is seen by a physician, various mental illnesses, and neurotransmitters. Some of these descriptions are quite good.

I do have some strong reservations about this book. I would agree with the author that many of the more complicated diseases that we have to deal with in medical practice and in life, including cancer, autoimmune disease, and mental illness, are multi-factorial and can be tragically dismissed as “I don’t know, go see a specialist” by some primary-care physicians. However, I do have a hard time relating all of these diseases purely to excess methylation. There is essentially no mention by the author of genetic factors involved with certain mental illnesses (for example, the association of serotonin transporter genotypes in depression or cannabinoid receptor gene single nucleotide polymorphisms and ADHD). Thus, mental illness and cancer have genetic causes, perhaps influenced by methylation, but also perhaps not. A tragedy of this world is that dysfunctional family structure will cause many mental disorders, and this reality should be firmly recognized.

Some statements in the later chapters are questionable, and the overall format of the book becomes choppy in sentence structure and disjointed in paragraph sequencing. The statement that “Excess iron, copper, and zinc do not belong in the body either, and metals may not belong in the body at all” is misleading. Yes, too much of any substance is toxic, but we all need trace minerals for the cellular processes of replication, immune function, and nutrient absorption. The author states that after the body is detoxified, a person recovers more fully, including a return of the so-called sixth sense. To be honest, I have found that when patients remove themselves from stress, eat right, and exercise (and if they truly follow this advice), they often make remarkable advancements in health and lifestyle. Finally, the discussion in the book regarding the importance of future astrologic signs and how Peter and the early church “tricked people into believing that Catholicism is true Christianity, the word of God” is not necessary and is misleading to the reader.

In summary, I would recommend the book if one is a health care provider who is interested in learning about some of the alternative theories of disease being discussed by the lay community. The lack of objectiveness in the book otherwise prevents it from being helpful to clinicians or researchers.

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## HISTORY OF SCIENCE

**THE DIALOGUE OF CIVILIZATIONS IN THE BIRTH OF MODERN SCIENCE** by Arun Bala. New York: Palgrave Macmillan, 2006. 230 pages. Hardcover; \$69.95. ISBN: 1403974686.

Arun Bala provides a history of science that stresses essential contributions from India. Over the course of twenty years, Bala’s teaching in the history and philosophy of science at the National University of Singapore led him to revise his conception of the importance of science developed in India. He further refined his ideas through interactions with international Asian studies institutes and finally completed the book while at the University of Toronto as a visiting professor.

Disclaiming the centrality of European science in the development of modern science requires significant mental gymnastics. Bala’s approach is to first argue that prior scholarship arbitrarily dismisses earlier scientific contributions from non-European cultures. Citing historian Colin Ronan, Bala claims, “His whole exercise of arbitrary dismissal without presenting any counter evidence to claims by dependable Greek writers seems solely designed to support his opinion” (p. 18). Although an amateur reader of science and religion, this reviewer believes that Bala overemphasizes other writers’ glosses to unfairly support his opinion. Why, for example, does Bala not cite any of the writings of Stanley Jaki who was a major proponent of science *having* to emerge from a Christian, western cultural milieu?

In one of the more interesting chapters, chapter 5, Bala examines what evidence would adequately validate a transfer of intellectual ideas from India to Europe. He argues that a corridor of communication is established by Jesuit priests who arrive in India to spread the gospel and develop schools. Bala then shows a correlation between the opening of communication channels and the transmission of new ideas within Europe.

The remaining chapters sequentially show how European astronomy, optics, atomic structure, and cosmology required key ideas from intellectual Indian communities. “[W]e cannot ignore the possibility that the Kerala School of Indian mathematics influenced the Scientific Revolution in modern Europe” (p. 70). While this may well be true, Bala severely overstates his case. “Hence, far from what Kuhn presumes, optics did not achieve paradigmatic status with Newton but with Alhazen” (p. 89).

*The Dialogue of Civilizations in the Birth of Modern Science* is a scholarly book with a small target audience. Those specializing in Asian studies will find the thesis

interesting, although with the caution that Bala's enthusiasm leads to overstatements that need to be appropriately tempered.

*Reviewed by Fraser F. Fleming, Professor of Chemistry, Duquesne University, Pittsburgh, PA 15282.*



## NATURAL SCIENCES

**RELICS OF EDEN: The Powerful Evidence of Evolution in Human DNA** by Daniel Fairbanks. Amherst, NY: Prometheus Books, 2007. 281 pages. Hardcover; \$24.95. ISBN: 9781591025648.

In *Relics of Eden: The Powerful Evidence of Evolution in Human DNA*, Daniel Fairbanks summarizes the molecular evidence for human evolution. As a distinguished professor at Brigham Young University, research geneticist, and author of a university-level genetics textbook, he is highly qualified to write on this subject. Moreover, his writing is full of wonderful vignettes and analogies. For example, in describing how transposable elements move around the genome, Fairbanks writes,

McClintock focused on transposons, DNA elements that excise themselves and move to other places in the genome, much like the cut-and-paste function of a computer. Retroelements use a copy-and-paste process instead of the cut-and-paste process of transposons.

In chapter seven, Fairbanks tells the amazing story of the persecuted Russian biologist Nicolai Vasilov and his quest to found a seed bank in Leningrad in order to drive home the point that the most diversity in a species is found at its point of origin. He then develops the DNA evidence for an African origin of modern humans. These literary devices act to engage the reader in a close examination of complex subjects.

Fairbanks discusses a number of topics in molecular genetics that would be very interesting to a general audience, including the story of why humans cannot make their own Vitamin C, why chimpanzees have twenty-four distinct types of chromosomes but humans have only twenty-three, and why scientists can use DNA to trace patterns of human migration. Each topic is well presented in its own chapter along with the background information necessary to understand it. Chapter 1 begins with the story of how human chromosome 2 developed from a fusion of two other chromosomes. This chapter is replete with excellent explanations of the structure of DNA and clear diagrams that illustrate the major points. For example, telomeres are explained as buffers against the erosion of our DNA:

Each time a chromosome replicates, a bit of telomere DNA erodes away, but a protein called telomerase restores the eroded ends to reconstitute the telomeres. Thus, telomeres function as buffer zones to protect the important DNA within the chromosome from erosion. If not for telomeres and telomerase, our chromosomes would progressively erode inward from the ends until they could no longer function.

It should be pointed out, however, that this book is not written for a completely scientifically naive audience. One probably does need a basic college biology course to fully understand the evidence that Fairbanks presents. A more sophisticated audience will greatly enjoy the historical touches, the rich comparisons of the human and chimpanzee genomes, and the detailed appendices.

In the final chapters, Fairbanks revisits the science/faith controversy, mostly from a historical perspective. The purpose of these chapters seems to be to acquaint the naive reader with a summary of how this controversy developed in America and why the dichotomy between science and faith should end. Overall, this book is an excellent and engaging summary of the recent molecular data that has resulted from the Human and Chimpanzee Genome Projects. The reader who is willing to closely examine the data is likely to agree with Fairbanks that there is indeed powerful evidence for human evolution.

*Reviewed by Dawne Page, Professor of Biology, Point Loma Nazarene University, San Diego, CA 92106.*



## ORIGINS & COSMOLOGY

**SCIENCE, EVOLUTION, AND CREATIONISM** by the National Academy of Sciences and the Institute of Medicine. Washington, DC: The National Academies Press, 2008. 88 pages, bibliography, index. Paperback; \$11.60. ISBN: 9780309105866.

The original edition of this book was published in 1984 by the National Academy of Sciences, an organization of outstanding scientists recognized by their peers in specific fields. Now in its third edition, the book affirms evolution as a widely accepted theory in the scientific community, and claims that the theory should be taught apart from religious studies. Additional examples and up-to-date information have been added to this new edition, enabling readers to understand the relation of evolution and religion in the school curriculum.

The book is divided into four chapters, with the last chapter serving as a brief conclusion. Following the chapters, the book offers answers to nine frequently asked questions concerning evolution and creationism. The book also includes several bibliographies and committee member biographies.

The first chapter briefly explains the process of evolution, the nature of science, and the differences between science and religion. The chapter briefly refers to several different religious leaders and prominent scientists (including Kenneth Miller and ASA member Francis Collins) who have successfully reconciled faith and science. The second chapter elucidates in detail the many different kinds of scientific evidence that support evolutionary theory. These include evidence from studies of astronomy, paleontology, comparative anatomy, molecular biology, genetics, and anthropology. The third chapter examines several creationists' viewpoints, including intelligent design, and discusses the scientific and legal reasons against teaching creationist ideas in public school science classes.

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The conclusion reiterates the contributions of modern biology and science to biomedical advances and the understanding of the natural world. Today we are facing pressing concerns for protecting the earth's plants, animals, and the natural environment. How should we alter our use of fossil fuels and other natural resources to enhance the well-being of our descendants? How should we utilize our new understanding of biology on a molecular level to engineer the characteristics of living things? Answering the above questions depends on a sound scientific education, which includes knowing the implications of and role of evolution in scientific thought. Thus placing science and religion in opposition reduces the potential of each to contribute to a better future.

This book is an excellent handbook for explaining evolutionary theory to laypersons, offering evidence for evolution, detailing its contributions, and describing the relationship of the theory to various creationists' views. The book argues that evolution must be accepted as a scientific truth about the natural world, and that evolution continues to shape all living organisms, including humans. Consequently, the study of evolution in science classes must be autonomous, free from the influence of creationists.

This book admits that many questions concerning evolution remain unanswered. The most difficult questions, however, do not concern the "facts" of evolution, but the meaning and the purpose of natural selection. The exploration of evolution's meaning and purpose requires the complementary input of religious faith. Such input should properly be pursued in a religion class. There, students may learn that many religious denominations have accepted evolution as a natural phenomenon, and that the study of evolutionary theory can complement their religious belief.

The book's writing style is easy to read, and the illustrations are brilliant and attractive. The contributors are authoritative, and the additional readings are extensive and up-to-date. This book can well be enjoyed by student, professional, and any layperson. Further, it is worthwhile whatever one's faith commitments may be. While this book is inexpensive, it also can be downloaded for free from [www.nap.edu/catalog/11876.html](http://www.nap.edu/catalog/11876.html).

*Reviewed by Wilkin W. Cheung, Adjunct Faculty, Science Department, Patten University, Oakland, CA 94601.*

**RANDOM DESIGNER: Created from Chaos to Connect with the Creator** by Richard G. Colling. Bourbonnais, IL: Browning Press, 2004. 208 pages. Hardcover; \$18.95. ISBN: 0975390406.

*Editor's note: When Random Designer was published several years ago, it initially appeared as a modest, self-published book. Since then, however, it has generated controversy within the Church of the Nazarene, raising issues of academic freedom at the denomination's various colleges and universities.*

Once upon a time, *creation* was a perfectly respectable term that credited matter, energy, and life to the Judeo-Christian deity. Lately, though, one can scarcely use this word without invoking narrowly prescribed views regarding the chronology and methodology of God's work. Similarly,

*evolution* once meant a series of gradual changes, and it could be mentioned in polite company without being mistaken for a theological statement. No more. When several prominent thinkers insisted that evolution was aimless and blind, many agreed and thus rejected the theory.

In response, *theistic evolution* became a useful phrase that denoted divinely guided natural development. But even this term has become problematic as many persons of faith now see it as an oxymoron, the equivalent of *religious atheism*. We thus need new terminology to replace words that became casualties of the culture-war over origins. Richard G. Colling proposes the term *Random Designer*. This book's central thesis is that God uses random variation and natural selection (among other methods) to accomplish his purposes.

In Section I, Colling points out that randomness is integral to several natural processes that do not provoke religious controversy. According to the Gibbs' equation, many biochemical reactions are thermodynamically feasible only because entropy is increasing. In a widely accepted view of the immune system, B cells generate innumerable variations on an antibody protein sequence, some of which eventually prove useful against pathogens.

Colling presents random mutation/natural selection as a mechanism by which organisms adapt to changing conditions. He illustrates with the familiar example of bacterial antibiotic resistance. Few people dispute this process—commonly labeled *microevolution*, although Colling does not use that term—because science can document that it happens here and now. Colling presents a complete molecules-to-humans spectrum, and makes it clear that he regards *all* aspects of evolution (including speciation and prebiotic chemistry) as compatible with his faith.

In Section II (subtitled *Searching for Purpose and Meaning in a Randomness-Driven World*), Colling shares personal reflections as a biologist who seeks to integrate scientific knowledge with religious faith. Anecdotes involving his wife and their four sons provide insights to illustrate his walk with God. These chapters might not provide support for his views on origins; however, Colling seeks to present an integrated worldview. If nothing else, this section demonstrates the orthodoxy of his Christian beliefs.

Colling always capitalizes the phrase *Random Designer*, and he clearly uses it in reference to deity. For example, his discussion of all life forms having descended from one original progenitor cell concludes with "the Random Designer says that this grand drama was simply an early part of the magnificent plan designed to accomplish his purposes" (p. 63). This reflects Colling's conviction that God works through natural processes. Such a conviction does not sit well with many Christians, as they have been persuaded that any scientific explanation precludes divine action.

*Random Designer* generated some controversy at the Christian university where its author has taught for twenty-seven years. Last year, Colling was relieved of teaching nonmajors general biology, and his book was banned from being used in any class. For many, this



action appears to contradict the *Manual* of the school's sponsoring denomination, the Church of the Nazarene. The *Manual* states that the denomination

opposes any godless interpretation of the origin of the universe and of humankind. However, the church accepts as valid all scientifically verifiable discoveries in geology and other natural phenomena, for we firmly believe that God is the Creator (Church of the Nazarene 2005 *Manual*, Articles I.1., V.5.1, VII).

We are embroiled in a cultural war in which many conservative Christians cling tenaciously to traditional values and cherished beliefs. They need to be persuaded gently and respectfully if they are to change their thinking about biblical interpretation, especially regarding origins. A writer who addresses that audience needs to be careful not to assault their religious sensibilities. I suspect that some readers were offended by the parody of Jesus' *Sermon on the Mount* on this book's dust jacket: "You have heard it said that God created the world 12,000 years ago. But I tell you God has revealed that five billion years is a closer approximation (etc.)."

The world needs more people like Richard Colling who are fully persuaded of the harmony between scientific truth and biblical belief. Those who read *Random Designer* to the end with an open mind will be helped by it.

*Reviewed by Joseph H. Lechner, Professor of Chemistry, Mount Vernon Nazarene University, Mount Vernon, OH 43050.*



## PHILOSOPHY & THEOLOGY

**A WORLD OF DIFFERENCE: Putting Christian Truth Claims to the Worldview Test** by K. R. Samples. Grand Rapids, MI: Baker Books, 2007. 312 pages, index. Paperback; \$17.99. ISBN: 0801068223.

Kenneth Samples is the senior research fellow at Reasons To Believe, a theological think-tank that seeks to communicate the uniquely factual basis for belief in the Bible as the error-free Word of God and for personal faith in Jesus Christ as Creator and Savior. Moreover, Samples is an adjunct instructor of apologetics at Biola University. He has written this volume with the explicit intention of helping modern-day Christians develop a worldview that is in conformity with Holy Writ. He advocates the notion that a Christian who correctly understands the worldview of Christianity can exhibit an overall lifestyle that corresponds to traditional Christianity. Samples notes that such a Christian worldview coupled with proper Christian logical reasoning would help expose fallacies present in contemporary worldviews.

In the first few chapters, Samples gives a laudable development of a worldview perspective that is in line with the biblical texts. Moreover, he delineates the importance of the Apostles' Creed for the foundation of a Christian worldview. This alone makes this volume worth its price. In another chapter, Samples expounds the basis of a Christian worldview by engaging its authority in all matters, i.e., Scripture. He goes on to give an excellent survey of the Christian view of God and its import in

the derivation of a Christian worldview. Another chapter contains an enlightening discussion of the historic Christian view of humankind, correlating it to the development of a truly Christian worldview. In later chapters, Samples identifies and interacts with several opposing worldviews, including naturalism, postmodernism, pantheism, and Islamic views.

A notable strength of the volume is Samples' inclusion of discussion questions at the end of each chapter that more fully explore the implications of the material covered. Thus, this book could well be used in small-group studies within the local church. A second notable strength of this book is the concise, acute, and accurate coverage of the distinctive Christian doctrine, the Trinity. Samples presents a plethora of biblical support for the doctrine of the Trinity and its implications upon a Christian worldview. An added plus are the charts that Samples employs to summarize the arguments in each chapter.

Noting these strengths, however, I would urge that caution be exhibited by the readers of this book for the sole reason that Samples is unabashedly Reformed in his theology. Consistently, throughout the book, Samples equates Reformed doctrine with what is largely called either Protestant or evangelical. Consequently, if the reader is not careful in noticing Samples' confessional stance, he or she may interpret Samples to be supporting the notion that the sole theological disposition that is coherent is the Reformed position. This equating of evangelical/historic Christian doctrine with Reformed theology is disturbing to me, as one can be an evangelical in keeping with historic doctrine, while at the same time choosing to be Arminian or Wesleyan in theology. In fact, one finds little reference to scholars who write from a non-Reformed position, but nearly all of the cited material comes from other Calvinistic/Reformed scholars.

Another weakness is Samples' minimal use of primary source material, choosing instead to rely upon compendia, survey volumes, encyclopedias, and dictionaries for his argument(s). A complete bibliography for the sources that are cited is absent. Instead we encounter "select bibliographies" at the end of each chapter with endnotes including the material cited. Even with these reservations, however, I heartily advocate the purchase and perusal of this book by readers of this journal.

*Reviewed by Bradford McCall, Divinity Department, Regent University, Virginia Beach, VA 23464.*

**DID MY NEURONS MAKE ME DO IT? Philosophical and Neurobiological Perspectives on Moral Responsibility and Free Will** by Nancey Murphy and Warren S. Brown. New York: Oxford University Press, 2007. 236 pages. Hardcover; \$77.95. ISBN: 9780199215393.

This is the first volume co-authored by these two scholars, professors at Fuller Theological Seminary: Murphy of philosophical theology and Brown of physiological psychology. They have previously co-authored articles and edited, with H. Newton Malony, *Whatever Happened to the Soul?* (2001, Fortress). The present volume is a *magnum opus* of their work together and is an extensive consideration of materialistic reductionism coupled with

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an affirmation of top-down causation as it relates to consciousness and free will. Readers of *PSCF* will find that reading this volume leaves them much more appreciative of the *imago Dei* and much more confident in the possibilities of human beings to participate in emergent restoration of this world to the will of God.

Sections of the volume include (1) Avoiding Cartesian materialism, (2) From causal reductionism to self-directed systems, (3) From mindless to intelligent action, (4) How can neural nets mean? (5) How does reason get its grip on the brain? (6) Who's responsible? and (7) Neurobiological reductionism and free will.

Labeling themselves, in both this and their previous volume, as *nonreductive physicalists*, Murphy and Brown present a view that human mental functioning, while embedded in the brain, cannot be explained either by biological reductionism (bottom-up causation) or Cartesian dualism (physical body, nonphysical mind). Instead humans are best understood as agents in a social world whose functioning is best understood through a *top-down model* in which higher level capacities (e.g., language, consciousness) function systemically to constrain the physiology of the brain in an emergent manner that results in reason, freedom, moral responsibility, and self determination.

There is a sense in which this volume could be considered a penetrating survey of modern philosophy. One might have hoped that the views expressed here would have included an equal balance of current thinking in psycholinguistics, learning theory, and cognitive psychology. As it stands, the volume is weighted heavily toward philosophy. Only the Gifford lectures of Donald MacKay, the noted Scottish neuro-psychologist, are referenced in any consistent manner. Even here, MacKay's well-known counter to reductionist determination is curiously absent. MacKay is often referenced as noting that even if a behavior is predicted to occur (on the basis of physiology, environment, or past training), humans can always say "I don't think I'll do it."

This is not a book for the unsophisticated in either philosophical or neurological terminology. The questions the book addresses are, nevertheless, foundational, if not universal. Yet, the authors make little accommodation for the implied "average" reader in the fetching title of the book, i.e., *Did My Neurons Make Me Do It?* While the title indicates an intention, the writing style does not support it. Understanding the content would have been greatly enhanced by more human examples. The most memorable illustrations of their conceptualizations were from lower forms of life.

At the same time, this is a foundational volume—erudite and convincing in a way that does indeed affirm the unique capacities of the human being. While B. F. Skinner is often maligned as an advocate of social control through mindless behaviorism, it should not be forgotten that Skinner would agree that all organisms, especially humans, are active social agents whose actions are "emitted" rather than "elicited." While Murphy and Brown spend much less effort than Skinner in describing the social outcomes of their theorizing, they are, by implication, much more hopeful that the humans they describe can create a society where moral reasoning and free will

have full sway. Their thinking goes far beyond either environmental or neurological determination. While they continue to malign Cartesian mentalism, they affirm the importance of social interactionism. As their postscript states, "*Go meta, regularly: remember the value of self-reflection.*"

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**EVOLUTION AND EMERGENCE: Systems, Organisms, Persons** by Nancey Murphy and William R. Stoeger, eds. New York: Oxford University Press, 2007. 360 pages. Hardcover; \$110.00. ISBN: 9780199204717.

One might wonder why emergence is drawing so much attention from scholars across a number of disciplines. Perhaps theologians, computer scientists, biologists, and sociologists are all intrigued by emergence because it depicts a common human experience. These experiences are typically routine, but can also provoke in us a sense of wonder and bewilderment. While chemical reactions, organism organization, and human social behaviors are clearly different, a common logic is inherent to each. That is, at a basic stage each exhibits a special relationship between parts and a whole. Examples that take these unique parts to whole relationships are all around us. Some would even argue that as you read this sentence an instance of emergence is occurring. Simply put, the parts in your brain (neurons) are interacting in a specific way giving rise to the whole (ideas) necessary to comprehend this sentence. In addition, the very sentence forms a complex of parts and wholes on several different levels. That common experience is the impetus for exploring emergentism. In *Evolution and Emergence*, the various essays seek to move emergentism beyond mere phenomenological alignment toward a legitimate explanatory option.

This book, edited by Nancey Murphy and William R. Stoeger, offers a collection of essays from philosophers, scientists, and theologians on the topic of emergent evolution. Fittingly, the book's three sections deal with "Philosophy," "Science," and "Theology."

The first section deals with philosophical notions of emergence. The article contributed by Nancey Murphy continues an argument she has made for years. In her view, emergence should be favored over reductionism due to the reality of downward causation exhibited by complex systems. Murphy's chapter is followed by two chapters from Robert Van Gulick. His first chapter is a summary of the primary reductionist, nonreductionist, and emergentist options available in the philosophy of mind. His second chapter addresses the difficult issue of mental causation and its possible reality.

In the final chapter of this section, Terrence Deacon notes that moving from mechanism to teleology requires a massive ontological jump. Instead of trying to reduce phenomenology to physics or to show them to be ultimately incommensurable, he focuses on the possibility that a mediating domain of causal dynamics can fill this gap. To serve this role, he looks to processes in which form generation and propagation are more prominent than either simple mechanistic/thermodynamic pro-



cesses or fully teleological processes. For Deacon, this means exploring the dynamics of emergence as a naturalistic or “bottom-up” process, much the way other scientific explanations are understood. From this perspective, Deacon strives to demonstrate how semiotic processes—which provide the framework for dealing with such human dilemmas as intention, desire, meaning, and even morality—are both physical processes in every sense of the word and yet can exhibit a causal character that appears to run counter to the most basic tendencies characteristic of other simpler physical processes. Deacon’s central contribution is to precisely identify two fundamental inflection points where such fundamental symmetry breaking occurs in dynamic processes of increasing complexity and thus where the apparent “directionality” of causal dynamics diverge. The first inflection point leads to a dynamic dominated by formal rather than energetic relationships (morphodynamics), and the second leads to a dynamic dominated by represented ends and functions rather than mere forms (teleodynamics).

Scientific topics are covered in the second section. Working with the assumption that physics is not a complete explanatory schema, George Ellis adopts emergence as a way to assess causation and existence. Don Howard’s chapter walks the reader through an assessment of the relationship between particle physics and condensed matter. He urges us to not be hasty in characterizing this relationship as emergent. Martinez Hewlett discusses the origin and complexity of life as a biological example of the need for “higher-order” explanatory models. The chapter from Alwyn Scott delves into the nature of nonlinear phenomena and their role in what he calls the “cognitive hierarchy.”

Warren Brown’s chapter describes a “bare bones” outline of a robust model for mental causation. The structure of this model includes a look at several challenging issues, including the nature of learning, the function of action loops, and symbolic representation, among others. His primary claim is that the best way to establish mental causation is to acknowledge that “mind is embodied and embedded in action in the world.” By affirming embodied mind, Brown is a physicalist. With the mind embedded in action, he is a proponent of mental causation. Along these lines, Brown’s use of emergence is not one of radical discontinuity between mental functions in humans and those in nonhuman animals; instead, he blurs this continuum. It is not that human mental causation is merely quantitatively different from other animals. The emergence of symbolic abilities and language allow for a qualitative difference as well—again, not in any discontinuous sense (human mental abilities find their precursors in our nonhuman relatives). Brown’s efforts to establish downward/mental causation is laudable, but many questions remain: Does mental causation operate via efficient causes? If so, how? If not, what kind of cause is it? As an admittedly “bare bones” attempt, Brown’s is an intriguing first step.

In section three, we move to theological chapters. William R. Stoeger has contributed an article that assesses the intricate relationship between emergence and reductionism. This interaction, he believes, offers a valuable resource for the wider interaction between theology and science, generally, and issues on divine and human

action, specifically. Arthur Peacocke continues an argument he has made consistently for some time now. He believes that the picture of reality set forth through emergence is monistic and hierarchical—features that allow theologians purchase with regard to whole-part causation. Niels Henrik Gregersen explores artificial life as a possible resource for theologians with its emphasis on novelty, its attention to the actual and possible, and its awareness of the emergence of autopoietic systems—all of which have religious and theological repercussions. The final chapter is Philip Clayton’s preliminary attempt to construct a Christian theology of emergence.

Catholic theologian John Haught’s chapter describes and assesses the insufficiency of “scientific naturalism.” For him, this position is exemplified by two commitments: first, there is nothing beyond nature, and second, the natural sciences are touted as the only accurate explanatory schema for dealing with this reality. Haught believes this “scientistic” view is fatally flawed because it ignores or dismisses the reality of subjective experiences which are clearly part of the natural world. Emergence provides Haught the means for affirming novelty, striving, and subjectivity as real and irreducible aspects of the world. Following the work of Alfred North Whitehead, Bernard Lonergan, Michael Polanyi, and Pierre Teilhard de Chardin, Haught argues for a “richer empiricism” that takes seriously “*the widest possible range of what we actually experience in the world*” (emphasis in original). There is certainly a type of naturalism that fits the model Haught has developed here, but naturalism is not the problem. Instead, it is the eliminative approach that some take—either reducing to “basic” particles or inflating to subjective ideals. Emergence is not a rigorous position because it eliminates reduction, but because it establishes a middle ground between the physicist and phenomenologist.

Overall, this is a helpful addition to the study of emergence. Several of the articles may be a bit challenging for the nonscientific reader, but the struggle is worth overcoming. Oddly, Oxford recently published another book that shares a very similar structure—and even several of the authors (see Philip Clayton and Paul Davies, eds., *The Re-Emergence of Emergence*, 2006). While there are differences between these texts, the exuberant price of each will likely prevent one from purchasing both. Either text will have a similar result: a thorough introduction to the topic of emergence from diverse perspectives.

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**RECONSTRUCTING A CHRISTIAN THEOLOGY OF NATURE: Down to Earth** by Anna Case-Winters. Burlington, VT: Ashgate, 2007. 183 pages. Hardcover; \$99.95. ISBN: 9780754654766.

Charges that Christianity has been responsible, in whole or in part, for our current environmental problems have been common since Lynn White’s 1967 article “The Historical Roots of Our Ecological Crisis.” Anna Case-Winters, professor of theology at McCormick Theological Seminary, takes this charge seriously and responds by developing a Christian theology of nature with guidance from the theology of John Calvin and process-pantheism.

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The author begins with discussions of “the state of the world” and “the state of theology.” She notes some of the problematic ways that traditional theology has treated nature and its relationship to God and humanity, and suggests critiques from the standpoints of feminist and process thought. The views of two theologians who will be mentioned frequently in a planned sequel, Sally McFague and Gordon Kaufman, are then set out and critiqued.

Case-Winters focuses next on the Reformed tradition, especially John Calvin. She argues that this provides a healthier approach to questions about the relationships of God and humanity to the natural world than critics have sometimes suggested. Then she discusses insights from ecofeminist sources, process thought, and religion-science dialogue. Chapters on “The Promise of Process-Panentheism” and ethical implications of the preceding discussions conclude the book.

There is a good deal that is helpful in this book and it may be especially useful for readers unfamiliar with ecofeminism, process theology, or panentheism. At the same time, there is some tension between the author’s favorable view of these recent theological trends and the apparent desire to remain in contact with the traditional views of Reformed theology. Of course, it would be a terrible anachronism to ask about Calvin’s position on ecofeminism or process theology, but it would have been helpful to explore this tension.

The treatment of dialogue between religion and science in chapter 6 concentrates on the relationship between humanity and the rest of nature and the meaning of the *imago Dei*. Philip Hefner’s idea of the human as “the created co-creator” receives particular attention in connection with the latter topic. Preliminary steps in this chapter discuss methodological naturalism, Intelligent Design, and miracles. While these are helpful investigations, the topic of divine action deserved more detail.

The book contains some good content, but unfortunately readers are likely to be distracted continually by an appalling number of typographical errors and an apparent lack of proofreading.

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## RELIGION & BIBLICAL STUDIES

**DO YOU BELIEVE? Conversations on God and Religion**  
by Antonio Monda. Translated by Ann Goldstein. New York: Vintage Books, 2007. 178 pages. Paperback; \$12.95. ISBN: 9780307280589.

This book is not what it first appears. Given the title and its description as a series of conversations about faith with noted cultural figures, one might expect something parallel to *Philosophers Who Believe* by Kelly James Clark, *Professors Who Believe* by Paul M. Anderson, or *Scientists Who Believe* by Warren W. Wiersbe. These books recount the testimonials of noted individuals representing relevant disciplines as a personal apologetic designed for the agnostic or skeptical reader.

Unlike these volumes, Monda’s subjects are, for the most part, unabashedly nonbelievers or at least fairly unorthodox in their belief. They are drawn largely from the New York City literati, where Monda lives and conducted most of the interviews. Some of the names are likely familiar to the average educated reader, such as authors Saul Bellow, Jonathan Franzen, Toni Morrison, Salman Rushdie, Arthur Schlesinger, and Elie Wiesel; directors Spike Lee, David Lynch, and Martin Scorsese; architect Daniel Libeskind; and actress/activist Jane Fonda. Others were unfamiliar, at least to this reviewer. They include authors Paul Auster, Michael Cunningham, Nathan Englander, Richard Ford, Paula Fox, and Grace Paley, as well as playwright Derek Walcott.

For his part, Monda is a believer (“Catholic, Apostolic, Roman”) but very much at home in the culture in which his subjects circulate. He is a filmmaker and film critic who teaches in the Kanbar Institute of Film and Television at New York University. He also writes for the Italian daily *La Repubblica*, in which these interviews were originally published. They were later collected and then translated into English by Ann Goldstein. His attitude in the interviews is forthright but respectful, challenging his subjects when they give shallow responses but never confronting or arguing with them.

Monda is best when he extracts from them what might be termed “confessions” regarding the subtle (or sometimes explicit) theological statements in their works, with which he is both aware and frequently enamored. The respectful tone was apparently helpful in eliciting some highly personal, even vulnerable, reflections from the subjects, along with some great one-liners, some of which made it into the table of contents as chapter headings. (See, for instance, the chapter on Saul Bellow, titled “I Believe in God but I Don’t Bug Him,” or on Paula Fox, “God Is the Name of Something I Don’t Understand,” or on Elie Wiesel, “I Have a Wounded Faith.”) Yet it is obvious that some of the subjects struggle with deeply-held hostilities toward faith. When Grace Paley was asked, “What do you feel when you meet a believer?” she struck back, “I feel ambivalent: I respect his thinking and his belief, but at the same time I think he’s deluded” (p. 126). One wonders what *disrespect* would look like for Ms. Paley.

Why would anyone care what this miscellaneous collection of cultural elites thinks about matters of faith? Despite an initial skepticism, this reviewer found at least two reasons to maintain a lively interest in the text. The first is that these individuals, randomly gathered though they may be, are, to use a trite phrase, “movers and shakers” in our society. We may or may not read them directly or watch their movies, but what they say matters to others whom we may read or who may otherwise paint colors on our cultural landscape. The other reason for reading is that most are deeply interesting. They are well read and their answers frequently reflect more than passing thought to the topic at hand. To take just one example, when Daniel Libeskind is asked if there are architects in whom a religious background or yearning is evident, he responds knowingly:

The first name that comes to mind is obviously Antoni Gaudí. But in some ways it’s too obvious. I’ve always been fascinated by the inescapable

spirituality of a person considered a heretic, like Le Corbusier, or a mystic, like Mies van de Rohe, who read St. Thomas and St. Augustine and kept their books beside his bed. I would conclude by saying that there hasn't been a great architect who didn't have a strong element of spirituality (p. 103).

How can one find that anything but fascinating, except to complain that Monda did not follow up on that intriguing final comment?

A few appeal to science as part of their reflection on faith. Michael Cunningham notes that he suspects "there are profound and as yet undiscovered relationships between God and the principles of physics," adding "and I do believe in physics." He finds the search for order in the universe, as exemplified in the hunt for the GUT ("grand unifying theory") as a search for God, of sorts. And Saul Bellow hints at some sort of life beyond death: "I don't think everything is resolved with the destruction of the body. What science has to say seems to me insufficient and unsatisfying" (p. 33). Most, however, reflect a largely existentialist mindset.

Monda begins and ends with a fascinating quotation from Jorge Luis Borges:

The idea of God as an omniscient, omnipotent being, who moreover loves us, is one of the most daring creations of fantastic literature. All the same, I would prefer that the idea of God belonged to realistic literature.

It is obvious that Monda believes that God resides in both literary forms and that most of his subjects who disagree with him echo Borges' sentiment. They may believe they have killed God but they miss him nonetheless.

*Reviewed by Anthony L. Blair, Dean of Academic Affairs, Eastern University, St. Davids, PA 19087.*



## RELIGION & SCIENCE

**THE BEGINNING OF ALL THINGS: Science and Religion** by Hans Küng. Translated by John Bowden. Grand Rapids, MI: Eerdmans, 2007. 234 pages, footnotes, index. Hardcover; \$22.00. ISBN: 9780802807632.

Hans Küng is president of the Global Ethic Foundation (Germany, Switzerland), having retired in 1996 as professor of ecumenical theology and director of the Institute for Ecumenical Research at the University of Tübingen. He is the author of more than fifty books, including his most well-known work, *On Being a Christian*. This book was written in German, and while the translation is excellent, the references are mostly in German and other European languages making them largely inaccessible to the North American reader. As I am learning, books on science and religion published by Eerdmans are quite technical and challenging. This book is no exception. The first two chapters alone covered 13.7 billion years of history, including the history of cosmology, physics, and mathematics up to the present. The five chapter titles are (1) A Unified Theory of Everything? (2) God as Beginning? (3) Creation of the World or Evolution? (4) Life in the Cosmos, and (5) The Beginning of Humankind.

Küng claims to believe in the common faith of Jews, Christians, and Muslims, but few of his positions would resonate with sincere believers of any of those faiths. The closest he comes to recognizing God as a personal God is that "he can be addressed." Passing reference is made to his trust in the "crucified Christ," but he clearly sees all religions as many paths to a common end. While he argues that faith is the only hope-filled alternative to reductionistic materialism, the terms and meaning of this faith are vague and almost meaningless to evangelical Christians. The theological reflection is limited to vague universalistic concepts, with virtually no reference to the Bible. Consideration for evangelical Christian faith is largely limited to a consistent critique of American fundamentalism and literalistic readings of Scripture. This book is not particularly novel, but the breadth and lucidity makes it a worthwhile book to have on hand as a clear presentation of an ecumenical position. The book takes a historical critical view and assumes the JEDP hypothesis as a given.

Having said that, Küng challenges both fundamentalist believers and rationalistic scientists, both of whom are guilty of holding to a confrontational approach to theology and science, which he considers out-of-date. This book moves through paleontology, human origins, psychology, and brain science. Küng writes:

If god exists, then there is a fundamental answer to such questions: we can understand in depth why we are very finite, defective beings and yet have infinite expectations, hopes, and longings.

So, he holds to a theistic position even in the face of challenging scientific concepts and data. From this perspective, this book makes for persuasive reading. For example, criticizing biochemical reductionism, Küng denies that the mental is merely an epiphenomenon of the neural, or that our mental choices lack freedom because their biochemical or neural processes demand a given outcome. His arguments leave open the window of faith, even though the faith argued for lacks content. Regardless, these arguments toward the end of the book are powerful, and would carry weight with secular readers who do not have a theistic worldview. His style is winsome and his attitude humble. This book is very readable and addresses many disciplines and schools of thought. It could serve as an upper level college-level course in science and faith. Students would need to understand his premise, but it would lead them to references and paths of discussion that many simplistic faith and science discussions would not.

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**THE GOD OF NATURE: Incarnation and Contemporary Science** by Christopher C. Knight. Theology and the Sciences series. Minneapolis: Fortress Press, 2007. xii + 164 pages. Paperback; \$17.00. ISBN: 0800662210.

Knight is executive secretary of the International Society for Science and Religion and a research associate of the Faculty of Divinity at the University of Cambridge. In *The God of Nature*, he expands on the pansacramental naturalism that was sketched in his earlier book, *Wrestling with the Divine: Religion, Science, and Revelation*—also in Fortress



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Press' Theology and the Sciences series (2001). This expansion takes two directions: one concerns the doctrine of the incarnation; the other involves a teleological view of creation.

By pansacramental naturalism, Knight attempts to get beyond both the deism characteristic of much of modern theology and the interventionist theism that marks much of contemporary reaction to deistic notions of science and its relationship to religion. The solution proposed reaches both forward and backward: forward to what many contemporary thinkers are calling a panentheistic view of the world as being "within" God and backward to classical Christian sources emphasizing a Neoplatonic understanding of time as the moving image of eternity, and the world as the unfolding of a once-for-all but yet perennially active God. In this framework, there are no interventionist acts that are needed to "fix" the world or keep it on course, but there also is no chasm between God and the world that needs to be bridged (even if God remains transcendent from the world as affirmed by classical theism). This allows Knight to affirm the evolution of the world through chance and natural law—the major means of divine "action"—as well as to view the entire scope of the material world as a "creation" that manifests the handiwork of God. Such a pansacramentalism emphasizes a naturalistic ontology but not epistemology: just as the evolutionary unfolding of creaturely species depends on their different ecological niche-systems, so also does the evolutionary development of the various world religious traditions and their explanatory world-views depend on their different socio-historical-cultural systems.

The two developments Knight proposes in this volume unpack the incarnational or Logos christology of John's Gospel as that unfolded especially in the tradition of Eastern Christianity. A more or less recent convert to Orthodoxy, Knight draws particularly from the Logos-theology of Byzantine theologian and saint, Maximus the Confessor, focusing on the latter's notion of the Logos as constituting the inner essence or telos of all things, and connects that with the inclusivistic pluralism (or pluralistic inclusivism, depending on one's point of view) of the twentieth-century Orthodox spiritual writer, Philip Sherrard. This Sherrard connection is what distinguishes Knight's proposals from that of the Russian Orthodox scientist-theologian, Alexis Nesteruk, although it is unclear why Knight neither cites nor footnotes Nesteruk's *Light from the East: Theology, Science and the Eastern Orthodox Tradition* (Fortress Press, 2003). In any case, the result is a reinterpretation of Maximus' Logos-cosmology for the twenty-first century, consistent with modern scientific naturalism on the one hand, but yet also informed by ancient Orthodox apophaticism, spirituality, and teleology on the other. The incarnation is thus the fulfillment and completion of creation (rather than a special instance of God's interface with the world) that allows for a naturalistic and yet pansacramental view of the world to come into focus.

Is Knight successful in what he attempts here? When compared with Nesteruk's book, *The God of Nature* is less robust in terms of the science (Nesteruk is also a lab physicist) but perhaps more expansive in terms of the theological vision (Knight is explicit about his being a fundamentally

theological rather than scientific proposal, and his dialogue with Sherrard accentuates this aspect of the book). Attentive readers will also note, however, that as retrieved by Knight, the classical Christian tradition's view of God, especially when set against the Neoplatonic (and Boethian) understanding of the relationship between time and eternity, may not be far removed from early modern deism in terms of how both paradigms explicate the God-world relationship. Yet the effort to add an Orthodox perspective into the science-theology conversation is surely reason enough to read this book.

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**RELIGION AND THE CHALLENGES OF SCIENCE** by William Sweet and Richard Feist, eds. Burlington, VT: Ashgate Publishing Limited, 2007. 235 pages. Hardcover; \$99.95. ISBN: 9780754657156.

This volume appears thanks to the support of the Social Sciences and Humanities Research Council of Canada and the work of two Canadian philosophers, William Sweet at St. Thomas University in New Brunswick and Richard Feist at Saint Paul University in Ottawa. The fifteen contributors hail from eight nations with about half of the authors being Canadian or from Canadian institutions of higher education. Most of the contributors are professional philosophers and the essays focus on underlying conceptual issues related to religion and the sciences. Two of the essays by Arthur Peacocke and by Denis Lamoureux are reprinted from, respectively, *Zygon* and *Perspectives on Science and Christian Faith*.

The first set of essays explores history and contexts in biology and evolutionary theory with attention to "The Declaration of Students of the Natural and Physical Sciences" from mid-Victorian Britain (Hannah Gay), Darwin's theological insights (Lamoureux), the work of Pierre Teilhard de Chardin (Lodovico Galleni and Marie-Claire Groessens-Van Dyck), and a theology of evolution (Arthur Peacocke). A second set of four essays takes up physics, philosophy, and fine-tuning arguments. A third section of four essays considers naturalism and the nonnatural, and a final section of two essays looks at whether science can provide evidence for metaphysics, and summarizes the various conceptual issues discussed in the volume.

The many new voices added into the discussion of religion and science that this volume alone contributes make it worth reading. The philosophical probing of the metaphysical foundations of much of the work in religion and science is long overdue and this book takes us forward in better realizing these underlying issues and their importance to contemporary discussions. There is reasonable diversity within the volume, although ID proponents will object to the absence of their point of view within the essays. The editors are to be congratulated on a finely produced and edited set of essays that help anchor discussions in deep and important philosophical issues in addition to the respective scientific theories, facts, and so forth usually involved in such discussions.

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**GOD'S MECHANICS: How Scientists and Engineers Make Sense of Religion** by Brother Guy Consolmagno. San Francisco, CA: Jossey-Bass, 2007. 233 pages. Paperback; \$24.95. ISBN: 0787994669.

Guy Consolmagno has a BS from MIT in earth and planetary sciences and a PhD in planetary science from the University of Arizona. He has also done postdoctoral work at the Harvard University Observatory and MIT. He taught physics in Kenya as part of the Peace Corps, and at Lafayette College for five years. He has coauthored five astronomy books and published about fifty papers in various peer-reviewed astronomy journals. Consolmagno is also a Jesuit brother who currently works at the Vatican observatory both in Arizona and in Rome. He researches the connections between meteorites and asteroids and the evolution of small bodies in the solar system.

The book is written for a general audience. It is divided into five sections. The first two parts express Consolmagno's views on why it is reasonable for a technically minded person (a techie) to believe in God, and how a techie sees religious life. He makes some effort to show how techies differ in their way of approaching religious matters and in the types of questions they tend to ask, compared to the majority of parishioners in a typical church. Though he is discussing this in the context of fellow Catholics, the experience seems rather similar to my own and other technically minded people, whom he interviews in the third chapter. Some of the results of that survey are surprising and unexpected, both to him and to me. The fourth section provides a brief summary of historical theology and some of the questions that a typical engineer or scientist might be inclined to ask about religious matters. The final section explains why Consolmagno has chosen to be a Catholic and a Jesuit brother.

Early on, Consolmagno makes it clear that his treatise should not be seen as a kind of proof for God's existence; rather he wants to show that it is rational for a techie to believe in Jesus. This fairly concise summary is similar to arguments I have heard before. It is unlikely to change the minds of most atheists, but it does offer a rational basis for faith which can help grant courage to a techie who still feels a yearning for eternity but does not know how to explain it.

For evangelicals, the book should be understood as one way a technically minded Catholic individual views these matters. I saw much that we share in common and, despite issues in which we differ, I found more benefit in listening since similar problems occur in our churches. Being Catholic, Consolmagno does not understand how techies in the evangelical churches learn to cope with such difficult matters as creationism, which can inflict heart-sinking embarrassment for believing scientists. He is not well acquainted with average church-going creationists or their way of thinking.

Overall, I felt this book was worth reading since it helps us understand how a fellow Christian is struggling to serve God while working as a professional scientist in a complex world.

*Reviewed by Wayne Dawson, Research Scientist, Structural Biology Laboratory, Chiba Institute of Technology, 2-17-1 Tsudanuma, Narashino, Chiba 275-0016 Japan.*

**GOD AND THE NEW ATHEISM: A Critical Response to Dawkins, Harris, and Hitchens** by John F. Haught. Louisville, KY: Westminster John Knox Press, 2007. 156 pages. Paperback; \$16.95. ISBN: 9780664233044.

**THE DAWKINS DELUSION? Atheist Fundamentalism and the Denial of Divine** by Alister E. McGrath and Joanna Collicutt McGrath. Downers Grove, IL: IVP Books, 2007. 118 pages. Hardcover; \$16.00. ISBN: 9780380834464.

Roman Catholic John F. Haught and evangelical Anglican Alister McGrath (writing on this occasion with his wife Joanna) are among the best scientists/theologians to take on the issues being raised by the "new atheists." Every author here deplores the low level of the discussion and aims to expose the flaws evident in a new skirmish in the old warfare of religion and science. Sadly, just when it seems that we are getting to the place where theistic evolution is being taken seriously again as the way God creates the world (compare the work of Ken Miller, Francis Collins, John Polkinghorne, and Arthur Peacocke)—at just such a time when people have been finding evolutionary ideas compatible with Christian faith, we are confronted by a secular anti-religious fundamentalism which is contemptuous of theology and intolerant of faith.

Haught, who writes prolifically and impressively on the borders of theology and science, is plainly disappointed with the intellectually unchallenging character of the new atheism of Dawkins and company. He has been used to conversing with "old atheists" who maintain high standards and do not rely on invective. These fellows such as Nietzsche and Freud thought more in depth about what atheism entails and could understand what might interest thoughtful people in religion. The new atheism in contrast is disinterested in fairminded discussions about whether religion might actually have something to contribute to human knowledge. In the new atheism (and it is not really "new"), readers are not expected to understand religion or have any sympathy for it. Instead they are exhorted to detest faith. Thus Haught is disappointed that the new atheism does not explain things, even its own convictions, such as where it finds the basis for its strong morality or how its extra-strong confidence in reason is sustained.

As for the deity, they do not think of God as believers do, as the personal ground of meaning and love; they view deity as a scientific issue, very much parallel to the hypothesis of evolutionary biology itself which reduces the divine mystery to the standing of a finite scientific truth, forgetful of the many channels other than science through which we gain an understanding of the world. They are completely unwilling to see that faith can sometimes be positive, reminding us how limited scientific reason can be in its capacity to penetrate the richness, beauty, and depth of being. Science alone is a narrow slit through which to view reality as a whole. It requires other modes of interpretation to take it all in. In his critical response then, Haught is not impressed by the uninformed rhetoric and sweeping condemnations of every kind that he finds in this debate.

The McGraths, on the other hand, take a somewhat different tack, and go head to head with Dawkins in more of a no-holds-barred apologetic battle. Since Dawkins is clearly out to make atheists of us all, the McGraths are

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out to convert him. Perhaps Dawkins, who succeeded Anthony Flew as the number one atheist in the world (Anthony Flew having recently become a theist himself) will himself bow the knee! The fact that Alister himself experienced conversion as a young man might even make this unlikelyhood more possible. In his book, McGrath takes on four of the main issues. First, in regard to the existence of God, which Haught is reluctant to view as a scientific question, McGrath tells us that what ought to impress us are not the gaps in our knowledge of the world but the fact that the world itself is intelligible. He urges, following Richard Swinburne, another Oxford professor, that what needs explaining is the world's comprehensibility. Following that, he goes after the narrow-minded scientific rationalism which in the new atheism closes off every mode of understanding save its own. He insists that in order to understand the world, a little humility is required. The cosmos is after all a highly complex, multifaceted, and multilayered reality which makes it open to more explanations than one. The dogmatism of the new atheists is out of place.

Difficult too is the persistence of religion in a world thought to be utterly secular. Why is this? Dawkins is forced to see it as the by-product of one or another evolutionary mechanisms. More than that, it is that human beings know what it is to be "drawn to truth and mystery." It is the experience of being grasped by what Tillich calls an ultimate concern. Evil can be blamed for a lot of suffering which we find in the world. (So can atheism for that matter.) But there is no reason to think that the elimination of religion would yield a peaceful planet. And for every tragedy, there are many acts of human kindness. Religion is not unambiguously good or evil.

What can explain the bitterness of the new atheists toward religion? It may be anxiety concerning the trends as regards its persistence. Are we dealing here with a Dawkins delusion?

*Reviewed by Clark H. Pinnock, Professor Emeritus of Theology, McMaster Divinity College, Hamilton, ON.*

**THE GOD THEORY: Universes, Zero-Point Fields, and What's Behind It All** by Bernard Haisch. San Francisco, CA: Weiser Books, 2006. 157 pages. Hardcover; \$21.95. ISBN: 1578633745.

Bernard Haisch has spent most of his career in astrophysics working at Lockheed-Martin in the Solar and Astrophysics Laboratory in Palo Alto, CA (formerly the Space Science Laboratory at Lockheed). He has written many manuscripts on subjects related to solar physics and a fundamental theory to explain inertia. For over ten years, he served as a science editor for *The Astrophysical Journal* which is one of the main working journals for practitioners in astronomy and space science related fields. He has served on a number of boards and committees in projects related to NASA. He earned his PhD in astronomy from the University of Wisconsin. He is currently president of a nonprofit organization called the Digital Universe. In addition to his scientific work, he has musical inclinations, speaks several European languages, and can read Latin.

PSCF readers who are expecting to gain a deep understanding of Christian theology (or even Buddhism for

that matter) are certainly going to be disappointed by this book. Though he had a rather thorough grounding in a Catholic education and wanted to become a priest, he drifted away in his early 20s. Predictably, his comments about Christianity are little different from other popular writers. Most of the apologetics is rather old hat. However, if readers can view this as a work in progress, written by a scientist grappling with these matters from inside the scientific community, there are some valuable points worthy of appreciation.

Haisch disagrees with the currently fashionable trashing of all belief in God as something akin to a disease. He rails against those he calls fundamentalist reductionists: "someone who truly believes that there is nothing beyond the physical" (p. 24). Many Christians also share such objections. Although these are not new arguments, it is noteworthy that a serious scientist resists following the multitude and recognizes that something is seriously amiss in this model.

The issues of quantum field theory are also considered. Haisch does not accept the many worlds interpretation and considers it "absurd and morally repugnant" (p. 136). I disagree with Haisch on what constitutes a true vacuum, but do see merit in some of his insights as to how Christians might engage and understand the existence of multiple universes. The discussion of his scientific discoveries is rather exciting. He also has an interesting interpretation of Gen 1:3.

Unfortunately, the work seemed a bit rushed. I found the arguments on consciousness rather weak. Haisch appears to be a dualist, but Haisch fails to address some serious issues that dualists should acknowledge when presenting their views. In summary, I see an honest, and at times, quite daring work.

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**LIBERAL PROTESTANTISM AND SCIENCE** by Leslie A. Muray. Westport, CT: Greenwood Press, 2008. 184 pages. Hardcover; \$65.00. ISBN: 9780313337017.

To be accurate, this book is *not* about liberal Protestantism and science. Were the volume to fulfill the promise of its title, it would doubtless be a delightful read ... and a significantly larger book. That is to suggest that either the author or the editor (this volume is the seventh in the Greenwood Guides to Science and Religion, which have included surveys of how Judaism and Islam have approached science) neglected an imperative definitional task early on. And thus the text presents problems for the reader.

The first problem is defining "liberal Protestantism." The sources for this study are almost exclusively theologians. As one of that ilk, I do not necessarily conclude that this is a bad thing ... except for the fact that individual theologians, typically ensconced in academic institutions, rarely represent the movements in which they do their work. Muray, professor of religion and philosophy at Curry College, is working with far too narrow a definition. There is nothing here regarding the actions of church



bodies or leaders regarding science, nothing regarding how laypersons within this tradition have approached science, nothing regarding how scientists who identify with liberal Protestantism have been influenced by that exposure, nothing regarding the scientific achievements of individuals, groups, or institutions associated with the mainline churches. And so much the pity, as there is a story there to be told.

The second problem is defining "science." While Muray re-tells the familiar story of how the old mainline was more ready to absorb Darwinism than the fundamentalist stream of Christianity his discussion of "science" would be more accurately described as a survey of epistemology (he has a particular attraction to radical empiricism) and cosmology (in this case, the interaction or relationship between God and the natural world). The one exception to this rule is his chapter on "ecothology." But if one were to turn here to discover how the mainline understands the theological or moral implications of cloning, for instance, one would be disappointed. The same is true were the topic the ethical uses of technology or stem cell research or nuclear weapons.

Having complained about what the book does not provide, let us now turn our attention to the text as written. Truth be told, Muray does some things well. He provides the reader with a vivid contrast between liberal and conservative approaches to science. Unfortunately he falls into the familiar pattern of overstating the case, relying too heavily on the fundamentalist reaction to Darwinism as representative of evangelical attitudes. Yet his disavowal of "warfare" metaphors to describe the relationship between science and religion will resonate with readers of this journal. Instead, "often untold is the long history of the radical, enthusiastic, unequivocal embrace of modern science (and the secularity that usually comes with it) on the part of Liberal Protestant Church bodies and theologians" (p. 1). Those three adjectives—radical, enthusiastic, and unequivocal—show up repeatedly to describe and emphasize Muray's understanding of the stance of liberal Protestantism toward science.

Muray is also an excellent synthesizer of theological history. His historical survey begins with the Enlightenment, moves swiftly through the nineteenth century (he has little interest in the transcendentalists), stops briefly at William James, lingers for an affectionate embrace of Whitehead in the mid-twentieth century, and concludes with an introduction to a younger generation of contemporary scholar-theologians with whom the reader may be unfamiliar. Yes, the rhetoric is a bit conflated at times. (Try this from page 69: "I have to confess that I have a tendency to read James through my Whiteheadian lens, Whitehead through my Jamesian lens." Frasier Crane, where are you?) And while one may wish to quibble with him here and there on a particular point of interpretation, the quantity of individuals discussed and the manner in which they are juxtaposed with each other is impressive. Muray knows his stuff.

Were this volume subtitled "How theologians associated with mainline Protestantism have understood human knowledge of and divine interactions with the natural world," or something of that sort, this review would conclude with a recommendation that those so minded should by all means inform themselves with this

brief, authoritative historical analysis of those ideas. Unfortunately, for those interested in how science has influenced or been influenced by mainline Protestantism, i.e., many readers of this journal, this volume yields little of value or interest. We hope for better from the remaining volumes in the Greenwood series.

*Reviewed by Anthony L. Blair, Dean of Academic Affairs, Eastern University, St. Davids, PA 19087.*

**THE SPIRITUAL TECHNOLOGY OF ANCIENT EGYPT: Sacred Science and the Mystery of Consciousness** by Edward F. Malkowski. Rochester, VT: Inner Traditions, 2007. 426 pages, notes, index. Paperback; \$24.95. ISBN: 9781594771866.

The monuments of ancient Egypt, especially the pyramids of Giza, continue to fascinate the public in general and some scientists in particular. We have almost weekly reports of archaeological discoveries, such as the huge tomb of the sons of Ramesses II, and programs on the Discovery Channel featuring the cat-scans of ancient mummies. But we have rather bizarre unorthodox interpretations of these monuments as well.

This book by Malkowski, "a software developer and historical researcher," falls into the latter category. The foreword is contributed by Christopher Dunn, the author of numerous publications promoting "his ideas that the Giza pyramid was a gigantic machine" (p. xix), which transformed the earth's "vibrational energy into electrical power" (p. 332). This book is a tribute to the life and work of René A. Schwaller de Lubicz, a member of the French Theosophical Society, who resided in Egypt from 1936 until 1949, and who developed the hypothesis that the Egyptian monuments betrayed an unexpectedly sophisticated technical civilization. Schwaller believed that the apparent pantheon of animal gods "was really a way of expressing cosmic principles" (p. 188). Ra was not really the sun or sun god, but rather, solar energy.

Malkowski rejects the traditional ascription of the Sphinx to Mycerinus (Menkaure) of the Fourth Dynasty; rather, he accepts the views of Robert Schoch that the Sphinx was carved more than 7000 years ago (p. 319). Rather than the conventional explanation that grave goods were interred to serve the dead in the afterlife, he assumes that the Egyptians believed in reincarnation (pp. 357–9). He believes that an artifact from Abydos depicts "a helicopter and two airplanes" (p. 386).

In his pan-Egyptian explanation of the Bible, he holds that Moses learned not only Egyptian traditions from his upbringing in the Pharaoh's house, but also the "Akkanian (i.e., Babylonian) tradition from his father-in-law Jethro," who was a Midianite shepherd in northwest Arabia (p. 343). The Garden of Eden, despite its association with the Tigris and Euphrates Rivers, he places "between Lake Urmia and the Caspian Sea" in Iran (p. 209). The symbol of the cross was derived by the Christians from the Egyptian hieroglyphic sign, the Ankh "Life" (p. 270). The Christians used the symbol of the fish, ICHTHYS in Greek, because Christ was born on the eve of "the age of Pisces" (pp. 267–8).

The author alleges that the secret of Paul's success was perhaps his knowledge of the Hermetic tradition, a late

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body of theosophical, alchemical, and astrological lore which Greeks in Alexandria, Egypt, associated with Hermes, whom they identified with Thoth, the Egyptian god of wisdom (p. 283). Malkowski, who believes that Gnosticism was a pre-Christian phenomenon, is confused as to the distinction between Hermeticism and Gnosticism.

To support his wide-ranging interpretations, Malkowski cites an array of dubious authorities such as George G. M. James, Cheikh Anta Diop, Martin Bernal, and Immanuel Velikovsky.

In summary, though this book may be read for amusement, I would not recommend spending any money to purchase it.

*Reviewed by Edwin M. Yamauchi, Professor Emeritus of History, Miami University, Oxford, OH 45056.*

**A SCIENTIFIC SEARCH FOR RELIGIOUS TRUTH** by Phil Mundt. Austin, TX: Bridgeway Books, 2007. 486 pages, index, bibliography. Hardcover; \$21.95. ISBN: 1933538619.

Author Phil Mundt is a retired geologist who holds a PhD from Stanford University. This book is the result of a four-year quest in which the author had two main objectives: "The first was to try to resolve some of the main misunderstandings between science and religion. The second was to answer some life-long questions concerning religion, and search for religious truth; this was for the purpose of personal fulfillment and perhaps, salvation."

The book contains sixteen chapters and, while lacking footnotes, has an extensive index and bibliography. The first ten chapters comprise the main body of the book, while the last six chapters, collectively referred to as the "Science Annex," provide general science background (universe, solar system, earth, life forms/evolution, DNA/genetics, humankind). The book begins with Mundt's purposes for undertaking this project (chap. 1) and a general introduction into the field of science and religion (chap. 2). Next, the author presents background into scientific concepts that form the framework for any science and religion discussion (chap. 3). Mundt then transitions in chapter 4 into the beliefs that scientists have in general (i.e., deism, theism, agnosticism, atheism), and the particular beliefs of notable scientists in history (Newton, Einstein, etc.). The middle section of the book seeks to describe the belief systems and history of the major monotheistic religions: Judaism (chap. 5), Christianity (chap. 6), and Islam (chap. 7). Chapter 8 acknowledges and discusses, rightfully, the "difficult times" or atrocities committed by the Christian Church historically, while chapter 9 provides an in-depth description of the Christian denominations that resulted from the aftermath of the Protestant Reformation. In the final chapter of the main section of the book (chap. 10), the author concludes by presenting his own thoughts on areas ranging from the creation of the universe and evolution of life to religious mistakes and the culture war.

The book produces a potentially overwhelming wealth of information. At times, the book does not offer logical connections between different aspects of the material, and the flow can be confusing. Although the overall organization of the book and individual chapters could

have been improved, this book still contains a large volume of information in a broad range of areas and is thus a useful resource for those beginning the foray into science and religion. In particular, this book serves as an introductory source on the history of the monotheistic religions (Judaism, Christianity, Islam), and for the development and evolution of the Christian theological tradition. In addition, the aforementioned "Science Annex" will serve as a valuable resource for those who do not have a scientific background.

Mundt's writing style tends toward conversational narrative, rather than dry academics. He takes the time to present material in such a way that all can be involved in the discussion. While most of the book is information presented objectively as "fact," Mundt occasionally includes his own opinions and conclusions in a frank and pointed manner. I thoroughly enjoyed it and wished that he would have included more of this in the sea of information and historical background that otherwise comprises the book.

In sum, the book is a welcome addition to the field of science and religion but must be considered in its proper place. Mundt is not seeking to join the academic ranks, but instead, to take the reader through the wealth of information that has guided his faith development. I found it to be a refreshing read and would encourage others in a similar place to read this book and enjoy Mundt's down-to-earth writing style.

*Reviewed by Justin Topp, Postdoctoral Fellow, Department of Biochemistry, University of Texas-Southwestern Medical Center, Dallas, TX 75390-9038.*

**EVOLUTION FOR EVERYONE: How Darwin's Theory Can Change the Way We Think about Our Lives** by David Sloan Wilson. New York: Delta Trade Paperbacks, 2008. 390 pages, index. Paperback; \$15.00. ISBN: 9780383340922.

*Matthew for Everyone*, *Mark for Everyone*, etc., is a series of popular commentaries by N. T. Wright, and helpful little books they are. Now David Sloan Wilson has written *Evolution for Everyone*, which presents the gospel of evolution in a book that I found to be both fascinating and exasperating. Among evolutionary thinkers, Wilson is well known for his book, *Unto Others*, on group (or multi-level) selection and altruism, and for his theory on the evolution of religion in *Darwin's Cathedral*. The themes of these books return in *Evolution for Everyone*, a book that discusses the importance of groups in evolutionary biology and in human society. It illustrates evolutionary theory with examples from everyday life, and it goes on to suggest that societal phenomena, such as cooperation, arts, language, and religion, can all be explained by evolutionary theory. In *Evolution for Everyone*, Wilson presents evolution not only as a biological process, but also as an all-encompassing worldview.

I found the book fascinating, especially the first half. Describing some wonderful examples from the natural history of animals, Wilson describes how reproductive strategies and behavioral patterns favor individuals and groups because they can be acted on by natural selection. Although this may be a more gene-centered view than

S. J. Gould would have been comfortable with, Wilson backs his theories up with observations and data. In the early chapters, he builds on the ideas of W. D. Hamilton, E. O. Wilson, R. Dawkins, and the branch of ethology known as behavioral ecology. But David Sloan Wilson has a legitimate voice of his own, and he has earned the right to be heard. While his gene-centered view has a touch of reductionism, his idea of group selection counters that tendency.

In the second half of the book, there is an exasperating and different train of thought. From natural selection and group selection, the argument moves to group phenomena, group dynamics, and human culture. Yes, there are many things in nature and in human life that have a connection to groups: cancer is caused by groups of cells, hunting in primitive human societies often takes place in groups, and religions are practiced by groups. But this interesting train of thought does not make religion a product of biological evolution any more than a group of automobiles in a parking lot are a product of such evolution.

Human beings have a biological past, in my view, but Christians and many non-Christians believe that humans have a unique task and place in this world. This is reflected in the fact that several levels of complexity are involved in what it means to be human. Complexity is not adequately dealt with by Wilson, for he reduces all phenomena to the biological level of functioning, and that is the only level that he considers in his book.

The physical level of functioning, i.e., the world of chemistry and nonliving things, and its role in originating living things, is mentioned only in passing in *Evolution* (pp. 137–8). Yes, Wilson mentions RNA as a possible first step in the development of living entities and cells, and Darwin speaks of “some warm little pool” as the source of life’s origin in a letter to his friend, Joseph Hooker; both authors accept the biological level of functioning without dealing with its origin. I cannot help thinking of a line in Exodus 32, “Then they gave me the gold, and I threw it into the fire, and out came this golden calf!” We are reminded that there are topics that evolutionary theory still needs to solve, in spite of the confident title of Wilson’s book.

More pertinent to the topics covered in Wilson’s book is what I would call its biological imperialism. Cultural phenomena, such as language, logic, art, marching, and music, all are group phenomena, and hence, in Wilson’s way of thinking, can be explained through evolutionary theory. There is no need, therefore, of a theory of emergence, for all things are biological. And, indeed, if I have read closely enough, the idea of emergence only appears once in the book, and that in relation to the idea of self-organization (chap. 31).

Religion is a major theme in the book, which is understandable since Wilson received a Templeton grant to study the evolution of religions and to write *Darwin’s Cathedral*. It is clear that for Wilson, religions are moral phenomena so there is no need to consider, in the Christian context, incarnation, divinity, revelation, and other things transcendent. Then, in the context of group phenomena, Wilson describes religions as useful in that they lead to beneficial group dynamics—there is the altruism

topic again—but, strangely, religion is described as “outlandish beliefs for which there is no basis whatsoever” (p. 256). With friends like that, who needs enemies?

Interestingly, Wilson also describes what he calls “stealth religions” or “pseudo religions” and illustrates them by using the thought of Ayn Rand. Science is being used, he says, “as a substitute for God” (p. 277). Wilson does not seem to recognize that this describes his own pattern of thinking, and that in his own theories the biological level of functioning is elevated, taking on the role of creator of all of created reality.

Read this book for the lovely descriptions of behavioral ecology, and as an illustration of an evolutionary thinker who decides that he can include religion in the class of phenomena that have evolved. Do not take the book for gospel truth, for its gospel is a poor substitute for the real thing.

*Reviewed by Harry Cook, The King’s University College, Edmonton, ON.*

**UNEXPECTED GRACE: Stories of Faith, Science, and Altruism** by Bill Kramer. Philadelphia, PA: Templeton Foundation Press, 2007. 243 pages, notes. Paperback; \$22.95. ISBN: 9781599471129.

Kramer is a freelance writer who has written for magazines, nonprofit organizations, corporations, theater, and film. Several of his plays have been produced and two of his screenplays have won independent film festival awards. For nearly thirty years, he has practiced meditation and, as a result, is deeply interested in the way individuals attempt to integrate spiritual beliefs with the challenging circumstances of real-world social agendas. *Unexpected Grace*, which is his first book, brings storytelling to science with compelling narratives about the investigators and participants in four studies, all of which have social and spiritual significance.

The idea for this book took hold over meals on the campus of Villanova University during the Works of Love Conference in 2003. The actual theme of the conference was Scientific and Religious Perspectives on Altruism. Listening to the professors, clergy, and scientists around him, Kramer realized that behind their studies and research were important stories that needed to be told. He later visited the Institute for Research on Unlimited Love (IRUL) in Cleveland which had co-hosted the Villanova conference along with the Metanexus Institute. He was eventually granted permission to interview and profile the participants of four different studies, all of which are chronicled in *Unexpected Grace*. The result is what Kramer calls a collection of love’s short stories, each of which is also a true story.

The first of the four studies is an account of what took place at St. Paul’s Chapel in New York after the twin towers of the World Trade Center were destroyed on September 11, 2001. For nine months, St. Paul’s closed itself to the public while it threw open its doors on a round-the-clock basis to every worker at Ground Zero, every uniformed officer and every conceivable service provider. The chapel became a place of radical hospitality where services for the mind, body, and spirit were rendered for free by a host of volunteers. The guiding



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assumption of these volunteers was that the high-intensity altruism of the recovery workers, battered daily by their grueling labor and the remains of the dead, could not be sustained without the ongoing labors of love that these volunteers provided. As a result of their dedication and sacrifice, St. Paul's Chapel became a holy place where the love of God flowed freely through the hearts and hands of those who served inside her walls.

The other three studies were university based and more quantitative in nature. The first of these was carried out at the University of California Santa Cruz. It involved exposing students from different ethnic background to a series of "Fast Friendship Interventions" in order to test the hypothesis that establishing cross-group friendships would improve inter-group attitudes. The second study, centered at Case Western Reserve University in Cleveland, examined various aspects of spirituality as predictors of giving. Results from the study indicated that the best predictor of giving was a humility measure—the more humble people were, the more money they were willing to donate to others. The last of these quantitative studies took place at the University of Iowa Hospital. In this "Physiology of Love" study, researchers attempted to correlate MRI brain scans with feelings of empathy. Brain scans were taken as participants viewed a series of video clips which included interviews with patients who were either chronically or terminally ill. Initial findings were that the degree of empathy expressed by the participants depended upon the degree of similarity to and familiarity with the conditions of the patients.

The overriding focus of psychology for the past century has been the study of human darkness and evil. Only in the last few decades has psychology begun to explore human virtues such as compassion, forgiveness, friendship, empathy, and altruism. The four studies included in this book are excellent examples of this more positive approach to human psychology. Hopefully, these studies will encourage even more scientists and theologians to pursue research into humanity's higher nature. The lessons learned from studies like these can then be applied to some of the more pressing social problems that we face as a nation.

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**EVOLUTION AND RELIGIOUS CREATION MYTHS: How Scientists Respond** by Paul F. Lurquin and Linda Stone. New York: Oxford University Press, 2007. 240 pages, index. Hardcover; \$29.95. ISBN: 9780195315387.

Authors Paul Lurquin (School of Molecular Biosciences) and Linda Stone (Department of Anthropology) are professors at Washington State University, and have written this book to help laypersons argue for the validity of evolution. They describe the differences between myth and science, then use this distinction to claim that evolution is the scientific explanation for the origin of life, while creationism and intelligent design are unscientific "religious creation myths".

The book has a preface, seven chapters, two appendices, a glossary, and index. There are no footnotes, but

instead a list of books and websites recommended for further study. The book begins with a description of creationism and intelligent design (ID) in which ID is presented as a newer, but quite similar, version of creationism. Next, the authors provide the reader with a historical overview of evolutionary theory and its development as it incorporates evidence from biology, molecular genetics, population genetics, archaeology, and anthropology. This overview is followed by a rebuttal of "creationist purpose" and irreducible complexity. The next three chapters focus on the evolution of *Homo sapiens*, the origin of life and the cosmos, and the evolution of the DNA world. The last chapter is a polemic on the "dangers of creationism."

The authors present evolution clearly and concisely, and are fair to the evidence, rightfully admitting that we do not know everything there is to know about evolution. As expected, while earlier chapters are laced with strong arguments for the validity of evolution, the chapters on the origins of life and the evolution of the DNA world are quite speculative and optimistic. The authors are clearly in their element when describing evolution. Their argument suffers, however, when they move to attacking creationism and intelligent design (virtually the same in their eyes) as myth and unscientific. The authors reduce ID to a defense of "perfect design" or teleological "purpose," then use that caricature to attack ID. Intelligent Design as a movement is much broader, with science, philosophy, and theology components (see Haarsma, *PSCF* 59, no.1 [2007]: 55). Reducing, if not misrepresenting, ID in such a manner makes it easier for the authors to argue against ID, but it clearly does a disservice to the movement and diminishes the integrity of the book for ASAers.

One highlight of the book was a section in Chapter 1 describing the responses of other (non-Christian) religions to evolution. The authors observe that other religions also have creationist movements similar to Christianity. Although the book's title suggested that this observation would more thoroughly examine this topic, this section was a mere ten pages, and left me wanting more.

The authors claim not to be against religion, but instead against those who feel they must interject their religious beliefs into the scientific realm. For the most part, the authors do remain neutral, or "non-religious," but there are several shots taken at scientists who argue that faith is supported—if not enhanced—by science. The idea that findings from science suggest there is a purpose for our existence or the acknowledgement of the anthropic principle particularly riles the authors, as they feel that science and religion occupy separate, if not warring, domains. Their negativity toward matters of science and faith seem to have fueled the concluding chapter of the book "The Dangers of Creationism," which is really an irrational rant about how creationism and intelligent design will ruin the technological and scientific supremacy of the United States. As the authors claim, "We must maintain the technological prominence of our country alive and well, and we can do so by preventing the introduction of theology and miracles into science courses. If we fail to discard this ideology, the world will watch, ponder, ... and suddenly burst out laughing."

While the treatment of evolution is well written and the section on other world religions' responses to evolution is worthwhile, the issues noted and the other capable offerings available make it difficult to recommend this book. For those interested in "evolutionary evangelism," read the better offering by ASAer Darrel Falk: *Coming to Peace with Science* (2004).

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**CREATIVE TENSION: Essays on Religion and Science** by Michael Heller. Philadelphia, PA: Templeton Foundation Press, 2003. 171 pages, index, appendix. Paperback; \$22.95. ISBN: 1932031340.

Michael Heller is the 2008 winner of the Templeton prize in science and religion and these essays demonstrate that the prize was well deserved. *Creative Tension* was published in 2003; however, because Heller is from Poland and has written largely in Polish, his work was virtually unknown to Western audiences until he received the Templeton prize. Heller is both a Roman Catholic priest and a cosmologist. He is actively engaged in research on noncommutative geometry and its application to relativity and quantum mechanics. Thus he brings the perspectives both of a practicing scientist and of a trained theologian to these essays. The result is a unique and stimulating integration.

Although each of the fourteen chapters could be treated as a stand-alone essay, they possess a natural flow from one to another. Part I consists of four essays grouped around the theme of methodological issues; Part II (also four essays) offers a historical perspective. Part III, titled "The Work of Creation," is the heart of the book; the three essays deal successively with relativity, quantum mechanics, and probability theory, frequently using Heller's own research to illustrate ideas. Part IV (also three essays) focuses directly on science and faith issues.

While it is well known that religious people often employ a "God-of-the-gaps" theology, Heller points out that people on the science side of the dispute often employ it as well, in the form of a "no gaps, no God" argument. The first essay discusses examples of both forms drawn from "big bang" theory. The second essay tackles the theological interpretation of physical creation theories. Heller analyzes the nature of physical theories and argues that it is not possible for a philosophical or theological interpretation to be in strict agreement with a physical theory—common language and the mathematical language of theory are too different. Thus at best such interpretations are metaphors. He also introduces a key theme—the most important questions for theology that arise from science are not associated with particular theories but rather are, "Why is there anything and why is the world comprehensible?" The third essay defines the "scientific image of the world" as a global picture of the physical world, obligatory for scientists in a given epoch and highly influential on nonscientists. He carefully describes the medieval, enlightenment, and contemporary images and persuasively argues for the importance

of theologians understanding the image within which their culture operates. The last essay briefly discusses a possible program for a theology of science. It discusses two aspects of the world inaccessible to both philosophy and science—the contingency of the world and the values present in it—and offers some reflections on the rationality of the world. It then suggests that the principal role of revelatory data in consideration of science is not analysis of specific scientific theories (e.g., biological evolution or big bang cosmology) but rather consideration of the significance of the scientific endeavor.

Part II addresses the historical context of the religion-science conflict. Chapter 5 discusses the nature of the Copernican revolution. In the popular perspective, the pre-Copernican view placed humanity at the center of the universe and Copernicus displaced it. Heller argues that the medieval image was only vaguely geometric; it was more like a city with God (not humanity) in the center. Thus the Copernican revolution can be seen as moving humanity from "the privileged margin to the average center." He also discusses the processes that gave the Copernican revolution momentum and the "strangeness" the revolution introduced between science and theology—that science aims for intersubjective transferable information whereas religion, at its root, involves an intimate nexus between an individual and God. Chapter 6 is critical to Heller's thought. He argues that Christianity was not simply a vehicle to carry Greek thought to the modern era. Rather, it introduced the notion that the world is contingent upon God's will, could have been made differently, and thus its nature cannot be discovered by speculation. This opened the door to empirical investigation of nature. Heller also points out that a deep tenet of science is that nothing should be accepted without sufficient proof or argument. But there is no a priori justification for this tenet; thus rationality becomes a moral choice—its successes can be viewed as revealing the correctness of that choice. For Christianity, "that Christ is the logos implies that God's immanence in the world is his rationality." There is thus a profound affinity between Christian belief and science; nevertheless, the age succeeding Copernicus was characterized by conflict between belief and science rather than by symbiosis, and Heller analyzes the basis for this. Chapter 7 is a brief analysis of the work of Teilhard de Chardin. In the mid-twentieth century, Chardin's work demonstrated a possible synthesis of evolution and Christian belief. But subsequent scientific advances have rendered Chardin's views out of date. Heller discusses three ways in which this has occurred. Chapter 8 examines the work of Georges Lemaitre, like Heller, a scientist and a priest. Lemaitre lived in the early twentieth century when logical positivism was ascendant. He was extremely careful not to mix his scientific and his religious convictions. But today, even secular scientists speculate freely on religious and philosophical matters. Thus Lemaitre illustrates how much the climate surrounding these issues has changed.

"Although science and theology use different languages and employ different methods, they often speak on the same subject. Therefore confrontations—not necessarily conflicts—are unavoidable." These words introduce Part III, the most challenging and the most substantive section of *Creative Tension*. Chapter 9 examines the mathe-

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mathematical definition of the initial singularity (also known as “the big bang”) and conditions for its existence, and then suggests some philosophical and theological implications. It points out several dangers in identifying the initial singularity with God’s creation of the universe. Most importantly, general relativity is a classical model—one that does not involve quantum mechanics. The initial singularity arises from solutions to the equations for general relativity. At quantum levels, this theory breaks down. Heller contrasts this with noncommutative geometric models; these generalize relativity, apply at the quantum level, but yield solutions that are totally non-local. Thus space, time, and individuality do not exist in their usual meanings. One noteworthy implication is process theology’s view that an atemporal God would be static. In fact, noncommutative models yield solutions which are global states that are dynamic—that is, change can occur apart from space and time. Thus this claim of process theologians is falsified. Chapter 10 extends the discussion of noncommutative geometry and quantum mechanics and explores some fascinating implications for generalized notions of causality without time and probability and without individual events. Heller also suggests that these notions will necessitate some rethinking of God as primary cause. Chapter 11 addresses the views that conclude that reality, at its most fundamental level, is random; often such views are presumed atheistic. But such a presumption neglects two principal questions: Why do the laws of probability apply to the world? And, why should the world be “frequency stable”—i.e., why does the law of large numbers hold? Heller concludes this section by arguing that any natural theology is sentenced to a “God-of-the-gaps” strategy; therefore we need to distinguish between essential and nonessential gaps. He argues that all gaps are spurious except two and perhaps a third: Why is there something rather than nothing? Why is the world comprehensible? How do we account for meaning and values?

Part IV focuses on the limits of science, acknowledging that “limits” may be a poor metaphor as there are no sharply defined boundaries. Chapter 12 is titled “Illicit jumps—the logic of creation” and focuses on the interplay between syntax and semantics in language. The leap from syntax to semantics is often a source of paradox—for example, “This sentence is false.” But it works in three important examples: in the genetic code, syntax generates semantics; in the human neuronal system, signals give rise to consciousness; and showing that mathematical laws could make it possible for something to arise out of nothing (as some have argued) does not account for the origin of the laws. But he cautions against God-of-the-gaps inferences here. Chapter 13 addresses the concept of rationality. It’s tempting for empiricists to identify rationality with the mathematical-empirical method. But there exist other ways of knowing that seem rational. Consider the statement “The mathematical-empirical method is rational.” This cannot be verified by the mathematical-empirical method. Heller suggests some thoughts on what such a broadened concept of rationality might look like. Chapter 14 concludes the book with some thoughts on science and transcendence, noting that contemporary science teaches us as never before a sense of mystery; it ends with a collection of thoughtful questions that foster this sense. The book

includes an appendix describing the work of the Center for Interdisciplinary Studies in Cracow (to which Heller belongs) and its work in science and religion.

*Creative Tension* is well written and stimulating reading. Anyone trained in physical science or mathematics should have sufficient background to understand all of the technical concepts; someone in the social or life sciences may need to skip some technical explanations; a person trained in the humanities can still find much here but will need to read selectively. I highly recommend it for anyone interested in the science-religion conflict.

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**EXPLORATIONS IN NEUROSCIENCE, PSYCHOLOGY, AND RELIGION** by Kevin S. Seybold. Burlington, VT: Ashgate, 2007. 163 pages, bibliography, index. Hardcover; \$89.95. ISBN: 0754655636.

In this volume, Seybold, Professor of Psychology at Grove City College in Pennsylvania, attempts to address current questions about how the brain is related to mental and physical actions as well as to religious behavior. This is his first single-authored volume although he has co-authored several previously published articles relating psychology and religion.

For the uninitiated, this volume could well serve as an introduction to neurology as well as a survey of current philosophical and psychological reasoning about higher mental processes. Chapters include Neuroscience, Psychology, Religion, Philosophy of Science, Integration Issues, Brain and Religion, The Self, Evolutionary Psychology, Religion/Spirituality and Health, and The Future.

The writing is succinct and the chapters are well organized. Seybold reflects an involvement in the Templeton Foundation seminars on science and religion. He has probably received some foundation support for course preparation as well as encouragement to prepare the present volume. The content of the book seems grounded in a number of their concerns about the relation between religion and the physical sciences. As a compendium of the philosophical and theological implications of developments in neuroscience, the volume certainly seems to have accomplished its intent.

Seybold argues that while human life is embedded in physical and social reality, selfhood, religious faith, and morality are more than the products of biological evolution. He follows Nancey Murphy in identifying himself as a “non-reductive realist.” He includes a comprehensive survey of “evolutionary psychology” in general and Edmund Wilson in particular. For Seybold, religion and ethics are more than superficial solutions to the human needs for security and selfishness. He counters Wilson’s assertion that these are culturally regressive accretions that are falsely based on transcendental foundations.

Nevertheless, Seybold considers how a physicalist, such as himself, can avoid a dualist’s understanding of the human soul and what are the ramifications of his position for the Christian belief in the resurrection of



the dead. He offers no rational solution to this dilemma and simply notes the importance of embodied selfhood implicit in the church's resurrection faith. He discounts any presumption that belief in the human spirit means eternal life will involve non-embodied souls floating around on clouds.

I found Seybold's treatment of a basic philosophical issue of neuroscience, "consciousness," somewhat undeveloped. Although the index refers to this concept fourteen times, he does not deal with the issue in more than a cursory manner. Particularly in the discussion of evolutionary psychology, the unique feature of self-awareness among humans would have seemed to be of central concern. Of course, it should be noted that the issue of the emergence of consciousness coupled with an empathy for self-awareness in other people remains somewhat of a mystery in almost all fields.

The section on philosophy of science was especially informative. The discussion considers the positivism of B. F. Skinner and others in the light of "post-positivism" — the view that all science is "theory laden." Following Kuhn, science is best seen, not as a continuing straight line of discoveries built, but as theories that are tested until they are questioned and other paradigms are presented. Seybold suggests that science has a "social nature" in that scientists come together in groups to assess facets of the theories that guide them.

However, the hierarchical model of the sciences that he presents, wherein physics is pictured at the bottom and theology is pictured at the top, would not seem to fit into Seybold's basic system. On the one hand, only a few theologians would label theology as a science and, on the other hand, the model implies reductionism — an implication I do not believe Seybold would espouse.

In sum, readers of *PSCF* will find this volume well worth reading — both for the surveys it supplies and for the paradigm that it affirms. Seybold can assume he has a place as a seminal Christian psychologist.

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The senior author is provost and professor of psychology at Wheaton College (IL). His junior author is a graduate of Wheaton's doctorate of psychology program and is professor of psychology and director of the Institute for the Study of Sexual Identity at Regent University, VA. Using funds provided by evangelical ministries, the authors set out to study, in a rigorous longitudinal manner, ninety-eight subjects who were thought to be representative of males seeking change through Exodus, a Christian ministry to the gay community. The main hypothesis was the standard professional view, that change of sexual orientation is impossible and that the attempt to change is highly likely to produce harm for those who make such an attempt. Their two main findings were that it is possible for some to embrace chastity and reduce the prominence of their homosexual desire, and that in some cases homosexual attraction can diminish and heterosexual attraction can increase with a resultant satisfactory heterosexual adjustment.

The authors are to be commended not only for the rigor with which they designed and prosecuted this study, but also for the various clever means they used to obtain methodological reviews and other necessary feedback from experts who were opposed to the very idea of the study. Their description about their attempts to publish the book with a secular publishing house demonstrates the manner in which ideology can rule the academy and those who publish on its behalf. Fortunately, InterVarsity Press agreed to publish this book that is written at a level of methodological rigor and detail that is rare for a general Christian publishing house. The authors are cautious in their narrative descriptions about all aspects of the study, especially its conclusions. It can only be hoped that others will now seek to replicate this study and demonstrate, with larger samples or samples drawn from different organizations, that what was observed in this sample of persons within the Exodus ministry is a real artifact that transcends one particular group within one particular Christian ministry at one particular point in time.

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## SOCIAL SCIENCE

**EX-GAYS? A Longitudinal Study of Religiously Mediated Change in Sexual Orientation** by Stanton L. Jones and Mark A. Yarhouse. Downers Grove, IL: InterVarsity Press, 2007. 420 pages. Paperback; \$24.00. ISBN: 978083082846X.

Society at large and the professional psychological and psychiatric communities as represented by their leading professional associations consider male homosexuality to be not a choice, but a predetermined way of life. Attempts to change male homosexuals' orientation are considered harmful and impossible to sustain. This remarkable study presents scientific evidence that such claims have to be modified in light of contradictory findings. On the other hand, the study also suggests that glib evangelical claims that homosexuality can be easily changed and is merely a moral choice are also overstated.



## TECHNOLOGY

**THE RECEPTION OF JACQUES ELLUL'S CRITIQUE OF TECHNOLOGY: An Annotated Bibliography of Writings on His Life and Thought** by Joyce Main Hanks. Lewiston, NY: The Edwin Mellen Press, 2007. 546 pages, indices. Hardcover; \$139.95. ISBN: 9780773453739.

Jacques Ellul (1912–1994) would certainly make a short list as one of the most influential Christian thinkers of the twentieth century. His prolific writings have evoked admiration and controversy in many different arenas of academic and public life including the environmental movement, biblical and theological circles, social criticism, political theory, ethics, philosophy, and finally, law, the area in which he was formerly trained and worked as a university professor at Bordeaux. (He also was a lay preacher in the French Reformed Church.) The far-ranging nature of his writings and the provocations they encapsu-

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lated are still invoked by an extraordinarily diverse group of people across the sociopolitical spectrum.

Hanks, a professor of French language and literature at the University of Scranton, has been a long-time member of the International Jacques Ellul Association and very active in scholarship related to this seminal thinker. She is widely known as the premier bibliographer of Ellul, who left behind a huge volume of material—much of it totally disorganized and scattered. Her most recent effort along these lines before this volume was *Jacques Ellul: An Annotated Bibliography of Primary Works* that was published as *Research in Philosophy and Technology, Supplement 5* in 2000 by JAI Press. This volume is the result of a multi-year effort to collect in one volume significant writings in English and French about Ellul's work and life from the 1930s to the present, based largely but not exclusively on collections at Regent College Library in Vancouver, BC, and Wheaton College, IL. Entries are grouped into three main categories (chapters): (1) books, articles, and interviews; (2) dissertations; and (3) reviews of Ellul's books. Notes for each entry range from a few words to a few paragraphs. A very comprehensive set of indices covers authors and subjects. This resource is invaluable for anyone who wants to explore the impact and ideas of Jacques Ellul as viewed through the eyes of others.

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**TECHNOLOGY AND SPIRITUALITY: How the Information Revolution Affects Our Spiritual Lives** by Stephen K. Spyker. Woodstock, VT: SkyLight Paths, 2007. 158 pages. Hardcover; \$19.95. ISBN: 9781594732188

"Most of us are not terribly reflective about the technologies we use." So asserts Stephen K. Spyker in the first line of the book. Spyker is an engineer and technologist by disposition with thirty-five years of experience at the intersection of technology and spirituality. He currently serves as the director of information technology at Earlham School of Religion and Bethany Theological Seminary.

Spyker pays particular attention to how technologies shape our spirituality. He employs the device or concept of "matrix" to describe the rather complex relationship between one's spirituality and technology. He borrows this concept from the fields of mathematics and computer science and uses it in two different, yet related ways. First, a matrix represents a place of origination. In order for us to understand something as multifaceted as technology, we need a matrix to represent the varied imagery associated with a complete definition of a given technological concept or the emergence of a given technology. A matrix implies that technology is much more subtle and less well defined than most people realize. Technology, in fact, operates at a much deeper level than is usually considered.

Secondly, the matrix represents the interconnectedness of technology and one's spirituality. In other words, there are many levels or planes of relationships on which technology and spirituality exist and many "lenses" through which to view these relationships. The book

employs eight of these lenses to observe the influence that technology has on our spirituality. The lenses are simplicity, transparency, community, identity, relationship, velocity, connectivity, and liberty. Spyker devotes one chapter to each of these lenses, demonstrating how they allow readers to evaluate the impact of emerging technologies on their life.

For the first of these lenses, simplicity, he reminds us that the promise of technology was a simpler life. He goes on to ask if certain technologies have had the opposite effect. Other discussions include how technology has increased the "speed" or pace of our lives, how it has tailored some of our goals and ambitions, the way in which it shapes or influences one's own identity, and the ways that it filters our view of the Divine. Spyker extends this dialogue quite successfully to the areas of daily life that technology affects and insightfully demonstrates how entrenched technology has become in our lives.

Part of the appeal of this book is its accessibility to those who would not consider themselves very savvy in the sphere of technological innovations. In fact, in some regards, people in this camp are the intended audience. Yet, the discussions probe deeply enough that even those of us who consider ourselves technologically literate would do well to reflect upon them. Spyker strikes the right balance between popular appeal and sophisticated dialogue to engage a broad readership. This book gives the reader an opportunity to reflect on the myriad of ways everyday life is influenced by the vast technological developments that are a part of the modern world.

*Reviewed by Kyle Hilton, Vestal, NY 13850.*



## Letters

### First Man versus Adam in Genesis

In a letter to *PSCF*, P.G. Nelson<sup>1</sup> comments on an apparent problem with my article<sup>2</sup> in which I am suggesting that Adam and Eve in Genesis 2-4 came later than the first humans in Genesis 1.

He claims that the first human in Gen. 1:27 is the same as Adam in Gen. 2:7, because the same expression (*ha'adam*, "the man") is used in both cases, the article (*ha*) being retained in what follows, and Adam (*'adam*) without the article is used later only, beginning with Gen. 4:25. But 1:26 has "Let us make man" (*'adam*), immediately followed in 1:27 by "So God created man" (*ha'adam*). Both refer to the same collective of humans, as explained by the specification, "male and female he created them," which implies that here "man" is not Adam, but humanity.

Then, Gen. 2:7-4:1a uses *ha'adam* including the article (2:23b and 4:1b have *'ysh* rather than *'adam* for "man"—for obvious reasons). Nelson apparently takes "there was no man to work the ground" in 2:5 (*'adam* without the article) to refer to mankind as a whole, believing that what follows is a creation story amplifying 1:27. But he

does not explain why in 4:1a, when Adam fathered Cain, the article is used with his name, but not in 4:25, when the same Adam fathered Seth. Nor does he say why 5:1–5 omits the article consistently (5 times) for the same Adam with whom Genesis 2–4 is dealing. From Genesis 6 onward, “man” cannot denote Adam any more, yet in virtually every case in the rest of Genesis we read *ha’adam*, the same form used for Adam in Genesis 2–4.

Nelson claims that the transition from singular to plural in Gen. 1:27, “in the image of God he created him; male and female he created them,” is explained by the story of the creation of Eve in 2:21–23, implying that therefore in 1:27, “him” refers to Adam and “them” to Adam and Eve. This is not compelling. It looks like circular reasoning. Starting with a belief that Adam was the first man, he concludes that 1:26–27 must refer to Adam, and from this, he concludes that “male and female he created them” in 1:27 must refer to Adam and Eve. Similarly, some translations of 1:27 incorrectly talk of a man and a woman, whereas “male and female” are generic terms. So “them” can be the same collective entity as “him,” which is plural in essence.

A given form of an expression is no guarantee that it always designates the same entity. The context has to be considered within the sentence, the paragraph, the book, the whole Bible, ancient culture, and language flexibility.

One crucial case of context sensitivity is the question of the extent of the geographical frame. Gen. 1:1–2:4a is a creation story, referring to the entire universe, the Earth, and life as a whole. On the other hand, 2:4b–4:16 deals with the history of God’s personal dealing with Adam and his family.<sup>3</sup> This second section of Genesis is clearly centered in southern Mesopotamia, the land of Sumer of the fifth millennium BC, as evidenced by the four rivers of 2:10–14.<sup>4</sup>

Between Gen. 2:4b and 12:3, there is no obvious break in the narrative, the geographical context gradually widening toward the northwest, before Abraham goes to Canaan. Nothing in this long story deals with the whole Earth. In particular, this applies to Noah’s flood, its farthest northwestern reach being near Cizre on the upper Tigris, at the edge of the low hill country part of Urartu (Ararat).<sup>5</sup>

## Notes

<sup>1</sup>P.G. Nelson, “Adam and Eve,” *Perspectives on Science and Christian Faith* [PSCF] 60, no. 1 (2008): 71.

<sup>2</sup>P. Rüst, “Early Humans, Adam, and Inspiration,” *PSCF* 59, no. 2 (2007): 182–93.

<sup>3</sup>Gen. 2:4 constitutes a symmetric bridge linking the two parts in a manner indicating a temporal succession, rather than an expansion; cf. A. Held and P. Rüst, “Genesis Reconsidered,” *PSCF* 51, no. 4 (1999): 231–43.

<sup>4</sup>C.A. Hill, “The Garden of Eden: A Modern Landscape,” *PSCF* 52, no. 1 (2000): 31–46.

<sup>5</sup>C.A. Hill, “The Noachian Flood: Universal or Local?” *PSCF* 54, no. 3 (2002): 170–83.

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## Does the Bible Really “Declare” the Earth Young?

In the recent response (*PSCF* 60, no. 1 [2008]: 35) to the essay review of Randy Isaac on Radioisotopes and the Age of the Earth, Larry Vardiman, a physicist at the Institute for Creation Research and a member of the RATE group, said, “... the apparent conflict between the billions of years of earth history commonly espoused by conventional science and the thousands of years declared by Scripture seems to be resolvable.” This sentence raises a question: Does the Bible really declare the earth young?

Unfortunately, I did not find any biblical sentence that declares the earth young or the earth old. The Bibles that the RATE Group used would be the same as others. I believe, therefore, that the RATE Group should correct the phrase “declared by Scripture” with “declared by young-earth creationists” in the sentence. There can be many interpretations for a single declaration of the Bible. Of course, the young-earth argument is just an interpretation. An interpretation should not be confused with the biblical declaration.

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## Can Science Make the “Breath” of God Part of Its Subject Matter?

Graeme Finlay (*PSCF* 60, no. 2 [2008]: 103–14) reflects on how the randomness of natural processes achieves God’s creative purpose. Finlay indicates:

To the Christian it is axiomatic that each one of us is a created being (Ps. 139). Scientifically, we are the product of random genetic process. Theologically, we are the outcome of loving divine purpose. Molecular randomness (in scientific terms) and createdness (in theological terms) inevitably go hand-in-hand.

A human being is a physical/nonphysical/supernatural entity, which is quite consistent with the Christian notion of humans as body/mind/spirit (Matt. 6:22, Rom. 12:2, 1 Cor. 2:11). Scientific study of the human genome cannot access the nonphysical in humans. The notions of life, consciousness, and rationality lie at the foundation of the humanity of humankind, but cannot be reduced to the purely physical. The latter somewhat contradicts the assertion that “Genetic mechanism in all its happenstance has produced the genetic basis of humanness.”

Consciousness is a moment-by-moment awareness of our temporal existence and surroundings. Human knowledge has access only to snapshots and flashbacks of reality. God is the being forever conscious and thus eternal that does not exist in time. God has no history and so he experiences the whole of reality as an eternal “Now.”<sup>1</sup> God is the supernatural or divine being that is omniscient and sustains His creation (Heb. 1:3). It is not



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clear, however, how God's action in spacetime can form part of a strictly evolutionary description of humans.

The Apostle Peter needed the Father in order to know the true nature of Jesus (Matt. 16:16–17). Perhaps the supernatural in humans actually mediates between the nonphysical mind (knowledge of who Jesus is) and the physical body (flesh and blood) and exercises the free will we possess. Science does not deal with the nonphysical and less so with the supernatural aspects of humans. Thus no development in evolutionary theory, *qua* scientific theory, can ever shed light on the true nature of humans, which can only be understood by knowing Jesus the Christ.

Verbs usually connote an action with temporal duration, which is not applicable to God. Certainly, God does not acquire knowledge as we do. He just knows. His knowledge is not temporal. However, for us, embedded in spacetime, our description of nature in terms of deterministic or probabilistic laws will give us only the physical aspect of the whole of reality. A complete understanding will include the supernatural, which is inaccessible to scientific inquiry no matter how science is defined. Therefore, if evolutionary theory is unadulterated science, then it cannot account for the true nature of a human being.

Of the different kinds of knowledge needed to study the whole of reality, only metaphysics and theology address the ontological question of existence while science deals only with the physical aspect of nature.<sup>2</sup> These issues are paramount when attempting to forge a solid integration of evolution with the Christian faith. Ascribing the genomic structure and temporal development in nature to "God's faithful dealings with his creation" may be satisfying to a Christian, but contrived to an unbeliever.

"Then the Lord God formed man of dust from the ground, and breathed into his nostrils the breath of life; and man became a living being" (Gen. 2:7). Physical science has successfully developed paradigms to study nonliving "dust." However, can science make the "breath" of God part of its subject matter? Is the concept of life so elusive that it becomes scientifically indefinable? Perhaps the inability of nonliving matter to detect and identify life as well as consciousness indicates that only life itself can "detect" and know life. Similarly, only self can "detect" and know self. Consciousness presupposes rationality, rationality presupposes life, and life presupposes God. Human rationality and consciousness are used to know nature and God, yet paradoxically humans may be unable to formulate a scientific theory either of life or of self.

## Notes

<sup>1</sup>C. S. Lewis, *Mere Christianity* (New York: Macmillan Paperback edition, 1978), 145.

<sup>2</sup>Moorad Alexanian, "Teaching, Propaganda, and the Middle Ground" (Letter), *Physics Today* 11 (2000): 80.

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## AI, Scripture, and Hardware

I found two problems in Russell C. Bjork, "Artificial Intelligence and the Soul" (*PSCF* 60, no. 2 [2008]: 95–102). He cited a usual translation of Psalm 8:4–5. This is the only time among the 2606 occurrences of *élohîm* that the King James version translates it as "angels." This follows the LXX [*Septuagint*] and is commonly adopted by other translations. A proper translation should indicate that human beings are a little below God, a thought that better fits 1 Peter 1:12. Why should the greater yearn to look into the state of the lesser?

From this it follows that strong AI expects the production of an image of the fallen image and likeness of God. Would this produce a mortal apparatus? An immortal one? Or would the possibility of exchanging parts and updating programs give it improved and unending existence? There is also a vital difference between a device that can perform a range of specific tasks more rapidly and accurately than humans can, and one that can self-consciously make moral decisions well or poorly. Can the machine comprehensively improve on the imitated person?

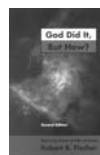
As a bonus, one may ask whether digital hardware, the current option, can ever adequately emulate analog wetware, even if this is all there is to consciousness.

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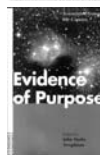
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