Environment

AMERICA'S ENVIRONMENTAL REPORT CARD: Are We Making the Grade? by Harvey Blatt. Cambridge, MA: The MIT Press, 2005. 272 pages, notes, index. Paperback; $27.95. ISBN: 0262025728.

Blatt, who taught at the University of Houston and the University of Oklahoma for many years, is the author of six textbooks. Currently he is a professor of geology at the Institute of Earth Sciences at Hebrew University of Jerusalem in Israel.

This book focuses on the environmental issues that polls show are most important to Americans today. Water issues are analyzed in the first two chapters of the book. The first chapter deals with water shortages in the western portion of the United States, and the second chapter summarizes flooding problems in other locations. Garbage production and disposal is the subject of chapter three while chapter four provides an overview of soil and agricultural issues. Energy resources are covered in chapter five and the next three chapters deal with air quality issues (global warming, air pollution, and ozone depletion). Chapter nine, the longest chapter in the book, is concerned with the problems associated with nuclear energy and the storage of its radioactive byproducts. The book concludes with a chapter in which the author tries to chart a realistic path to a sustainable future, one with enough water, clean and abundant soil, clean sources of energy, a stable climate, and pollution-free air.

The topics discussed are presented in a manner that is accessible to all readers. Numerous charts and graphs are included and entertaining anecdotes are sprinkled throughout the text. Citations are provided in each chapter so the reader can check the author's statements against statements made by professionals in each field. Additional readings relevant to each topic are listed at the end of the book. While a number of statistics are included, they are presented in a way that does not detract from the flow of the text. Many of these mind-boggling statistics not only provide support for the author's arguments, but they also enable the reader to better appreciate the magnitude of our nation's environmental problems. However, the book is much more than "gloom and doom" statistics with supporting text. The emphasis throughout the book is on workable and reasonable solutions that map out the course to a sustainable future.

America's Environmental Report Card is an excellent environmental science primer for the general reader. It could also be used as a supplementary textbook in an undergraduate environmental science course. Blatt is to be commended for writing a book that presents our country's environmental problems in a readable manner. The book offers a number of practical solutions to some of our more pressing environmental questions. It is a timely reminder of what we need to accomplish in order to achieve a sustainable environment.

Reviewed by J. David Holland, Biology Instructor, Benedictine University at Springfield College, 1500 N. Fifth St., Springfield, IL 62702.

Ethics

DEFENDING ANIMAL RIGHTS by Tom Regan. Champaign, IL: University of Illinois Press, 2007. 180 pages, index. Paperback; $20.00. ISBN: 9780252074155.

Defending Animal Rights is a collection of lectures given by Tom Regan between 1990 and 1998, and reprinted in paperback, February 2007. The book addresses a wide range of animal rights topics within the broad context of moral philosophy. Regan is a philosophy professor at North Carolina State University, and while the essays are academic in nature, all but one of them are accessible to concerned nonphilosophers. On the whole, this collection of essays is a response to Regan's critics; familiarity with his early work and other opinions on animal rights is not needed but will enrich the reading of this text. Regan's *The Case for Animal Rights* (1983) argues that nonhuman animals bear moral rights equivalent to the rights of humans. The author's conception that nonhuman animals have the right to not be harmed is the basis for his advocating animal liberation.

Of the nine chapters, only three directly confront concepts from Christianity. In his introductory chapter—an overview of the philosophical arguments relevant to animal rights—Regan insists that a Christian perspective of animal rights be classified either as despotism or stewardship. He does not make the mistake of interpreting the Hebrew word *rada*, from the Gen. 1:24–29 creation account, as meaning only dominion, but allows for its application in a context of stewardship. However, stewardship, in Regan's rigid conception of rights, necessarily leads to a position of animal abolitionism. He fails to acknowledge that Christian stewardship could inform improved practices of animal husbandry or biomedical research based on the Matt. 25:40 conception of actions unto the least of these as being done unto Christ.

Regan adopts a novel tactic in sparing biomedical science. He applies none of the criticisms to Christianity's role in subjugating animals for human use. The sixth chapter, "Patterns of Resistance," chronicles several instances in American history where groups of humans were subjugated because of presumptions of lesser rights—presumptions supported by quotes from scientists and theologians. Regan then maps these cases onto current struggles to assure animals' rights. While he does acknowledge that "the two powerful institutions [of Christianity and science] have sometimes been on the side of the right and the good," Regan decides not to "highlight the positive role [*sic*] that Christianity and the scientific enterprise have played in moving America toward an expanded conception of the moral community." His subsequent arguments are weaker for this choice because the accounts are polarizing and divisive.

Where it is convenient to pit science against religion, Regan does so. For example, his harsh ridicule for the concept of special creation appears in "Putting People in Their Place" when he makes no allowance for divine intervention over time. "Darwinism effectively undermines the belief that human life is uniquely valuable *if* this belief rests on the claim that human life originated because of a special creation of God." Regan is not only selective in

his characterization of Christianity; he chooses emotion-laden moral situations and specific examples that have utility for his arguments, but may not be representative of the common situation of animal welfare. These examples include human slavery, the moral status of developmentally delayed humans, Nazi experimentation on prisoners, and carcinogen evaluation (rather than research to cures) as representative of biomedical research with animals.

Regan's expertise in animal rights and moral philosophy, combined with the advocacy roles he has assumed over the years, provide a clear presentation of a well-rehearsed animal rights position. For scholars interested in such, there is ample room to formally contest some of Regan's characterization of the Christian faith, but these individuals have probably encountered these ideas elsewhere. Individuals interested in a comprehensive introduction to animal rights topics will find *The Animal Ethics Reader* (Routledge) with its wide range of contributors (including Regan) more useful.

Reviewed by Thomas Robey, Medical and Graduate Student, 8005 Sand Point Way NE A55, Seattle, WA 98115.

General Sciences

10 QUESTIONS SCIENCE CAN'T ANSWER (YET) by Michael Hanlon. New York: Macmillan, 2007. 186 pages, index. Hardcover; $24.95. ISBN: 9780230517585.

Michael Hanlon, one of Britain's most successful science writers, is science editor at the Daily Mail. In addition to writing popular science books, he contributes regularly to magazines and appears on TV and radio as a science pundit.

Writing the book on questions science cannot answer has given Hanlon the opportunity to write brief accounts of a wide range of topics without having to show any connection between them. His introductions to the various topics are designed to capture the reader's interest, and then these are followed by discussion of the present state of investigation in the area.

The author's starting point is a quote from Lord Kelvin in 1900 that there was nothing new to be discovered in physics, an opinion which, of course, we now know was spectacularly false. Hanlon goes on to discuss a number of questions in physics and other sciences that remain open today. Although most of them have been subjects of interest for many millennia, the question about dark matter and dark energy could not have been posed until very recently.

One chapter asks whether the human race is the only species that is self-aware. Another questions how to understand the nature of time, a concept so different from other concepts in physics since, for example, it is not symmetric. Some other questions are how to stop the aging process, whether there is life elsewhere in the universe, and the question of continuity of identity, i.e., what it is that makes me the same person even as the material in my body is being replaced by other matter.

Some questions suggest the need for public policy decisions in addressing certain problems. For example, the question is raised as to what should be done about people of below-average intelligence who are becoming increasingly unemployable in our highly technological society. Another is understanding the causes of and cures for obesity and how it affects health.

The penultimate chapter deals with the author's desire to disprove the paranormal, and the final chapter asks why anything exists at all. This would seem to be a philosophical rather than a scientific question, but it gives Hanlon the opportunity to discuss cosmology, including the concept of a multiverse.

Michael Hanlon is a very skillful writer. His chapter introductions capture the reader's interest immediately, and he manages to maintain it throughout. However, the chapters are too short to fully satisfy a reader who has an intense interest in the particular topic, but they may whet the appetite of a scientifically minded reader for further reading on some of these topics.

ASA members should take exception to some of Hanlon's remarks. For example, he says that he hates all religions and that science rejects the idea of a soul. Nevertheless, ASA members who are interested in the current state of affairs in a variety of scientific disciplines without going into them too deeply may profit from this book by coming away better informed about up-to-date developments in a variety of areas.

Reviewed by Gordon Brown, 1220 NW State St. #28, Pullman, WA 99163.

History of Science

SCIENCE AND ISLAM by Muzaffar Iqbal. Westport, CT: Greenwood Press, 2007. 209 pages plus annotated bibliography and index. Hardcover; $65.00. ISBN: 9780313335761.

This is an encyclopedic survey of the field written by the president of the Center for Islam and Science in Canada. His previous books include *Islam and Science* (2002) and *God, Life, and the Cosmos: Christian and Islamic Perspectives* (2002). Iqbal is extremely well versed on the subject being both an Islamic scholar as well as a trained scientist.

The volume is evenly divided between chapters that survey the development of science from the beginning of Islam through the sixteenth century and chapters that deal with the philosophical foundations which continue to guide Islamic science up to the present. Of special interest are sections that detail the debates between Islamic and western scientists in the nineteenth and twentieth centuries.

Initially, I must admit that I often questioned my appropriateness in reviewing this volume. While I am fairly well informed about the history and nature of science in western (particularly Christian) culture, overall I found myself knowing little about Islam in general or science within Islam in particular. This was tough reading—neither the names nor the locales made much sense to me. Perhaps a cross-cultural historian of science would have been a more appropriate reviewer. However, any presumption that, through all centuries and across all sub-disciplines, science has not been alive and well in Islam would be incorrect. Nevertheless, I do feel able to

comment on the difference in presumptions that guide western science as compared to those in Islam that the author details so well.

Cartographers, biologists, astronomers, mathematicians, chemists, geologists, geographers, agronomists, to name only a few—all flourished in Islamic culture from the very beginning of the faith. Their accomplishments have been acknowledged by the introduction of Aristotle, etc., into Spain by the Moors—a remarkable event that sparked the reconstruction of Christian theological thinking by Saint Thomas Aquinas. Science was never discouraged although it always functioned under one overarching conviction that we know in the modern world as *theocracy*. Culture and religion were one—by intention. Science served a basic worldview that controlled every aspect of culture. The distinctions we know today between private religious faith and secular culture coupled with the freedom of religion simply have never existed. However, it should be noted that the Dark Middle Ages following Constantine in the west were controlled by Christian convictions that actually discouraged the scientific enterprise in favor of an emphasis on the afterlife.

Initially the Islamic point of view was focused on the issues of religious ritual. Astronomers, for example, determined the times of worship festivals. Geographers determined the way to face Mecca in prayer from different locales. However, the understanding of how science was to be related to faith was significantly more subtle than this. Three quotes from the volume illustrate this issue:

1. The Qur'an considers Islam to be that path and way (*din*) that corresponds to, and is in harmony with, the innate nature of all human beings, *fitrah*—the pattern on which they are created (p. 62);
2. Knowledge is *ilm* in Arabic, a word that frequently occurs in the Qur'an. Knowledge is considered meritorious; *those who know and those who do not know are not equal*, a verse in the Qur'an tells us Q. 39a;9 (pp. 64-65); and
3. … scientific knowledge, whether furthering our understanding of the cosmos and its working or merely fulfilling the practical needs of the community, becomes a "religious" duty incumbent on the whole community (p. 65).

Iqbal gives the example of al-Khwarizmi's writing of the book that initiated the study of algebra by saying he "was fulfilling a fard'ayn for which he hoped to receive recompense from the Creator" (p. 65).

I suppose one could say that the deist and Puritan Christian scientists of the seventeenth and eighteenth centuries would agree fully with these motivations. Ian Barbour, in his well-known *Issues in Science and Religion* (New York: Harper and Row, 1966), notes that England's Royal Society stated as its goal to "study the laws of God for the alleviation of human suffering." Many members of ASA would likewise affirm similar life objectives. Nevertheless, since the rise of modern science in the Christian west (beginning with Galileo), the separation of science and religion has taken a decidedly different turn than in Islam where scientists have remained true to these convictions.

This book was not easy reading, by any means. It would probably be best read in sections by those who seek a better understanding of this parallel development of science.

Reviewed by H. Newton Malony, Senior Professor, Graduate School of Psychology, Fuller Theological Seminary, Pasadena, CA 91100.

Natural Sciences

INTO THE COOL: Energy Flow, Thermodynamics and Life by Eric Schneider and Dorion Sagan. Chicago, IL: University of Chicago Press, 2006. 362 pages. Paperback; $18.00. ISBN: 0226739376.

Eric Schneider has a doctorate in marine geology from Columbia University. He has worked on geophysical, chemical, and oceanographic processes of the deep sea. He worked at the US Environmental Protection Agency (EPA) as a director of science policy and later in the study of marine pollution. He has also worked as a chief scientist at the National Oceanic and Atmospheric Administration (NOAA) and as a chief scientist at other related positions. During the last ten years, he has focused on work related to this book. Dorian Sagan contributed much of the wit and humor to the book.

The book has an extensive index and bibliography and is aimed to the general reader. It does not contain a single derivative, integral, or partial differential equation. It should be understandable to most readers with a general education background in science.

The book has many strong points. First, because I am trained as a physicist and work in biotechnology, I share the author's passion for non-equilibrium thermodynamics in researching many aspects of biology. I agree that gradients are where the action is in biological systems. I enjoyed reading someone who appreciates non-equilibrium thermodynamics and sees its broad importance in understanding biological problems.

Second, I greatly appreciated that Schneider and Sagan showed some agnostic leaning on the matter of ultimate reality. I am weary of reading vulgar displays of scientism; it was refreshing to read a combination of wit and the faint hints of genuine honesty.

Third, I agreed with where the authors apply their ideas. These extend into economics and environmental issues. They also take a different angle on the origin of life. In my own research area on RNA, it is commonly asserted that the RNA world was first. Schneider and Sagan assert that metabolism came first. I think they may have a good point in saying that life is not driven by genes alone, though metabolic models also raise many questions.

The main area where I most strongly differ with the authors comes around the last chapter. There they propose for the purpose of life "that purposeful behavior and functionality as we experience it in ourselves, and observe it in other animals and organisms, is an outgrowth of nonliving gradient-reducing systems" (p. 302) and "… human purpose may be a long-evolved consequence of the thermodynamic tendency to come to equilibrium" (p. 309). In other words, "purpose" seems entirely defined by gradients. Perhaps scientifically they have a point, and I appreciate that they nuance it within their writing. I can

agree that we should not think too highly of our significance. That said, I think that there needs to be more for a conscious sentient being to live on than just a gradient. Humans were not meant to live by bread alone, nor—should I think—merely by gradients.

I can certainly recommend this book to readers who are interested in understanding the relevance of nonequilibrium thermodynamics in the processes of life and the environment. Even if Schneider and Sagan have possibly erred on some major issues, the work is informative and quite thought-provoking, and it generates gradients.

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

GENETICS 101 by Michael Windelspecht. Westport, CT: Greenwood Press, 2007. 195 pages, index. Hardcover; $49.95. ISBN: 9780313333811.

The study of genetics is extraordinarily complex and broad, and it is in the forefront of technological advances in biology. The lay community often lags considerably behind in understanding the basic concepts of genetics and its human applications. *Genetics 101* is one of a series of books produced by Greenwood Press with a series title *Science 101*. The publisher has put together this book series with the conviction that individuals not in a science career will learn the basics of various scientific fields—in this case, genetics. The author, Michael Windelspecht, assistant professor of biology at Appalachian State University, has several publications explaining organ system biology for laypersons.

This book is written in a manner similar to an undergraduate textbook for genetics. The early history of genetic science is explained and then a straightforward progression through the study of genetics is explored including the history of DNA discovery, the mechanism of DNA replication (including transcription and translation), techniques of genetic study at the microbiological level, mutations and transposons, methods of genetic manipulation to study a desired effect, and genetic applications to real-world scenarios. A few misspelled words were noted which should be corrected in future editions.

The book was difficult to follow at times. For example, "Studying the Gene" (chap. 4) went into considerable detail regarding various techniques for gene identification such as electrophoresis, polymerase chain reaction, Southern blotting, and so forth. However, I think that the lay reader would be overwhelmed by the large amount of data presented. Windelspecht has attempted to help the reader by including appropriate illustrations of these techniques. However, even with these well-made illustrations, some readers will discover that this book requires a significant degree of concentration to understand. The book seems better suited for an introductory college course of genetics, rather than reading for simple enjoyment by the layperson.

Several areas of genetics that are coming to the forefront of research and clinical application are touched upon lightly in this book. Single nucleotide polymorphisms are described briefly in the context of genetic diseases, but this topic needs to be expanded greatly. RNA interference also is mentioned in a short manner and does not go into any detail about the thousands of newly discovered RNA types that suggest Lamarckian evolution (in which changes in the environment affect an organism's phenotypic characteristics) may be more of a reality than previously thought. For that matter, it would have been helpful for the author to discuss Charles Darwin and the theory of natural selection as a precursor to the discovery of DNA.

The multiple brief biographies of the giants of genetics contained in this book are enjoyable to read. I had not realized that Gregor Mendel published his research on pea shape and color in a well-known scientific journal of the day; I thought that his works suffered in obscurity for years. In summary, this book is very complete in its overview of genetics, but it would be helpful if discussion on some newer areas of research in this field were expanded.

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

Origins & Cosmology

SCIENCE VS. RELIGION? Intelligent Design and the Problem of Evolution by Steve Fuller. Malden, MA: Polity Press, 2007. 177 pages. Paperback; $22.95. ISBN: 0745641225.

Be not deceived by the title. Fuller is neither an "objective" reporter on the fortunes of the intelligent design (ID) movement nor does he attempt in this book to weigh the pros and cons of ID. Rather, he writes as one convinced that Darwinism and Neo-Darwinism are no more than "rhetorical achievements" that will wither in the twenty-first century as did Marxism in the twentieth. In seeking to "balance the ledger between evolution and ID" (p. 7), the book's five chapters discuss the "problem of evolution" historically, ideologically, and in terms of complexity theory, the legal issues, and "Life after Darwinism."

Fuller is a historian, philosopher, and sociologist of science who has held full professorships at the Universities of Durham and, most recently, Warwick. As founding editor of the journal *Social Epistemology* (1987), he has long argued that the major epistemological problem of science is not the question of how we can know what is true, but how the many different scientific interpretations emerge out of common scientific practices. This central question is interwoven throughout the over ten substantive volumes (excluding edited books) he has written in the last twenty years. Fuller's own proposals are creative efforts to think through the issues in critical dialogue with Kuhnians and Popperians on the left and right.

It is precisely because of Fuller's conviction that the practices of science open up to a wider range of interpretations rather than leading incontrovertibly to either methodological or metaphysical naturalism that he was called in as an expert defense witness in the recent *Kitzmiller v. Dover Area School District* trial. Although judgment was rendered against the school district's quest to include an ID textbook as part of the science curriculum on the grounds that ID was religion, not science, Fuller's testimony was that the history of religion and science have

been intertwined since the inception of the latter. Only in the last century have scientific hypotheses derived from religious commitments found confirmation, and the latter then have been called upon to conclude toward a naturalism that rejected the premises upon which the hypotheses were originally based.

Science Vs. Religion can be understood as Fuller's *apologia* for his participation in the Dover trial. He argues not only that the Establishment Clause has been transformed into an ideology that institutionalizes atheism, but also that methodological naturalism is "a pseudo-philosophy tailor-made to counteract a perceived pseudo-science" (p. 117). Further, Fuller suggests that the current anti-ID animus parallels the anti-communist McCarthyism of the Cold War era; that Darwin's natural selection should itself be understood as a design-based mechanism; and that in the long run the use of computer simulations will bring ID and mainstream science closer together (e.g., William Dembski's notion of specified complexity overlaps with Stuart Kauffman's quest for identifying self-organizing complexity surviving at the edge of chaos). Hence design-based research does not stunt inquiry; rather, it fosters scientific discovery. In fact, Fuller urges ID theorists to reclaim the tradition stretching from Carolus Linneaus through Georges Cuvier to Gregor Mendel—all "special creationists" whose scientific theories were inspired by their theological conviction that human beings saw themselves as made in the image of God and thus had the capacity both to understand nature and to transform it for human purposes. Fuller even anticipates that ID's future might be to push the biological sciences to re-calibrate as design-based disciplines (so that, e.g., bird flight can be studied to develop further aviation technology).

However, Fuller himself is far from a stereotypical ID advocate. A self-styled secular leftist, naturalist (who wants to naturalize or historicize naturalism), and public intellectual, his agenda is to illuminate the social practices and contexts of all scientific endeavors. At this level, he criticizes ID for reading the history of biology (rather than the Bible) too literally. All in all, then, *Science Vs. Religion* is an engaging book. It will provide fuel for Fuller's critics who have accused him of "pomo science" (postmodern science); energize ID theorists in their efforts to "widen the wedge"; and serve food for thought for those still sitting "on the fence" between ID and mainstream science. These are marks of a good book, and, for purposes of this journal, a good science story.

Reviewed by Amos Yong, Professor of Theology, Regent University School of Divinity, Virginia Beach, VA 23464.

THE WONDERFUL ADVENTURES OF NAT SELLECK AND EVA LOU SHINN IN SCI FI LAND: A Spoof on Evolution and Natural Selection by A. Nonimous. Claremont, CA: Paige Press, 2007. 85 pages. Paperback; $14.95. ISBN: 1930053525.

I am an avid fan of National Public Radio's long-running program "Car Talk." In particular, I always get a chuckle at the end of the show when the hosts acknowledge their "staff" in a fanciful series of word plays—thanking, for instance, their chauffeur Peekup N. Dropov and their attorneys Dewey, Cheatum, and Howe. So I became understandably intrigued when a recent ASA book review list included a short tome by an author adopting the pseudonym A. Nonimous, and whose title introduces characters named *Nat Selleck* and *Eva Lou Shinn*. In fact, my interest was sufficiently piqued to cause me to offer to prepare the following review.

This work resembles a Greek mythology in which the central characters Nat and Eva, both illegitimate children of Manatura, strive to overcome their checkered parentage. Their goal is to achieve divinity and take their rightful place among the panoply of the gods. As the story unfolds, we are treated to a whimsical history of the development of evolutionary theory. Along the way, we meet many of the major and minor players (all under humorous pseudonyms, of course) in the development of the theory and some of the disciplines (e.g., evolutionary psychology) derived from it. The author is playful in his or her rendering of the subject matter, though there clearly is an undercurrent of sarcasm that suggests the author is unsympathetic to the central tenets of evolution. Defenders of Lord Trewgott (some of our more conservative brethren may cringe at this pseudonym), in their several different forms (e.g., ID), are also represented. By story's end there are several different philosophical camps all claiming to be *THE TRUE WAY*. In a delicious twist that (unintentionally, I think) appears to reject all of them, a voice from heaven inquires, "Where were you when I laid the foundations of the earth …" (Job 38:4).

This book offers no new information in the seemingly endless debate regarding how the world we see today came into being. It does, however, present the topic in a fresh and original manner that lacks much of the polemics that often attends such discussions. Not only is the style different, but readers are presented with the task of deciphering the pseudonyms that represent the various historical figures that have contributed to the topic. Many are readily recognizable, but a few forced me to sneak a peak at the "cast of characters" in the back of the book. By no means would I consider this book a must-have for most ASAers. But, if you are interested in a short, lighthearted, fanciful read, then this book is worth the asking price.

Reviewed by F. Allen Dray Jr., U.S. Department of Agriculture, Agricultural Research Service, Fort Lauderdale, FL 33314.

PHILOSOPHY & THEOLOGY

THE ATHEIST'S BIBLE: An Illustrious Collection of Irreverent Thoughts by Joan Konner, ed. Los Angeles: HarperCollins Publishers, 2007. 195 pages. Hardcover; $16.95. ISBN: 9780061349157.

Ernest Hemingway is quoted in this book as saying "All thinking men are atheists." Interesting, since a *Newsweek* poll revealed that only three percent of respondents called themselves atheists and only thirty percent said they would ever vote for an atheist. Based on this statistic, it might be falsely concluded that the USA is mainly run by nonthinking theists.

Nevertheless, while books on theism far outnumber books on atheism, recently atheists have produced some bestsellers. These include books by Richard Dawkins

(*The God Delusion)*, Sam Harris *(The End of Faith; Letter to a Christian Nation)*, and Christopher Hitchens (*God Is Not Great*). Daniel C. Dennett has argued that religion is a fit subject for scrutiny (*Breaking the Spell: Religion as a Natural Phenomenon*).

Konner has conceived and edited a book of quotations from a variety of sources which question the wisdom of religion and faith in God. Quoted are philosophers, political thinkers, writers, scientists, and humorists. For good measure, she even includes some quotes from the *Holy Bible* (falsely attributing Hebrews to Paul). The quotes are divided into thirty-three chapters. The three that might interest readers of *PSCF* are "The Book of Reason," "Scientosophy," and "Book of Truth."

These books and thoughts have been analyzed by a variety of apologists and theodists. Perhaps one of the most well known is Alister McGrath who has written two books which evaluate Dawkins' thoughts *(Dawkins' God; The Dawkins Delusion?)*. If you appreciate mental gymnastics, *The Atheist's Bible* may provide some mental morsels with which to combat!

Reviewed by Richard Ruble, John Brown University, Siloam Springs, AR 72761.

SCIENCE AND THE AKASHIC FIELD: An Integral Theory of Everything by Ervin Laszlo. Updated 2d ed. Rochester, VT: Inner Traditions, 2007. 194 pages. Paperback; $14.95. ISBN: 1594771812.

Over the last four decades, Ervin Laszlo has led the vanguard of work on systems theory and futures theory. His commitment to uncover the connections between the various systems that constitute our world—from the micro- (subatomic) to the macro- (cosmic) domains—has led him inexorably to the search for what in this book is subtitled "an integral theory of everything" (ITOE). With mixed reports coming from (on the one side) cosmologists, many of whom are skeptical about theory-of-everything (TOE) projects, and (on the other side) string theorists, the currently more optimistic bunch about the success of TOE research, what might a systems and futures theorist contribute to the discussion?

One major idea "in-forms" Laszlo's version of TOE, which, as already indicated, he calls "integral": the notion of the coherence of nature at and between its many levels such that what emerges is a thoroughly interconnected world. This is "in-formation": "a subtle, quasi-instant, non-evanescent and non-energetic connection between things at different locations in space and events at different points in time" (p. 68) that is seen in nonlocality at the quantum level (among other quantum phenomena); feedback loops (within organisms, between organisms, and between organisms and their environments) at the level of evolutionary biology; transpersonal, psi, and synchronicity phenomena at the level of consciousness; and the fine-tuning constants at the level of cosmology, among other evidence that Laszlo summarizes in this volume. This interconnectivity is possible, he suggests, because each of these domains is "linked" via the Akashic- or A-field (from the Sanskrit Akasha, which refers originally to what embraced the five fundamental elements of the world), the cosmic plenum from which all things have emerged and into which all things will ultimately re-converge.

This second edition of *Science and the Akashic Field* updates the science published in the first version (2004), and presents (what Laszlo believes is) a more mature statement of the ITOE. It does present some viable alternatives to some scientific problems—e.g., that since random and chance mutations cannot by themselves account for the emergence of complexity that we have observed within the time constraints of our cosmos, there must be other factors at work, with the result that an organism integrated with its milieu is "designed for evolution" (p. 90). However, Laszlo's ITOE probably goes too far too fast for most scientists—e.g., that it leads to what a previous generation of speculative cosmologists has called the "oscillating" or cyclic universe. But Laszlo goes further and says that our universe is part of a larger "metaverse," with the many (even infinite number of) "universes" successively emerging. With bold optimism, he suggests that each world is more complex than the previous version precisely because of the "in-formation" bequeathed to the new one through its process of coming into being via the quantum vacuum (or plenum).

Last but not least, as befitting an ITOE, Laszlo proffers answers to the "big questions" of whence (we come from), what (we are), and whither (we are headed), and in doing so not only steps beyond science into metaphysics, but even beyond classical metaphysics and traditional religion into what can only be called a scientifically repacked mythology. While he makes religious arguments—he prefers to present a poem of the Akashic vision—in the end, his proposals will probably be seen by Christians (and Christians who are scientists) to be too easily compatible with some versions of contemporary Hindu or Buddhist cosmologies (e.g., like that of the current Dalai Lama).

To be fair, this book is said to be a more accessible version of previous academic works such as *The Interconnected Universe: Conceptual Foundations of Transdisciplinary Unified Theory* (World Scientific, 1995); *The Creative Cosmos: A Unified Science of Matter, Life and Mind* (Floris, 1996); and, especially, *The Connectivity Hypothesis: Foundations of an Integral Science of Quantum, Cosmos, Life, and Consciousness* (SUNY Press, 2003): readers may have to consult the science of those volumes in order to draw final conclusions about Laszlo's hypothesis. But while there is no denying Laszlo's overall contributions, it may turn out that his more recent proposals are neither serious science nor viable theology. Only time will tell if Ervin Laszlo is a prophet or an unsuccessful reformer of an ancient Eastern cosmology.

Reviewed by Amos Yong, Professor of Theology, Regent University School of Divinity, Virginia Beach, VA 23464.

THE RE-EMERGENCE OF EMERGENCE: The Emergentist Hypothesis from Science to Religion by Philip Clayton and Paul Davies, eds. Oxford: Oxford University Press, 2006. 330 pages, index. Hardcover; $99.00. ISBN: 0199287147.

C. S. Lewis, in his 1943 novel *Perelandra*, ably demonstrated the reductionism, pretended autonomy, and poverty of

naturalistic emergence, which the villain Weston propounds:

> I could admit no break, no discontinuity, in the unfolding of the cosmic process. I became a convinced believer in emergent evolution. All is one. The stuff of mind, the unconsciously purposive dynamism, is present from the very beginning … The majestic spectacle of this blind, inarticulate purposiveness thrusting its way upward and ever upward in an endless unity of differentiated achievements towards an ever-increasing complexity of organisation, towards spontaneity and spirituality … spirit—mind—freedom—spontaneity … That is the goal towards which the whole cosmic process is moving … *Pure* spirit: the final vortex of self-thinking, self-originating activity … (Pp. 90–2)

"Emergence" has again become popular in some sciences and in the science-and-religion field, while its meaning and applicability remain enigmatic. This collection of essays by thirteen scholars does not provide definitive answers, but serves well as an advanced primer. The volume is edited by Philip Clayton, philosophy and religion professor at Claremont and author of several science-and-religion monographs, and Paul Davies, well-known physicist and popular author. While not giving much guidance for the required Christian response to the developing claims of emergence, reading this book helps us see the issues.

The ancients observed that the whole is more than the sum of its parts. Much of emergence theory relates to whether and how the brain "gives rise to" the mind. This issue is placed into a wider consideration of the general relations between complex systems and their lower-level constituents, via topics including the connection between classical and quantum physics, bonobo ape behavior and environment, and life chemistry. Clayton's excellent summary/conclusion suggests a system being emergent means "it is explanatorily, causally, and hence ontologically irreducible to the systems out of which it has evolved" (p. 310); however, "constituted" (instead of "evolved") would better reflect the observation made most clearly in the essay by George Ellis—among seven incisive theses—that emergence has both diachronic (developmental over the time frame of an individual, or of a species) *and* synchronic (in terms of present functioning) senses.

After a preface by Davies, the book is organized—between Clayton's introductory conceptual foundations and his summary/conclusion—into four sections. Physicists Davies, Erich Joos, and Ellis discuss the physical relevance of emergence; Anthropologist Terrence Deacon, Biologist Lynn Rothschild, and Social Psychologist Barbara Smuts consider biology; Philosophers Jaegwon Kim, Michael Silberstein, Nancey Murphy (also a theologian), and David Chalmers discuss consciousness; Scientist/Theologian Arthur Peacocke and Theologian Niels Gregersen ponder religion. Several authors cite each other, and most first overview emergence generally, showing the variety of current positions. Each contribution has its own list of references, but the principal sources could have been collected.

From a Christian perspective, the book has a number of problems. When writing "Emergentists take the position that brains … really can be conscious … while no individual neuron is" (p. x), Davies should have noted the person, not the brain, as being conscious. Also, it cannot be that "minds may 'contemplate' and 'enjoy'" (Clayton, p. 22); rather, persons do, as seen in the integral nature of personhood found in biblical anthropology. Similarly, Ellis writes "non-physical quantities such as information and goals can have physical effect in the world of particles and forces and hence must be recognized as having a real existence" (p. 104), while the person (or group) possessing the goal has the effect. And since goals actually do exist, having effects on particles cannot be a criterion for reality. I also would point out that information and goals are not "non-physical," since (following Reformed Christian Philosopher Herman Dooyeweerd) everything (including goals) within created reality has a physical aspect which coheres with the other aspects (lingual, ethical, social, etc.). However, Silberstein's "enactive (embodied plus embedded) paradigm of consciousness and cognition" (p. 208) and Peacock's "*joint* operation" (p. 269) across levels, make significant progress in rectifying the reductionism found in top-down causation and in the individualism intrinsic to several modern theories of mind as well as the compositional materialism found in "non-reductive physicalism."

Finally, Alexander's notion that the "universe may become … divine" (Clayton, p. 25) is not challenged, short shrift is given to any notion of intelligent design, and much of the book assumes a thoroughly naturalistic perspective.

Reviewed by Arnold E. Sikkema, Associate Professor of Physics, Trinity Western University, Langley, BC V2Y 1Y1.

ALL THAT IS: A Naturalistic Faith for the Twenty-First Century by Arthur Peacocke, edited by Philip Clayton. Minneapolis, MN: Fortress Press, 2007. 219 + xvi pages. Paperback; $22.00. ISBN: 9780800662271.

This is a somewhat unconventional *Festschrift* for Arthur Peacocke. A book in that genre usually contains essays by those in the honoree's field that deal with ways in which his or her work has been important. Here the essayists do not just celebrate the writings of this biochemist and theologian but respond to the final statement of his views on religion and science in an essay that forms the first part of the book.

And it is a final statement. A *Festschrift* is often assembled for the retirement or a significant birthday of the person whose work is celebrated. This one is composed in view of his approaching death from cancer. The concluding *Nunc Dimittis* by the dying scientist and priest of the Church of England is a moving reminder of this context.

Peacocke's work, which won him a Templeton Prize, is an important part of the modern science-theology dialogue, but the book's subtitle indicates that it seeks more than a conversation of theology with science. The search for a "naturalistic faith" means that theology is to be formulated in accord with a philosophical view, "naturalism," which may be suggested by, but is not identical with, "science." Just what that philosophical view is or should be is a major issue that is discussed by Peacocke and some of the responders.

Peacocke presents a distinctively Christian view but begins with a more general theistic one. His understanding of God and the world is described by the acronym ENP—emergentist, naturalistic, and panentheistic. The idea of emergence is relatively straightforward: More complex entities in the world develop from simpler ones without the need to invoke entities or forces beyond the world. Naturalism and panentheism are more controversial terms.

Panentheism is, Peacocke says, an "admittedly inelegant term for the belief that the Being of God includes and penetrates the whole universe, so that every part of it exists in God and (as against pantheism) that God's Being is more than, and is not exhausted by, the universe" (p. 22). He quotes Augustine's image of creation as a finite sponge immersed in and pervaded by an infinite ocean to illustrate this. There is divine transcendence, for God is "Ultimate Reality and Creator" (p. 23), but divine immanence must be given special emphasis.

It is clear then that "naturalism" in this context will not mean that there is nothing beyond the natural world. Peacocke's "theistic naturalism" holds that what happens in the world can be explained in terms of natural forces *and* that God works through those forces. It is thus a strong form of methodological naturalism. Not only is scientific investigation limited to natural processes, but we need not invoke other processes or forces to explain what takes place.

Peacocke argued that we should start with First Article considerations before Christology. This is a fairly common idea in religion-science discussions but it should not go without challenge. Justifying it with the claim that "one would expect the created world to reflect in its very nature the purposes of God" (p. 6) leads all too easily to the idea that it is nature, not Jesus Christ, which is the fullest revelation of God. And when the move to Christology is made in chapter 6, we can ask whether the divinity of Christ is given adequate expression.

It is not even clear that this approach presents as persuasively as possible the type of view of the God-world relationship that Peacocke wants. Strong arguments for elements of a naturalistic view, such as divine kenosis, have their basis in Christology. For this and other reasons, it is better to begin with the belief that the character and purposes of God are revealed in Christ, and then to move to creation.

Peacocke's emphasis on the sacramental dimension of Christianity is welcome. That, as well as his use of other elements of the church's liturgy, remind us of the old principle, *lex orandi lex credendi*: theology must be coherent with worship. This rule is too often neglected in religion-science discussions. But the treatment of sacraments needs to be completed by giving adequate attention to their salvific dimension. Chapter 8 is devoted to the Eucharist but we miss here any reference to the words "for the forgiveness of sins." Concepts of sin and atonement are not dealt with explicitly, and most of the responders who mention them at all do so rather negatively.

The initial essay is followed by responses from ten workers in the field, and then by Peacocke's reflections on them. The responses are both appreciative and critical, and call both for more radical departure from the Christian tradition and for closer adherence to it. Willem B. Drees asks, for example, why a naturalistic account should give traditions about Jesus of Nazareth a privileged place. On the other hand, Keith Ward's more conservative critique is not that Peacocke's basic ideas are wrong but that they can be understood in ways not as far removed from traditional Christianity as they may at first appear.

Not surprisingly, several of the responders discuss aspects of divine action in Peacocke's program. In particular, the question of miracles seems to require more adequate treatment than he has given. Christopher C. Knight emphasizes insights of the Eastern Orthodox tradition and is able to insist upon an understanding of the God-world relationship which is naturalistic and at the same time is "open to the possibility that there do occur phenomena of the kind usually deemed miraculous" (p. 91).

Peacocke's 1971 *Science and the Christian Experiment* was one of the books which initiated the modern science-theology dialogue and his *Theology for a Scientific Age*, first published in 1990, is an important contribution to it. His work is responsible in no small part for establishing "religion and science" as a recognized field of study. Philip Clayton, who edited this book and wrote one of the responses, as well as the other writers who participated in the project, are to be thanked for helping to produce a fitting conclusion to the life work of a dedicated Christian scholar.

Reviewed by George L. Murphy, St. Paul's Episcopal Church, 1361 W. Market St., Akron, OH 44313.

NOT IN HIS IMAGE: Gnostic Vision, Sacred Ecology, and the Future of Belief by John Lamb Lash. White River Junction, VT: Chelsea Green Publishing, 2006. xix + 441 pages, index. Paperback; $21.95. ISBN: 193149892X.

The author (born 1945), who lives in Europe, has written a number of books, including *The Hero—Manhood and Power*. His biography does not mention his education or professional qualifications. He is principal author of www.metahistory.org, a project funded by the Marion Institute, Marion, Massachusetts.

This book's twenty-six chapters are grouped into four parts: how Gnosticism was suppressed, what Gnosticism is, the bad effects of its suppression, and the benefits its revival could bring. A picture ornaments the first page of each part. The book continues with an Afterword in which another writer, Derrick Jensen, lavishes praise on what Lash has accomplished, particularly in showing the evil nature of Christianity. Lash then provides 324 notes referred to in the text; next a glossary of unfamiliar terms and familiar ones used with modified, mystical meanings; and finally suggestions for further readings. Although the index has over six hundred entries, several times it did not lead me to a topic I wanted to find again.

Lash opens dramatically with the murder in AD 415 by a mob, urged on by fanatical Christian Peter the Reader, of kind and elegant Hypatia, a wise teacher of the knowledge cultivated by the Gnostics and the adepts of the Mysteries. This deed is but one of many wrongs perpetrated by humans deceived by sinister Christianity, which with Judaism and Islam, constitutes "*salvationism*: the totalitarian belief system that asserts divine intercession in human

history, and imbues suffering with redemptive value … assumes superhuman rescue of humanity from its problems and off-planet, remote-control authority on morals, and divine retribution." Those harmed and betrayed by this patriarchal system often succumb to the "insidious tendency" to become "emotionally attached and morally identified with those who harm and betray them," so that some victims become perpetrators in their own right. This *victim-perpetrator bond* is the "primary cause of the European genocide of the Americas." "Human nature is essentially good … we need no exhortation or off-planet moral commandments to make us take care of each other and the earth."

Far from being a movement arising within Christianity, authentic Gnosticism was diametrically opposed to it, and early Christians ruthlessly destroyed Gnostic writings. Using the fragmentary materials that have survived, Lash has imaginatively reconstructed the myth of Sophia, originally a divinity with the Godhead at the galactic center, who "absorbs herself in *dreaming*, the cosmic process of emanation," and plunges outward, then "morphs into terrestrial form, becoming a planet herself, but an organic one, sentient and aware: the earth." Additional events in this myth account for the origin of evil and the emergence of humanity. Closely related is "*Gaia theory* … loosely, the understanding that the earth is a living, sentient superorganism …" No brief summary is possible of all the complex ideas Lash presents, into which he weaves concepts from science in bizarre ways: "variable 20–22-base systems such as the Celtic tree alphabet may be … significant in indicating that the ancients had direct knowledge of the structure of life down to the molecular level"; "the organs and generic form of the human body are built in a creative programmatic manner by the organizing power of the sun."

This lengthy book was tedious to read. I noticed several errors or misstatements which lessen its overall credibility. The book is an indication that the spiritual side of our lives are important, and that Christians need to live so as to make our Christian faith attractive. Both Lash and Jensen testify to being raised in Christian homes and becoming alienated. Readers may be sensitized to real problems. One is mistreatment of aboriginal peoples by churches, currently an issue in Canada with regard to residential schools. Another is the environmental crisis; while Christians seek a remedy in the context of faith, Lash asserts that Christianity is the problem: "Every reversion to redeemer theology and the ethics of Jesus undermines the quest for sacred ecology." Nevertheless, because twenty-first century Christianity is threatened much more by secular humanism than by the arcane mythology Lash offers, I believe ASA members will have little reason to read this book.

Reviewed by Charles E. Chaffey, Adjunct Professor of Natural Science, Tyndale University College, Toronto, ON, Canada M2M 4B3.

Religion & Biblical Studies

IN THE NAME OF HEAVEN: 3000 Years of Religious Persecution by Mary Jane Engh. Amherst, NY: Prometheus Books, 2006. 235 pages, index. Hardcover, $25.00. ISBN: 1591024544.

Many opponents of religion claim that violence and oppression are the characteristics of this distinctive human activity, not the love and peace that we so often assume. Novelist and poet Mary Jane Engh makes a fair case that they are correct, based on a survey of twenty-two cases of religious persecution across the millennia and around the world. It is impossible to browse her vignettes and come away unimpressed by the inventiveness, persistence, and relative pettiness of persecution in all its myriad forms. However, the subject is still waiting for a more definitive treatment than this ultimately disappointing cook's tour through too much diversity squeezed into too few boxes, valuable primarily for its pointers to quality treatments in each chapter's suggested readings.

Engh acknowledges in her introduction that the topic of religious persecution is dauntingly large: "A long view that covers three thousand years and six continents can only be superficial and incomplete, but it is the best way to get the subject into perspective." For unknown reasons, that long view has been compressed into chapters that are ten to twelve pages long, resulting in a slim volume of just over two hundred pages. Each chapter begins with a brief—sometimes no more than a paragraph—tableau that sets the persecution in a particular time and place. And as long as Engh is discussing instances of persecution that are relatively contained in time and space, such as the centralization of Yahweh-worship under King Josiah of Judah, the crackdown on the Bacchanalia in second-century BC Rome, or the monotheistic reforms of Akhenaten in Egypt, the strategy works relatively well. The reader is drawn into the situation by a quick sketch of characters and plot, much like the opening of a short story. The historical information that follows in the rest of the chapter sets the sad situation into context and leaves varied impressions of mania, paranoia, political opportunism, fanaticism, and wasted lives and energies.

After only a few chapters, however, Engh finds herself overwhelmed by information. No longer is she discussing periods of decades, but centuries. How can the bewilderingly rapid changes of fortune for Christians in the second through fourth centuries AD be conveyed in a few pages? And is the task likely to be easier when subsequent chapters try to cover five centuries of the whirlwind of Byzantine peoples, or 1300 years of missions and resistance in China and Japan considered together, in just eight pages? The chapters become crowded litanies of kings, emperors, sects, and martyrs that arise and are dismissed in the space of a sentence or two. Complex shifts in power, origins of doctrines and movements, and frictions between ethnic, language, and political groups are necessarily simplified until they are reduced to names and slogans. Such a treatment does not give us a long view, nor does it offer perspective. Instead, the details of history that might provide some information about why persecution recurs so predictably and how it overwhelms the moral teachings of the religions involved are lost. The only message that survives is that persecution is constant and inevitable. Yet Engh's breezy, drive-by approach suggests that she views her mission as cautionary and consciousness-raising. Such a purpose requires a much heftier volume, and perhaps a comparative approach.

Despite its misguided format, however, selected chapters would serve well to start undergraduate or lay

research into specific historical periods. Engh has excellent taste in her sources, and the paragraph or two of further readings discussed at the end of each chapter are worth their weight in gold. Indeed, the relative poverty of detail, description, and analysis in most of the chapters will whet readers' interest in accessible scholarly treatments of the kind she uniformly recommends. *In the Name of Heaven*, for all its promise as a popular introduction to a diverse and fascinating history, stands instead as a failed opportunity caused by unfortunate decisions about length and scope.

Reviewed by Donna Bowman, Associate Professor of Religious Studies, Honors College, University of Central Arkansas, Conway, AR 72035.

CAN GOD INTERVENE? How Religion Explains Natural Disasters by Gary Stern. Westport, CT: Praeger, 2007. x + 229 pages. Paperback; $39.95. ISBN: 0275989585.

This first book of an award-winning journalist pursues the explicitly theological question announced in the title. Motivated by the tsunami of December 2004 and the experience of hurricane Katrina the following year, the bulk of the volume—nine of the eleven chapters—is devoted to representing the spectrum of theological and religious views regarding what philosophers call "natural evil" in Judaism, Roman Catholicism, mainline Protestantism, Evangelicalism, African-American Christianity, Islam, Hinduism, Buddhism, and what Stern calls "The Nonbeliever's Perspective," which includes secular humanists, agnostics, and atheists. (The justification provided for having four chapters on Christian traditions is that the book is intended for the North American audience.) In each of these chapters, Stern presents in narrative form his findings derived from interviews with at least three representatives—scholars, intellectuals, and other leaders—of the tradition under consideration (forty-three in all, for whom a bibliography of their works would have been helpful). He adequately summarizes their responses, often transcribing, sometimes in fairly lengthy sections, their own words.

Religion scholars will find little new in this book in terms of answers to either the theodicy question (how can natural evil be possible given an omnibenevolent and omnipotent God) or the question of how those in various religious (and secular) traditions respond practically and existentially to natural disasters. But then again, Stern is not writing to the intellectual elite or to theologians. Yet educated laypeople, including scientists with religious interests, will find this volume to be an accessible, stimulating, informative, and even absorbing read. Stern has done his homework to ensure that the diversity of views within each tradition is included. To take just two examples with which readers of this journal may most readily identify, the chapter on Mainline Protestantism includes positions emphasizing relief work over speculative theodicies, highlighting God's entering into human suffering through the cross of Christ, and rejecting notions of an interventionist God, among other views, while the chapter on evangelical Christianity describes accounts referring to traditional theological explanations regarding the Fall, using the experience of natural evil as a springboard to introduce the gospel, and revising traditional notions of divine power to take into account the interplay of chance and natural law in the outworkings of the world. Throughout, Stern is fair and respectful, honest about his own questions as well as with regard to the responses of his interviewees, and helpful in making comparisons and contrasts across traditions.

The question "Can God Intervene?" may be of interest to those working at the interface of science and Christian faith primarily in light of Stern's introducing specifically scientific perspectives on natural disasters in the first chapter. Modern science is increasingly capable of explaining the natural causes of tsunamis, hurricanes, and other such phenomena. How have such accounts impacted, if at all, theological and religious explanations? The most obvious response, one reflected in different ways across the book, is that rather than referring to such events as "acts of God" directed to people (for whatever reason, whether as punishment for sin or as instruments for testing faithfulness, etc.), human beings should instead take more responsibility, given our scientific capabilities and knowledge, for where we live (i.e., not below sea level in hurricane areas), how we live (i.e., in building better levees or constructing better warning systems), and how we might respond to nature's behaviors. In the case of one interviewee, the Reverend George Coyne (astronomer and director of the Vatican Observatory), science is seen as confirming and deepening rather than detracting from religious piety or theological explanations, while in the case of another, Ibrahim B. Syed (a Muslim professor of medicine), natural disasters are "systems of entropy" designed by God to govern the world.

Of course, Stern is neither capable of formulating nor does he set out to present a developed account of how scientific and theological approaches may converge to provide complementary explanations for natural disasters. Yet those familiar with the "Divine Action Project" will observe that the positions across the spectrum in that discussion correlate in many ways to the range of viewpoints appearing within theistic traditions in this volume. In this sense, *Can God Intervene?* narrows the gap sometimes thought to exist between academic theology and beliefs in the public sphere.

Reviewed by Amos Yong, Professor of Theology, Regent University School of Divinity, Virginia Beach, VA 23464.

RETHINKING CHRIST AND CULTURE: A Post-Christendom Perspective by Craig A. Carter. Grand Rapids, MI: Brazos Press, 2006. 220 pages. Paperback; $19.99. ISBN: 1587431599.

Craig Carter's *Rethinking Christ and Culture* is important, prophetic, and frustrating. Carter's central thesis is that H. Richard Niebuhr's canonical *Christ and Culture* presents a warped typology of Christian cultural engagement. The problem with Niebuhr's typology, Carter argues, is that each of Niebuhr's types arises from a "Christendom" perspective. Niebuhr's typology assumes that Church and state are co-equal in the process of cultural construction—whether as sparring partners, as in the "Christ Against Culture" type, or as dialogue partners, as in the "Christ Transforming Culture" type. The "Christendom" mentality, Carter claims, dates back to the Western Church's

alliance with political power forged at the time of Constantine.

Carter suggests that the "Christendom" perspective is misguided, even idolatrous, because it causes the church to participate in violence. Drawing on Stanley Hauerwas and John Howard Yoder, Carter proclaims that instead the church should "be the Church." True to these Anabaptist and pacifist roots, Carter argues that violence is the antithesis of Christian faith. The church should reject alliances with secular powers, maintain the separation of church and state, refuse to fight in wars, renounce natural theology and civil religion, and challenge governmental and other abuses of power through nonviolent protest and exemplary moral behavior. Carter proposes a new typology in response to Niebuhr's, which includes an axis of violence versus nonviolence.

Evangelical and other Christian readers who are weary of the Religious Right will appreciate much that Carter has to say. If more evangelical thinkers and leaders were willing to acknowledge and repent of our compromises with political power, we might indeed move closer toward constituting the sort of community Jesus desires us to become—one that transforms the world through the cruciform power of love, patience, gentleness, and self-control rather than through the worldly weapons of political violence.

But for all its prophetic punch, Carter's analysis is also deeply frustrating. His dogged adherence to a "fall" thesis of Christian history—the notion that nothing good came of the Catholic faith that developed after the fall of the Roman Empire and before the Reformation—often is gratingly reductionistic. History just is not that simple.

Moreover, Carter fails to engage in any meaningful way with the eschatology implied by his new typology. Indeed, it is unclear whether Carter essentially proposes a mostly future Kingdom, in the tradition of old-school dispensationalism, or whether he accepts that the Kingdom breaks into the world in transformative ways in the present age. Carter seems to hold both views at the same time, assigning to the present church the role of "witness" rather than an active role in Kingdom construction. Eschatology, however, directly informs any view of church and state. Eschatology cannot be treated as an afterthought in church-state discussions. A more robust understanding of the Kingdom might lead to a broader transformative role for the church in the present age than Carter envisions.

Notwithstanding its weaknesses, however, this book is a must-read for anyone concerned about how the church should engage the non-Christian culture.

Reviewed by David W. Opderbeck, 20 Smith Ln., Midland Park, NJ 07432.

MISQUOTING TRUTH: A Guide to the Fallacies of Bart Ehrman's *Misquoting Jesus* by Timothy Paul Jones. Downers Grove, IL: IVP Books, 2007. 176 pages, indexes. Paperback; $13.00. ISBN: 9780830834471.

Jones is senior pastor of First Baptist Church of Rolling Hills, Tulsa, Oklahoma, and an Ed.D. graduate of the Southern Baptist Theological Seminary. Co-author of *The Da Vinci Codebreaker* and a "fact checker" for the claims of Dan Brown, Jones continues his foray into apologetics with this book, a rebuttal to the claims of biblical scholar Bart Ehrman. Ehrman famously maintains in *Misquoting Jesus* that the New Testament Gospels do not represent eyewitness testimony. Moreover, he also asserts that the extant manuscripts are too filled with textual errors and scribal additions to be of any use in learning about Jesus. While the title may be somewhat polemical, *Misquoting Truth* is an even-handed and careful rebuttal to these points, touching also on arguments raised in *Lost Christianities* and in Ehrman's more scholarly works.

Jones begins his answer to Bart Ehrman by considering the man himself. A graduate of Moody Bible Institute, Ehrman had a crisis of faith at Princeton when he found, while learning about textual criticism, that he could no longer hold to "inerrancy" as he understood it; he gradually lost all Christian faith thereafter. As a contrast, Jones graciously tells the story of his own faith crisis at a similar point in his education, and he expounds on both the classes that challenged his faith and the authors (C. S. Lewis, F. F. Bruce, etc.) that brought him to a fuller understanding of it. While acknowledging Ehrman's stature as a biblical scholar, and praising him for his skill at popularizing scholarly conclusions in such prosaic fields as textual criticism and the history of Christianity, Jones finds fault with the way Ehrman "presents these conclusions and, in some cases, what he adds to them" (p. 12). In his opinion, Ehrman's books elevate personal, deep-seated doubt about the Bible to a nonexistent "consensus" in the minds of readers.

Jones then moves to expertly unpack Ehrman's central claims. He grants that, as Ehrman repeatedly points out, the gospel originals no longer exist; nevertheless, the text is recoverable. He makes this point by taking the reader through what is known about early Christian copyists. Summarizing the distribution of variants in the gospels, he whittles down the 400,000 known differences to the handful that have an effect on the text's meaning. He pays special attention to the three passages Ehrman feels are incorrectly rendered in major Bible translations—and by extension, allegedly threaten the reliability of the entire New Testament. Jones makes a detailed analysis and does not give simple answers (in one passage, he agrees with Ehrman's reading), yet I must concur that Ehrman has severely overstated his case.

In the second half of the book, Jones engagingly surveys the oral history of Christianity, the authorship and formation of the canon, and the "lost gospels" of Thomas, Peter, etc. Against Ehrman, he argues for the traditional authorship of the gospels, supplying ample background on first-century life and a great deal of material that I had not seen before. On this point, Jones may not have a slam-dunk case, but his argument is certainly compelling.

Overall, the author makes an excellent popular response to a fellow scholar who has gone beyond the evidence in his popularizing. Readers of *Misquoting Truth* will find it meticulously cross-referenced, with seventeen pages of notes; a glossary of foreign words; subject, name, and scripture indexes; and an appendix. A study guide for the book is available on the publisher's website.

Reviewed by Christopher J. Barden, Dalhousie University, Halifax, NS, Canada, B3H 4J3.

TAKING BACK THE GOOD BOOK: How America Forgot the Bible and Why It Matters to You by Woodrow Kroll. Wheaton, IL: Crossway Books, 2007. 218 pages, appendices. Hardcover; $19.99. ISBN: 1581348266.

Woodrow Kroll is president and Bible teacher for Back to the Bible and the author of more than fifty books. This new book was prompted by his concern about the decline in biblical literacy among Americans, including evangelicals. He says, "Today the great battle isn't over Bible infallibility; it's over biblical illiteracy." The book documents this decline, suggests some of the reasons for it, and proposes ways to attempt to correct the problem. There are twenty-five short chapters followed by the author's summary of his conclusion and then two appendices with recommended resources.

In order to establish the degree of biblical literacy in the early days of the US, Kroll quotes from statements of many early American leaders and from literature such as the primers used to teach reading in the schools of that era. More recent evidence for the decline in biblical literacy is based mostly on the results of polls by Gallup and the Barna group. These poll results are encountered repeatedly throughout the book, and some of them document parallel trends in other areas such as a biblical worldview. The decline is said to have begun in the 1960s and been greatest in the late 60s and early 70s.

Kroll has criticisms of certain trends among American evangelicals that may be relevant to the downward trend that he sees in biblical literacy. For example, he specifically mentions pre-evangelism that does not lead to evangelism. However, he devotes much more space to the fact that Christian radio is devoting more and more time to music and less and less time to Bible teaching. He characterizes this as a prioritizing of entertainment and sees this preference reflected in what Christian publishers choose to publish. Economic considerations cause broadcasters and publishers to try to satisfy the desires of their listeners and readers.

The author devotes a significant amount of space to listing the benefits of Bible reading, responding to excuses for not reading the Scriptures, and pointing out the negative consequences of biblical illiteracy.

The last third of the book is devoted to ideas for reversing the trend toward biblical illiteracy. The author recommends methods for individual Bible study. He also encourages family devotions and more Bible-centered preaching by pastors. He sees evaluation of church members' spiritual maturity as being valuable and gives an example of a church with an assessment method that he endorses. There is also a list of organizations with exemplary Bible study ministries, and one chapter devoted to describing the work of the Bible Literacy Center, which was established by Back to the Bible to address the problem that Kroll details in his book.

Anyone who is concerned about the lack of biblical literacy in America today, particularly among evangelicals, should be interested in Kroll's book. It is easy to read although one may want to reread some poll results from time to time to make sure which demographic group is involved. It should not be assumed that Kroll has presented every reason for the decline in biblical literacy or every practical suggestion for reversing it. The reader may have additional ideas about causes for the decline which could have been used in the book to give the subject a more complete treatment.

Reviewed by Gordon Brown, 1220 NW State St. #28, Pullman, WA 99163.

RELIGION & SCIENCE

THE NEW FRONTIER OF RELIGION AND SCIENCE: Religious Experience, Neuroscience and the Transcendent by John Hick. New York: Palgrave Macmillan, 2006. 228 pages. Paperback; $31.95. ISBN: 0230507719.

Hick holds doctorates from both Oxford and Edinburgh Universities. He is an emeritus professor at Birmingham University in the UK and Claremont Graduate University in California. Hick has published thirteen books that have been translated into over seventeen languages.

In this book, we get slight glimpses of Hick's own religious journey that help somewhat in our understanding of what he is saying and why he is saying it. Hick was a Christian until he began studying philosophy in college. He gradually moved away from that faith position and is now much more oriented toward Eastern religions (but not exclusively).

Hick's goal (as stated in the preface) is to demonstrate that "… the living heart of religion is to be found in religious experience, rather than in the religious institutions, with their creeds and hierarchical priesthoods." He considers religious institutions as being somewhat dangerous, even though he admits they also do a lot of good.

The book is developed with four main themes. Hick first explores religion, both as institutions and in terms of basic spirituality. He then focuses on the primary importance of religious experience, no matter which religion is being considered. Thirdly he investigates the supposed links between religion and the neurosciences. Finally, he considers issues regarding epistemology and religious experience.

The book first examines the role of religious institutions and the issue of spirituality. Institutions are there to preserve a specific belief set, while (to Hick) the important common theme of all religions is the experience of the transcendent. It may involve some personal sense of the presence of God (in whatever form the believer prefers) or just the awareness of the beauty of the day.

For Hick, the primary focus is on experience. The revelation forthcoming in whatever sacred book one uses can be and is confirmed at heart by experience. The miraculous has been explained away to a great extent. What we have left is the great moral teaching of a respected religious leader. To Hick, that experience of religious practice (prayer, meditation, worship) is of first importance, not the adherence to specific doctrines.

For this reviewer, the section on religion and neuroscience was particularly disappointing. Hick describes a few well-known experiments, such as Newburgh and d'Aquili's brain-activity studies on Catholic nuns and Buddhist monks. He also repeats the arguments in favor

of interpreting religious visions (such as Paul's encounter with Christ on the road to Damascus) as being due to epileptic seizures. There is nothing new in this theme, the research has been better evaluated and critiqued by others, and no new insights are contributed. One would expect more of a book with "neuroscience" prominent in the subtitle.

Hick does put forth a challenge to the mind/brain monism that is so prevalent today. He raises the question of transcendence and feels that our current concepts of mind are very much in error. It would have been interesting to see him develop this idea further.

In the final section, Hick makes his proposal for a "universal religion." He strongly rejects the idea that any specific religion should have primacy and be considered the "true" religion. All religions to him are culturally formed responses to some sort of transcendent being (the characteristics of which are very vague). He also advocates a type of multiple reincarnations until we finally get to wherever we should be.

All in all, I was frustrated and disappointed. Nothing new, very little clear—a vague, nebulous acknowledgment of some sort of transcendence, but the reader is left with no specific knowledge of that being.

Reviewed by Donald F. Calbreath, Emeritus Associate Professor of Chemistry, Whitworth University, Spokane, WA 99251.

RENEWAL IN THE WILDERNESS by John Lionberger. Woodstock, VT: SkyLight Paths Publishing, 2007. 158 pages, references, suggested readings. Paperback; $16.99. ISBN: 9781594732195.

John Lionberger, a former atheist/agnostic, is founder of Renewal in the Wilderness, a wilderness ministry that brings people of all faiths and nonfaiths into nature to experience God. He is also the head chaplain of a retirement community in Evanston, Illinois. This book is an attempt to put the processes and experiences of his wilderness seminars into print.

The book consists of an introduction and eight chapters, essentially describing various aspects of his wilderness seminars. The chapters describe, based on the sacred writings and history of various faiths (Christianity, Judaism, Islam, Buddhism, and Hinduism), how people have experienced God in nature. Testimonies from attendees of the seminars are included to illustrate the points of each aspect of the seminar featured in the chapters. Each chapter ends with a series of "reflection" questions for individual or group study.

The chapter titles, with descriptions from the table of contents, are listed below:

1. God in a Hummingbird (the wilderness is a place of transformation)
2. It is in our DNA (the wilderness is an ancient, universal experience)
3. Presence in the Present (the wilderness brings us into the present moment, into God's presence)
4. Scraping the Hull (the wilderness returns us to our essence)
5. God in a Box (the wilderness takes us beyond our expectations into God's surprises)
6. God on the Edge (the wilderness takes us beyond our comfort zone, tests us, and teaches us)
7. Healing Waters (the wilderness leads us to solitude and silence so we can know ourselves and God)
8. The Rapture of Being Alive (the wilderness opens us up to the transcendent).

Lionberger has a gift at describing the natural environments he has experienced. His description of his own "ambush" by God while on an Outward Bound trip is marvelous. In reading it, I almost felt myself experiencing the cold of a Minnesota winter while cross-country skiing.

The ecumenical (in the broadest sense of the word) approach to his subject matter is both a strength and a weakness. It is a strength because it puts the concept of seeing God in the wilderness (a concept well known to readers of *PSCF*) into a broader context of other faiths. It is a weakness because it fails to go any further than the experience. The book was somewhat redundant from chapter to chapter, with many chapters focusing on the same subject matter (how the wilderness helps us to experience God).

As C. S. Lewis expressed in *Mere Christianity* (p. 136), people can and do experience God in nature. The vague religion expressed by feeling God in nature, and only going that far, is "all thrills and no work" and does not get one anywhere. To go further, one must put one's experience of God in nature into a wider theological context. Lionberger fails to do this in his book. The God he describes is an amalgam of concepts found in various faiths, many with contradictory views (for instance, how is the God of Christianity compatible with the God, or gods, of Hinduism?). God is so watered down as to be almost meaningless.

As a geoscientist and an outdoor enthusiast, I had high hopes for this book, based solely on the title. However, I discovered that the book is focused only on the experience of God in the wilderness and does not place this in a theological context. This theological naivety is the reason I cannot recommend this book to *PSCF* readers.

Reviewed by Wayne R. Belcher, Hydrologist, 160 North Stephanie St., Henderson, NV 89074.

AN ILLUSION OF HARMONY: Science and Religion in Islam by Taner Edis. Amherst, NY: Prometheus Books, 2007. 251 pages, index. Hardcover; $28.00. ISBN: 9781591024491.

Taner Edis, associate professor of physics at Truman State University, has previously written on issues of science and faith. Since he is Turkish, he is very familiar with Turkish Muslim thought. This book examines the interaction of science and faith in Islam.

The book begins with an introductory chapter discussing general Islamic attitudes toward science. I found the second chapter to be the most interesting, presenting a survey of the history of the interaction between science and Islam. The third chapter discusses (eisegetical) attempts to

find science in the Quran. The fourth chapter discusses specific problems of reconciling evolution with Islam, including Islamic versions of intelligent design and theistic evolution. The fifth chapter discusses the interactions of social sciences and history with the Quran. The sixth chapter discusses liberal tendencies in Islam. The final chapter gives closing thoughts on the future prospects for interaction between science and Islam.

Edis emphasizes that true science is practically nonexistent in Islam. Scientific communities in Islamic lands are weak and disorganized. Even in Islam's medieval golden age, Islamic "science" was not of the modern variety. There was no abstraction of data to form overarching theories, just a loose collection of facts pursued for pragmatic reasons. Islamic attitudes are substantially the same today: technology is accepted for pragmatic reasons, but there is ambivalence toward basic science.

He sees a number of reasons for weak Islamic science, but primarily points to the strength of religious fundamentalism and the strength of community in Islam. (I am not convinced that strong community is a large impediment for scientific development; it does not seem to have killed science in Asian cultures.) He looks longingly to Christian liberalism and to western individualism. He wishes for a more liberal form of Islam but is realistic and realizes that it is highly unlikely that Islam will move in this direction.

Edis writes from a thoroughly secular, philosophically naturalistic perspective. To Edis, a modern scientist must fully embrace philosophical naturalism or he is but a "stamp collector," assembling facts with no cohesive framework in which to place them. He wants to view science very broadly "as the interconnected, multidisciplinary activity of understanding how the world works" and to rule God out of this endeavor.

Hence Edis seems to see religion only as an impediment to science, never as a help to it. He views the development of modern science in a Christian culture as an accident of history with no contribution from a Christian worldview. His dream for Islam seems to be a hands-off attitude toward science, to "let science operate without religious constraints." He wishes to restrict religion to personal beliefs and questions of purpose (though he does note that Christianity helped to shape social movements and democracy). His view is similar to Steven J. Gould's "non-overlapping magesteria."

Edis convincingly shows that the popular Islamic view of harmony between science and Islam is an illusion. His philosophically naturalistic position exaggerates the tension, but there is a fundamental tension nonetheless. He explores and demonstrates historical, sociological, and theological contributions to this tension.

This tension seems to be fundamentally due to the foundations of Islam itself. The Quran is supposedly given by dictation from heaven, so is not open to textual or source criticism and cannot be interpreted to accommodate pre-scientific views of the writer. A cultural-historical hermeneutic is not acceptable in Islam. God's sovereignty is stressed so strongly in Islam that God cannot be truly known or understood by humans; God's actions are not predictable. Hence, there is no Islamic analog to the views of evangelical scientists, where science is viewed as the actions of a consistent God who desires to be known and whose actions are worthy of study. It is virtually impossible for a healthy harmony ever to develop between science and Islam.

Edis' book provides an informative and balanced perspective of historic and modern interactions between science and Islam. It is quite objective and nonpolemical. It should be helpful for anyone who has interactions with Muslims or for anyone interested in the broader history of science and faith. It gave me a renewed appreciation for the fundamental differences between Islamic and Christian worldviews.

Reviewed by Kirk Bertsche, 242 Ferrari Avenue, San Jose, CA 95110.

SCIENCE AND GRACE: God's Reign in the Natural Sciences by Tim Morris and Don Petcher. Wheaton, IL: Crossway Books, 2006. 352 pages. Paperback; $17.99. ISBN: 1581345496.

Tim Morris and Don Petcher, professors at Covenant College, have had a long-term interest in the relationship between science and their Christian commitment. It was this interest that led them to create "Science in Perspective," a course at Covenant College, and it was out of this course that this book developed. Both write from a Reformed perspective and yet this book would appeal to Christians of any persuasion and even to open-minded non-Christians.

The book is split into three sections. The first section looks at "Science and Christian belief in the postmodern context." What is refreshing about this chapter is that the authors take postmodernism seriously and do not write it off as a philosophical aberration that science will eventually disprove.

Chapter 3 looks at five "dissenters," Christians who have rejected the Enlightenment Project of the neutrality and objectivity of reason and therefore of science: Blaise Pascal, Johann Georg Hamann, Charles Hodge, Abraham Kuyper, and Herman Dooyeweerd. All of these dissenters agree that there is a need to reconsider the role of faith in relation to reason. Faith commitments are important in the development of science. If there are two different kinds of science—that of the believer and that of the nonbeliever—then how can we work together? Morris and Petcher answer: common grace.

Section two examines "Jesus Christ, the Lord of creation" and considers God's relation to his creation. Chapter 4 looks at the Trinitarian character of God and his covenant with his creation. The extremes of immanentism or pantheism and transcendence or deism are avoided. The Trinitarian God works in the creation in a covenantal way. This means that the world is not a predictable machine. The next chapter looks at the concept of miracles and God's freedom in the universe. Morris and Petcher rightly regard miracles as being part of God's providence; a miracle is an "outworking of God's purposes." In the final chapter in this section, "The laws of nature and the gospel of grace," they see the laws as a "faithful unfolding of God's covenant promises" that reflect creation's creatureliness and contingency.

The final section, "Investigating his dominion," analyzes our place in the "doing" of science. The authors ask, "What does loving God and neighbor entail in the natural sciences?" They see science as an opportunity for obedience to the great commandment (Mark 12:30–31). It is a refreshing and inspiring perspective. Materialism and reductionism are resisted and they capture the wildness of creation that has been lost in the "Modern domesticated version" of science.

Throughout the final section is a lot of wisdom and wise advice, for example: "the use of scientific evidence in apologetics may inadvertently cede to science the ultimate truth authority" (p. 270) and "our ultimate allegiance as scientists is not to our scientific disciplines as such but to Christ's church" (p. 191).

The penultimate chapter looks at "The kingdom of Christ and the culture of science"; science is seen as "a cultural enterprise that reflects God's favor and yet calls for His judgment at the same time" (p. 306). The final chapter provides a clarion call for Christians to work out their science in the context of their Christian commitments. There are twenty-four pages of notes, a bibliography of 149 works and an eight-page index.

This is one of the best books on science and Christianity I have read. If you only read one book on science and Christianity this year, make it this one. The authors take seriously Kuyper's claim that there is no inch of secular life that Christ does not declare, "It is mine." They look at what this claim might mean for the biological and physical sciences, but as they do so, it has implications for all of the sciences—theology included. This is a book that demands slow, careful, and prayerful study for any Christian involved in academic study.

Reviewed by Steve Bishop, City of Bristol College, Bristol, UK.

MONKEY TRIALS AND GORILLA SERMONS: Evolution and Christianity from Darwin to Intelligent Design by Peter J. Bowler. Cambridge, MA: Harvard University Press, 2007. 256 pages, bibliography and index. Hardcover; $24.95. ISBN: 9780674026155.

Bowler, professor of history of science at Queen's University in Belfast, has distilled years of research and writing into this fine little book. He admirably succeeds in providing a succinct "survey of the history of the engagement of religious faith with scientific evolutionism, showing how a whole range of alternative positions have been explored, establishing a continuous spectrum of opinion." This nonbeliever has produced a respectful account of Christian responses to evolutionism. He summarizes the positive views of nineteenth-century liberals and twentieth-century modernists, and the negative responses of early fundamentalists and latter-day creationists. He holds that a middle way between the extremes of atheistic evolutionism and dogmatic creationism is possible.

The text presents a promenade of thinkers and movements. We survey moments in natural theology from Ray to Chambers, nineteenth-century geology, and early evolutionists from Buffon to Lamarck. The perspective on Darwin's work provides an excellent review of the problems he addressed and the solutions he hit upon.

Bowler sketches the debate over natural selection which occupied the scientific community from the *Origin* to the genetic revolution. The reader learns that evolution was gradually accepted by scientists and most of the educated people in Britain and the United States, but Darwin's materialistic mechanism was less popular than nonmaterialistic notions that incorporated a progressive model of the history of life. The latter allowed liberal Christians such as Charles Kingsley and Henry Ward Beecher to embrace evolution while seeing it as directed within by a purposeful Creator. Such thinkers, for example, combined Lamarck's theory of acquired characteristics with Spencer's and Darwin's ideas about the evolution of morality and incorporated them into the concept of a created and "divinely instituted process" that would lead to a perfected humanity.

The early decades of the twentieth century saw an "eclipse of Darwinism" within the scientific community. Concepts of evolution that eschewed selectionism were to have a significant impact on scientific thinking. Especially important were neo-Lamarckism and the creative evolutionism of Bergson, which offered liberal thinkers hope that evolution could be divested of materialistic implications. These were taken up by modernist Christians such as Americans Henry Drummond, Shailer Matthews, and Harry Emerson Fosdick. In his popular "gorilla sermons" preached in Westminster Abbey, Ernest William Barnes called upon his Anglican co-religionists to reject traditional dogmas and accept a primate ancestry out of which humans have progressively evolved.

Within the scientific community, neo-Darwinian evolutionism emerged with the new science of genetics, and after mid century, the modern synthesis became the reigning theory that, with modifications, persists today. Before this development, both modernist Christianity and social Darwinism came under attack by the emerging fundamentalist movement. Fosdick found himself in intellectual combat with William Jennings Bryan, the Bible's champion at the Scopes "Monkey Trial." The outcome led to the virtual removal of evolution from school science courses, not to be restored until after Sputnik.

Bowler provides brief treatments of the development of the modern synthesis, and two major reactions to it: the atheistic evolutionism of Dawkins and Dennett; and the creationist movement fathered by H. Morris and Gish along with the intelligent design alternative brought forward by Johnson and Behe. In concluding his exposition, he asserts that modern theologians must give up any attempt to integrate theology with outdated evolutionary concepts (e.g., Teilhard's synthesis):

> If religion was hoping to deal with science, it had to face up—at long last—to the challenge of an evolutionary mechanism based on the natural selection of randomly generated variations. (P. 220)

After citing a few notions that might be helpful to them (e.g., S. Kauffman's concept of emergent complexity and S. C. Morris' convergent evolution), he credits scientifically trained theologians such as Peacocke and Polkinghorne with proffering ways of understanding divine action in evolution that offer hope for a rational and meaningful articulation of a new natural theology.

This all-too-brief survey hardly does justice to Bowler's exposition. Written in clear and graceful prose and abounding in valuable interpretations and insights, this book is a feast for any interested and educated reader. I thought myself fairly well informed in the subject matter, but Bowler took me back to school and taught me much. The book would be particularly useful in a college-level course on issues of science and Christian faith.

Reviewed by Robert J. Schneider, Adjunct Associate Professor of Philosophy and Religion, Appalachian State University, Boone, NC 28607.

GOD'S UNIVERSE by Owen Gingerich. Cambridge, MA: The Belknap Press of Harvard University Press, 2006. 121 pages plus notes, acknowledgments, and index. Hardcover; $16.95. ISBN: 9780674023703.

Gingerich began a "love affair with the stars" at age five. The temperature in the house was one hundred degrees at sunset, so the family slept in the backyard on cots. Looking at the darkening sky, Owen asked, "Mommy, what are those?" She replied, "Those are stars; you've seen them before." Owen reportedly responded, "But I never knew they stayed out all night!"

Decades later, as emeritus professor of astronomy and of the history of science at Harvard, he delivered the 2005 William Belden Noble Lectures. This book is a compilation of these lectures. I will discuss its three chapters in order.

Chapter 1: "Is Mediocrity a Good Idea?" The Copernican Principle is often called "the principle of mediocrity." Gingerich explains it as follows:

> We will make scientific progress if we consider that everything we see around us is commonplace in the universe, that we are average beings in a run-of-the-mill planetary system in an average galaxy probably populated by scores of other mediocrities.

He concludes that mediocrity is not a fundamental principle of science, but "a generally unexamined ideology, and not one to which I would readily subscribe." He cites a suggestion by physicist John Wheeler, paraphrasing it as:

> … perhaps the universe is like a large plant whose ultimate purpose is to produce one small exquisite flower. Perhaps we are that one small flower. Quite possibly mediocrity is *not* a good idea!

Chapter 2: "Dare a Scientist Believe in Design?" After giving several examples that seem to imply design, Gingerich states:

> Evolutionists who deny cosmic teleology and who, in placing their faith in a cosmic roulette, argue for the purposelessness of the universe are not articulating scientifically established fact; they are advocating their personal metaphysical stance … There is, I shall argue, no contradiction between holding a staunch belief in supernatural design and working as a creative scientist …
>
> Even in the hands of secular philosophers … the modern mythologies of the heavens, the beginnings and endings implied in the Big Bang, give hints of ultimate realities beyond the universe itself … our cosmology leads logically to the idea of a transcendence situated beyond time and space, giving the lie to the notion that the cosmos is all there is or was or ever will be.

He concludes this chapter:

> So, just as I believe that the Book of Scripture illumines the pathway to God, I also believe that the Book of Nature, in all its astonishing detail—the blade of grass, the missing mass five, or the incredible intricacy of DNA—suggests a God of purpose and a God of design. And I think my belief makes me no less a scientist.

Chapter 3: "Questions without Answers." Inspired by an Alan Lightman essay saying science owes its success to choosing questions that can be answered, Gingerich discusses the "why" questions that scientific analysis cannot answer: Why is there something rather than nothing? Does the universe have a purpose? Why is the universe comprehensible? What does it mean to be human (including qualities such as altruism and conscience)? Gingerich observes:

> It seems to me that within the dappled universe is a theistic space, a perspective for viewing God's universe, a place where God can play an interactive role unnoticed by science, but not excluded by science.

He quotes John Polkinghorne's statement, "… I do not for a moment suppose that my atheistic friends are simply stupid not to see it my way. I do believe, however, that religious belief can explain more than unbelief can."

Gingerich integrates a lifetime of research and reflection into a compact book that combines scholarly wisdom with an eloquent, sometimes poetic, literary style. This book deserves to become a classic.

Reviewed by Dave Fisher, Editor, "Truth in the Test Tube" Mandarin broadcast of Trans World Radio, Aurora, IL 60504.

WHAT ABOUT SCIENCE AND RELIGION? A Study of Faith and Reason (Faith questions) by Paul Stroble. Nashville, TN: Abingdon Press, 2007. 112 pages. Paperback; $9.50. ISBN: 0687641624.

What About Science and Religion? was written by Paul Stroble, an elder of the Illinois Great River Conference of the United Methodist Church. He is a college teacher who earned an Excellence in Teaching award at the University of Akron, a researcher, and an author of eleven published books.

As one would expect from a Christian writer, this book is written for Christians who are uncertain about science. "The book is designed for use in any of three settings: (1) adult Sunday school, (2) weekday adult groups, and (3) weekend retreat settings" (p. 5). Written as a study guide for Christian groups, this book goes through the main points of contention between religion and science in seven simple chapters. The prose is straightforward, with many asides offering questions or biblical readings for further study.

The first two chapters define science and religion and try to explain how the two can work together. "We rely upon God during medical emergencies, but prayer is not the only thing we do; we also consult physicians, trusting

that they are skilled in the best and latest science of healing" (p. 16). Chapters three through five each take a different area of contention between science and religion and look at how they diverged by going through a historical overview of the growth of science and religious reaction. The areas of faith and reason, creation and evolution, and the view of the universe are dealt with in this way.

Stroble discusses truth in the chapter on faith and reason. "Truth can … be multifaceted: the truth of a poem is different than the truth of a scientific study" (p. 38) basically sums up the way he resolves issues. Science helps and supports Christianity, but the Bible is always right. His view of science is mostly as a tool that can be used to help people understand the Bible better.

Medicine, miracles, prayer, and the oft-stated tendency of science to dehumanize are crammed together in the sixth chapter. The final chapter, called "Faith and Science Together," is an overview of all the reasons why science is necessary and has to be integrated into our understanding of religion.

As a study book for Christian teens and adults, this book will probably be helpful as it does not go into detail about scientific terms or expect much more in the way of background knowledge than a basic education provides. The questions and scripture references scattered through the book should help provide jumping-off points for discussion. Many people in the ASA will find that this book's introductory style limits its use to churches where scientific knowledge is minimal, but in its proper setting this book is very good.

Reviewed by Catherine Fleming, English/Classics Major, Duquesne University, Pittsburgh, PA 15282.

THE PANDA'S BLACK BOX: Opening Up the Intelligent Design Controversy by Nathaniel C. Comfort, ed. Baltimore: The Johns Hopkins University Press, 2007. 156 pages. Hardcover; $20.00. ISBN: 9780801885990.

The Panda's Black Box follows on the heels of two historic court rulings against teaching intelligent design (ID) in schools. In a series of six short essays, a group of contributors dissect ID into scientific, social, philosophical, and legal components. Nathaniel Comfort, an assistant professor of the history of medicine, is the editor and writer of the introductory chapter. Additional contributors are Scott Gilbert (a biologist at Swathmore College), Daniel Kelves (a historian of science at Yale University), Edward Larson (a historian at Pepperdine University), Jane Maienschein (the director of the Center for Biology and Society at Arizona State University), and Michael Ruse (a philosopher at Florida State University).

A survey of anti-Darwinianism is laid out in the Introduction, setting the tone for the rest of *The Panda's Black Box*. The title is a strike against "[t]he ID textbook, *Of Pandas and People*" (p. 9) that seeks to be "one of the few books on the ID issue that moves beyond mere name-calling and finger-pointing" (back cover). As with many editorialized volumes, some chapters succeed while others are peppered with pointed remarks that detract from the author's intention of providing a balanced treatment.

The first chapter provides an overview of ID by focusing on social interactions. While the main issues are clearly presented, the author's disdain for creationists detracts from the material. "One point on which anti-Darwinists and anticreationists agree is that this is a pitched battle between dogmatic religious fanatics on the one hand, and rigorous, fair-minded scientists on the other" (p. 3).

Ruse provides a much fairer perspective in "The Argument from Design," chapter 2. His conclusion is that ID is not new but has a grand historical position that began with Rev. William Paley's book, *Natural Theology*. Ruse concludes that "When Behe suggests (as he does) that he is authoring a breakthrough of the magnitude of Copernicus and heliocentrism, he is not just embarrassing, he is historically wrong" (p. 39).

Scott Gilbert dives into the biological nuts and bolts of ID in the third chapter. Gilbert deftly shows that the issue is clouded by less than complete honesty and provides some nuggets to explain why ID is so controversial, such as "evolution being perceived as the enemy of Divine Providence" (p. 59). Chapter 4 turns from the biology to the high profile legal battles that have brought ID into the public square. Larson concludes:

> Perhaps a better science education and deeper understanding of the popular appeal and scientific limits of the Intelligent Design concept can help both sides to appreciate the vital place of both scientific knowledge and religious faith in the evolving American experience. (P. 82)

Jane Maienschein dispels the notion of a simple battle of science versus religion by following Judge Jones' reasoning in the recent Dover decision. In the final chapter, Robert Young goes further by looking at the metaphysical connections emanating from natural selection. His rally against reductionism is couched as a historical survey, concluding that meaning and purpose is intrinsic to reality.

> The goal of reducing all explanations to matter, motion, and number impoverishes our worldview. Is it any wonder that sincere people reach for theological explanations to husband and celebrate the wonders of nature, life, and human nature and ground them in transcendent processes which continue to use poetic and celebratory language to characterize truth, goodness, and beauty? (P. 133)

The Panda's Black Box is a valuable source of ID history, arguments, and social influence. Despite the disdain of some authors for creationists, the book is something of an olive branch offering to uncover truth in a complex and heated issue—always a painful process. For this reason alone, the book should be required reading for zealots and is recommended for those interested in ID.

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

EMINENT LIVES IN TWENTIETH-CENTURY SCIENCE AND RELIGION by Nicolaas A. Rupke, ed. Frankfurt am Main: Peter Lang, 2007. 255 pages, index. Paperback; $49.95. ISBN: 3631568033.

A century ago, "eminent lives," the biographies of distinguished religious scientists, abounded. "God's scientific witnesses" were duly chronicled in encyclopedic tomes, part of the toolkit of Christian evangelism. But such hagiography dwindled as the twentieth century rolled on.

Nicolaas Rupke, a Princeton Ph.D., currently professor of history of science at Göttingen, has edited a far different successor volume. The eight scientists spotlighted in this compendium are a motley but eminently fascinating crew: the ranks of these biologists, chemists, and physicists include Protestant, Orthodox, agnostic, and atheistic voices. Yet all of these lives are intertwined with religious influences and interactions. Even the atheist Pavlov, son of a priest and once a seminary student, spoke sympathetically to the Soviet government about "our Christianity." And naturalist E. O. Wilson, whose private agenda in writing *Sociobiology* was to substitute science for religion, has admitted that his Baptist upbringing has morally bankrolled his crusade to preserve biodiversity.

The strength of Rupke's volume lies both in the judicious selection of eight particularly interesting scientists whose stories blend well together and in his recruitment of eight brilliantly qualified authors to prepare these carefully structured and well-documented biographies. The ordering of these accounts is especially felicitous. First is the deeply religious English chemist Coulson, followed by the Orthodox evolutionist Dobzhansky, then Fisher, the eccentric statistician of evolution but, as a Christian and practicing eugenicist, determined to raise the average intelligence of the British population by having as many children as possible. (It was his evangelist grandfather-in-law, father of nine children, who wrote the unforgettable couplet, "Lord, give me grace that I may be, Able to keep it up for thee.") Next comes Julian Huxley, grandson of "Darwin's bulldog," Thomas Huxley, the Richard Dawkins of his day; Julian, in contrast, set out to "create a humanism that would both remain faithful to the teachings of science and retain a role for the feelings that religious believers valued."

Among the final quartet are the Protestant physicist Pascual Jordan, whose biography played out in the German Nazi period and beyond, and the Serbian Orthodox physicist Michael Pupin, who established his reputation at Columbia University. These are interleaved with the biographies of Pavlov and Wilson.

Readers of this journal should recognize the names of at least several of the authors. They are, respectively, Arie Leegwater, Jitse van der Meer, James Moore, Peter Bowler, Richard Beyler, Torsten Rüting (Pavlov), Edward Davis, and Mark Stoll (Wilson). Nicolaas Rupke provides an informative historical introduction and Ronald Numbers offers an epilogue. Usually a multiple-authored compilation of this sort has some outstanding essays as well as a few that miss the mark or are just padding. Not everyone is as memorably bizarre as Ronald Fisher, but the truly remarkable feature of this collection is the uniformly high standard of presentation in all these diverse and engaging biographical essays.

As someone who, even as a teenager, found biography my literature of choice, I was naturally attracted to this commendable collection. My only criticism concerns a technical point: in a volume so thoroughly documented as this one, it is very clumsy to list strings of as many as half a dozen authorities following a given sentence—using numbered endnotes would have diminished this obstacle course. Also, apparently several of the biographies were prepared with a different font, and the conversion to a standard form has left a tell-tale trail of unwanted hyphens in the middle of words.

Reviewed by Owen Gingerich, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

SCIENCE EDUCATION

CREATION AND THE COURTS: Eighty Years of Conflict in the Classroom and the Courtroom by Norman Geisler. Wheaton, IL: Crossway Books, 2007. 385 pages, bibliography, index. Paperback; $22.00. ISBN: 1581348363.

From time to time, I find it instructive to read books written by academics with whom I do not share a worldview. One such, Norman Geisler, has written or co-authored over four dozen books and many articles over a forty year career. He holds the position of dean at Southern Evangelical Seminary. One may disagree with him, and yet respect his fervor and willingness to articulate his views.

The book is blurbed by Josh McDowell, Ravi Zacharias, and others. Duane Gish provides a foreword; Wayne Friar, a preface. There is a lot of good (original) source material in this book, including much of the Overton decision (McLean, 1982) as Geisler analyzes that decision and critiques it. Court cases from the 1925 Scopes trial to the 2005 Dover case are analyzed.

Geisler positions himself as a philosopher, not a scientist. Apparently he has not read deeply into the science of the evolution-creation controversy. He admits, for instance, to have never read Duane Gish's 1973 book, *The Fossils Say No.* He accepts the scientific expertise of the young-earth creationist adherents on their say-so.

He is deeply convinced of four things: (1) Creation and evolution are the only two views of origins (there can be but one true position); (2) There is a difference in kind between experimental science and "forensic" science; (3) The media is biased; and (4) There is genuine scientific evidence for the creationist position. On these premises he bases his book. Paige Patterson comments that Geisler "offers the sort of clarity this debate requires." I did not find this to be true. Geisler consistently confuses science and metaphysical speculation, majors in minors and, generally, brings more heat than light into the debates.

Chapter 4 particularly puzzled me. It is entitled "The Testimony They Refused to Transcribe." Geisler spends thirty-seven pages on this and then, in Appendix 4, uses another twenty-three pages to completely document that testimony (his own). That is over fifteen percent of the book! He makes no case that the "refusal to transcribe" was anything more than either an oversight or simply the court's recognition that the content was irrelevant to the issues at trial. When I read the testimony, the latter reason seemed most likely. Geisler did get some bad press after this testimony; its publication may serve, to some extent, to clarify (and normalize) his beliefs about the occult,

UFOs, and the like. I suspect that is the reason he spent so much time on it.

One point Geisler makes may be instructive and may show how his education in the philosophy, methods, procedures, and assumptions of science is lacking. He writes: " … while naturalistic evolutionists … criticize creationists of a 'God-of-the-gaps' fallacy … they are themselves guilty of a 'Nature-of-the-gap' view" (p. 252). It is this sort of thinking, of course, that has led Phillip Johnson's "Intelligent Design" crusade. If magic were real, such thinking might have an audience.

So do I recommend this volume? Yes. It has a place in a university library, and many ASA members may want to check it out for an evening of entertaining reading. It will not, however, stay in my personal collection very long.

Reviewed by John W. Burgeson, 8119 Bideford Lane, Houston, TX 77070.

Social Science

THE HAPPINESS TRIP: A Scientific Journey by Eduardo Punset. White Rivers Junction, VT: Chelsea Green Publishing, 2007. 160 pages. Paperback; $12.95. ISBN: 1933392448.

"Be warned: the writing of many books is endless, and excessive devotion to books is wearying to the body" (Eccles. 12:12, NASB). Such would seem to be the case with books on happiness. *PSCF* has printed reviews of three recently: *Happiness Is a Problem* by Dennis Prager; *Stumbling on Happiness* by Daniel Gilbert; and *The Pursuit of Happiness* by David Myers (ASA member). The books by Gilbert and Myers are based on scientific research. There is not much to be said about the benefits of religion in the book by Gilbert or *The Happiness Trip* by Punset, but Prager and Myers credit faith with considerable power to contribute to happiness.

But, alas, it would be a mistake to think history has sacrificed many trees to provide paper for books on happiness. In *The Happiness Trip*, Punset notes that concerning happiness, with the exception of the Declaration of Independence, "there is no organized inkling of such a birthright in the history of political or scientific thought … Being happy would thus appear … a human concern of relatively recent vintage" (p. xi). Punset has a very high view of science; he writes that "the penetration of scientific knowledge into popular culture will prove to be the most revolutionary event of the last two centuries" (p. 85).

What is happiness? Punset thinks happiness "may be an unconscious recognition, felt physically and emotionally, indicating an organism's synchrony with itself and its environment, its living and nonliving surroundings" (p. 88). What is the road to happiness? Punset suggests that a clue can be found in amoebas, reptiles, and nonhuman mammals. What is learned from these life forms is that with plentiful resources, happiness may be more easily achieved independently; when a scarcity occurs, happiness (well-being) may be more easily obtained in the organized groups which can provide safety, relative conformity, and increased efficiency (p. 16).

Punset also points out that, with so many lethal threats looming, leading scientists think the odds of finding happiness are only fifty percent. Since happiness is an emotion, it is always in a transient state. For most people, happiness is not related to work, health, money, family, education, or ethnic group membership (p. 70). This is contrary to what most people believe, which is why Punset labels them as myths related to happiness. For example, while most people claim children are a great source of joy, on the parental activity preference scale, raising children comes after social life, eating, watching television, taking a nap, and many other activities. Another example: People who live in India, despite their poverty, are happier than most Europeans (p. 88).

Punset affirms the age-old maxim that happiness lies more in anticipation than in the act of achievement, based on the fact that in Pavlov's dog and human's experiment, the hypothalamus fires during the search, not during the conquest (p. 17). "Getting there is the lion's share of the fun. Happiness is hidden in its waiting room" (p. 18). Another conclusion: The absence of fear augments the increase of happiness (p. 22). Novelty often interferes with happiness, because it requires new rules of the game and potential loss of control (p. 23).

A person who is happy has a tolerance for ambiguity and ambivalence, and possesses the courage to question personal convictions (p. 31). In the final chapter, the author gives a formula for happiness. Factors that destroy happiness include fear, unnecessary conscious processes in decision-making, not accepting that happiness is ephemeral, idealization of objects and people, prejudices against oneself that distort reality, loss of control, and hormone fluxes (p. 59). Some readers may question the wisdom of seeking happiness. Punset does not advocate seeking it; he is merely examining the factors correlated with it. Solomon valued happiness and virtue: "I know that there is nothing better for men than to be happy and do good while they live" (Eccles. 3:12, NIV).

Dan Gilbert has high praise for this book: "I dare anyone to read a single page without learning something new." The author of *The Happiness Trip*, Eduardo Punset, is a professor at a Barcelona, Spain, university. In addition, Punset directs and hosts a TV program on science broadcast throughout the Spanish-speaking world. This book has an index and a recommended reading list for each of its nine chapters.

Reviewed by Richard Ruble, John Brown University, Siloam Springs, AR 72761.

ALIEN WORLDS: Social and Religious Dimensions of Extraterrestrial Contact by Diana G. Tumminia, ed. Syracuse, NY: Syracuse University Press, 2007. 305 pages, appendixes, references, index. Paperback; $34.95. ISBN: 9780815608585.

This compendium of essays is authored by some better-known students of UFOlogy (Unidentified Flying Objects), including sociologists, religious historians, professors of culture and religion, anthropologists, and independent researchers. Tumminia teaches sociology at California State University, Sacramento, and is the author of *When Prophecy Never Fails*, a study of the Unarius Academy of Science.

Tumminia's "introduction" is a helpful contextualizing of a field of study that has had little attention in *PSCF*. After noting how embedded the presence of extraterrestrial thinking has become in popular culture (cf. ET, Star Trek series, Scientology, and such books as James Lewis' *The Gods Have Landed: New Religions from Other Worlds*), Tumminia provides a helpful taxonomy of terms that elucidate the complexity of the field.

She notes three basic types of activity in the field: (1) the UFO investigation group; (2) the contactee group; and (3) the UFO cult. The first type includes secular and religious groups of scientists and others who take an agnostic stance and encourage empirical investigation of the phenomena. The second type is composed of those who claim to have experienced extraterrestrial contact or abduction. The third type includes those who may or may not have experienced any UFO contact but are believers and supporters.

The use of the word "cult" in this typology simply refers to a new, independent spiritual group often led by a charismatic leader. No judgment is implied. This last type can be considered a religion by certain markers: (1) the adherents consider what they are doing as "religion"; (2) the group practices rituals in their meetings; (3) there is deference paid to contactees who repeat their experiences; and (4) the group is organized and not a free-floating association. *When Prophecy Fails* (Festinger, Riecken, and Shachter, 1956) is a book which gives a clear example of a UFO group that was a religion, as was the group called Heaven's Gate in Southern California who committed mass suicide thinking their spirits would be joined to a nearby comet.

An alternative typology suggested by Tumminia distinguishes among "Believers," "Skeptics," and "Debunkers." Obviously "Believers" include contactees/abductees as well as UFO cult members. They accept the reports as real or highly probable. "Skeptics" include investigators as well as doubters. "Debunkers" are actively involved in discrediting the very idea of alien contact or abductions. There is no doubt that the great majority of social/behavioral and physical scientists have been in the Skeptic and Debunker groups.

Following Tumminia's introduction, the remainder of the volume includes descriptions of a variety of incident reports and specific groups, a perceptive analysis of the several understandings of the persons involved, and some reflections on the way this field has counterparts in modern religions.

In regard to understanding the persons involved, at least two approaches have dominated the field: contactees and abductees have either been typified as suffering from some personality aberration, or as using the experience as a way out of environmental stress. Their reports have rarely been taken at face value. Of course, these analyses have been based on the supposition that there can be no such thing as extraterrestrial intervention of any kind. History is replete with these sorts of judgment by the majority about the minority culture.

This leads to a consideration of a major issue raised by this volume—namely, the relevance of extraterrestrial contact to the experiences reported by organized religionists. Take Christianity, for example. The whole foundation of Christianity is based on an extraterrestrial appearance of a savior who, according to John's gospel, existed with Almighty God from the foundation of the earth. And Christian history is replete with experiences such as that of Saint Paul who reported he had contact with this alien savior who came to him from the spirit world.

The book poses the question of "How are we to distinguish the validity of these two—the more or less contemporary reports of contacts with or abductions by space aliens, and the traditional dogma that Jesus Christ came into the world to save sinners?"

This is probably the most important issue raised by this volume. It is worthy of reflection by *PSCF* readers. Many will find this volume provocative and insightful. It raises questions such as this and causes us to think again about what is a "cult."

Reviewed by H. Newton Malony, Senior Professor, Graduate School of Psychology, Fuller Theological Seminary, Pasadena, CA 91100.

40 DAYS AND 40 NIGHTS: Darwin, Intelligent Design, God, OxyContin® and Other Oddities on Trial in Pennsylvania by Matthew Chapman. New York: HarperCollins, 2007. 272 pages. Hardcover; $25.95. ISBN: 9780061179457.

Matthew Chapman has an axe to grind. He is an angry man, and it is often difficult to determine in this book who makes him most angry. The "usual gang of suspects" include the Dover, Pennsylvania Board of Education; Republicans; President Bush; and "religious fundamentalists." While the book is ostensibly about a specific court case, Chapman uses it as a vehicle for his disdain and anger toward all of the above-mentioned groups as well as others I perhaps have inadvertently left out.

Chapman is the great-great-grandson of Charles Darwin, which could explain some of his enthusiasm for the theory of evolution. He covered the *Kitzmiller v. Dover (PA) Board of Education* trial (decided in the early months of 2006) that dealt with an attempt by a school board in rural Pennsylvania, to recommend that students be made aware of problems with Darwinian evolution and that alternative ideas (including, but not restricted to, intelligent design) be considered. In addition, the teachers were to read a statement in class that raised questions about the validity and completeness of the evolutionary theory. The statement also affirmed that the Pennsylvania state educational standards had mandated the teaching of evolution and that students would be prepared to meet state standards for proficiency testing on the topic. Since the science teachers refused to read the statement, the ACLU and Americans United for Separation of Church and State got into the middle of things, and the battle was on.

Chapman's coverage of this controversy is puzzling and one-sided. He makes no effort whatsoever to try to understand the culture and mores of the community. The legitimate concerns of people are not explored at all, or they are treated as caricature. Those who express concerns about the teaching (and implications) of evolution are branded as ignorant, anti-science, and religious fundamentalists whose approach to life he compares to Islamic radicals. Chapman's concern, expressed at the end of the

book, is that Evangelical (his capitalization) teens will soon be in charge. "While other kids are busy having sex and doing drugs, these ones are getting ready to take over America. If there is a 'vast right-wing conspiracy,' this is it." Are we to understand that Chapman would prefer people who engage in sexual immorality and do drugs run the country?

Chapman places a lot of emphasis on appearances. All his heroes (the lawyers and brave townspeople who took on the school board) are attractive and intelligent. Judge Jones was "… a good-looking man in his fifties." Fred Callahan (one of the plaintiffs) was "… a trim, good-looking man … impeccably turned out … his hair well cut … concise, polite, and measured …" Who could dislike such a person? One of the lead attorneys wore "… the best suits in the trial …" One "drank good wine …" Not to show bias, Chapman points out that one of the defense lawyers "… had good teeth …" even though his "… long head was topped with thinning hair …"

Equally interesting is Chapman's strong awareness of attractive women. Although one would think that the good (or not-so-good) looks of a woman were irrelevant to the issues being debated, Chapman apparently spent a lot of time noticing who was good-looking and who was not. Well, this does tie in with some evolutionary theories about men.

It is very disturbing that Chapman almost completely ignores the efforts of the Discovery Institute to get the school board to abandon the decisions they made. Institute leaders worked very hard to get the board members to drop their efforts to include ID concepts, but they were not successful. Chapman would prefer to see them as part of the conspiracy.

Equally disappointing is the praise that Chapman provides for the judge. The evidence is very clear that over 90% of the opinion that Jones is said to have authored came directly from the brief submitted by the ACLU.

If you want an extremely slanted account of the controversy, buy this book. If you want to find out what really happened, you are much better off reading the trial transcript.

Reviewed by Donald F. Calbreath, Emeritus Associate Professor of Chemistry, Whitworth University, Spokane, WA 99251.

RENDER UNTO DARWIN: Philosophical Aspects of the Christian Right's Crusade Against Science by James H. Fetzer. Chicago: Open Court, 2007. 194 pages, index. Paperback; $24.95. ISBN: 0812696050.

James H. Fetzer is Distinguished McKnight University Professor Emeritus at the University of Minnesota at Duluth. He has authored several books on the philosophy of science, computer science, artificial intelligence, and cognitive sciences. He is also known for his advocacy of conspiracy theories concerning 9/11 and the Kennedy assassination.

Fetzer discusses the philosophical issues from which public debates about Creation Science and Intelligent Design (ID) derive. He argues that while God's creation of the universe can be reconciled with the scientific evidence, the literal account in Genesis cannot be. He claims that attempts to deny biological laws are misconceived. Creation Science is not science because its claims are not conditional, not testable, and not tentative. He thinks the distinction between microevolution (accepted by many Creation Scientists) and macroevolution cannot be sustained.

According to Fetzer, creationists routinely misrepresent evolutionary theory. Evolution does not tend toward what is best, but only toward what is good enough. "Survival of the fittest" can avoid tautology if fitness is defined in terms of probabilities. Attempts to describe the evolutionary process as one of solving algorithms are misconceived.

In Fetzer's view, the failure of Creation Science (which is committed to a young earth and a worldwide flood) to bring creation into the science classroom has led to ID, a creationist movement with more modest claims and a broader constituency. ID rests on an imperfect and misplaced appeal to the analogy of a human designer. The alternative to ID is not "chance," but the interaction of chance with law-governed causal processes.

Concerning morality, Fetzer thinks we rely on our beliefs to guide our actions, and that we are morally entitled to hold a belief only if it is logical. He then looks at eight commonly held moral theories. He also argues that morality can be objectively validated independently of religion, and that only a deontological standard of ethics (treating other persons as ends-in-themselves) passes the essential tests. On this basis, Fetzer argues that persons acquire rights in graduated stages; stem cells, zygotes, embryos, or early fetuses are not persons and hence it is immoral for religious persons to interfere politically with abortions, stem-cell research, or cloning.

On a similar basis, Fetzer concludes that flag burners, hookers, and pot-heads are not immoral. Furthermore, he provocatively argues that an unholy alliance of fundamentalist propagandists and right wing politicians is playing its part in the rise of a new American fascism. This is based on the domination of civic life by unscrupulous business corporations who subordinate everything to the pursuit of profit. He claims that the Bush administration is crushing liberties at home while wreaking mayhem abroad in contravention of international law. In his view, American policy represents the triumph of the most corrupt form of morality: the pursuit of the interests of one's own exclusive group.

In an epilogue, Fetzer indicates how science can help public policy. Culture enables evolution to incorporate the inheritance of valuable acquired patterns of behavior. While science cannot set society's goals, it can help society attain them. The Good Society is founded on the deontological principle that every member of society is entitled to the same rights and opportunities as every other member. Fetzer also argues that public schools should be secular but not atheistic. Further, members of a moral society must tolerate group differences as well as individual differences.

The book contains an appendix on the definition of science from a formal philosophical aspect. A glossary is included. Nonetheless a lay reader may find the going hard.

Someone who is already familiar with the creationism-evolution controversy will find interesting points in the book, if only because of the wide range of topics discussed. However, the book cannot be recommended as an introduction to that controversy. For one thing, the treatment of ID is shallow, in my opinion; the author is too ready to take it as just a development of Young Earth Creationism. While a philosophical approach can add to the lucidity of an argument, the conclusions of the argument are no more valid that the assumptions made at the beginning: garbage in leads to garbage out. Thus, for example, few Christians will be satisfied with Fetzer's assumptions that Scripture and traditional theology can be bracketed out of a treatment of morality.

Reviewed by Donald Nield, Associate Professor of Engineering Science, University of Auckland, Auckland, New Zealand.

AMERICAN RELIGIOUS DEMOCRACY: Coming to Terms with the End of Secular Politics by Bruce Ledewitz. Westport, CT: Praeger, 2007. 242 pages. Hardcover; $49.95. ISBN: 0275994600.

This book presents a thesis that, if true, would have a positive effect on the politics of this country. Ledewitz, a law professor at Duquesne University, makes the claim that in the election of 2004, the American people gave government the permission to endorse religion and that religion in some form would now be the basis of American public life. In that election, voters explicitly voted according to their religious preferences and elected politicians who will echo those preferences; the resulting government policy would then reflect religious values.

Instead of bemoaning the end of secular politics, Ledewitz wishes to celebrate it. He identifies the secular consensus in American politics as forming around the wall of separation, drawing encouragement from the assumed decline of religion as modernization advances. This secular consensus was fortified by a number of Supreme Court decisions that strengthened the wall and reduced the rights of believers. One of its tenets held that the only way a diverse democracy could function would be to have religious viewpoints kept out of the public square: when religious voters decide on candidates or issues they must not let their religious beliefs influence their decisions. How they are to perform this act of dissonance the committed secularists do not explain, but if they are unable to do this, then religious believers have no legitimate claim to input on many public policy questions. This is clearly untenable and, ultimately, undemocratic.

But this secular consensus did not last for a number of reasons, among which was a lack of majority support. Ledewitz claims that America does not need more secularism since a purely secular approach to politics cannot lead to noble goals; he is unconvinced by attempts to develop theories of human rights in nonreligious terms. Instead, he states provocatively that America needs "more and better religion" (p. xvii). What he means is that secular voters must be made to see that they are in fact believers in a religious sense. And while they may not be Christian or Jew, they share with the Christian or Jew a prevailing sense that

> the world has a tilt in the direction of the good that is not attributable to the will of human beings … that there is a difference … between true and false, and that these matters are not matters of human judgment, but are real and reliable … (and that) the whole universe upholds the righteous ones who live by this path. (P. 171)

Ledewitz claims that the majority of secular voters believe these things and therefore could accept a politics based on religious language. In addition, many of the enduring political issues—equality, liberty, justice—draw heavily from older religious traditions, and that in many ways politics and religion speak to the same fundamental questions. The problem with the current version of religious democracy is that it is too one-sided: it is dominated by conservatives aligned with the Republican party, facing a Democratic party that too often purposely shuns religious voters. This is not a recipe for dialogue or good government. What is needed is a rebirth of progressive politics based on religious values, the "promise of our religions … the transcendent realm … For without hope of the transcendent, no politics that matters is possible" (p. 165).

On what basis then will the secularists come to embrace religious democracy? According to Ledewitz, they will not embrace a view of religion that is pushed by what he calls the fundamentalists who sometimes speak in apocalyptic terms. A greater focus on the themes of the Old Testament and its emphasis on the here and now, the value of life in this world, and the fact that a people who willingly disdain the divine call for mercy and justice are subject to judgment, can serve to invigorate a politics of the religious left, including those who call themselves secularists. Grounding the calls for justice and the demands to preserve the environment in religious language can facilitate those ends. Once religious language is fully accepted in American public discourse, then we can bid good riddance to secular politics.

This book certainly has appeal to Christians who believe that religion deserves a place in the public square. It makes a solid, well-documented plea for the religious viewpoint being represented. But I am not as sanguine as the author that such a politics is possible. It may be too much to ask for secularists to come to a new view of religion, to shed their view of God as merely a rule-maker overly concerned with sin, and to adopt a view of religion that instead is focused on a general direction of history toward some conception of the good. From the secularist viewpoint, why would religion be necessary to work toward that good? So, while I applaud the author's call for a greater degree of religious values and language in our politics, I am not sure how many will listen to that call.

Reviewed by Steve Montreal, Associate Professor of Political Science, Concordia University Wisconsin, Mequon, WI 53097.

FAITH AND FORCE: A Christian Debate about War by David Clough and Brian Stiltner. Washington, DC: Georgetown University Press, 2007. 304 pages, bibliography and index. Paperback; $26.95. ISBN: 9781589011656.

Faith and Force is an unfortunate title for this book. The "and" gives the impression of two separate areas of life; faith is not a separate area because it permeates all of life. However, this title was chosen, I suspect, for its alliteration

rather than its theological purpose as both authors seek to show how their faith integrates with their different positions.

David Clough and Brian Stiltner have produced an excellent and innovative book. They come from different perspectives as well as different sides of the Atlantic. Clough, a Methodist at St. John's College, Durham, UK, expounds and defends a pacifist position. Stiltner, a Roman Catholic at Sacred Heart University, USA, takes a just war position.

The impetus for this book is the 2003 invasion of Iraq. Two friends found themselves on opposing sides of the debate and long e-mail debates ensued. These debates formed the basis of *Faith and Force*. Each of the chapters is co-written and then followed by the e-mail type discussions which retain much of a conversational character and highlight agreements and disagreements.

The key questions addressed are: When, if at all, is it right for a country to go to war? Should a person serve in the armed forces? How much money, if any, is legitimate to spend on the military? These are urgent questions since millions of lives and dollars are at stake.

Along the way, clear and insightful discussions are directed at topics like developing a war-ethic (chap. 1), the issue of weapons' proliferation (chap. 4), and the menace of terrorism (chap. 5).

It is a little disappointing for this neo-Calvinist not to see any major interaction with Reformed authors on the just war position as it avoids the problems of a natural law approach. Nevertheless, this book is highly recommended, not only for its ethical discussion, but also as a model for debate and discussion. Ethics involves a reflective and dialogic process and these aspects are exemplified in this book. The authors have provided useful resources in thinking about the ethical issues of war from two different Christian traditions.

Despite my reservations with the book's title, it would be great to see a series of books using this as a model such as *Faith and Global Warming*, *Faith and Evolution*; though I suspect these debates might not be as cordial as this particular book.

Reviewed by Steve Bishop, City of Bristol College, Bristol, UK.

Letters

Numerology in Genesis

In a recent article,[1] Carol Hill promotes Umberto Cassuto's suggestion that the author of Genesis employed contemporary numerology in writing his account of creation (Gen. 1:1–2:3).[2] This is an important suggestion, and merits careful consideration. I support the aim of interpreting Genesis in a way that is consistent with how its first readers would have understood it. If the author did use contemporary numerology in writing it, this greatly affects its meaning.

According to Cassuto, in ancient Middle Eastern numerology, seven was a perfect number. From this he suggests that, when the author of Genesis describes creation as taking place in seven days, he is intending to convey that the work was carried out perfectly. The seven days are accordingly symbolic.

An obvious problem with this explanation is that the author says that God made the seventh day holy (2:3), in anticipation of the fourth commandment (Exod. 20:8–11). In this commandment, God told the Israelites to work on six days and rest on the seventh as he had done in creation (v. 11). For the Israelites, the numbers in the commandment were real—they had to rest for one 24-hour day in seven.

Another problem is that the author of Genesis says that, on the first day of creation, God established the cycle of "day" and "night" on the earth (Gen. 1:3–5), and on the fourth day, made the sun and the moon to "rule over" this cycle (vv. 14–19). The implication is that the cycle before the fourth day was the same as that after it, and that "day" throughout the narrative is equal to the time interval between one sunrise and the next.

Cassuto himself acknowledges a further difficulty. This is that, in parallels from ancient Middle Eastern literature, the seven days of working on a project are divided up as 2 + 2 + 2 + 1. Genesis divides them up as 6 + 1 or 3 + 3 + 1.

Carol Hill also promotes Cassuto's suggestion that the author of Genesis used contemporary numerology in his genealogies (Gen. 5; 11:10–32).[3] Cassuto points out that most of the ages in these end in zero or five, and that the remainder can be obtained by adding multiples of seven:

$$\text{age} = (5x + 7y) \text{ years}$$

He associates the number five with the base number of the sexagesimal counting system used in ancient Mesopotamia, 60 months being 5 years.

A major problem with this suggestion is that the above formula will reproduce *any* age above 23 years. As the lowest age in the genealogies is 29 years, the fact that all the ages conform to the formula is of no significance. There is a similar problem with the more complicated scheme proposed by Carol Hill.[4] In her Table 2, she uses 6 x 2 months to reproduce Nahor's ages. Multiples of this increment can be used to reproduce any age.

It is true that most ages in the genealogies end in zero or five, but this can be explained as being the result of rounding to the nearest zero or five. Many of the numbers look rounded. The distribution of the remaining last digits is unexceptional (1, nil; 2, four times; 3, twice; 4, once; 6, nil; 7, thrice; 8, nil; 9, thrice).[5]

I offer these observations for discussion. Can other readers help?

Notes

[1]Carol A. Hill, "A Third Alternative to Concordism and Divine Accommodation: The Worldview Approach," *Perspectives on Science and Christian Faith* 59, no. 2 (2007): 129–34.

[2]U. Cassuto, *A Commentary on the Book of Genesis*, pt. 1, trans. Israel Abrahams (Jerusalem: Magnes Press, 1961), 12–17.

[3]Ibid., 258–62.