Book Reviews

Anthropology & Archeology

THE CRADLE OF HUMANITY: Prehistoric Art and Culture by Georges Bataille and Stuart Kendall, eds. Translated by Michelle Kendall and Stuart Kendall. New York: Zone Books, 2005. 210 pages. Hardcover; $28.95. ISBN: 1890951552.

Stuart Kendall presents here a collection of essays, reviews, letters and other manuscripts by Georges Bataille (151 pages), together with an introduction (23 pages) and notes (25 pages). He does so to reassert the place of prehistory in Bataille's thought, even though he notes—thus weakening the argument in favor of the book—that the indifferent silence accorded Bataille's work has been "perhaps not entirely inappropriate." While other matters are touched, Kendall's introduction (as does Bataille's work itself) points out the importance of the discovery of prehistoric cave art at Lascaux on shaping Bataille's thought: the period when that art was produced stands for all of prehistory for Bataille, who does not offer final answers but instead "writes to satisfy our longing for the marvelous."

Bataille reads Lascaux and other art as portraying prehistoric humans as having a reverence and love for animals, feeling remorse for having to kill them, and thus anticipating our modern experience of being slaves to work we must pursue at any price. In general, he claims that "our present world disparages man's longing for the marvelous." Prehistoric art shows that as a race we have not been defeated in the past by a lack of understanding, but have continued to strive for it, and we can do the same in the modern world. We do not understand art, poetry or religion, but in all of these we strive for understanding. In particular, "the world of understanding is to religion as the clarity of the day is to the horror of the night." Paradoxically, in the moment when we are refusing to reduce religious experience to something easily defined and delineated, we are being religious.

My second pass through this book, looking back after some reflection at the notes I had made while reading it in detail, made me more sympathetic to the stimulus that Bataille's work could be for those who think about the relationship between prehistory and modern experience, and between art and the human religious imagination.

Reviewed by David T. Barnard, Regina, SK Canada.

Faith & Science

GOD, HUMANITY, AND THE COSMOS: A Companion to the Science-Religion Debate by Christopher Southgate, et al. 2d ed.; New York: T & T Clark International, 2005. 443 pages, index. Paperback; $49.95. ISBN 0567030164.

The first edition (1999) of this book, then with the subtitle, *A Textbook in Science and Religion*, received enthusiastic reviews in the June and September 2000 issues of *PSCF*. The book has been substantially revised and has two new chapters and some other new material, though a change to smaller type and finer paper has kept the number of pages about the same and reduced the thickness of the book. It is written by a team of British authors, most of whom hold academic qualifications in both science and theology/religion, led by Christopher Southgate. The other members are John Hedley Brooke, Celia Deane-Drummond, Paul D. Murray, Michael Robert Negus, Lawrence Osborn, Michael Poole, Andrew Robinson, Jacqui Stewart, Frazer Watts and David Wilkinson.

Among the topics covered in the fifteen chapters are: the debate between science and religion; truth and reason; modern cosmology; biological evolution; divine action today; Islam and science; biotechnology; and what the future holds. The new chapters are Chapter 2, on creation, by Murray and Wilkinson and Chapter 3, learning from the past, by Brooke. These further extend the usefulness of this book.

Intelligent Design Theory is dealt with in one paragraph. The arguments of Behe and Dembski are briefly stated and books by Ruse, Shanks, Peters and Hewlett, and Dembski and Ruse are cited. It is noteworthy that Phillip Johnson is not mentioned. We are told that

> Intelligent Design theorists tend to say that their ideas are scientific rather than theological, but one is left in little doubt that their ultimate motivation is to suggest the existence of (a Paley-esque) God. We would regard their position as flawed on scientific grounds—plausible evolutionary explanations for the relevant processes are possible, and also questionable theologically.

Young earth views are also treated very briefly. We are told that

> some Christians view the Genesis text as a disclosure of *how* exactly creation came into existence and not simply *why*. Such approaches are collectively referred to as "Creationism" … there is a diversity of such creationist approaches … Some believe in creation that is only thousands of years old. Some view just the earth as being only thousands of years old but think of the universe in its totality as being much older. Others believe that the universe *appears* to be billions of years old but is in fact only thousands of years old … In these views contemporary science is seen to be misleading compared with the evidence of Scripture. Such views are dependent on seeing the Genesis text as a scientific picture of God's creative acts. However, the current scientific picture of the universe which is billions of years old cannot be dismissed lightly. The theories of modern science have gathered a very considerable consensus around them with a very considerable body of supporting evidence in their favor. Moreover, many of the scientists who explore the history of the universe in this way are devout Christians and Jews. Nor is this simply a scientific problem but also a theological one, for if God is the creator of all then creation should surely disclose something of God? God as creator, it might be reasoned, has authored "the book of nature" as well as "the book of scripture." It is odd, therefore, on theological grounds to think of the book of nature

and the book of scripture as standing in fundamental conflict with each other.

For people who are willing to look deeply beyond young-earth creationism and intelligent design, this book has a wealth of informative and challenging material, from both classical and modern sources—far too much for me to list here. The book deserves to be widely read by students and others.

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

General Sciences

GOD IN THE MACHINE: What Robots Teach Us About Humanity and God by Anne Foerst. New York: Plume/Penguin, 2005. 212 pages. Hardcover; $15.00. ISBN: 0452286956.

This book afforded me one of the most enjoyable reading experiences I have had for some time. Foerst has studied both computer science and theology (as I have myself) and written a thesis on the possibilities of a nonjudgmental dialogue between Christian anthropology and artificial intelligence (AI). One of the orientations of AI is to think of intelligence as an abstract that can be realized in various concrete forms, such as machine intelligences and the "meat machine" that is the human brain. On the other hand, there is a noticeable continuity of the rest of the animal world and humanity, because most of what we know about humans can be found elsewhere in creation; but as Christians we know humans as special in that we are "God's partner."

The book has as a central narrative the interaction of the author and some colleagues and visitors at MIT with two robots, Cog and Kismet. This narrative describes how humans bond with these machines in fascinating ways, sometimes despite initial skepticism about that possibility. Foerst's reflections explore what robots can teach us about ourselves, our emotions, and our ways of thinking and acting. This leads to challenging thoughts about what it means to be human and what it means to be partners of God.

The author sees humans as essentially storytellers, with the shared narratives of our experience—including our experiences with God—providing the core of our self-understanding. The Bible, of course, presents us as estranged from God, in a condition it refers to as sin. AI generally takes a different view, seeing humans as defined by their intelligence. However, though estranged, we are certainly communal beings and embodied beings, so if we want to replicate the human experience in robots, they too must be communal and embodied.

Personhood means accepting the other as the other, though humans are not always very good at this, sometimes only acknowledging relatively small numbers of others as really human in one way or another. But God accepts us for who and what we are, and allows us to be imperfect. "Personhood, then, can be understood as participating in the narrative processes of mutual storytelling about who each of us is." If we want to include all humans in these shared narratives, the author expects that we will not be able to draw boundaries that exclude all of the intelligences that we are capable of creating, so some of them will also be persons in this sense. Ultimately, we are called to commit ourselves to creating narratives of universal acceptance so that peaceful coexistence of all humans "and our robotic children" becomes possible.

This book is easy to read and should be accessible without a detailed background in computer science or AI or theology. It is thoughtful and thought-provoking. I highly recommend it.

Reviewed by David T. Barnard, Regina, SK Canada.

THE E-BOMB: How America's New Directed Energy Weapons Will Change the Way Future Wars Will Be Fought by Doug Beason. Cambridge, MA: Da Capo Press, 2005. 256 pages, index. Hardcover; $26.00. ISBN: 0306814021.

Beason is the associate director of threat reduction at Los Alamos National Laboratory. He has been a key architect in directed-energy weapons for the past twenty-six years and has worked as the president's science advisor in both the Clinton and Bush administrations.

This book has three major divisions. First, Beason makes the attempt to explain in an accessible, yet unclassified way, what Directed Energy weapons are (chaps. 1–4), the technology that is involved with them (chaps. 5–13), and what the future may hold for this class of weaponry (chaps.14–16).

Directed Energy (DE) is best defined perhaps by what it is not. Many of those not involved in the defense industry visualize a weapon to execute war as some projectile (bullet, bomb, missile, etc.) putting its kinetic energy onto a target (i.e., striking the objective). DE weapons by contrast seek to divert part of the electromagnetic spectrum as a weapon. DE weapons have a variety of applications in the prosecution of war. They may be high-powered microwaves directed at a target to damage its electrical infrastructure, or a laser attempting to "heat up" an incoming ballistic missile to destroy it, or a millimeter wave used to deter access to incoming assailants.

Beason makes some arguments as to why DE weapons are superior to conventional kinetic weaponry. His arguments are three-fold: (1) DE weapons allow for more precision and thus can minimize collateral damage; permitting the U.S. Armed Forces to become even more of a precision-strike force, isolating the specific threat and neutralizing it; (2) DE weapons are "unlimited," in that they do not require bullets so therefore can be used for a very long time. Harnessing the power of the sun, while not truly infinite, is many times more sustainable from a logistic sense than kinetic weapons; and (3) because of the precision-strike capability and the "unlimited" supply, a boost is achieved in the affordability of defense weaponry. An argument from economics can be made that the objective must be achieved in a much cheaper way.

Beason then goes on to tout more of the specific advantages of DE weapons in a variety of scenarios. From ballistic missile defense to crowd control, he goes as far as

saying that DE weaponry is a "revolution in military affairs" (p. 4). He makes a rather strong case and his scenarios are both realistic and timely.

Beason is also a realist most of the time. He knows of the many detractors of this type of weaponry and does his best to acknowledge them. At times, he dismisses them as bureaucratic and obstructionists without merit. At other times, he acknowledges that their questions pose some value. He also admits, though not overtly, that the current state of technology does not quite yet permit his rather overly-optimistic view. Since I am familiar with the industry, in my opinion, it is only a matter of time until DE weapons are a reality.

In his descriptions of DE weaponry, Beason displays great faith in technology. This engenders the reader to ask some pressing moral questions concerning these weapons. For example, is it a troubling development that the consequences of war are becoming further and further separated from the ones that are prosecuting the war? Are these weapons too powerful? How do we separate the question of "Can this be done?" from "Should this be done?" Is this another example of the growth of technology outpacing our moral capacity to deal with it? This book can catapult readers to a whole series of vital and relevant questions concerning the developments of this technology.

This book does give a tremendously helpful overview of the inevitable state of modern and soon-to-be weapons of defense in the USA. Those who appreciate the many accomplishments of technology will enjoy this book. It is a relatively light read because much of the technical detail is glossed over. However, this should not detract from its value as an informed appraisal of the defense armaments in our time.

Reviewed by Kyle Hilton, South Hamilton, MA 01982.

HISTORY OF SCIENCE

A CHAOS OF DELIGHT: Science, Religion and Myth and the Shaping of Western Thought by Geoffrey P. Dobson. London: Equinox, 2005. 478 pages. Paperback; $27.95. ISBN: 1845530195.

Dobson's comprehensive volume (the title reflects a quotation from Darwin) includes a review of the Sumerians (chap. 2), ancient Egyptians (chap. 3), Presocratics (chap. 4), classical philosophy (chap. 5), early and medieval Christianity (chaps. 6 and 7), and science (chaps. 8–11). The first and last chapters (1 and 12) outline Dobson's convictions and assumptions, such as "Every religion contains some form of myth" (p. 9), and "Natural science provides a very different way of making sense of the world" (p. 11), one that is ordered and explainable. Modern science includes knowledge seeking, with questions and answers that have no absolutes (a self-correction process). A "scientific truth" is "that relation derived by careful observation and some form of verifiable experimentation, usually involving measurement" (p. 18). Dobson states clearly his own views:

> I do not believe in a personal god, heaven or hell, the afterlife or the notion that human beings are special creations of God … The idea of a personal god, heaven or hell, the afterlife or the act of special creation are "truths of the past" and, along with the concepts of spirit and soul, belong to the history of ideas (p. 374).

There are many helpful figures and tables, including "Summary of Greek prehistory and civilization" (p. 95), "Twelve major Olympian gods and divine functions" (p. 100), "Chronology of the major Greek Presocratic philosophers" (p. 103), "Definition of Greek terms" (p. 105), "Summary of the major contributions of the Greek Presocratics" (pp. 134–5), and a "Diagram showing the broad mindset of most Presocratic philosophers" (p. 138).

Chapter 6 covers the rise of Judeo-Christianity in the Greco-Roman world, noting briefly Abraham, Moses and the prophets, then Jesus, who "taught that suffering indicated an unhappy and disoriented soul ready to receive divine grace with the right guidance" (p. 193). Dobson next comments on Paul before turning to early "Christian" philosophers such as Philo Judaeus, Justin the Martyr, Clement of Alexandria, Origen and Tertullian, as well as Latin church fathers, such as Ambrose, Jerome and Augustine of Hippo.

Chapter 7, Medieval Christendom, discusses neoplatonism (Boethius, Charlemagne and Eriugena of Ireland), "The Arabic Corpus" (pp. 228–37), and scholasticism and the universities (Anselm, Thomas Aquinas). Dobson includes challenges to church authority, such as Roger Bacon, and provides background on the foundations of natural science at that time (pp. 255–6).

Chapter 8 treats the rise of Western science and its methodologies, with achievements by Leonardo da Vinci (anatomy and mechanics), Copernicus (heliocentric theory), Vesalius (human anatomy), Brahe (astronomy), Galileo (telescopic astronomy), Gilbert (magnetism) Kepler (planetary motion), Harvey (blood circulation), Descartes (theory of coordinates), Pascal (probabilities), Torricelli (barometric pressure), Guericke (air pump), Malpighi (capillaries), Boyle (gas laws), Huygen (wave theory), van Leeuwenhoek (microscopic research), Newton (universal gravity), Leibniz (monads) and Harrison (portable maritime clock).

In Chapter 9, Dobson outlines how he believes the universe arose (the Big Bang theory) and how it is changing, leading to chapter 10, with theories on the origins of life discussed (spontaneous generation, divine creation, life from outer space and, of course, natural selection). Dobson believes the formation of the earth was at 4.6 billion years ago, when prebiotic and biological evolution began. On the origin of life "scientists have to be content with developing plausible 'scenarios' that mimic primordial conditions and assume there is a continuity between extant organisms and life forms" (p. 331).

Chapter 11 discusses the evolutionary origins of the mind in the light of Darwin's theory, which allowed a scheme of hominid evolution. Dobson concludes that humans evolved from a hunter-gatherer existence to builders of "a succession of grand civilizations with the most elaborate language and cultural systems," all within the past 12,000 years (p. 362).

Chapter 12 is a short polemic on "seeking unity in diversity" (pp. 370–4) because "Everyone's truths, to some degree, have been shaped by ideas of the past" (p. 371). Dobson's agnostic views do not "suggest doing away with religion" (p. 374) because it has contributed to the history of ideas.

Dobson's book on the history of ideas is a veritable *tour de force* that includes over 1,100 bibliography entries and over 3,000 endnotes. It falls short, however, of noting contributions on the idea of intelligent design.

Dobson displays an extensive knowledge of science and summarizes how people have built upon each other's ideas throughout the centuries. He may not believe in God, but readers are asked to believe in Dobson.

Reviewed by Karl J. Franklin, Anthropology Consultant, SIL International, 7500 W. Camp Wisdom Road, Dallas, TX 75236.

THE RELIGIOUS FOUNDATIONS OF FRANCIS BACON'S THOUGHT by Stephen A. McKnight. Columbia, MO: University of Missouri Press, 2006. 193 pages, index. Hardcover; $37.50. ISBN: 086216099.

Francis Bacon's writings are traditionally seen as harbingers of the Enlightenment when religion is reduced to a sideshow and human reason and human capabilities usher in a new era of prosperity, tolerance, and progress brought about by the steady advancement of science and technology. The many references to religious motifs throughout Bacon's works are seen either as attempts to deceive less enlightened readers as to his true intent to destroy the power of religion over humankind or as window dressing that does not reflect his true beliefs about religion in general, and Judeo-Christian beliefs in particular.

Reading Bacon in such a future-oriented mode, argues Stephen McKnight, fails to do justice to understanding Bacon on his own terms and removes him from a social and cultural context that facilitates obtaining a full grasp of his central philosophy and its import. McKnight, professor emeritus of European intellectual and cultural history at the University of Florida, seeks to redress this imbalance by dissecting the texts of eight of Bacon's works, including his three major works *New Atlantis* (1626) and *Instauratio Magna (The Great Instauration)* and *Novum Organum (The New Organon)* both published in 1620, and five earlier important works: *The Advancement of Learning, De sapientia veterum (Wisdom of the Ancients), Temporis Partus Masculus (The Masculine Birth of Time), Redargutio Philosophiarum (The Refutation of Philosophies),* and *Cogitata et Visa (Thoughts and Conclusions)*.

Consistent with the work of other revisionist historians and historians of science (e.g., Perez Zagorin, John C. Briggs, and the introductions to the new critical edition of Bacon's writings) who have reconsidered Bacon's works in the past decade or so, McKnight finds that Bacon's thought is constructed on a religious foundation that includes classic Christian thought as well as substantial themes and imagery drawn from the *prisca theologia*, a collection of Neoplatonic, Hermetic, alchemic, magic, and Jewish esoteric traditions that was quite influential at the time. Bacon was especially focused on the imagery and importance of the Edenic Fall and believed that science and technology would become a means of ameliorating its effects on humanity.

New Atlantis, for example, contains a series: the Exodus-Sinai episode, the Davidic-Solomonic kingdom, the wisdom of Solomon, the concept of the chosen people, and the messianic and millenarian restoration of nature and humanity. Bacon also draws upon the *prisca theologia* and employs both the myth of Atlantis and ancient wisdom traditions. The function of the Temple priests as preservers of the Ark and esoteric knowledge passed down from Moses leads Bacon to make a case that in the demise of the Hebrew nation much ancient knowledge was lost. Science and technology from his time forward is the means for reacquisition of what was lost (*instauration* or re-edification), restoring order to a disordered world.

McKnight finds four major religious motifs in Bacon's writings. *Instauration* is Bacon's motif for the restoration of humanity to its prelapsarian condition, i.e., before the Fall. *Providential intervention* figures largely in Bacon's view of how this instauration will be realized. Vocation for Bacon is the God-ordained task of himself and others to advance harmony and prosperity through reason and the advancement of science and technology. The final motif is that of Christian charity which replaces selfishness and pride and prevents materialism from rearing its ugly head.

This detailed study of Bacon, a major thinker in the history of science and technology, shows clearly that he proceeded from a religious orientation. McKnight's case helps one reconsider the foundations of modernity (i.e., it is not what your professors likely told you), and encourages the rereading of Bacon with more discernment and understanding.

Reviewed by Dennis W. Cheek, Vice President of Education, Ewing Marion Kauffman Foundation, 4801 Rockhill Road, Kansas City, MO 64110.

HOLLOW EARTH: The Long and Curious History of Imagining Strange Lands, Fantastic Creatures, Advanced Civilizations, and Marvelous Machines beneath the Earth's Surface by David Standish. Cambridge, MA: Da Capo Press, 2006. 289 pages, bibliography. Paperback; $24.95. ISBN: 0306813734.

This is a history of speculations about advanced civilizations existing underground in a largely inaccessible hollow earth. No matter that such views are challenged and exceed established scientific knowledge, the myth, like many such myths (UFOs, for example), is durable.

David Standish, a teacher in Northwestern University's Medill School of Journalism, is a frequent writer for the *Smithsonian*. His book takes us on a journey which entertains as well as informs. He describes how varied, extensive and everlasting are the fables which some people believe. Yes, the idea of a hollow earth is still alive and well in the twenty-first century. Search the Internet for evidence!

The idea of a hollow earth dates back as far as the Sumurians (2600 BC–2100 BC), but it was Edmund Halley (of comet fame) who made it famous in modern times

when he developed the first scientific theory. He claimed it accounted for observed variations in the earth's magnetic poles. In 1691 his ideas were presented three times to the Royal Society, where they were taken very seriously for awhile. Since Halley, the hollow earth has been subjected to hundreds of permutations, both fictional and "charmingly delusional" (author's description). The works of authors Verne, Poe and Burroughs are analyzed, as well as the strange stories of Richard Shaver, taken seriously by some in the middle of the last century. The book is well illustrated, which adds to its appeal.

ASA members interested in the fringe histories of science will want to read this book; all ASA members will enjoy it.

Reviewed by John W. Burgeson, Rico Community Church, Rico, CO 81332.

SCIENCE AND RELIGION: 400 B.C. to A.D. 1550 from Aristotle to Copernicus by Edward Grant. Baltimore, MD : The Johns Hopkins University Press, 2006. 307 pages. Paperback; $22.00. ISBN: 0801884012.

Science and Religion is an outstanding chronicle of the emergence of science intertwined with theology. Grant provides a detailed commentary of the development of the relationships of science and religion.

Grant, a distinguished professor emeritus of history and philosophy of science at Indiana University, Bloomington, has published numerous books in science and religion, specializing in the Middle Ages. This book is a revision of a prior publication (2004) in a series by Greenwood Press and forms a pair with *Science and Religion: 1450–1900 From Copernicus to Darwin* written by Richard Olson.

Reason and revelation: two concepts whose development has affected virtually all of Europe's history. After an Introduction to these themes, the next two chapters cover the works of Aristotle and other scientists to show that "Greek learning acquired by the natural light of human reason … stands in contrast to revelation" (p. 13). This dichotomy was maintained in the Roman Empire which inherited and preserved the rich legacy of Greek science in two major literary genres: the handbook and the commentary. "The most important commentaries for the interrelations between science and religion were those on the works of Plato and Aristotle" (p. 93) which later served as key sources for writers in the Middle Ages. Grant argues that a New Europe emerged after the Barbarian Invasions. The Middle Ages was an innovative period despite the meager knowledge of science and natural philosophy. As partial evidence, Grant cites the development of Medieval Universities which featured prominently in developing natural philosophy and theology in the fourteenth and fifteenth centuries.

Grant has an extensive grasp of the field which he uses to provide insightful comparisons and draw out general themes. For example,

> From all that has been said about the interrelations between natural philosophy and theology, it is obvious that theology had a relatively small impact on natural philosophy, whereas natural philosophy, logic, and mathematics had so great an influence on theology that they reshaped the discipline, transforming its subject matter more nearly into natural philosophy than theology or religion (p. 220).

Science and Religion should be required reading for all those teaching and researching in this area. The topics are well indexed and the bibliography contains an impressive list of original works in translation. The style is remarkably engaging for a densely packed book that is an excellent resource and could be used as an upper class textbook.

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

NATURAL SCIENCES

SMITHSONIAN TITLES by Seymour Simon. New York: HarperCollins, 2006. 12 volumes. Hardcover; $6.99 each.

This may be the first book intended for children ages 5–9 ever reviewed in *PSCF*. Actually, it is not one book, but twelve beautifully produced volumes: *The Brain; Destination: Space; Earthquakes; The Heart; Lightning; Oceans; Sharks; Stars; The Universe; Volcanos*; and *Whales*.

Each book contains beautifully photographed scenes in color. The accompanying text is brief, double-spaced, and in large type. This should make them appealing to young readers. Adults also will find them stunning.

Seymour Simon, labeled "the dean of science writers for the grammar school set" (Kirkus Reviews), writes about things that interest children including animals, vehicles, anatomy and astronomy. He has published more than two hundred books on many topics for which he has gotten many awards.

These books are offered by the Smithsonian Institution in conjunction with HarperCollins. They are updated editions of Simon's most popular books, and they include the most recent scientific research. Their modest price makes them accessible to families as well as libraries.

If you like to look at exquisite pictures of nature with brief commentary, and seek to instruct your children in the marvels of nature and creation, these books fit the bill.

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

HARD SCIENCE, HARD CHOICES by Sandra J. Ackerman. New York/Washington, DC; Dana Press, 2006. 142 pages, index. Paperback; $12.95. ISBN:1932594027.

This book is a journalist's report (a good one in my opinion) on a conference held in May 2005 at the Library of Congress on "neuroethics," a term coined at a seminal conference three years earlier in San Francisco with the support of universities and the Dana Foundation (now chaired by William Safire). Organizers of the 2005 conference, Ruth and Gerald Fishbach, both from the faculty at Columbia University, named the conference per the title of this book with the subtitle: "Facts, Ethics and Policies Guiding Brain Science Today."

The book begins with an overview which reports on a discussion among panelists Safire, law professor Hank

Greely (Stanford) and neuroscientist Michael Gazzaniga (Dartmouth), touching on highlights such as chimeras, drug enhancement, neuroimaging and general legal and ethical aspects of neuroscience. Three parts follow on neuroimaging, drugs in the brain and neurotechnology (e.g., deep brain stimulation and the brain-computer interface). The book closes with another discussion of legal and ethical issues by panelists Safire, Greely and Gazzaniga, with audience participation. At the end there is a list of twenty-three references to the most prominent and controversial issues in this field.

The first part on neuroimaging discusses how functional MRI (fMRI), supported by human participation exercises and techniques like skin conductance response, points to areas of the brain (brain circuits) involved in decision-making including those related to morality and ethics. On the issue of "false memory" the results are equivocal—"hard to prove or disprove." Considerable discussion focuses on the difficulty distinguishing PVS (permanent vegetative state) from MCS (minimally conscious state) patients—with reference to the Terry Schiavo case. Memorable quotes are "scientists have not found anything in the brain that looks like a truth detecting region," and "according to data from neuroimaging the brain has no moral center."

In the part on drugs, key issues are "pharmacological Calvinism" (the notion that prescribing drugs robs patients of the opportunity to exercise self-reliance skills) and the debate on when drugs give therapy (e.g., helping old people remember) vs. performance enhancement (e.g., for athletes). Along the way the question is posed on whether a relative loves the "person" before drug therapy or the "person" after drug therapy.

Under neurotechnology, there is a focus on DBS (deep brain stimulation) that relieves symptoms of various disorders and neurosurgery aided by DBS—PET scans guided by patient's feelings. Noted is the scary indication that ten percent of patients feel no benefit from treatment, and it carries a high risk of suicide.

In the final panel discussion attention is given to the debate on choosing to know about results of the test for the Huntington gene. A dichotomy is reflected in the views of Greely (law) and Gazzaniga (neuroscience). "Even if a neuroscientist could prove that there is no such thing as free will, we would ignore him in the critical setting. We would continue to treat people as if they are responsible" (Greely). "Neuroscience is driving towards a mechanistic understanding of us. But that doesn't lessen the social contract of personal responsibility" (Gazzaniga).

The idea of complete mechanistic understanding seems to me antithetical to the Christian view where hope and faith are welcome. Fortunately, I believe the defense of the Christian view is supported by the fact that neuroscience is not a "hard" science and far from the definitive prognosis of Gazzaniga. I note that on page 21, Ackerman, makes the following statement, presumably based on talks at the symposium, about neuroscience studies: "Very few of them are reproducible and even fewer would be published a second time in a major professional journal."

Reviewed by John M. Osepchuk, Full Spectrum Consulting, 248 Deacon Haynes Road, Concord, MA 01742.

Origins & Cosmology

THE MUSIC OF CREATION: Theology and the Sciences by Arthur Peacocke and Ann Pederson. Minneapolis, MN: Augsburg Fortress Press, 2006. 106 pages. Paperback; $20.00 ISBN: 0800637569.

This book comes with a CD and is divided into parts by musical terminology: prelude, first movement, second movement, bridge passage, third movement, coda, and postlude. Included are a glossary, endnotes, index, and CD track list of twenty-two musical compositions by past greats including Haydn, Wagner, Beethoven, Mozart, and Bach. Music from modern musicians like Duke Ellington and Charlie Parker are also found on the CD. Comments on the CD music is woven into the text.

The prelude commences with a quote attributed to Victor Hugo: "Music is that which cannot be said but upon which it is impossible to be silent." The postlude concludes that "Music and theology have been brought together here in a composition about God's creation" (p. 81).

Arthur Peacocke, a biologist, is ordained by the Church of England, a recipient of the Templeton Prize in Religion, and author of *Theology for a Scientific Age*. Ann Pederson, a professor of religion at Augustana College in Sioux Falls, SD, is the author of *God, Creation and All That Jazz*. While the authors come from different cultural backgrounds, they share a common theology. Peacocke seeks to emphasize music as a reservoir of models and metaphors for examining God's continuous creative activity and presence. Pederson sees music, jazz especially, as reflecting and enriching the creative Christian community. In this book, the authors "hope to shed light on God and creation through the rich creativity we see in music" (p. xii). The authors agree with Luther that "God's grace is experienced through the music of creation, as the grace notes in our lives" (p. 82).

The Music of Creation stresses the importance of music in enriching the human spirit, shedding light on God and his creation, and showing that, in a civilized society, music should not be supplanted by pragmatics, utilitarianism, and efficiency.

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

Philosophy & Theology

FROM HUMAN TO POSTHUMAN by Brent Waters. Aldershot: Ashgate, 2006. 166 pages. Paperback; $29.95. ISBN: 0754639150.

We are at the dawn of an age when technology enables humans to ascend to a posthuman stage—so state many authors who argue in favor of the need and necessity of the change. Waters is interested in the unspoken assumptions, particularly of a theological type, that are made in such arguments.

As discussed in chapter 1, at the threshold of the postmodern age, there is a shift from the providential view of reality to progress and rational ethics so that moral progress can be put in line with the progress of science. However, "there is no progressive trajectory to discern; only a non-directional process marking the passage of time" (p. 18). According to chapter 2, the end of the modern age is marked by Nietzschean philosophy and the emergence of two classes of people: last men and nihilists. Three postmodern attributes are discussed: subjectivity, malleability, and mastery.

Technology becomes the major tool to create posthumans, claims the author in chapter 3. Previously, the human mandate was to have a dominion over the earth. Posthumans, on the other hand, should also have dominion over themselves. In particular, they want to achieve immortality by, for example, treating the mind as software that can be copied at will. Chapter 4 points to the need of a theological perspective in discussions promoting the posthuman stage: "to assert that humans should become posthuman requires the invocation of a higher or transcendent good that trumps the anthropocentric standard" (p. 78). If such a perspective is offered, theological aspects are often downplayed and diluted, as illustrated with the views of Hefner and Peacocke.

In chapter 5, a case is made for the view that "the principal weakness in postmodern theology … is the absence of any compelling Christology" (p. 95) as illustrated in the views of Kaufman, Teilhard de Chardin, and again, Hefner and Peacocke. Waters, using O'Donovan's work, delineates a framework that avoids this deficiency. One important result of giving a predominant position to the Incarnation is the statement that "we are called to prepare creation for its perfection by Christ, and not to perfect it for Christ's sake" with the available technology (p. 121). The last chapter accentuates eschatology as a proper perspective for analysis of what dominion over the earth signifies. However, according to the author himself, no easy solutions can be automatically derived from his deliberations concerning specific moral problems such as embryonic stem cell research.

This is an important and valuable book because the author stresses the significance of theology in thinking about technological progress and places emphasis on the person of Christ in pondering the consequences of this progress upon the fate of humankind.

Reviewed by Adam Drozdek, Duquesne University, Pittsburgh, PA 15282.

Religion & Biblical Studies

ALL THINGS IN THE BIBLE: An Encyclopedia of the Biblical World by Nancy M. Tischler. Westport, CT: Greenwood Press, 2006. 2 volumes. Hardcover; $149.95. ISBN: 0313330824.

This attractive two-volume set is printed in large type on pages with lots of white space. The author intends it for lay readers who are less interested in scholarly debate, detail, and discussion and more interested in the facts leading to a better understanding of Scripture.

Organized alphabetically, the book's cross-referencing and sixteen-page index help locate topics. Most of the books' two hundred topics have Bible references, etymology, commentary, archaeological findings, and intellectual, artistic, and religious history. A bibliography covers four pages in the second volume. The topics are sometimes illuminated by illustrator Ellen Johnston McHenry.

The author's hope is that these two volumes will help readers "gain a richer understanding of vineyards and funerals, weddings and hospitality, Pharisees and Sadducees, kings and shepherds …" I think they will.

Nancy M. Tischler, professor emerita at the Pennsylvania State University, has also written *Men and Women of the Bible* and *Student Companion to Tennessee Williams.*

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

THE MAGIC NEVER ENDS: The Life and Work of C. S. Lewis by John Ryan Duncan. Minneapolis, MN: Augsburg Books, 2006. 194 pages. Paperback; $14.99. ISBN: 0806652802.

The magic which never ends refers to the public's continuing fascination with the life and works of C. S. Lewis. Forty-three years after his death, the life of C. S. Lewis still provides fodder for biographies, pictorials, and analysis. That Lewis' writings, of which there are many, are perennial bestsellers testifies to their vast influence.

If you know nothing about C. S. Lewis, or perhaps are interested in a different perspective on what you already know, this book is for you. It has many attractive features, the primary one being its brevity. A reader who might be hesitant to indulge in reading a longer account of Lewis' life and writings would find this volume very appealing. Its brevity is aided by the white spaces and large print.

There are many photos of Lewis, his family and friends, and buildings associated with his life. In the past, some fundamentalists were deterred from reading or admiring Lewis because of his vices. This book does not seek to hide them. It includes photos of The Eagle and Child Pub, where the Inklings group met, and several photos of Lewis smoking a pipe and cigarettes. (By the way, Lewis thought some denominations majored on the minor, "the trivial at the cost of the essential," as Gresham put it, p. 97.)

Endnotes for the book's twelve chapters point to other writings on Lewis. Quoted throughout the book are people who personally knew Lewis and other scholars who have spent time studying Lewis' writings. These include Douglas Gresham, Lewis' step-son; Walter Hooper, Lewis' personal assistant; Dabney Hart, author of *Through the Open Door: A New Look at C. S. Lewis*; Lyle Dorsett, currently writing a spiritual biography on Lewis; Christopher Mitchell, director of Marion E. Wade Center at Wheaton College, which contains the C. S. Lewis archives (the world's largest collection of C. S. Lewis writings and memorabilia), and currently writing about Lewis and the Oxford Socratic Club; and Colin Manlove, author of *C. S. Lewis: His Literary Achievement.*

Chapter Twelve, "Observations," is unique and interesting. Much information the author collected did not fit

neatly into the main text. Therefore he has included it in this chapter in a question and answer format. It succinctly provides insights by answering such questions as "Was C. S. Lewis a misogynist?"

Some people consider Lewis to be the twentieth century's greatest Christian writer, leading apologist for the Christian faith, and a most important author of children's books. This is easy to understand because his books have collectively sold more than 200 million copies and all thirty-eight are still in print. Lewis was featured on the cover of *Time* magazine; had some of his life covered in the film *Shadowland*; had his famous tale, *The Lion, the Witch, and the Wardrobe,* translated into a movie; was the subject of a documentary film with the same title as this book and produced by the author of this present book; and is the focus of more than two hundred fan clubs around the world.

Lewis' conversion from atheism in 1931 changed his life dramatically. "Up to that time, he'd been a respected scholar, a respected teacher, a gifted student, a caretaker to Mrs. Moore, and a good friend to Oxford colleagues. But his writings, while interesting, were not yet notable. That seemed to change with his transformation to Christianity" (p. 67).

One of Lewis' most famous observations resulted from his reaction to people who say Jesus was only a great teacher. It is summarized by Lyle Dorsett: "How can he be a great man, a great teacher, and a wonderful prophet but not be who he says he is? He's either a liar, he's a lunatic, or he is who he says he is" (p. 95).

Three significant events occurred November 22, 1963: John F. Kennedy was murdered in Dallas; the Beatles released their second album in London; and C. S. Lewis died at age 64 in Oxford, England.

Lewis's concise statement of his faith best explains his popularity with evangelicals and the huge sales of his writings: "The central Christian belief is that Christ's death has somehow put us right with God and given us a fresh start" (p. 99). This belief resulted in exerting, by his life and writings, a great influence in the twentieth century. That influence continues unabated.

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

ON *THE PASSION OF THE CHRIST*: Exploring the Issues Raised by the Controversial Movie by Paula Fredriksen, ed. Berkeley, CA: University of California Press, 2006. 284 pages. Paperback, $19.95. ISBN: 0520248538.

Mel Gibson's blockbuster *The Passion of the Christ*, released in 2004, has already faded into the distance for most observers of the film and religion scene—a culture-wars hot spot that flared in an especially intense American moment. However, the issues it raised about art, historiography, and, of course, Christian theology, remain largely unresolved for moviegoers and laypeople. As long as individual viewers and believers remain uncertain what values are at stake, or why this film represents a unique crisis point in the culture wars, they will be unable to move beyond their personal aesthetic reactions into an informed judgment on the larger issues.

For those reasons, Fredriksen's guidebook to the controversy will be timely for years to come. The collection (a reissue of the hardcover *Perspectives on The Passion of the Christ* (Miramax, 2005), with a new introduction) is a lively, personal, passionate, and accessible argument against the widespread misunderstandings and misreadings engendered by Gibson's disingenuous virtuosity. Its shortcomings are endemic to edited volumes of this sort. For example, there are repetitive introductions in multiple essays to Anne Catherine Emmerich, the nineteenth-century nun whose visions provided framework and content for *The Passion*, without a single definitive essay on her life, work, promotion, and the significance of Gibson's appropriation of her interpretation of the passion scenes. But the book's strengths illuminate both the film and its source material from multiple angles. Readers will leave the collection understanding the difficulties of using the gospels as unproblematic historical sources, of conflating or harmonizing their different accounts, and of approaching film as naive consumers, assuming that what one sees there is all there is to be seen. The emotional tone of the prose will convince readers that the fissures revealed by the film's reception are serious threats to religious co-existence and public understanding—issues for which all the writers exhibit passionate and credible concern.

Fredriksen, one of the premier popular writers on early Christian development, contributes an arresting introduction and an outstanding overview of the disparities in audience and approach among the four Gospel accounts of Jesus' death. The collection otherwise begins on a shaky note, with two essays by journalists. *Newsweek*'s Jon Meacham provides an account of the film's origin and reception, but includes no notes or sourcing for his assertions, frustrating the reader who might like to find the original interviews and news reports. Similarly, Jay Tolson and Linda Kulman of *U.S. News and World Report* narrate the changing relationship between Judaism and Christianity over the last two millennia, and while they perform ably, it is difficult to know why these journalists, rather than historians of religion, are the right guides to these complex topics.

The meat of the volume, however, is choice prime. Members of the ad hoc scholars group that provided a much-discussed pre-release report on Gibson's script, including Phillip Cunningham of Boston College, Lawrence Frizzell and Eugene Korn of Seton Hall, Amy-Jill Levine of Vanderbilt, and John Pawlikowski of Catholic Theological Union, offer perspectives from Catholic and Jewish scholarship and piety. (The entire scholars' report is also included in the text.)

Fredriksen's most inspired touch, however, is her solicitation of essays from passionate evangelicals like Ben Witherington III of Asbury Theological Seminary, and Jim Wallis of *Sojourners* magazine. Complementing the scholarship of other practicing clerics from Orthodox Judaism, Catholicism, and Protestantism, these essays have the invigorating flavor of preaching that engages with cultural touchstones.

Where the collection is weakest is in genuinely cinematic approaches to the movie and its issues. Adele Reinhartz of Wilfred Laurier University comes closest to a legitimate writer on film, but the reader senses in some

of the essays the bravado of the cultural dilettante, such as when Thistlewaite asks rhetorically whether there is "a person who lives in the United States who does not know that Mel Gibson starred in the *Lethal Weapon* series and in *Ransom*." (Until Thistlewaite reminds her readers of the existence of the minor genre picture *Ransom*, they probably would not have known it themselves.) Nevertheless, it is difficult to imagine a more exciting engagement with Gibson's *Passion* than this informative volume, still smoking from the heat of the moment.

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

MAPPING PARADISE: A History of Heaven on Earth by Alessandro Scafi. Chicago: University of Chicago Press, 2006. 400 pages. Hardcover; $55.00. ISBN: 0226735591.

Where was the Garden of Eden located? How about Ethopia, Sri Lanka, Missouri, or somewhere in the Middle East? Was the Garden a real earthly place or metaphorical one? If it were geographically terrestrial, was it destroyed by the flood? These are some of the questions raised by contemporary theorists and discussed in this book.

Mapping Paradise shows how paradise was presented during the past 2,000 years in cartographic form. It explores how creative people attempted to make a place of unknown location, yet imbedded in the Genesis creation story, become more accessible and real.

Scafi is a lecturer at the University of Bologna, the Victoria and Albert Museum, and the University of London.

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

GETTING THE GOSPEL RIGHT: Assessing the Reformation and New Perspectives on Paul by Cornelis P. Venema. Carlisle, PA: The Banner of Truth Trust, 2006. 100 pages. Paperback; $6.00. ISBN: 085151927X.

EVANGELISTIC CALVINISM: Why the Doctrines of Grace Are Good News by John Benton. Carlisle, PA: The Banner of Truth Trust, 2006. 32 pages. Paperback; $2.00. ISBN: 0851519296.

If you need to brush up on your Calvinism, or to be introduced to it for the first time, these two short books will help. The first one, *Getting the Gospel Right*, deals with the Reformation understanding of Paul, and then it explains and assesses the new perspective.

The Reformation perspective is given on Paul's view of justification, grace, and faith. The new perspective treats Second-Temple Judaism, works of the law, and justification. The conclusion to the matter is that only time will tell whether the new perspective has traction, because it has too many problems. Consequently, "it would be premature to declare the Reformation perspective outdated" (p. 90). Venema thinks the old view of the Reformation a more faithful representation of Scripture.

According to the new perspective, the Reformers (mainly Luther and Calvin) erred because they believed Paul thought the Judaizers taught salvation by works. Not so! Paul opposed the Judaistic teaching that Gentiles were excluded from God's covenanted people unless they conformed to certain legalisms. According to this view, Paul was objecting to Jewish exclusivism, not to Jewish legalism. Paul's emphasis was on ecclesiology, not soteriology. However, as Venema points out, the new perspective appears to require some keeping of the law to reflect inclusion in the covenanted relationship which then becomes, at least partially, justification by works.

Evangelistic Calvinism defends the five points of Calvinism coming out of the Synod of Dort in Holland in 1618–1619. These five points resulted from what the Synod considered a departure from the faith in the teachings of Jacob Arminius. Benton thinks "The five points of Calvinism are a very useful hand-drawn theological sketch-map" (p. 4).

Benton thinks TULIP, the acronym for the five points, represents biblical truth "not only ignored and despised by the world but are often considered unfashionable within the church of Jesus Christ" (p. 5). Arminianism is a "distortion of the Bible's teaching on grace" (p. 5). After making the case for TULIP and how they relate to evangelism, Benton concludes that TULIP should be taught because they (1) are full of cogent and loving evangelistic arguments; (2) are full of pastoral encouragement and consolation; and (3) bring glory to God in Christ (pp. 30–1).

Because of their brevity, irenic style, and high regard for Scripture, these two books will be helpful in giving new exposure to the teaching of the Reformers. They also address the teachings of new and old theologies that they think are less faithful to Scripture.

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

INSPIRATION AND INCARNATION: Evangelicals and the Problem of the Old Testament by Peter Enns. Grand Rapids, MI: Baker Academic, 2005. 197 pages, glossary, index of scripture and other ancient writings, index of subjects. Paperback; $17.99 ISBN: 0801027306.

For Enns, an associate professor of Old Testament at Westminster Theological Seminary, "the primary purpose of Scripture is for the church to eat and drink its contents in order to understand better who God is, what he has done and what it means to be his people, redeemed in the crucified and risen Son" (p. 168). His goal in writing *Inspiration and Incarnation* "is to bring an evangelical doctrine of Scripture into conversation with the implications generated by some important themes in modern biblical scholarship—particularly Old Testament scholarship—over the past 150 years" (p. 13). He seeks to reach those who accept the fact that "the Bible is God's word, but for whom reading the Bible has become a serious theological problem—even a crisis" (p. 15).

PSCF readers are familiar with the issues raised by discoveries in disciplines that shed light on the ancient history of the earth and its inhabitants in contrast with traditional treatments of scripture. Accompanying the new science has been more than one hundred fifty years of critical scholarship and study of ancient Near East culture,

including contemporary and pre-biblical documents. The author identifies three problem areas:

1. *The Old Testament and Ancient Near Eastern Literature*. The Bible often looks like the literature of the surrounding Gentiles. If the Bible is God's special revelation, should it not be unique?

2. *Theological diversity in the Old Testament*. Different authors seem to have different opinions on the same subject, at times even flatly contradicting each other. If God only has one opinion, should the Scriptures not always say the same thing?

3. *New Testament interpretation of the Old Testament*. The New Testament authors seem to quote the Old Testament out of context, making it say something the author never intended. If we have to use the grammatical-historical method, should they not?

An additional problem area …

4. *The biblical and scientific accounts of origins do not agree.* Issues of age, pre-adamic humans, and death before the Fall plague efforts to make the "two books" concur.

Conservative Christians generally believe that the Bible must be error and contradiction free for it to be God's Word. The result has been a huge effort to smooth over the inconsistencies with yet another "harmony of the gospels" or "harmony of science and Scripture."

Enns suggests instead that one *begin* with the belief that *Scripture is inspired* then deal with the problems as they appear. Faith comes before proof and it is not based on fact or proof, or it would not be faith. If it is inspired, then the contradictions are there for a reason, and it does not make it any less inspired.

The author asks us to think of biblical inspiration in terms of the "incarnational analogy." "As Christ is both God and human, so is the Bible" (p. 17). While not a new concept, it is often ignored by evangelicals. The Bible is both a divine and human book. Both Christ and Scripture were situated in the context of their times. The Old Testament is more than a compendium of dictated timeless truths; it is revelation bound to the cultural trappings of its times—the languages, the customs, the events of the day, political structures, etc. There needs to be a balance between minimizing the human marks of Scripture and regarding it as just another ancient book.

In the chapters, The Old Testament and Ancient Near Eastern Literature, The Old Testament and Theological Diversity, and The Old Testament and Its Interpretation in the New Testament, Enns considers data from the ancient Near East that conservatives have downplayed. *PSCF* readers will have a special interest in his (all too short) discussion of the biblical accounts and ancient creation and flood stories and *Enuma Elish, Atrahasis,* and *Gilgamesh* epics. Enn's summary is instructive.

> It is a fundamental misunderstanding of Genesis to expect it to answer questions generated by a modern worldview, such as whether the days were literal or figurative, or whether the days of creation can be lined up with modern science, or whether the flood was local or universal. The point I would like to emphasize, however, is that such a firm grounding in ancient myth does not make Genesis less inspired; it is not a concession that we must put up with or an embarrassment to a sound doctrine of scripture … This is surely what it means for God to reveal himself to people—he accommodates, condescends, meets them where they are (pp. 55–6).

Each chapter closes with an annotated bibliography and a lengthy glossary of terms. One index contains references from Scripture and other ancient literature; a second, topics and authors.

Inspiration and Incarnation has created heated discussion among biblical scholars. Some feel that Enns has not gone far enough, others find him headed down a slippery slope. Get it.

Reviewed by John W. Haas, Jr., Emeritus Professor of Chemistry, Gordon College, Wenham, MA 01984.

Letters

Author's Reply to Two Letters Regarding "Prospects for Theistic Science"[1]

P.G. Nelson's letter[2] makes the point that complex groups can have properties not singly possessed by their components. That is undoubtedly correct, and the non-reductionist ontology I advocate agrees with his examples of this. But the point is doubly irrelevant. First: that fact has nothing to do with whether everything has at least some properties of each basic kind (quantitative, spatial, physical, biotic, sensory, logical, etc.). Nelson says he is in disagreement with this, but gives no reason for it. Second: the sort of reduction I was arguing against was not only the old whole-must be-the-same-nature-its-parts claim. Instead it attacked a more basic sort of reduction, a sort that is ontically global, namely, the claim that anything in creation is purely X, where X is one or another of the basic kinds of properties and laws exhibited by things. Against that claim I gave a (knock-down) argument: no one can so much as frame the idea of any thing as purely X -or even any property as purely X. I urged my readers to try the thought experiment of thinking away the non-physical properties of a thing to see what they had left when they finished. So I ask again: what is left of the idea of a physical thing that is nowhere in time or space, is not mathematically calculable, and is not logically identical with itself, and cannot be referred to in language? The very idea of *physical* disappears before our minds as soon as we attempt to separate it from the non-physical kinds of properties-and-laws we experience such as temporal, spatial, quantitative, logical, and linguistic, etc.

The same comments apply to the letter[3] of Moorad Alexanian. While ignoring the argument I just repeated, he simply asserts "The purely physical constitutes the subject matter of science" and "the content of all there is in Nature are elements that are either (1) purely physical, (2) purely non-physical, or (3) both …" But if we cannot form any idea of anything as purely physical (or purely logical,