

# Book Reviews



## ANTHROPOLOGY & ARCHEOLOGY

**PARADIGM SHIFTS IN CHRISTIAN WITNESS: Insights from Anthropology, Communication, and Spiritual Power** by Charles E. Van Engen, J. Dudley Woodberry, Darrell Whiteman, eds. Maryknoll, NY: Orbis Books, 2008. 208 pages. Paperback; \$25.00. ISBN: 9781570757716.

**TRANSFORMING WORLDVIEWS: An Anthropological Understanding of How People Change** by Paul G. Hiebert. Grand Rapids, MI: Baker Academic, 2008. 368 pages. Paperback; \$24.99. ISBN: 9780801027055.

*Paradigm Shifts* is a *Festschrift* collection honoring the contributions of the influential missiologist Charles Kraft. The book's structure is grounded in the recognition that contemporary missiology has been profoundly influenced by Kraft's application of ideas from the discipline of cultural anthropology, the field of communications, and his own experiences with spiritual phenomena. Contributions from specialists in each of these spheres constitute the body of the book.

Anthropologists Darrell Whiteman, Paul Hiebert, Robert J. Priest, and Michael A. Rynkiewicz make clear the relationship between anthropology and mission. Whiteman's history of that relationship focuses on the increasing attention to the importance of applied anthropology in missionary training in the second half of the twentieth century. Hiebert invokes a kind of cultural determinism as a reminder that Western Christians' ideas of mission have latent worldview influences and that a failure to appreciate those influences can have unintended outcomes. Priest's essay is in many respects a continuation of the history begun by Whiteman, and concludes with a set of recommendations needed for the formation of a missiological anthropology. Rynkiewicz continues along these lines by suggesting that some of the foci of contemporary anthropology—Culture, Person, Identity/Ethnicity, Agency, and Migration and Diaspora—have important implications for Christian mission.

Eugene A. Nida, Viggo Sogaard, Roberta R. King, and Knud Jørgensen author contributions that focus on communications (or, perhaps more precisely, applied linguistics). Nida offers some "vintage musings" (pp. 47, 49) that center on language-learning and culture-learning, the vagaries of language and translation, and the importance of interpersonal relations. Sogaard attempts to lay out a biblical basis for communication based on the rather rash idea that the Bible can be seen as a "textbook on communication" (pp. 59–60). King's essay is a reminder that communication is a *negotiated* phenomenon that entails a continuous back-and-forth of signals between interlocutors, while Jørgensen, in his largely autobiographical chapter, maintains the semiotic theme with a call for a rethinking of evangelism as "meaning-making" (p. 74).

The third section, "Spiritual Power," is represented by chapters from C. Peter Wagner, J. Dudley Woodberry, John and Anna Travis, and Tormod Engelsviken. Each of these essays is rooted in the notion that any dismissal of "signs-and-wonders" is a kind of ethnocentrism. Rejecting ethnocentrism, therefore, means rejecting the rejec-

tion of "signs-and-wonders." These four authors all agree that Christian conversion and development are best accomplished through attention to the dynamics of supernatural forces.

A final essay by Robert J. Schreiter deftly recaps the book's themes, noting that this homage to Kraft acknowledges that he "has indeed shifted perspectives within missiology and brought new methods of interpretation to bear upon our understanding of Christian mission" (p. 129).

Hiebert's wide-ranging *Transforming Worldviews* contends that Christian conversion—and, by implication, the way we think about mission—must take into consideration a person's worldview, which is defined (in one instance; there are variations) as the "fundamental cognitive, affective, and evaluative presuppositions a group of people make about the nature of things, and which they use to order their lives" (p. 15; cf. pp. 25–26, 80, 84, 324). Worldview is a subset of the socially transmitted understandings known as culture that goes largely unexamined and which significantly affects other aspects of culture and behavior.

The centerpiece of the book is a seventy-page critique of the Enlightenment and the Modern Worldview. Occupying over twenty percent of the book, this chapter argues that in many instances, Christian mission has failed—or has been compromised—by (Western) missionaries' uncritical acceptance of Enlightenment assumptions, including mechanistic rather than organic ways of conceptualizing the world and humanity, and an embrace of empiricism that discounts the difficult-to-quantify. In contrast, Hiebert argues that a worldview that includes an epistemological stance of *critical realism* is the best one for Christians to adopt—and to pass on. The "realism" of critical realism assumes that there are many features of the universe that are discovered, not invented. "Critical" is a humble recognition that no one sees the world as it truly is, and that our own perceptions are flawed. Such a worldview circumvents a bodies-plus-ideology minimalism as well as the hubris of certainty. From this stance, Hiebert proposes the fundamentals of a biblical worldview, which would include, among many other things, a linear view of time, a strict distinction between the Creator and the created, and a critical realist epistemology.

Both books are characterized by two ideas that attend cross-cultural ministry. One is the profound importance of a shift in thinking, which Hiebert calls "worldview" and the Kraft volume calls "paradigm," and the idea that Western Christians are unwittingly limited by their own worldview/paradigm with the result that the transmission of the gospel can be garbled. The other is the idea that people in other societies have worldviews or paradigms that provide insights that our own does not.

These books are ultimately intended to make a difference in missionary practice. Van Engen, one of the editors of the Kraft *Festschrift*, hopes that "this volume will serve as a textbook in the field" (p. xiv). It is probably more suitable as a reference handbook, as the chapters lend themselves more aptly to provocative rumination than to seminar discussion. Hiebert notes that "if behavioral change was the focus of the mission movement in the

nineteenth century, and changed beliefs its focus in the twentieth century, then transforming worldviews must be its central task in the twenty-first century" (pp. 11-12), although behavior, beliefs, and worldview remain heuristically tangled throughout.

Not surprisingly, given both Kraft and Hiebert's anthropological expertise, culture is central to both books. Alas, the term "culture" is not used consistently. It is employed variously as a synonym for "society," as the beliefs in the minds of people, and as a metaphorical container (e.g., people are described as being "in" a culture). This lack of precision can be found throughout anthropology and is certainly not unique to these books, but it does preclude coherent theologizing about the concept. We will not, for example, be able to think clearly about the relationship between culture and "the world" (e.g., *aionos* in Luke 16:8; *schema* in 1 Cor. 7:31) until we can at least think clearly about culture.

There is, of course, more to anthropology than culture, and the missiological implications of a broader anthropology are left untouched in these books. How, for instance, do taboos that proscribe protein-rich foods for young children affect cognitive development and subsequent understanding of the gospel? Or in what ways has gene-culture coevolution generated what we think of as rocky, shallow, and fertile soils (Matt. 13:4-8)?

While readers familiar with Kraft and Hiebert will find little new material here, those who would like to know more about these two missiological luminaries, or about anthropology in missions, will find these volumes a very good place to begin.

*Reviewed by Alexander H. Bolyanatz, Department of Anthropology, College of DuPage, Glen Ellyn, IL 60137.*



## ENVIRONMENT

**WHERE WE STAND: A Surprising Look at the Real State of Our Planet** by Seymour Garte. New York: AMACOM American Management Association, 2008. xiv + 290 pages, index. Hardcover; \$24.95. ISBN: 9780814409107.

Seymour Garte asserts that public health and environmental quality are in better shape now than how we have been led to believe, and should continue to improve. Garte is professor of environmental and occupational health sciences of the Graduate School of Public Health, University of Pittsburgh, and author of two other books and 180 scientific publications. These improvements occur particularly in democracies where free citizens, exercising their civil rights, get their governments to enforce regulations protecting their health and environment. Garte's hope is that by learning from past successes in these areas, people can make ongoing progress in resolving problems that remain. After a preface explaining its purpose, the book's introduction reviews historical trends and contrasts political beliefs and religious faith with science, which should always be the basis for decisions.

Part I, "Where We Stand Now: Reasons for Optimism," has five chapters. Life expectancy has increased; cancer and AIDS are decreasing, but obesity and emergent diseases (such as drug-resistant tuberculosis) remain

concerns. However, while air and water pollution is decreasing, partly because of more use of alternative energy technology, global warming due to emissions of carbon dioxide still must be confronted. Toxic chemicals are under control. Biodiversity is improving, with species being taken off the endangered list, although deforestation in the Amazon basin needs to be stopped. People's welfare around the globe is improving, as measured by diet, literacy, and other indicators. Rates of population growth are decreasing. Garte is distressed that warfare continues to devastate the poorest countries, but argues that warfare may lessen as democratic cultural values replace ethnic and religious ones. Unfortunately, some of his rising indicators (pp. 126-7) are not sustainable: the number of fish caught in the wild will decline as a result of over-fishing, and irrigated farmland will degrade from exhaustion of aquifers and salinization.

Part II, "Where We Have Been: Historical Lessons," begins with data showing that countries enjoying political freedom have higher levels of human development than dictatorships. Under Communism, Eastern Europe had bad pollution leading to health disorders; today, the region's empowered citizens are correcting these problems. Strong environmental regulations enhance economic performance and corporate success. The third and last chapter in this part closes with four case histories in which a free citizenry has acted to restrict use of certain products: lead, chlorofluorocarbons (CFCs) which deplete stratospheric ozone, tobacco, and genetically modified organisms (GMOs), only the first three being praiseworthy. Garte notes that the scientific-research community, which provides factual information for good decisions, is often in conflict with industry advocates or activists motivated more by faith than by reason. Yet the victories may not be as complete as Garte implies; for example, over 2800 industrial chillers in Canada still use CFCs, only one half of them having been replaced or converted since 1995.

In the single chapter of Part III, "The Way Forward," Garte states that ecosystems—the natural world—are without morality: "evil cannot be found in nature, except for man." He commends a new morality in which we strive for the well-being of our own species, other species to be preserved only because their loss might harm us. Garte is encouraged that nuclear weapons have not been used since 1945, and thus ends the book by stating that people are "the best hope for ourselves and for our planet." The book also includes a nine-page bibliography and an eight-page index.

Garte argues convincingly that the state of our planet "where we stand" is actually improving, in an accessible book of moderate length. Most of the information he provides is in big university texts, such as the one by ASA Fellow Richard T. Wright, *Environmental Science: Toward a Sustainable Future* (9th ed., 2005). More cautious in his optimism than Garte, Wright emphasizes sustainability and the Christian ethic of stewardship. *Where We Stand* is valuable for its facts on progress and needs in public health and the environment, but Garte's human-centered worldview and disdain for faith do not commend it to the Christian reader.

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

# Book Reviews



## ETHICS

**CONCEIVING PARENTHOOD: American Protestantism and the Spirit of Reproduction** by Amy Laura Hall. Grand Rapids, MI: Eerdmans, 2008. 460 pages. Hardcover; \$32.00. ISBN: 9780802839367.

Mark A. Haller in *Eugenics: Hereditarian Attitudes in American Thought* and Daniel Kevles with *In the Name of Eugenics* have traced the sorry story of sterilization that embodied coercive eugenics in North America in the first half of the twentieth century. In *Conceiving Parenthood*, Amy Laura Hall focuses that cultural history specifically on the visuals and sermons produced by mainline Protestants. She has found chilling examples. One is a collection called *Preaching Eugenics* that begins with an award-winning sermon by the rector of St. Mark's Unitarian Church in Minneapolis. The preacher ostensibly expounds on the refining fire of Malachi 3:3, that Christians are to support coercive eugenics in order to free the future from those who handicap the Holy Spirit's Incarnation with their physical disabilities. *Conceiving Parenthood* is replete with visual examples as well as with commentary on what each illustration assumes and conveys.

These documents are not gathered as a mere historical exercise. Hall is concerned that eugenics marketed exaggerated promises for what genes could provide, and excused leaving behind those genetically less able. Hall sees the pattern of ambition and misdirection repeated in the expectations for the atomic age after World War II and even now in expectations for the new genetics. She finds genetics used to justify exclusive attention on the best schools and friends for one's own children to aid their social climb, while ignoring the less successful as unworthy of effort. The problem is their genes. Invest effort where it will bear more fruit. Hall argues to the contrary, that a person should be welcomed and nurtured regardless of potential utility. She does briefly acknowledge that one could seek to prevent children from having disabilities while caring deeply for those who do, but sees these approaches as in tension. Mainline Protestants should "allow their strategically protected and planned lives to become entangled in the needs of families and children judged to be at risk and behind the curve" (p. 250). Her concern extends as well to abortion for Down's and other children differently-abled.

Hall is an associate professor of theological ethics at Duke Divinity School. The book includes eleven pages of acknowledgments that convey a sense of a community of church and scholars working together and centered in North Carolina's Research Triangle. The author is speaking into the lives of her local community that, in many neighborhoods, is pervaded by highly educated parents who press their children to excel. Hall wishes to upturn what she calls "responsible parenthood" for a felt solidarity that deeply entwines the lives of all children and parental care regardless of biological or social start. In the book, she is happy to affirm an interlocutor's comment that "You apparently want to do away with piano lessons." For Hall, children and parents have a higher calling than maximizing the potential of their biological children.

Pursuing her argument, the text tends to read as if there is a univocal conspiracy determining culture. Also, hopes for better uses of technology are generally dismissed as if without warrant. When describing the overreaching of advertising designed to grab attention, or *Life* magazine articles touting possible future uses of nuclear science, there is not even an allusion to use that has turned out to be positive. A recent example comes from the Chalk River nuclear plant, which temporarily suspended its production of medical isotopes. Patients missed lifesaving treatments, causing an international uproar that highlighted how much those nuclear products were appreciated. The use of technology for good or ill is often complex. *Conceiving Parenthood* is about marketing and cultural disposition, not specific policy analysis.

With extensive illustrations and documentation, *Conceiving Parenthood* warns that not long ago there were influential mainline Protestants who were willing to trade the gospel's call to inclusive care for an excluding technological fix. Mark Twain suggested that history does not repeat itself, but it often rhymes. Hall's concern is well taken: the history she describes so vividly should not be repeated or rhymed, especially by Christians called to care for "the least of these."

*Reviewed by James C. Peterson, R. A. Hope Professor of Theology, Ethics, and Worldview, McMaster University Divinity College and Faculty of Health Sciences, Hamilton, ON L8S 4K1.*



## GENERAL SCIENCES

**THE NEW FLATLANDERS: A Seeker's Guide to the Theory of Everything** by Eric Middleton. Philadelphia: Templeton Foundation Press, 2007. 164 pages, including glossary, endnotes, and index. Paperback; \$16.95. ISBN: 9781599471235.

I recently visited L'Abri Fellowship in Switzerland to give a couple of lectures and to discuss various questions with a group of young twenty-somethings. They were intensely concerned with how Christian faith can be rooted and sustained in real life and real learning, and they knew that a modern scientific understanding of the material world was somehow important to this concern. But none were students of natural science; their scientific understanding drew mainly from classroom experiences and cultural stereotypes. I wish I had had a few copies of Eric Middleton's book *The New Flatlanders* to leave with them.

Middleton is a college chaplain with a background in natural science, philosophy, and psychology. He is familiar with the kind of student I am talking about. His book opens with a dramatization of the actual conversation that precipitated his unusual project: four young friends exchange speculations about the ancient stone circle in which they have gathered. Recognizing their inability to resolve the tensions they find between mystical and scientific ways of understanding, they decide to turn to Middleton for help. They meet with him weekly for a semester, sustaining a single conversation in thirteen installments. Each of these meetings is the basis for one of Middleton's chapters, and in each chapter an organizing thread of questions echoes his students' train of thought.

This makes for easy reading that could be taken up within many other group discussions, particularly those animated by the fervency of young “seekers.”

The first three chapters provide a quick overview of big-bang cosmology, quantum mechanics, standard-model particle physics, and string theory. These chapters can be read as a useful but all-too-quick tour of modern physics for the scientifically uninitiated. Their more useful function is to point out the metaphysical indeterminacy at the heart of all scientific understanding. The fourth and fifth chapters serve as a fulcrum in the discussion: here Middleton looks to Plato’s allegory of the cave and Edwin A. Abbott’s *Flatland* novella for analogies that will provide leverage for prying into the metaphysical possibilities that have opened up.

The explicitly Christian message, which first takes shape as the group discusses the *Flatland* story, is filled out in subsequent chapters that are organized around themes including the anthropic principle, evolution, consciousness, the question of other religions, and the problem of evil. The discussions draw frequently, and for the most part winsomely, from the Flatland analogy in order to broker a philosophical deal between different modes of understanding. A well-placed chapter on “Chaos and the Hidden Order” describes the visualization methods and graphing techniques adopted in complexity research. It is surprisingly successful in reinforcing the Flatland analogy, to the extent that Jesus can be compared with a strange attractor without the discussion jumping the tracks of orthodoxy. It refreshed me to see the gospel creatively but faithfully proclaimed in an introductory science-and-religion book.

It is only in the last paragraph of the book that I think Middleton oversteps his bounds, predicting “that taking M-theory seriously is how scientists will investigate all areas at the sharp end of science today. Science and faith will be seen as mutually compatible insights within a multidimensional universe, the new worldview of contemporary science.” That prediction requires a grandiose view of M-theory, for there are lots of sharp ends of science today. Moreover, I remain unconvinced that seeing the mere “mutual compatibility” of science and faith is much of an achievement. A worldview in which science and faith are just compatible insights is the thinnest possible hope that one can draw from the Flatland analogy. Middleton cannot intend this as the final take-home message. The rest of the book has built up and filled out much of the rich and textured message of the Christian gospel; why deflate and flatten that message and conclude with M-theory filling the role of intellectual mediator?

That ending is one of a few minor flaws in the book’s execution, and all of these might be justifiably explained away in terms of the author trying to remain faithful to the trajectory of his group’s actual conversation. One thing that is missing (not entirely, but in large part) is attention to Abbott’s original concern with social-ecclesial commentary. And while the book is an easy read, I wonder whether it is, at times, *too* easy. Do the successive questions really follow one upon another? To what extent has Middleton reconstructed the conversation using rhetorical shortcuts in order to move the discussion along or to avoid difficult technicalities? A related concern involves Middleton’s repetition of stan-

dard scientific phraseology, such as, “In current theory these four [forces] are transmitted by the exchange of messenger particles; for example, electromagnetism is carried by photons.” One wonders whether these descriptions would carry much meaning for dialogue partners like Middleton’s.

A group using the book might benefit from having one or two patient members with expertise in the sciences and possibly philosophy. Their input not only would help with particular knowledge gaps that the book cannot fill, but they also might help clarify some subtler distinctions that Middleton ignores, such as those between complementarity and indeterminacy in the discussion of the Heisenberg uncertainty principle, or those between weak and strong versions of the anthropic principle. But discussion leaders would be wise to match Middleton’s stride at the start of a group journey. His first-pass tour of science introduces key ideas at a level accessible to students like those I met at L’Abri, most of whom had never heard of either the uncertainty or the anthropic principle. If I find myself in such a setting again, I will suggest to my fellow seekers that we read *The New Flatlanders* together, and I will expect us to enjoy some long and rewarding conversations as we do.

*Reviewed by Matthew Walhout, Professor of Physics, Calvin College, Grand Rapids, MI 49546.*



## HEALTH & MEDICINE

**RADICAL GRACE: How Belief in a Benevolent God Benefits Our Health** by J. Harold Ellens. Westport, CT: Praeger Publishers, 2007. 209 pages, appendices. Hardcover; \$49.95. ISBN: 9780313348167.

In 2004, Ellens edited the four-volume set *The Destructive Power of Religion*. In *Radical Grace*, Ellens shifts his focus to the power of religion for optimal human health and flourishing. Ellens argues that psychology and theology are deeply interrelated. To talk about God, we must have an understanding of ourselves; to talk about ourselves, we must have an understanding of God. Human health requires unity in body, mind, and spirit.

In particular, Ellens advocates a holistic, integrated model of people-care based upon a healthy concept of God. For the last 4,000 years, many humans have viewed God as a psychotic being involved in a cosmic battle with another god who threatens to undo God’s work. Sick gods make people sick. The author contends that much of what has been attributed to God can be understood as a projection by people who are scared to death of the unknown and the unpredictable in life. Ellens challenges the Hebrew notion that illness represents God’s chastisement with the story of Job and by the ministry of Jesus.

Ellens believes there is an urgency to identify the psychopathological factors that shape religions to support an attack on the World Trade Center, suicide bombers, and national policies such as preemptive defense. He suggests that radicals are attempting to settle their feelings about being disempowered. In response Ellens contends that “God’s grace is *radical* in that we cannot hide from it or defend against it or sin ourselves out of it” (p. 36). This concept of radical grace may be likened

## Book Reviews

to Carl Rogers's theoretical tenet of unconditional positive regard, the healing dynamic of grace incarnated in humans for each other. For the Greeks visiting the oracle at Delphi, the inscription on the temple portals, "Know thyself," came to mean "Remember your mere humanness and accept it compassionately and joyfully, not despairingly." The predicament of human existence is not our lostness, but our perceived lostness. The prodigal son is the epitome of our human predicament. Our destiny is to accept our status as compatriots in building God's kind of world in human society and culture, rather than attempting to achieve a successful power play to get right with God.

Conceiving of others and ourselves as divine image bearers elevates communication to a theological level because it must take seriously the fact that God is for humankind. As we share our stories with others, we become a part of each others' stories. The ideal case occurs when a healthy God story intertwines with one or both of the human stories. When we are motivated by fear, we become psychologically and spiritually sick. When we are motivated by grace, we grow and become psychologically and spiritually healthy.

Ellens believes that most of us resist the acceptance of God's radical grace because (1) it means we must give up our attempts at self-justification and cast ourselves on the mercy of God and (2) we must give up our attempts to keep others under control through conditional acceptance. Instead, the author advocates embracing our role as God's compatriots in promoting God's kingdom. Sharing acceptance and kindness will enable us to love one another, since feelings follow behavior.

I find Ellens's argument compelling, that the unconditional acceptance of God's unconditional acceptance of us can lead to the affirmation of our real selves and lessen the stress and emotional upset that comes from attempts at self-justification. Although the author advocates a holistic view of human health, including the physical realm, his theology of grace is most directly related to psychological and spiritual well-being. It seems to me that the physical health benefits attributed to religious practice in some studies may be more attributes of healthy behaviors, such as avoidance of tobacco and moderate use of alcohol, a sense of hope for the long-term future, and the gender effect since women are more religiously active than men and women outlive men.

In *Radical Grace*, Ellens builds upon some themes he introduced in *God's Grace and Human Health* (1984). His most recent work should be helpful for those interested in the influence of religious belief and practice on psychological health.

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### HISTORY OF SCIENCE

**SCIENCE AND EMPIRE IN THE ATLANTIC WORLD**  
by James Delbourgo and Nicholas Dew, eds. New York: Routledge, 2008. xiv + 365 pages. Paperback; \$31.95. ISBN: 0415961270.

Interdisciplinary books are not easy reading for most scholars, trained in an academic culture that stresses specialization and in a general culture that defines an "expert" as one who knows more and more about less and less. Hence neither most professional scientists nor most professional clergy know a great deal about the others' field. Throw in another discipline—history of science—and both scientists and theologians have a tendency to throw up their hands and despair of understanding the material, much less seeing its relevance to their own discipline. Even historians of science have their specialties based on scientific discipline, geographic region, or chronological period. So why should anyone read an interdisciplinary history of science book?

The authors who contributed to this book are all seeking to answer the question "How did the sciences shape the Atlantic world, and how did the Atlantic shape the sciences?" (p. 1) The overriding concept of the editors and authors is to see how the sciences spread from the sixteenth to eighteenth centuries from various intellectual and politically powerful centers to the "periphery," i.e., from European capitals to the New World, and how the New World influenced the sciences in those centers. Scientific topics covered include navigation and cartography, metrology, oceanography, medicine, climatology, and botany. Yet each of these topics is dealt with from a perspective that includes some combination of moral philosophy, political and economic influence, historical assumptions about race and climate, and who can be the discoverer or author of knowledge. So, for instance, we learn how the political competition between Spain, England, France, and the Netherlands created a scientific culture that hid findings from "enemies" of a particular country and allowed only its own citizens access to that knowledge. We find out that the New World (especially North America) was initially viewed by Europeans as "a garden, where Fallen man would labor to redeem the sin of tasting forbidden knowledge. Particularly in Puritan New England, spiritual election required the cultivation of land and the soul; agriculture and botany were sacred tasks" (p. 256). We discover some of the "scientific" and "theological" bases for attitudes justifying white superiority (and why "Negroes" and "Indians" should not have access to scientific knowledge). In other words, we see vividly that the growth and spread of scientific knowledge has not been objective, unbiased, and neutral.

And that is one of the reasons we need to read books like this in the history of science. They challenge preconceptions, they force us to look at elements in science and theology that we would normally ignore, and they inform us of assumptions that begin to explain actions and attitudes that we know existed (or exist) but have not known why. For the non-specialist, this book will not be easy reading, and there may be many individuals, places, events, and ideas with which one is not acquainted. But reading it will enhance one's understanding not only of the growth and spread of science, but of the need to move beyond one's disciplinary specialization.

*Reviewed by Sara Miles, Founding Dean Emerita, Esperanza College of Eastern University.*



## MATHEMATICS

**CHRISTIAN AND HUMANIST FOUNDATIONS FOR STATISTICAL INFERENCE: Religious Control of Statistical Paradigms** by Andrew M. Hartley. Eugene, OR: Resource Publications (Wipf and Stock Publishers), 2008. xii + 126 pages. Paperback; \$18.00. ISBN: 9781556355493.

Andrew Hartley poses the question “Does the Christian faith have anything distinctive to say ... about the foundations or practice of statistics as a science?” His answer is a resounding “yes!” and in this book he shows us how. As he does so, he exposes and refutes the dogma that statistics is religiously neutral. If such a claim seems intriguing or even outrageous, then this book is for you.

Hartley maintains that statistics has for the most part been controlled by non-Christian, humanist beliefs. His desire is to see the Christian faith integrated with statistics; hence the descriptive, if not snappy, title of the book. He claims to write for a wide audience, yet the mathematical equations may put off many humanities and arts students. This is a pity; they would benefit from this excellent introduction, as Hartley writes clearly and explains the difficult mathematics well (though there were one or two places I had to read and re-read slowly!).

Hartley begins by looking at four popular paradigms within statistical inference: direct and indirect frequentism, subjective and objective bayesianism. He also cites numerous examples of these from the statistical literature.

He then provides a brief overview of the biblically consistent philosophy of such thinkers as Herman Dooyeweerd and Abraham Kuiper—the so-called philosophy of the law idea (PLI). The PLI demonstrates how religious beliefs control all scientific enterprises: these beliefs delimit ranges of acceptable philosophical overviews of reality, which in turn delimit ranges of acceptable scientific theories. The PLI also proposes an overview of reality, coherent with biblical revelation, which regards the modal aspects (numeric, spatial, kinetic, biotic, sensory, logical, historical, symbolic, social, economic, aesthetic, moral, legal and certitudinal) as mutually irreducible and mutually interconnected.

Hartley then reviews in more depth the PLI’s analysis of one particular religious ground motive, the nature-freedom motive. This ground motive has two main poles or ideals: the nature or science ideal and the freedom or personality ideal. The former emphasizes nature and the latter freedom. He sees how these apply to the statistical paradigms. The nature ideal (over)emphasizes and absolutizes the mathematical aspects of reality; this is seen in direct frequentism and objective bayesianism. These paradigms tend to be the most dominant because, as Hartley states, many statisticians have first placed their trust in mathematicism: reality is reduced to quantitative functioning. The subjectivist approach fits into the personality ideal, and indirect frequentism fits well with this framework. Indirect frequentism absolutizes the role of subjective elements, the individual scientist becomes the “last word concerning the credibility of a hypothesis” (p. 76).

The only statistical paradigm that could provide a Christian basis is then subjectivist bayesianism. This is then examined, in chapter 7, to see how well it does comport with a Christian worldview. Subjective bayesianism makes no claims that scientific hypotheses “must follow solely from quantitative data” and it holds to the “coherence of inter-aspectual meaning” (p. 82). Hartley identifies some apparent conflicts between the PLI and subjective bayesianism but these are not insurmountable. Though he rejects the other three paradigms as being inconsistent with a Christian perspective, he does note that their numeric results could be implemented non-reductively, insofar as these results in some cases “approximate subjective bayesian conclusions” (p. 106).

There is a useful six-page glossary of key statistical terms and Dooyeweerdian terms and an eight-page bibliography. Unfortunately, there is no index.

This brief book is not an easy read; nevertheless it demands and repays careful attention. It should be required reading for all statisticians, mathematicians and scientists as it shows how religious beliefs control statistical inference. It provides an excellent role model for the application of Dooyeweerd’s philosophy to a subject.

This book is not the last word on the relationships between Christianity and statistics—as Hartley notes in his conclusion, where he identifies other areas for reflection and investigation (p. 111)—but it is an important step towards them. It is a pioneering book and will provide the basis for much needed research and discussion.

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



## NATURAL SCIENCES

**THE CELL’S DESIGN: How Chemistry Reveals the Creator’s Artistry** by Fazale Rana. Grand Rapids, MI: Baker Books, 2008. 336 pages. Paperback; \$16.99. ISBN: 9780801068270.

*The Cell’s Design* by Fazale Rana represents a new line of argument for the Intelligent Design hypothesis, a new argument that somehow is as old as William Paley’s watchmaker argument. Rana, vice-president at Reasons to Believe and co-author of *Origins of Life* with Hugh Ross, describes his strategy in the preface:

Instead of arguing for creation by relying on the perceived inability of natural processes to generate life’s chemical systems, this approach frames the support for intelligent design in positive terms by highlighting biochemical features that reflect the Creator’s signature.

Rana uses “Biochemistry as Art” as a consistent metaphor for design throughout this book, beginning most chapters with a famous painting and inventive links to a school of art. Often “Biochemistry as Engineering” is used as a secondary metaphor, with analogies drawn to quality assurance steps in manufacturing and other similar processes.

As a practicing biochemist, I welcome this change in strategy and tone from the increasingly narrow confines of the irreducible complexity argument found in Michael

## Book Reviews

Behe's *Darwin's Black Box* (referred to passingly but approvingly by Rana). The complexity of DNA polymerase III, for example, deserves admiration, as do other complex biochemical processes. Rana carefully explains these biochemical workings for an audience with no prior experience with biochemistry. Unfortunately, while the verbal descriptions are adequate, the cartoons depicting these processes are oversimplified and drab. Standard biochemistry textbooks convey the wondrous complexity of these machines better, although for a different audience, as does the online video "The Inner Life of the Cell." The level at which Rana describes biochemical mechanisms seems chosen to depict proteins as irregular simple shapes, which minimizes their fluidity. This helps the central metaphor of comparing biochemical assemblies to cogs in a watch but makes the proteins seem more "designed" than they are. Most importantly, this depiction of proteins as solid, varied shapes de-emphasizes the fact that all these proteins are polymers of the same twenty amino acids, in every species, on every continent, an unacknowledged universality that allows for adaptation and transformation.

Often Rana's arguments boil down to describing how molecules work and calling it "fine-tuning," when it alternatively could have been simple adaptation to available conditions. Chapters include discussions of minimal genomes, assembly of protein machines, production of protein sequence and structure from DNA, gene structures and organization, membrane structures, and rebuttals to previous claims of poor design. A few strong arguments are mixed in with weaker ones. The speed of the development of the genetic code is indeed astonishing, occurring just about as soon as the earth cooled enough to support life. The finding that DNA replication machinery may have two origins instead of one is also "too wonderful for me" to fully describe. But the argument that this machinery may have evolved twice is too quickly glossed over, as is the counter-argument that out of millions upon millions of organisms, we can reduce DNA polymerases to only two possible ancestors, which really is a small number if so many systems were individually designed.

Chapter 11, on evidence for convergence of biochemical function, is a prime example of the missed opportunities in this book. Several fascinating examples of convergence are listed, but in a list that tells little more than the titles of papers that could be obtained from a perfunctory PubMed search. Stephen Jay Gould's argument that evolution is contingent is recapped and rebutted, but the ideas of Simon Conway Morris, who has made a career out of collecting examples of convergence, are not mentioned. What could be a strong point for the book becomes little more than a laundry list.

To Rana's credit, he does describe some alternate evolutionary explanations, such as in the case of the formation of the genetic code. Most times, however, possible evidences for common descent and divergent evolution are not included. The most complex examples of biochemical machinery are cherry-picked and described in detail, while similar, simpler prokaryotic versions that accomplish the same task are omitted. Much is made of the precise location of a few specific amino acids for protein function, while it is left unsaid that these crucial

amino acids are only 1-2% of the total, and many other amino acids can be changed or deleted without significant loss of function. Overlapping genes are emphasized as evidence of deliberate design, while the fact that these genes are a tiny minority of cases, often at the very ends of genes in genomes under extreme pressure, is downplayed. No mention is made of the endosymbiotic theory for formation of mitochondria, although that event would hold several possibilities for discussing artistry, theology, and the methods of a creator.

I would like to know what specific predictions are made by Rana's model of creation, in which separate species are designed and accumulate only deleterious mutations over time. Why are bacterial and human polymerases so similar if they were created separately? Why are there no designs that are clearly impossible without a Creator, such as a species that uses twenty unique amino acids or a different genetic code? (Surely not every designed species must be optimized identically!) What phylogenetic patterns should be deduced if mutations are only harmful, reducing proteins from an optimized starting point? What old, optimal proteins can you identify, and what stepwise progression downward is observed?

The wonder of biochemistry and what it may reveal about the Creator is indeed a worthy topic, and Rana often tells us how elegant and efficient these protein machines are. But if the Creator chose to form a universe where all life sprang from a single point, and one in which chemical changes could cause life to adapt itself to the world around it over millennia, that by itself does not seem to decrease the wonder of biochemistry, which is the main point of this book. In fact, if the Creator chose to do so through chemistry rather than direct manipulation of atoms, that seems a more elegant and efficient solution than having multiple, directly manipulated starting points. It also would give a book like this more wonders to describe if evolutionary processes could be detailed or at least alluded to. I personally would argue that such processes would be more aesthetically satisfying and would reveal a Creator more worthy of praise.

As a statement of biochemical wonder, this book is a step in the right direction. As scientific discussion, it is decidedly slanted toward a particular model of creation. Evidence of this can also be found by counting the promotional quotes inside the book's cover: most are from ministers, none are from scientists. I hope other scientists will follow Rana's lead and develop more substantial books about the wonder of biochemistry in creation, while remaining open to all possible techniques by which the Divine Artist may have created.

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## PHILOSOPHY & THEOLOGY

**NATURALISM** by Stewart Goetz and Charles Taliaferro. Grand Rapids, MI: Eerdmans, 2008. viii +132 pages, bibliography, index. Paperback; \$16.00. ISBN: 9780802807687.

In *Naturalism* Stewart Goetz and Charles Taliaferro come to grips with the dominant worldview of the contemporary academy, especially in the sciences and in philosophy. They address early on the problem that “naturalism” is not a single view but a large and diverse family of views, united more by what they deny (God, the soul, the supernatural) than by what they affirm. In an effort to impose some order on this chaos, Goetz and Taliaferro distinguish “strict naturalism” from “broad naturalism”; the distinction is inevitably rough and a bit messy, but it serves the purpose. According to strict naturalism, “nature is all that exists and nature itself is whatever will be disclosed by the ideal natural sciences, especially physics” (p. 7). Mental categories such as intelligence, purpose, and consciousness cannot be given any ultimate explanatory role; if they are recognized at all, it is mandatory that they be fully explainable in terms of causes that are neither intelligent, nor purposive, nor conscious. The authors show how radically strict naturalism conflicts with the view of human beings as rational, purposeful, free, and responsible beings—a view that we all take for granted, and cannot help taking for granted, in the conduct of our everyday lives. They criticize effectively and at some length the “argument from causal closure,” a key supporting argument for strict naturalism which contends that every physical event must have a sufficient physical cause. They point out that while a scientist conducting an experiment must assume that the experimental setup is causally closed—that there are not significant external influences that will affect the outcome of the experiment—this neither requires nor justifies the assumption that the physical world as a whole and in all its parts is immune to influence by nonphysical causes.

The authors then move on to broad naturalism, which relaxes the strictures on what counts as natural so as to include in nature consciousness, intelligence, and purposefulness as manifested in human and animal behavior. Broad naturalism still rejects a substantial soul; the authors respond by defending a modified Cartesian dualism according to which the soul, while immaterial, is extended throughout the living body. They present a lengthy defense against the argument from the impossibility of mind-body interaction—probably the most overrated argument in all of philosophy, but requiring attention because it is still often taken as a conclusive refutation of dualism. They go on to demonstrate naturalism’s difficulties in giving an adequate and plausible account of consciousness and values. In their final chapter, “Beyond Naturalism,” they criticize several naturalistic arguments against theism. Interestingly, they give only brief mention to the problem of evil, arguably the most potent and influential anti-theistic argument; probably this is because the complexity of the issues would require a longer treatment than space would permit. In an appendix the authors explain the “argument from reason” against naturalism, an argument familiar to many from C. S. Lewis’s *Miracles* (and often thought, quite erroneously, to have been refuted by Elizabeth Anscombe).<sup>1</sup>

Not all of Goetz and Taliaferro’s arguments will be convincing to everyone; that is hardly to be expected in a philosophical discussion. Some of their omissions, however, seem significant. They discuss at length the objection to mind-body interaction, but there are several

other important objections to Cartesian-type dualism that they leave unmentioned. (For example, Cartesian dualism does not fit at all well with the well-established fact of biological evolution.)<sup>2</sup> In detailing naturalism’s problems in accounting for the mental, they argue against the notion of mind as emergent from the biological organism. They succeed in showing that the mental cannot be emergent in the rather simplistic way proposed by John Searle, but this leaves untouched (and unmentioned) more sophisticated varieties of emergence such as have been advocated by Timothy O’Connor and me.<sup>3</sup>

Notwithstanding these limitations, Goetz and Taliaferro have produced an admirable book, one that can serve an important purpose. They make it clear that the reputation of naturalism far outruns its argumentative support; theists in particular have no reason to be intimidated, or to think that they have to concede major portions of the naturalistic agenda in order to maintain intellectual respectability. The book is philosophically responsible, yet written in a readable and appealing style which should make it accessible to scientists, theologians, and students on a wide variety of levels.

## Notes

<sup>1</sup>For an excellent and accessible discussion of the argument, see Victor Reppert, *C. S. Lewis’s Dangerous Idea: A Defense of the Argument from Reason* (Downers Grove, IL: InterVarsity, 2003).

<sup>2</sup>For this and other objections, see my book *The Emergent Self* (Ithaca, NY: Cornell University Press, 1999), 148–60; also, “On Behalf of Emergent Dualism,” in Joel B. Green and Stuart L. Palmer, eds., *In Search of the Soul: Four Views of the Mind-Body Problem* (Downers Grove, IL: InterVarsity, 2005), 95–9.

<sup>3</sup>See Timothy O’Connor, *Persons and Causes: The Metaphysics of Free Will* (New York: Oxford University Press, 2000), 110–23; also Hasker, *The Emergent Self*, 171–96; and Timothy O’Connor and William Hasker, “On Behalf of Emergent Dualism,” in Green and Palmer, *In Search of the Soul*, 75–83.

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**MAKING THE BEST OF IT: Following Christ in the Real World** by John G. Stackhouse, Jr. New York: Oxford University Press, 2008. 370 pages, index. Hardcover; \$27.95. ISBN: 9780195173581.

This book would be a fine gift for that sister or brother in the faith who looks with a jaundiced eye at any fellow Christian who has not yet discovered the one right approach all Christians should always follow in engaging contemporary culture. John G. Stackhouse Jr. argues that our judgment is too limited and our culture is too multi-faceted to settle on one approach. To explore the intersection of faith and culture, he uses the dialogic style of one of his champions, Reinhold Niebuhr, stating perspectives incisively with persuasive force, only then to make the opposite case compelling as well. Stackhouse frequently does not resolve the resulting paradox, but rather advocates that the kingdom might be best witnessed and furthered by some Christians holding one view and some another, so that each is tempered by awareness of the other and together the gospel has a more complete witness in the world.

Stackhouse may have readers who are already aware of our finite and fallen state, for whom one paradox upon



## Book Reviews

another could become enervating. If whatever one does is so mixed in its intent and effect, why do anything at all? Stackhouse advocates that we should still act out of faithfulness. As mixed as our results will be for now, we are to make the best of it. He devotes chapters to the integrated life and thought of both C. S. Lewis and Dietrich Bonhoeffer as exemplary in this regard.

To think through the mix of possible relations between following Christ and living in our contemporary context, Stackhouse uses H. Richard Niebuhr's classic typology of five different ways Christ can be related to culture. "Christ of Culture" and "Christ above Culture" are quickly dismissed as rarely relevant. Usually the distance is too great between Christianity and contemporary cultures for either of these to apply. Stackhouse focuses instead on critiquing the "Christ against Culture" model championed by Yoder and Hauerwas, although characteristically he is quick to acknowledge that there have been times and places such as in Nazi Germany when following Christ was diametrically opposed to most of the dominant culture.

He also argues against the "Christ transformer of Culture" model that is rooted in the Reformed tradition. Stackhouse describes an extreme version of the transformation view to differentiate it from his own perspective that he labels as a hybrid between "Christ transformer of Culture" and "Christ and Culture in paradox." It seems to this reader that his arguments are closest to a nuanced view of the Christ transforming culture perspective. By God's grace and call, we work toward the kingdom in every endeavor, including the arts, government, and politics, but realize that the kingdom will not be fully instituted until Christ establishes it in the new world to come.

Stackhouse is one of the most prolific and informed Christian writers in theological ethics today. The text is clear and insightful, while the extensive footnotes are not to be missed. There are many interesting comments, connections, and moves there. Granted, a bibliography would have saved extended hunts for the full citation of numerous abbreviated references. *Making the Best of It* is an erudite and timely addition to an important conversation. Recommended.

*Reviewed by James C. Peterson, R. A. Hope Professor of Theology, Ethics, and Worldview, McMaster University Divinity College and Faculty of Health Sciences, Hamilton, ON L8S 4K1.*

**CAN THESE BONES LIVE? A Catholic Baptist Engagement with Ecclesiology, Hermeneutics, and Social Theory** by Barry Harvey. Grand Rapids, MI: Brazos, 2008. 303 pages, index. Paperback; \$24.99. ISBN: 9781587430817.

Barry Harvey makes the provocative proposal that the contemporary Western church increasingly resembles a scattered collection of dusty skeletons. These lifeless bones are the remains of a once vibrant and transformative church, now paralyzed by compromise, privatization, self-interest, and corruption. But hope is not lost. Harvey proclaims, along with the prophet Ezekiel, that by the grace of God in Christ and by the life-giving breath and power of the Holy Spirit these bones can live again. Through allegiance to God's in-breaking kingdom and by

rethinking its own constitutive practices, the church can recapture its true identity and mission as a pilgrim people en route to the already, but not-yet, City of God.

Harvey argues that the church is where Christ takes form concretely in the world. By the church's distinctive practices and language, it bears witness to the reality of God in its worship, teaching, witness, and work. From Barry's perspective, the church's present lifeless state has resulted from several factors, including the rise and fall of Christendom, the emergence of the modern state, the invention of "religion" as a set of private, internal beliefs, and the impact of consumerism. The upshot of all this is a tragic shift in the church's identity and mission that has compromised its prophetic message. Instead of being an alternative community of disciples, bound intimately to God and to one another by the Spirit and in loyalty to God's in-breaking kingdom, the Western church has generally become a collection of individual consumers with shared, but private, beliefs who gather together to consume religious goods and services.

Harvey narrates and analyses this deterioration in Part One of the book. In Part Two, he asks how the church might by God's grace be resuscitated by the Holy Spirit to be Christ's living earthly-historical body. Harvey proposes that a renewed devotion to four constitutive practices in particular is crucial in this regard. These are scriptural reasoning, doctrine, sacraments, and spiritual formation, each of which Harvey rethinks and reformulates in order to help the church be faithful to its true identity and calling.

Harvey describes scriptural reasoning as Bible reading that engages our imagination and intellect to direct our steps toward God's future. He rejects interpretive approaches that attempt to isolate abstract and universal meanings (Hodge's "facts" or Scheiermacher's "experience") from concrete life and practice in a typically modern "kernel and shell" fashion. In contrast, Harvey emphasizes the performative and dramatic dimensions of scriptural reasoning, in line with similar proposals by Kevin Vanhoozer, N. T. Wright, Francesca Aran Murphy, and Samuel Wells. Doctrine, the second practice, engages contemporary thought and scholarship to wrestle with questions about God, Christ, and the world that cannot be resolved strictly within the scope of biblical imagery and narration. Third, the sacramental practices of baptism and the Eucharist draw us to participate liturgically in God's mysterious and transformative presence and action in the world. These sacraments "take isolated producer-consumers and produce martyrs, witnesses to the apocalyptic activity of God in Christ" (p. 228). Finally, spiritual formation is crucial for sustaining the church's identity and mission as an alternative society. Authentic spiritual formation includes what Harvey calls "unselfing," a process in which our identities as disembodied consumers and faceless producers (formed by state and market) are unmade and then remade as members of Christ's body through Christian narrative, virtues, and practices.

Harvey's cultural critique is penetrating and his suggestions for moving forward are insightful and practical. Enriched by the thought of several key ecclesial and cultural thinkers, such as Dietrich Bonhoeffer, James McClendon, Rowan Williams, and to a lesser extent Alasdair MacIntyre, John Milbank, and Stanley

Hauerwas, Harvey produces a well-informed and thought-provoking diagnosis of where the Western church stands today. Moreover, he provides a helpful contribution to the ongoing discussion of what it means for the church to be *the church* in our contemporary, post-Christendom context. I commend this book to all thoughtful Christians that are interested in the intersection of church and culture.

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**A UNIVERSITY FOR THE PEOPLE: A History of the Institute for Christian Studies** by Robert E. Vander Vennen. Sioux Center, IA: Dordt College Press, 2008. 273 pages. Paperback; \$18.00. ISBN: 9780932914750.

The Institute for Christian Studies (ICS) in Toronto, Canada, is unique on the North American educational scene: a graduate school without organizational ties to an undergraduate institution. From the day it opened its doors in 1967, ICS has critically employed the unique philosophical theories of the Dutch philosopher, Herman Dooyeweerd. For Dooyeweerd, philosophy is not rooted in the autonomy of rational thought, but rather is based on world-views, particularly as they relate to our everyday experience and faith commitments. From this starting point, he developed his ideas about levels of being and the creational laws that hold for them, about societal structures and their distinctive tasks, and about the ground motives that have shaped Western thought.

The charter faculty members brought this central vision to bear on their individual disciplines and research programs. Thus, ICS has been a distinctive and valuable voice on the North American educational scene, not only in the courses offered, but also in the books and lectures its faculty produced, and in a number of other ancillary activities. Although ICS was started by the post-war Dutch, reformed, immigrant community, its students have come from all over North America and, indeed, the rest of the world.

Robert E. VanderVennen has been associated with ICS almost from its inception in a variety of administrative positions. He describes ICS in its troubles and its triumphs, its quarrels and achievements, its early chaos and present organization. The initial ups and downs were caused as much by the countercultural influences of the day and the inexperience of its young faculty as by the financial limitations of its supporting constituency. Early struggles of the ICS focused on gaining a legitimate place in the world of post-secondary education, by affiliation with an existing university or by an Ontario government charter. Eventually the provincial government passed legislation that gave the ICS the right to confer masters and PhD degrees. This has allowed the Institute to have an even greater shaping influence through its graduates who teach in Christian and secular institutions of higher learning across the globe.

VanderVennen's book gives detailed accounts of the various aspects of the history of ICS. There are portions of the book that will only be appealing to a certain audience, but its detail also serves to document the history of a unique educational voice. It is regrettable, but important

to note for the readers of this journal, that ICS has not extended its range of activities into the area of philosophy of science and the religion-science interface.

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**BEYOND THE FIRMAMENT: Understanding Science and the Theology of Creation** by Gordon J. Glover. Chesapeake, VA: Watertree Press, 2007. 228 pages. Paperback; \$16.00. ISBN: 9780978718619.

*Beyond the Firmament* is written by an evangelical Christian layperson (Gordon Glover is a former Navy diver) for evangelical Christian laypersons. It is neither theologically nor scientifically academic in tone—although, to give Glover credit, he has read and referenced a number of serious theological texts. Glover's purpose is to persuade his fellow evangelicals to abandon "creation science," particularly young earth creationism, while maintaining fidelity to biblical authority. This is not a particularly new endeavor, but Glover shares his readers' commitment to biblical infallibility and, unlike more academic texts that may be inaccessible to the average evangelical, here Glover employs popular language.

The book is divided into four parts. Part I is titled "What Do We Know and How Do We Know It?" and consists of a discussion of the epistemologies of revelation and reason. This chapter reminded me of a church sign that asked, "Are there sources of truth other than the Bible?" It is a striking question in a culture that increasingly wonders whether there is truth to be found anywhere and that seldom looks to Scripture as one of those sources. Glover and his readers, however, are firmly committed to the primacy of revelation as humanity's source for knowledge of God. Glover uses the traditional theological distinction between general and special revelation to persuade his readers that God has also revealed knowledge through reason and through observation of the natural world.

Part II asks, "What can the Bible tell us about nature?" Here Glover introduces his readers to the hermeneutical principle of accommodation, that God has accommodated himself to the language and worldview of the original recipients of his revelation. Long utilized in higher criticism, which is, of course, anathema to most of Glover's evangelical readers, accommodationism is here employed to assert that the creation story is clothed in the language of myth in order to be understandable to its ancient hearers, and thus should not be interpreted as scientific truth:

So if God can limit His very nature by entering time and space in the person of Jesus Christ, shedding His own eternal and infinite attributes and voluntarily submitting Himself to His own creation, even to the point of death on a cross, certainly He has the artistic license to make sure of the foolishness of popular mythology in order to contextualize the creation account so that the original non-scientific audience could receive it (p. 78).

Having invited his readers to abandon the mythology of the creation narrative in favor of truth gained through "general revelation," he then asks in Part III, "What can nature teach

## Book Reviews

us about itself?" Here he introduces geological and biological arguments in favor of a long evolutionary process, stopping frequently to counter arguments raised by the young-earth creationists (which he calls the "YEC" crowd). He is particularly persuasive in demonstrating the inconsistencies in their projections for the age of the earth and chastises them for their arrogance:

I can honestly say that I see more humility when I read secular scientific literature than when I read YEC literature and it's embarrassing ... Will scientists ever take seriously our claims about the person and the work of Jesus Christ if some of us keep pushing these questionable scientific theories through the back door? (p. 136).

Part IV asks, "What about evolution?" Assuming his readers will accept that the creation story is largely myth, that the natural world can reveal God's truth, and that the cosmos is much older than the YEC folks have been willing to admit, Glover suggests that the theory of evolution is neither unbiblical nor untrue, but is a means that God has used to bring the world we know into being. This is the classic "theistic evolution" stance. By an interesting sleight of hand, he argues that the theory of evolution is more consistent with Intelligent Design (ID) than young-earth creationism:

... All this evidence for common descent shows us that Intelligent Design theories make more sense if the actual mechanism of creation is material. Having each species appear "out of thin air" with a "built-in" evolutionary history that never actually happened only makes God a *deceptive designer* (Italics his, p. 207).

So what should readers of this journal do with Glover? First, read other books. This one is not for you. Second, order several copies of this book and give them away to those who are still struggling with these issues. Glover has done us a favor by boldly making an argument to those least willing to hear it and doing so with their own language and from within their own worldview. For that, I both commend and recommend him.

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### RELIGION & BIBLICAL STUDIES

**REWired: Exploring Religious Conversion** by Paul N. Markham. Eugene, OR: Pickwick Publications, 2007. xii + 244 pages. Paperback; \$28.00. ISBN: 9781556352942.

Dallas Willard calls it *The Great Omission*. Ronald J. Sider thinks it *The Scandal of the Evangelical Conscience*. Dietrich Bonhoeffer once gave it the name "cheap grace." Each sees a devastating gap in popular Christian culture between profession of faith and serious discipleship. In *Rewired*, Paul N. Markham raises this concern specifically for American evangelicalism. Markham charges the latter with having an incomplete view of Christian spirituality, one that is excessively inward-oriented, individualistic, and detached from broader societal concerns. As a result of that truncated spirituality, evangelicals tend to read the Bible through an individualistic and spiritualized lens.

They treat the Kingdom of God as a sub-category of personal salvation, so that the church is merely a contractual association of independent individuals.

Markham identifies two contributing factors to this discouraging state of affairs. The first is a tendency to dichotomize outward and inward spirituality, often resulting from a commitment to body-soul dualism. Such an orientation leads many evangelicals to focus on individual spiritual fulfillment while neglecting the public and communal dimensions of Christian faith. Their goal becomes saving souls, while corporeal aspects are seen as peripheral or secondary. In contrast to both body-soul dualism (whether in Platonic, Augustinian, or Cartesian forms) and the opposite extreme of reductive naturalism (in which all of human existence is explained purely in biological terms), Markham proposes as a third alternative a "nonreductive physicalist" view of human nature and existence. Building upon the theological work of Nancey Murphy and the latest research in neuroscience, this view proposes that the human person is a physical being. However, the human form is sufficiently complex as to allow for the emergence of capacities such as morality and spirituality. Notably, such dimensions are capable of emerging without requiring the existence of an immaterial, ontological entity such as a soul or spirit. Markham avoids falling into reductive materialism by appealing to the inter-relating phenomena of supervenience, emergence, and top-down causation.

The second contributing factor is crisis conversion spirituality, a popular view in American evangelicalism (intensified through some versions of the holiness movement) that sees conversion as something simple and instantaneous. It concerns a change in one's personal beliefs, which can be (but is not necessarily) worked out subsequently in one's actions and behavior. In contrast, Markham envisions conversion as a process leading to a holistic, socio-moral transformation that encompasses all of one's life—one's attitudes and actions, beliefs and behaviors, personal spirituality and public engagement.

Markham calls upon two broad resources to support his case. First, he combines his nonreductive physicalism with insights from virtue ethicists (notably A. MacIntyre and S. Hauerwas) to argue that conversion is a process-oriented phenomenon of character reformation. He discusses character as an emergent property of the brain's self-organizing activity, which is shaped through goal-directed practice. Such character-shaping practice "involves purposeful repetition commensurate with the reorganization of frontal lobe systems active in planning, motor command and execution" (p. 152). In other words, consistent practice creates habits of perception and action that are embodied in the brain. Virtue involves rewiring.

Second, he invokes the Wesleyan tradition to construct a progressive and holistic theological portrait of conversion (Markham explicitly equates his understanding of conversion to Wesley's doctrine of sanctification). Wesley's doctrine of salvation is holistic in that it addresses spiritual, socioeconomic, and cosmic dimensions of the human condition simultaneously. By cosmic, Markham is referring to the ultimate sources of good and evil as addressed in the *Christus Victor* description of the atonement. Moreover, Wesley's doctrine of salvation is process-oriented in its explication of grace as being

prevenient, justifying, and sanctifying and in its emphasis on growing into perfection in love. Salvation involves the cultivation of holy tempers, which are virtuous or holy affections that have been habituated through practice in community. Accordingly, Wesley prefers to speak of salvation as a multifaceted and nonlinear “way,” rather than attempting to work out its successive steps by means of a traditional order. Ultimately, for Wesley, salvation is about being renewed in the image of God, which he defines as a capacity for relationship with and imitation of God rather than an inherent human possession. It involves being healed and delivered from the penalty, plague, and presence of sin.

A complex and carefully argued book, it is no wonder that Pickwick Publications (an imprint of Wipf and Stock) included the present volume in its *Distinguished Dissertations in Christian Theology* series. Markham’s research is extensive and his engagement in interdisciplinary dialogue is impressive. Moreover, his skill in summarizing and condensing complex ideas and data makes his writing relevant and accessible both to specialists and lay readers. Those with only a basic knowledge of the biological sciences will find his chapter on nonreductive physicalism challenging but well worth the effort. Theologians will likely wonder about the implications of nonreductive physicalism for doctrines like Christology (particularly Christ’s two natures) and eschatology (is there an intermediate state after death?), which Markham does not address. Unfortunately, Markham has a tendency to portray evangelicalism somewhat simplistically as a uniform entity (dialogue with theologians such as K. Vanhoozer, C. Pinnock, or M. Volf would be fruitful here). This also prompts the question: why the one-sided focus on evangelicals? While he criticizes dualist evangelicals for prioritizing the inner life over social engagement, he does not explicitly criticize dualists who reverse the trend and reduce the gospel to mere social activism. What about faith groups that implicitly or explicitly adhere to reductive materialism? He directs his critique only at one side. Nevertheless, Markham’s case for understanding conversion as a process of holistic socio-moral transformation of the whole person is compelling.

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**NEW EVIDENCE FOR TWO HUMAN ORIGINS: Discoveries That Reconcile the Bible and Science** by Gary T. Mayer. Bloomington, IN: AuthorHouse, 2007. 482 pages. Paperback; \$22.00. ISBN: 9781425973223.

Mayer attempts to do two things in this book. He tries to convince readers that at least some of the descendants of Adam and Eve had offspring by some other type of being, and that it is possible to reconcile what Genesis says about creation with modern scientific evidence, for example, evidence that the earth is very old.

The publisher’s name suggests that the book was more or less self-published. Mayer could have used some help since the book cries out for some serious editing. There are too many usage errors. The first part, especially, needed either some critical peer review or better evidential support. The book could have used a lot of qualifying ifs or maybes, but they are almost entirely absent.

Genesis 6:1–5 may mean that some of Adam and Eve’s offspring married some other type of being. Mayer claims that it does based on his training in the original languages (I have no such training). There are some who agree. For example, *The NIV Study Bible*, 10th ed. (Grand Rapids, MI, 1995) has a note on this passage indicating that some scholars believe that the passage refers to cohabitation between angels and humans or that it refers to those who followed God, namely offspring of Cain, but married those who were not. There is even the suggestion that it may mean that some men set themselves up as rulers and took harems. Mayer holds that the original language supports the idea that the other type of being was human which was already present when Adam and Eve were created. If other experts agree with him, my limited research did not find any of them. He does address one old commentary that dismisses his theory, but no one else seems to support it.

Mayer then spends about seventy pages presenting what he believes is evidence. This “evidence” comes from the life spans given in Genesis. He claims that the decline in life span given is because of intermarriage. There are a number of serious problems with this claim. The first, of course, is the assumption that there were two types of beings. Although we do not know how long the “pre-Adamites” lived, Mayer states that “archeologists inform us that there are no prehistoric men that have been discovered who have shown a life span of over fifty years” (p. 21). Averaging this figure with the seventy years mentioned in Psalm 90:10, Mayer chooses a life span of sixty years for the “pre-Adamites.” Mayer further holds, based on no evidence, that most of the characters of early Genesis married “pre-Adamites,” or people who were partly descended from them. He goes on to calculate predicted life spans, based on the number of “pre-Adamite” and, to coin a word, “Adamite” ancestors. To hold this, he must assume that life span is simply inherited — one’s life span is the average of the life span of your parents, which is questionable. Mayer then calculates predicted ages, to two decimal places for Genesis individuals. For example, Noah’s wife is given as 277.25 years (p. 66 — Mayer does not seem to know about significant figures). He compares these ages to the life spans given in Genesis, where those are available. Then he uses his calculations to “explain” the shortening life spans. The more “pre-Adamite” ancestors a patriarch had, the shorter was his life.

Mayer finds remarkable agreement between his calculations and his predictions. But that is not surprising, since he can decide how many “pre-Adamites” he needs as ancestors without any scriptural support. There are, as I say, too many assumptions in his work. What if (assuming there were such beings, and that life spans were inherited as Mayer thinks they were) the pre-Adamite’s life span was not sixty, but thirty? Or eighty, not sixty? I do not think it is worth my time, or yours, to do the mathematical calculations. Mayer holds that his ideas explain the decline in life span shown in Genesis. Other, less tortured explanations are certainly possible.

The second part of the book is well-intentioned, but has been treated far better by other writers. To cite just two weaknesses, Mayer is not aware of the numerous scientific criticisms of Michael Behe’s *Darwin’s Black Box*, and he is woefully weak on some scientific points: “Chro-

# Book Reviews

mosomes are connected laterally to each other to form a double helix" (p. 193). Ouch!

There are a lot of references, charts, appendices, and tables, which are mostly well done, and there is an adequate index, but I cannot recommend this book to anyone.

*Reviewed by Martin LaBar, emeritus, Southern Wesleyan University, Central, SC 29630.*



## SCIENCE EDUCATION

**SCIENCE FOR SALE: The Perils, Rewards, and Delusions of Campus Capitalism** by Daniel S. Greenberg. Chicago: University of Chicago Press, 2007. 285 pages, appendix, index. Hardcover; \$25.00. ISBN: 0226306259.

Daniel S. Greenberg is a seasoned science journalist who has been reporting on research and industrial science for over forty years. In *Science for Sale*, Greenberg explores the web of relationships among the academic sciences, private industry, and government.

A primary strength of Greenberg's approach to this question is his journalist's ability to tell colorful stories, often based on personal interviews with key players, which elucidate both individual personalities and big questions. For example, Greenberg has Drummond Rennie, an activist and editor of prestigious medical journals, explain a key problem in scientific publishing: "What we're talking about ... is the influence of money on research that my journal and other journals publish. The distorting influence of it. And this distorting influence is huge." This sort of first-hand testimony—and there is much of it in this book—is a powerful indictment of the supposed Mertonian neutrality of academic-industrial-government science.

The primary strength of Greenberg's book, alas, is also a major weakness. Very often, the book reads like a string of tedious, unending anecdotes and quotations lacking a cohesive vision for reform—which is a fair description of the book as a whole. In a very brief concluding section on "Fixing the System," Greenberg suggests "transparency" is the key to reform, but he never explains what this might mean. In a major omission, he does not examine at all whether "open access" publishing models might help push things toward greater transparency. Moreover, his dismissal of the Bayh-Dole Act and other legal developments that have encouraged universities to privatize their research through patent protection is so cursory that it flies by almost unnoticed. Yet the tension between "open" and "property" models of scientific research surely is both a driver and a symptom of the problems Greenberg exposes in his anecdotes and interviews.

On the whole, *Science for Sale* contains some useful source material for those who are interested in the sociology and business of institutional science in an age of money. It also will open the eyes of those who naively assert the neutrality of the scientific establishment. It does not, however, provide any meaningful proposals for reform.

*Reviewed by David W. Opderbeck, Associate Professor of Law, Seton Hall University Law School, Gibbons Institute of Law, Science and Technology, Midland Park, NJ 07432.*



## SOCIAL SCIENCE

**OUT OF POVERTY: What Works When Traditional Approaches Fail** by Paul Polak. San Francisco, CA: Berrett-Koehler Publishers, 2008. 232 pages, index. Hardcover; \$27.95. ISBN: 9781576754498.

Paul Polak is an optimistic man with an audacious goal. He writes about his purpose:

I wrote this book to create a revolution in how we think about poverty and what we can do about it. That revolution begins with you.

Many people who work on poverty issues write with a tone that indicates how desperate the situation is, and how we have a duty to work hard at this very difficult task. Polak's writing (and speaking) has a very different tone. Throughout the entire book is a sense of excitement, bordering on joy, about the exciting opportunities we have in working to help poor people. In the preface, he makes his position clear.

I hate books about poverty that make you feel guilty, as well as dry, academic ones that put you to sleep. Working to alleviate poverty is a lively, exciting field capable of generating new hope and inspiration, not feelings of gloom and doom.

The organization that Polak started in 1981, International Development Enterprises, has helped millions of people escape from extreme poverty to much better lives.

This book is not written from an explicitly Christian perspective, but it is Christian friendly. The actions he recommends are things anyone (Christian or not) can do to help make a difference. As a way to explain his perspectives, he follows the path of one poor Nepal farming family, that of Krishna Bahadur, who went from making about \$1 per day growing rice to a net income of over \$4,000 per year, which put him within the Nepalese middle class. Polak describes ways in which westerners can help rural people in developing countries escape extreme poverty. It is not in the way many of us might think. He writes that we cannot donate people out of poverty, nor can we reach the rural poor by helping the overall economy of a country grow. Steps must be taken to help the rural poor where they live.

Polak's perspective is that top-down governmental or foreign aid programs almost never work. What works is a bottom-up approach that deals with individuals. He sees market-based approaches as offering the only long-term solution. With some training and very cheap products, such as the human-powered Treadle pump and a drip irrigation system, farmers like the Bahadurs can begin to grow labor-intensive cash crops that will bring them much more money than they could ever obtain by growing subsistence foods.

Polak makes the point that most engineers design products for the richest 10% of the world. He encourages us to design for the other 90%. Profit margins may be smaller, but the markets are so large, that substantial profits can still be made. The Treadle pump is an example. These pumps are simple enough that they can be made by small manufacturers. In Bangladesh and Kenya, there are hundreds of small companies making them

(generating income for additional poor people). It is estimated that this one invention alone has improved village economies around the world by over \$600 million per year, lifting millions of people out of extreme poverty.

Polak describes methods that work to help alleviate extreme poverty. He includes recommendations of how individual engineers and scientists can become involved. Anyone in the sciences/engineering who is serious about working on poverty issues should read this book.

*Reviewed by William Jordan, Professor of Mechanical Engineering, Baylor University, Waco, TX 76706.*

**THE FUNDING OF SCIENTIFIC RACISM: Wickliffe Draper and the Pioneer Fund** by William H. Tucker. Urbana, IL: University of Illinois Press, 2007. 304 pages, index. Paperback; \$20.00. ISBN: 9780252074639.

William Tucker has written extensively on racism. He is a professor of psychology at Rutgers University, and this book is the result of many years of research. It includes a Table of Contents, a useful list of archival materials consulted, comprehensive notes by chapter, and an index. Tucker states that his concern is with the improper use of social science to support oppressive policies, especially those relating to race. In this book, Tucker demonstrates his concern that racism has been a significant ongoing problem in America.

This volume is about Wickliffe Preston Draper who belonged to a southern aristocratic family that took pride in its background of wealth, privilege, and power. He attended Harvard University and was accepted as an educated millionaire and philanthropist—at least by those who agreed with his aims. Draper wanted to do something practical in life, but through his vast wealth, he eventually perpetuated a legacy of hate. He is remembered as a vehement racist and an ardent anti-Civil Rights advocate. William McDougal of Harvard University, Draper's *alma mater*, declared that blacks and non-Nordic immigrants were a biological threat to the American white civilization. It is not surprising that matters relating to segregation became Draper's mission.

Draper initiated two major projects: the publishing of the *Mankind Quarterly*, and then, in 1937, the setting up of the Pioneer Fund. The former provided an outlet for the publishing and distributing of racist and fascist materials, and the latter permitted the channeling of monies necessary for a variety of ventures that harmonized with Draper's ideas. His intention was to prove that blacks were intellectually inferior to whites, justifying their repatriation to Africa. This would preserve white racial purity in the homeland. However, the details of his financial support for all these projects, especially for Fund grantees, and the ultimate source of these monies, were carefully kept in the background.

Sometime in the mid-1930s, Draper met Ernest Sevier Cox and they became close friends. Together they lobbied many in powerful positions of State in order to guide policies that included the support for eugenics and the publishing of warnings about miscegenation. In their view, if racial purity were to be achieved, then, amongst other measures, Jews must be barred from entry into

America. The activities of Draper's group encouraged the State Legislatures to enact measures supporting the compulsory sterilization of 75,000 individuals who should not be allowed to breed. Tucker outlines how neo-Nazis were inevitably attracted to Draper's activities. These racists maintained communication with the Third Reich through contacts with Professor Hans Gunther and Eugene Fischer, power brokers who were formulating the Nazi racial policies. Hitler used the Draper-inspired American Eugenics Model as the basis for the Nuremberg Laws, relying on the expertise already available to him in the United States.

The US Supreme Court was pointing the way toward a desegregated future in America. Opposed to this aim were the efforts of the racists who hoped to prove that blacks and other minorities were intellectually and racially inferior to whites. If successful, then Draper and his coterie would be able to demonstrate to Americans the immediate need to preserve white purity in order to ensure their own ongoing supremacy in the nation. This goal could be achieved by effectively opposing the threat from blacks and undesirable immigrants, especially the Jews, and countering the leveling effect of equality of status of the races.

Tucker then elaborates on the activities of other racists who were Draper's associates. Draper contributed \$3.5 million to those "scientists" whose work was acknowledged by the authors of *The Bell Curve*, a book with a possibly disguised political agenda. They included some with pro-Nazi affiliations who were also contributors to the *Mankind Quarterly*. Psychologist Arthur Jensen of Berkeley, a Stanford physicist, implied that blacks might be genetically less intelligent than whites; Jensen was obsessed with the presumed racial differences in intelligence. He received over \$1 million toward his studies as a grantee of Pioneer. His contributions to different Nazi publications were numerous. It was implied that if a Negro was intelligent then he or she had a white ancestor. Nobel laureate William Shockley encouraged involuntary sterilization measures, based on the observation that the least-capable persons in the community were producing the largest numbers of offspring. Although he did no research, he was rewarded financially by Pioneer for many years. Carleton Putman, an influential advocate of racism, opposed the right to education or any other form of equality for blacks. In 1961 he wrote *Race and Reason*, Draper paying for the publishing and distributing of 60,000 copies of the book. W. C. George wrote *The Biology of the Race Problem* and over 45,000 copies were paid for and distributed to selected recipients by Draper. The mailing of vast amounts of literature from Pioneer continued.

The "Draper Clique" believed that the Jews from Germany were responsible for creating problems by supporting equality for blacks. Blacks were held to be victims of their own biology, whereas the mulattos showed the ambition of the whites, but the inadequacy of the blacks. Pioneer pursued its immediate goal, attempting to prove scientifically the intellectual inferiority of blacks, because then its battle would be won. It had long been assumed that the genetic limitations of black children meant the necessity to link corrective programs with eugenics and sterilization that had already been initiated by law in

## Book Reviews

many states decades earlier, and applied to those judged socially and genetically inadequate.

In 1956 Draper chose Harry F. Weyher to head the Pioneer Fund and act as money-launderer for Draper. At this time, the basic premise was that the minorities were not like whites and never would be. As the underlying aim was domination of the world by whites, aid given to the underprivileged elsewhere was seen as defeating the racists' aims. It was held by them that although integration seemed to offer no benefits to blacks because of their genetic shortcomings, it handicapped the white students in classes with them. Weyher continued to hold power after Draper's death, exerting financial pressure to oppose integration and to support the repatriation of blacks to their homeland although ultimately accepting the fact that the Jews were in America to stay. It was noted with approval that Germany was now free of Jewish financial domination. America's problems were still seen by the racists to stem from the presence of inassimilable minorities, now comprising 30% of the population. Pioneer still hoped to use science to oppose racial equality.

In 1979 Bouchard, a physicist, was granted large sums of money from Pioneer to carry out his ill-conceived twin study. The Nordic peoples were held to be a superior race. It was feared that integration, possibly having a leveling effect on the nation, was also allowing the emergence of Jewish ascendancy. But these nonwhites would never become real Americans so "universal mongrelization" must be stopped.

Pearson, a British-born anti-Semite, came to America. He played a significant role in the aggressive distribution of literature. He initiated a monthly publication, the *Northlander*, a vehicle for the post-World War II continuation of Nazi racial theories. He sought to establish genetically approved hierarchies that would control the inferior members of society by denying them equality of status. He attempted to form an International Nazi Organization, advocating sentiments enshrined in the Nuremberg Laws of the Third Reich. Pearson had contact with the aristocratic "Cliveden" set in the United Kingdom who seemed to have aligned themselves with Hitler's policies. During the following three decades, Pearson, a neo-Nazi, was a Pioneer grantee, although he was not engaged in research. In December 1999, *Race, Evolution and Behavior* was distributed to selected individuals.

Tucker documents the uniformity of the racist alignment in the United States, Europe, and the United Kingdom. Pioneer was eventually censured, but Weyher's defense, though accurate, was misleading because Pioneer's intention had always been to oppose equality of the blacks and this policy persisted to the close of the twentieth century. The dust cover points out that this book is a plausible account of a socially dark and intellectually perverse fragment of American conservatism. Since publication, a Nobel laureate expressed his belief that blacks were intellectually inferior to whites; Mavis Staples, still singing freedom songs, says, in 2008, that the fight for equal rights still goes on today.

Tucker has achieved his task, carefully and truthfully outlining the scourge of racism. He demonstrates that

Draper's objective, the preservation of white racial purity and therefore supremacy against the threat posed by blacks and undesirable immigrants, especially Jews, was not achieved. The author, in providing a factual, contemporary assessment of racism in America, would suggest that his topic is of concern to all Americans. I highly recommend this book. It deserves a place in libraries and could be used effectively in discussion groups in churches and universities.

*Reviewed by Ken Mickleson, 105 St Andrews Road, Epsom, 1023, Auckland, New Zealand.*



## TECHNOLOGY

**BIOTECHNOLOGY AND THE HUMAN GOOD** by C. Ben Mitchell, Edward D. Pellegrino, Jean Bethke Elshtain, John F. Kilner, and Scott B. Rae. Washington, DC: Georgetown University Press, 2007. 210 pages. Paperback; \$24.95. ISBN: 9781589011380.

This book is the result of a collaborative research initiative at the Center for Bioethics and Human Dignity (CBHD). Its authors include the executive director of CBHD (Ben Mitchell), the chair of the US President's Council on Bioethics (Edward D. Pellegrino), and a Gifford lecturer at the University of Edinburgh in Scotland (Jean Bethke Elshtain). They and their coauthors have written extensively on the topics of reproductive technologies, gender roles, health care, aging, and euthanasia. But rather than doling out the writing of each chapter based on individual expertise, the authors spent significant time drafting and critiquing together. Following external review of chapter drafts, they then solicited feedback from participants in the "Remaking Humanity?" conference in 2003. The final product is a remarkably cohesive, readable book that comprehensively addresses matters underlying important philosophical and religious concerns about present and future biotechnologies: genetic testing and intervention, cybernetics, and medical nanotechnology. However, its greatest flaw is that the authors' common agenda so strongly influences the structure of their arguments that alternative perspectives receive too little attention.

The preface and opening chapter of the book present a sobering—if not a bit alarmist—perspective of human biotechnology. The authors take seriously the notion that the Human Genome Project has launched us on a trajectory in which medicine's goal to heal will be supplanted with a goal to enhance and even "immortalize" individuals. While I surmise that few biotechnologists and medical practitioners take this extreme seriously, an exploration of its implications is worthwhile nonetheless.

The second chapter deals with various foundational narratives that drive the way North Americans tend to think about the role of technology: the second-creation narrative, the recovery narrative, and the wilderness narrative. Mitchell et al. reject each of these as narratives unsuitable for guiding human biotechnology, preferring a fourth option—responsible technological stewardship. Relying heavily on Stephen Monsma's book, *Responsible Technology: A Christian Perspective* (Eerdmans, 1986), they define responsible technology as a human communal activity exercised in freedom and responsibility to God

for the transformation of an object toward a practical purpose. While this definition could be quite affirming of biotechnology, the authors use it to point out some of its risks: namely, that biotechnology can be employed in ways that are irresponsible and in contrast to God's will. This shadow of doubt permeates the remainder of the book. Moreover, their critique of alternative narratives becomes a vehicle to disregard the arguments of Christian authors who view biotechnology more favorably, namely, Ronald Cole-Turner and Philip Hefner, whom they seldom mention. In my opinion, the failure to engage other Christian scholars (e.g., James Peterson, Ted Peters, or Allen Verhey), who offer constructive insights for the appropriate use of biotechnology, seriously detracts from its effectiveness as the guide for the church that its authors intend it to be.

Following this same rhetorical approach, the third chapter turns to alternative worldviews that affect one's view of biotechnology and its application, laying out their arguments why philosophical naturalism and biocentrism are seriously flawed as guiding worldviews. And while few readers of *PSCF* would argue against their preferred worldview—Christian theism—many will find their five-page treatment of it rather unsophisticated. Non-Christians will find it entirely unconvincing. What is more, in rejecting “environmentalist biocentrism,” the authors fail to acknowledge extensive Christian scholarship on the hot topics of creation care, environmental justice, and ecological sustainability. Nor do they address how their view of responsible technological stewardship might contrast with those who view it from a more biocentric perspective. Readers interested in a more ecologically balanced assessment will find more helpful the insights of Dorothy Boorse in “Anti-Aging: Radical Longevity, Environmental Impacts, and Christian Theology” (*PSCF* 57 [2005]: 55).

The fourth chapter introduces the crux of the authors' ethical analysis, namely the CBHD's concept of human dignity. The concept has many different connotations. The authors define it as an intrinsic human property embedded in our status as image-bearers of God. This definition enables them to avoid slippery slopes associated with defining dignity as rooted to some special human characteristic (e.g., rationality or autonomy), and the CBHD has used it effectively in their evaluations of beginning- and end-of-life medical issues. The chapter concludes with overviews of recent bioethical debates, demonstrating how different conceptions of dignity can lead to opposing conclusions about the ethics of embryonic stem cell research, germline genetic intervention, and human cloning. The authors contend (or at least strongly imply) that these technologies violate human dignity, according to their definition. But a more comprehensive evaluation of Christian scholarship concerning the image-of-God concept might lead to other conclusions. Seen as an interrelational property that mirrors the Trinitarian nature of God, one might conclude that these technologies do not violate human dignity so long as normative interrelationships (such as the love relationships between parents and children) are maintained. To that end, James Peterson's book, *Genetic Turning Points: The Ethics of Human Genetic Intervention* (Grand Rapids, MI: Eerdmans, 2001), offers more helpful insights.

Chapter five does, in fact, employ a more communal accounting of human nature as the authors examine the quest for control over the human body. Citing over-exuberance for the Human Genome Project as a first step toward resolving genetic maladies, the authors urge caution. They note that increased genetic testing has resulted in more abortions of fetuses with Down syndrome, thereby diminishing humanity. Indeed, they argue, we are already on the road toward the “future-perfect body,” rejecting our given imperfect bodies as “foe.” The danger in this is that we lose sight of the Christian concept of natural as good, and embodied (embedded in nature) as an inseparable aspect of the life God intends for us. The chapter concludes with a call for the church to be that “embodied community of wisdom” that accepts others “as embodied imagers of God, whether they are naturally weak or naturally strong, whether fully abled or less fully abled” (p. 108). Thereby, we must “measure technologies, including biotechnologies, by the ways these technologies either diminish our shared humanity or contribute to our life together” (p. 109).

How do the authors see biotechnologies measuring up against this standard? Chapter six begins with an acknowledgment that “biotechnology has indeed opened a wide, new, and confusing array of doors” (p. 111). Terms such as “health” and “disease,” which have traditionally been defined in more restorative ways, will be redefined if bodily enhancement becomes a prominent goal of medicine. Can medicine, so refocused, serve the good of the individual and the common good? The authors argue that this would not be the case. Medical intervention for the purpose of enhancement would tend to foster, instead, pathological narcissism, social injustice, and reduced moral accountability.

If this slippery slope is to be avoided, what use should we make of biotechnology? Readers might suspect that the authors would advocate that biotechnology be avoided entirely, but instead they conclude the book with a set of questions, posed with the intent that they serve as a set of principles for assessing biotechnologies philosophically, theologically, and practically. Their questions include these crucial considerations: Does the technology assist us in fulfilling our stewardship responsibilities? Does it facilitate healing/restoration or is it for re-engineering/enhancement? Does it require/promote commodification or destruction of human life? Does the pursuit or use of it make just use of resources? Does it promote human flourishing or does it more likely promote technological and economic imperatives? How much additional technology is necessary to produce, maintain, or safely constrain/contain the technology? Rather than answer these questions (which they propose to do in a pending series), the authors urge that our engagement be based on Scriptural guidance and the pursuit of moral perfection (love).

While I still have misgivings about earlier chapters, I find redemptive wisdom in chapters 5–7. These will help readers to think biblically about the place of biotechnology in medicine. But one will have to go elsewhere for a more comprehensive analysis of Christian thought on the subject.

*Reviewed by David S. Koetje, Professor of Biology, Calvin College, Grand Rapids, MI 49546.* \*



# Book Notices

# Book Notices

**EVOLUTION AND CREATIONISM: A Documentary and Reference Guide** by Christian C. Young and Mark A. Largent, eds. Westport, CT: Greenwood Press, 2007. 298 pages, resource list, bibliography, index. Hardcover; \$85.00. ISBN: 9780313339530.

The title of this book is partly right: though not a reference work in the usual sense, it is a reliable guide to many historically important documents about the origins controversy, from the pre-Darwinian period to the recent trial, *Kitzmiller v. Dover*. This coherent, well-organized collection, representing a wide range of topics and literary genres, is divided into eight sections. Each section has a clear but brief introduction, and each of the forty-six selections has a separate, single-paragraph introduction deftly placing the work and its author in the appropriate historical context. Some selections are very well known, such as the excerpts from Darwin's *On the Origin of Species* (1859) and Fleeming Jenkin's insightful critical review of it (1867); others ought to be better known, such as *Headquarters Nights* by Vernon Kellogg (1917) and Reinhold Niebuhr's powerful essay, "Christianity and Darwin's Revolution" (1958). Recommended especially for anyone teaching a historically oriented course about evolution.

Reviewed by Edward B. Davis, Messiah College, Grantham, PA 17027.

**MORE THAN DARWIN: An Encyclopedia of the People and Places of the Evolution-Creationism Controversy** by Randy Moore and Mark D. Decker. Westport, CT: Greenwood Press, 2008. xxiv + 415 pages, appendix, bibliography, index. Hardcover; \$85.00. ISBN: 9780313341557.

Although not an encyclopedia in the usual sense, this single volume contains 500-plus entries providing a synopsis of the persons, organizations, and places involved in the history of the evolution-creationism controversy. Entries range from *Adam and Eve* to *Evelle J. Younger*, the California attorney general who in 1975 made a decision challenging California's *Science Framework*, which gave equal recognition to creationism and evolution. The entries are mostly short (averaging 800 to 1000 words in length) and include both major and minor scientists, religious leaders, lawyers and plaintiffs, organizations, and places. Even popular culture's involvement in the form of *The Flintstones* and *Inherit the Wind* is described. This accessible resource is a good tool for anyone looking for a short and concise background to the controversy. Be ready for surprising alphabetical juxtapositions. For example, an entry on *Tim LaHaye* (b. 1926) is followed by one on *Jean-Baptiste Lamarck* (1744-1829). Entries frequently include lists of recommended reading for more in-depth study. The book also has an extensive bibliography of sources, eighty-two illustrations, and an appendix providing a detailed guide to the sites of the 1925 Scopes trial in Dayton, TN.

Reviewed by Arie Leegwater, Calvin College, Grand Rapids, MI 49546.

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I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

PS Form 3526, September 2007 (Page 2 of 3)