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CLIMATE JUSTICE: Ethics, Energy, and Public Policy
by James B. Martin-Schramm. Minneapolis, MN: Fortress Press, 2010. 232 pages, index. Paperback; \$20.00. ISBN: 9780800663629.

The interrelated issues of energy and climate change are two of the most pressing environmental challenges, or perhaps more accurately, challenging environmental arenas, of the twenty-first century. At the very least, dependence on oil and the impacts of climate change pose fundamental challenges to the economic future of the United States, and, viewed more broadly, they threaten geopolitical stability, human health and welfare, and biodiversity around the world.

Energy and climate change are not, then, merely technical problems; they are, argues Christian ethicist James B. Martin-Schramm, fundamental moral challenges. In *Climate Justice: Ethics, Energy, and Public Policy*, Martin-Schramm urges Christians to engage in serious moral reflection on these issues, connecting the biblical, theological, and Christian social teachings with the relevant natural and social sciences. Energy and climate issues, he argues, “pose grave threats to justice, peace, and the integrity of creation” (p. 21), and therefore, “Christians at the outset of the twenty-first century must respond to this climate crisis by developing a new way of living in harmony with Earth’s energy resources and in solidarity with all of God’s creatures” (p. 5). The good news is that a growing number of Christians from a variety of theological, political, and economic perspectives are concerned about these issues, and Martin-Schramm provides a useful template for Christians who want to engage public policy debates.

In *Climate Justice*, Martin-Schramm advances an ethic of ecological justice, which is essentially “the social and ecological expression of love” (p. 28) for God’s whole creation, both human and nonhuman, and it can be seen in the four derivative norms of sustainability, sufficiency, participation, and solidarity. Applying these norms to complex cases requires additional principles or guidelines, which Martin-Schramm provides for both energy and climate policy. Equity, efficiency, adequacy, renewability, appropriateness, risk, peace, cost, employment, flexibility, timely decision-making, and aesthetics direct his evaluation of energy policy; at the same time, current urgency, future adequacy, historical responsibility, existing capacity, political viability, scientific integrity, sectoral comprehensiveness, international integration, resource sharing, economic efficiency, policy transparency, emissions verifiability, political incorruptibility, and implementational subsidiarity guide his assessment of climate change policy.

With this framework in place, Martin-Schramm devotes most of the book to policy analysis, scrutinizing US policy on energy and climate change as well as international climate negotiations. Fossil fuel energy has led to vast increases in economic productivity, but “this economic wealth has not been distributed very well, and it has only been garnered by undermining the ecological

health of the planet” (p. 70). Alternative sources of energy exist, and his guidelines allow for a thoughtful comparison of various options, from solar energy to hydro power, resulting in nine policy recommendations to move the United States away from fossil fuel dependency. Climate policy, he argues, is just as problematic, and “after a decade of delay and obfuscation, we have now reached a point where a decision needs to be made” (p. 158). Once again, the detailed guidelines he advances at the outset of *Climate Justice* enable him to evaluate various issues in the development of new climate policy, both internationally and domestically. He concludes with an account of what his own institution, Luther College, is doing to reduce greenhouse gas emissions by increasing energy efficiency and switching to alternative energy sources.

Climate Justice is an important contribution to both Christian ethics and public policy discussion, and it will serve a wide audience. It provides a valuable model for applied Christian ethics, working from the basic biblical principles of justice and love to the complex world of public policy. This fills a relatively thin area in the literature of Christian environmental ethics, which has focused primarily on either normative ethics or applied ethics at the individual level. Furthermore, Martin-Schramm’s command of the science, both natural and social, behind energy and climate debates is impressive, and he guides readers through the maze of relevant information with remarkable clarity. Furthermore, the book is written in a way that is accessible and useful for those inside and outside the church, because the guidelines he develops embody basic elements of prudence that a wide range of people will affirm regardless of their religious identity.

This leads, however, to one aspect of *Climate Change* that is not readily accessible. Martin-Schramm roots the four moral norms of sustainability, sufficiency, participation, and solidarity in longstanding work by the World Council of Churches and the Presbyterian Church, USA, yet he provides minimal rationale for the associated guidelines employed throughout the book. As a result, it is not entirely clear how he derived these particular guidelines, and not others, from the four moral norms; this question is important because he ultimately traces the guidelines’ moral authority back to the fundamental principles of love and justice. His emphasis on policy analysis also at times obscures some of the necessary work involved in balancing the guidelines, particularly in cases which may indicate different alternatives. For this reason, those interested in greater attention to normative ethics and the transition area between normative and applied ethics may wish to read *Climate Justice* alongside other recent books on ethics and climate change, such as *The Ethics of Climate Change: Right and Wrong in a Warming World* by James Garvey (New York: Continuum, 2008) or *A New Climate for Theology: God, the World, and Global Warming* by Sallie McFague (Minneapolis, MN: Fortress Press, 2008).

Nonetheless, *Climate Justice* is an important step forward. The four moral norms of sustainability, sufficiency, participation, and solidarity and the much longer list of guidelines promise reflection that balances human and nonhuman flourishing, and they will guide essential reform in energy and climate policy if applied by policy makers. *Climate Justice* is therefore an excellent text for undergraduate classes on energy and climate change and

for anyone seeking guidance in these important policy arenas. Given the immensity and complexity of the challenges that lie ahead, *Climate Justice* is a timely contribution and hopefully will improve the depth and quality of public debate.

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GOD, CREATION, AND CLIMATE CHANGE: A Catholic Response to the Environmental Crisis by Richard W. Miller, ed. Maryknoll, NY: Orbis Books, 2010. 150 pages. Paperback; \$20.00. ISBN: 9781570758898.

Editor Richard Miller's introduction to *God, Creation, and Climate Change* states,

The magnitude of the problem of environmental degradation in general and climate change in particular requires a complete rethinking and reorienting of our way of being in the world. Responding ... requires not only a conversion of the will but even more fundamentally a transformation of the imagination. (p. vii)

The following essays then seek to encourage such a transformation. The essays originated as talks at the Seventh Annual Church in the 21st Century Lecture Series held in September of 2009. The essayists are theologians, joined by a historian and an economist.

Miller's opening essay, "Global Climate Disruption and Social Justice," is a strong statement and overview of the problem. He focuses on the impacts climate change has and will have on food and water. Miller does a particularly good job of reminding us of a number of very uncomfortable truths, including the following: (1) by every major indicator, climate change is coming faster than any of the climate models have predicted; and (2) as he puts it, the "elephant in the room" is that the "historical climate record shows that abrupt climate change is the norm, not the exception" (p. 16). Especially inspiring, and important, is Miller's closing call to direct action—that people need to start "demonstrating en masse in the streets ... especially in the United States" (p. 25).

The following two essays explore theological themes through the lens of present-day ecological concerns. Dianne Bergant looks at anthropocentrism in the Scriptures through a reading of the Book of Job and the Wisdom of Solomon. John O'Keefe then critiques the common understanding of resurrection as a spiritual ascent, a liberation from the body and from the material world. He rightly suggests that such eschatology contributes to a devaluing of nonhuman creation. As a corrective, O'Keefe points to Irenaeus of Lyons' deeply material theology which states that "the incarnation ... delivers us from our alienation and restores us to a proper relationship with nature" (p. 63) rather than liberating us from nature.

Both authors make important points. I suspect that, for readers relatively new to "creation theology," their discussions may seem a bit esoteric—or at least leave the reader wondering why the much more common themes of dominion and stewardship are not addressed. However, the book's closing chapter is a transcript of the conference's panel discussion—it is a strong chapter and includes good discussion of these two themes.

The fourth essay begins somewhat repetitively, covering some of the same material that Richard Miller did in terms of the impacts of climate change. In the light of those impacts, author Jame Schaefer introduces the concept of "planetary sin" and argues that the common good needs to include the well-being of nonhuman creation. Her comments raise very important questions, including whether humans can become nonspecies centric; whether we can act as if our "self" is more than a skin-encapsulated ego such that our self-interest not only incorporates the well-being of other humans but other species and living systems as well.

Chapter 5 is entitled "Theology and Sustainable Economics." Including this theme is crucial and recognizes that ecology and economics are intimate partners, sharing the Greek root word of *oikos*, meaning household. Author Daniel Finn provides a good overview of "four problems of economic life" and raises important questions about whether markets address those problems adequately. Significantly, he concludes by asking "what parts of your current definition of well-being would you be willing to give up for there to be a more sustainable future for our lives together?" (p. 110). I wish he would have explored a similar question related to the church (Catholic and otherwise) as a whole: how and where does the church benefit from our current economic system (certainly an unsustainable one and arguably violent), and what would the church be willing to do to actually move the system toward a more sustainable future.

It seems that David O'Brien, the author of chapter 6, reveals his own fatigue with "calls to action" in the very title of his essay, "Another Call to Action." He provides a historical overview of Catholic responses to social injustice, looking through the lens of Catholic social teaching, Catholic social action, and the Catholic social gospel. When asked in the panel discussion (chap. 7) how lay people should build the institutions within the church and society to allow for mobilization around climate change, O'Brien admits that, based on what he sees, he has to assume "there are not a lot of people out there who take responsibility for the politics of the church. They are quite resigned to treat the church like a monarchy" (p. 131). He states emphatically that "people do not do anything"; and though that specific comment was in reference to most Catholics' inaction related to the sex-abuse crisis and the Vatican's inquiry into the Sisters, his comments do not bode well for mobilization to address climate change.

As mentioned, the book concludes with a transcript of the conference's panel discussion. And it is a good discussion. In response to questions from the audience, the speakers respond at some length, allowing them to reveal some of the ways they engage their own imaginations in response to the realities of climate change.

The authors included in this anthology are rooted in the Catholic tradition. They refer to papal encyclicals and Catholic statements throughout the essays; this is one of the book's strengths. They emphasize how both Pope John Paul II and Pope Benedict XVI have taken strong positions and written important pieces on climate change and our related responsibility. I found myself wishing, however, that they had at times challenged the Catholic

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tradition on two things in particular, population growth and the position of women in the church.

A number of the essayists discussed population growth in the context of Earth's finite carrying capacity. In addition, Richard Miller cites one of the world's leading climate scientist's careful argument that on our current path (a 5° C increase from pre-industrial temperatures) "the planet could probably support only about 1 billion people" (p. 18). For none of the authors, in this context, to raise questions about the Catholic church's traditional teachings on family planning (for example, condom use) seems a significant oversight.

Eco-feminist theologians have for years pointed out that patriarchal and hierarchical systems tend to associate the feminine with Earth. Both end up being seen as less than capable—and are often treated as such. Though there is not space to discuss this at any length here, an exploration of these themes would have strengthened this anthology.

For the book to not address population growth and the position of women in the church is a missed opportunity because the church plays such a significant role in defining its adherents' worldviews and behaviors. As the author of chapter 4, Jame Schaefer wrote,

Theologians also need to make some decisions, decisions that focus on ways in which we can contribute to the interdisciplinary dialogue that has emerged over the phenomenon of human-forced climate change ... scholars of the world religions can identify teachings that might be helpful in addressing why some climate change-forcing behaviors should be avoided while others should be initiated. (p. 69)

God, Creation, and Climate Change is a worthwhile read. The theological pieces are accessible. Miller's opening and the closing panel discussion are particularly strong. Like many current resources on climate change, this book does not end with a great deal of hope, at least not in the US political process. The book was published when many of us—including a number of the essayists—still had hope that the US Congress would actually pass a climate change and energy bill, however inadequate it may have been. That, of course, did not happen; thus, Miller's opening essay's call for direct action is all the more important.

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GLOBAL WARMING AND THE RISEN LORD: Christian Discipleship and Climate Change by Jim Ball. Washington, DC: Evangelical Environment Network, 2010. 479 pages. Paperback; \$25.00. ISBN: 9780982930014.

Global Warming and the Risen Lord is the culmination of two decades of work by Jim Ball focusing on creation care, and frequently specializing on a Christian response to the threat of global warming. Ball was challenged by a fellow graduate student to consider the value of a Christian perspective on the environment in 1990, then went on to do his PhD on theological ethics, writing a primer for Christians on global warming in the process. Few read it, and meanwhile the threat of global warming initially fell on deaf ears throughout much of Christendom. Through his

involvement in the Evangelical Environmental Network (EEN), Jim has done much to raise the profile of the issue in Christian circles. His best-known contribution was the "What Would Jesus Drive?" campaign which he conceived in 2002. This was followed by the launching of the Evangelical Climate Initiative in 2006, which also garnered widespread media attention. Now with this book, Ball makes available an in-depth resource for readers seeking to see how Christian faith might best be incorporated into this complex and far-reaching issue of our time.

Ball's comprehensive treatment of global warming and theological ethics is divided into three distinct parts, with each of the three parts comprising seven chapters, followed by a concluding chapter entitled *Walking into the Future with the Risen LORD*. Part 1 describes the challenges posed by global warming to the planet. Ball alternates between painting a picture of the more local impacts to be felt in the United States, and the consequences of climate change for the world's poor, emphasizing that the poorer global regions stand to be impacted the most, even though their contribution to the world's greenhouse gases is less, and it is hard for them to do anything about it. At the same time, Ball acknowledges that it is very hard for people to respond to a crisis that is distant geographically or is predicted to have much greater impact in the future. Although Part 1 is focused on the biophysical aspects of climate change, Ball integrates a Christian worldview into each chapter, developing a major theme of the book that anything is possible if we truly walk with the Risen LORD.

Ball is careful to indicate how the scientific data shows that the historic increase in greenhouse gases leads to a potential intensification of natural disasters such as floods, droughts, and storms, and the resulting impacts on humans and the biota, rather than being 100% responsible for these meteorological events. In this way, Ball systematically addresses skepticism spurred by alarmist claims regarding impacts of climate change. However, the reference to the issue being the "next great cause of freedom" in chapter 7 takes the debate to a whole new level. In essence, this is what Ball discusses throughout the extensive theological reflections in Part 2. Ball weaves in his own personal testimony and also attempts to draw parallels from the transformation of historical attitudes on civil rights in the United States, including stories from the hometown of his ancestors. So the question becomes, Can this global, yet complex and intangible, environmental crisis really become "the next great cause of freedom"? I have my doubts, but nevertheless Ball's engagement with the question via a wide-ranging discussion of biblical passages is worth reading.

As might be expected, Part 3 provides the application. To me, this was the most enlightening part of the book. Ball repeatedly tackles the question that paralyzes so many politicians, citizens, and even environmental activists: "What can be done, when the problem seems overwhelming?" In the process, he discusses the spiritual goal of overcoming global warming, overcoming the causes, and overcoming the consequences. Ball says that the spiritual goal is to "become Christian agents of transformation, to be forward-leaning team-builders as we strive with God to work with others in overcoming global warming in this great cause of freedom" (p. 318). "What can I do?" becomes "what can *we* do empowered by the Risen Christ?"

in Ball's vision. The thought that the goal is best pursued as part of a team in itself makes the situation more hopeful, but what provides concrete hope are the chapters that follow in which he describes how recently developed and soon-to-be-developed technologies for increasing energy efficiencies can really make a difference. Furthermore, he provides numerous examples of how governments, companies, and individuals have seized many of these opportunities, generally resulting in economic benefits as well.

This book provides an invaluable resource for believers and even unbelievers to try to grasp the potential for turning the corner on climate change. The multifaceted issue of climate change leads to a myriad of responses, and I doubt whether anyone would agree with Ball's approach on all points. But that is not what it is about, according to Ball. It is about going beyond just thinking about climate change or talking about it, and simply walking deliberately forward with the Risen LORD into a better future not so fettered by materialism, consumerism, and conventional ways of thinking about energy use.

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BONHOEFFER AND THE BIOSCIENCES: An Initial Exploration by Ralf K. Wüstenberg, Stefan Heuser, and Esther Hornung, eds. Frankfurt: Peter Lang, 2010. 183 pages. Hardcover; \$57.95. ISBN: 9783631598450.

At first glance, the title *Bonhoeffer and the Biosciences* seems puzzling. What could a man who died over sixty years ago contribute to twenty-first-century discussions of biosciences and bioethics? There are two explanations. First, the book—the third in Peter Lang's *International Bonhoeffer Interpretations* series—is not really about Dietrich Bonhoeffer per se. Most of the essays do not present a thorough reading of his writings (two do not engage Bonhoeffer at all) and few interact critically with contemporary Bonhoeffer scholarship. Instead, the authors explore what they call “the hermeneutics of human life,” built upon some key themes drawn mostly from Bonhoeffer's *Ethics*, in order to frame theological and ethically the discussion of various issues in the biosciences. As Hans Ulrich nicely puts it in the final chapter, “Bonhoeffer's texts will be primarily fruitful for our ethical work when we do not look for passages in Bonhoeffer's ethics which seem to be immediately relevant for solving moral dilemmas, but when we follow his descriptions of our human existence” (p. 170).

Second, the book does not aim primarily to propose specific solutions to current ethical problems in the biosciences. Its aim is less to teach us *what* to think about current issues than *how* to begin to address them in a way that takes seriously, and in an integrated way, the reality of God, the complexity of human existence, and the integrity of the biological sciences. This reflects Bonhoeffer's emphasis on the Incarnation as *the* event that unites the reality of God with the reality of the world in the person of Jesus Christ. Moreover, as the book's uniting theme, “the hermeneutics of human life,” suggests, it reflects the

authors' desire to offer not merely abstract principles or simplistic rules, but to prompt deeper ethical reflection based upon a “thick” theological account of human existence in the light of the Incarnation. Before we get to principles and rules, we need an interpretive framework in which they can be contextually and fruitfully employed.

The book comprises a foreword, ten chapters, an index, an appendix, and a descriptive list of the contributors. In the first chapter, Stefan Heuser introduces the book's overarching theme and foreshadows the topics to be discussed in the following chapters. In chapter 2, Christoph Rehmann-Sutter picks up on Bonhoeffer's discussion of the inter-relatedness of all human life and discusses the significance of interpretive decisions about the “beginning” of human life for issues such as stem cell research and IVF.

Next, David Clough (chap. 3) argues against claims that humans are distinct from animals to support ethical arguments. He criticizes Bonhoeffer's tendency to do this in *Creation and Fall* but applauds Bonhoeffer's relational interpretation of the image of God and his reflections on Christ becoming a creature. Clough feels this better affirms all of life, not just human life. However, in my estimation, he makes some questionable claims of Bonhoeffer's views, partly because Clough does not seem to consider Bonhoeffer's historical context in WWII Germany, and thus misses Bonhoeffer's polemical intent.

In chapter 4, Robert Song calls us to reject an idolatrous approach to technology that either views technology as the savior of the human condition or as helping us to become like God *apart from God*. Rather, we should find our likeness to God *in relationship with God* (Bonhoeffer's *sicut Deus* vs. *imago Dei*). Bonhoeffer helps us to avoid what Song calls “posthumanism” and leads us to develop an approach to technology that is more faithful and contextually concrete.

Bernd Wannewetsch (chap. 5) applies Bonhoeffer's concepts of “responsibility” (in *Ethics*) and “loving the limit” (in *Creation and Fall*) in reflecting upon the delicate tension between patient autonomy and physician responsibility. In place of both “professionalism” and contractualism (focusing on rights, duties, liabilities, etc.), he emphasizes vocation and what he calls “total responsibility.”

In chapter 6, Michael P. DeJonge employs Bonhoeffer's argument that “natural life is formed life” to clarify and integrate the relationship between rights and duties in patient-doctor relationships. In this perspective, formed life is both an end *and* a means, correspondingly involving both rights that protect basic dignity *and* duties that serve human purpose. Problems arise when these are separated. Regarding life exclusively as an end absolutizes life, leading to “vitalization” and a one-sided focus on individual rights and autonomy. Regarding life exclusively as a means leads to “mechanization” and a one-sided focus on the duties of individuals to uphold the “common good,” whatever that may be. While Bonhoeffer faced the latter danger in his context, DeJonge argues that America presently struggles with the former.

Sigrid Graumann (chap. 7) reflects on the problem that “many disabled people feel discriminated by Prenatal Diagnosis” (p. 124). In dialogue with Charles Taylor, Axel

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Honneth, and Nancy Fraser (but not Bonhoeffer), he seeks a more adequate analysis of the social problems linked with prenatal diagnosis.

In chapter 8, Heinrich Bedford-Strohm discusses the role of public theology in relation to biotechnology by reflecting on Bonhoeffer's assertion that the church is called to hold the state accountable when its policies are morally questionable. In order to fulfill this call, Bedford-Strohm argues that the church needs a threefold public discourse strategy: (1) an internal debate about the implications of biotechnologies; (2) an ongoing dialogue with key public figures such as scientists, politicians, and business leaders; and (3) input into public debate indicating both interest and wise reflection concerning fundamental societal questions.

Hans Ulrich (chap. 9) argues that understanding the human condition is the common task of science, hermeneutics, and ethics. No one discipline can claim exclusive ownership of bioethical questions. An interdisciplinary approach is necessary to account for the complexity of the human condition. In the concluding chapter, Ulrich again emphasizes the importance of viewing the human condition as a common field of description and interpretation for multiple disciplines. Where Bonhoeffer is particularly helpful is in providing us with an incarnational theological framework that takes seriously both God and the world, both the spiritual and the biological in the ethical task. Bonhoeffer offers us a "hermeneutics of human life" that can help integrate and orient our ethical questions.

Bonhoeffer and the Biosciences does not provide concrete answers to bioethical questions. Nor does it add significantly to contemporary Bonhoeffer scholarship or even hermeneutical theory. It probably will not attract a wide readership. It will be most helpful to scientists searching for a more nuanced theological framework that integrates theological and scientific knowledge in a way that genuinely respects the integrity and uniqueness of both.

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IS GOD STILL AT THE BEDSIDE? The Medical, Ethical, and Pastoral Issues of Death and Dying by Abigail Rian Evans. Grand Rapids: Eerdmans, 2010. 508 pages. Paperback; \$29.99. ISBN: 9780802827234.

Most books written in this field are limited to addressing individual subjects. They lack the wider scope any practitioner will need. In this book, Abigail Evans, professor emerita of practical theology at Princeton Theological Seminary and scholar-in-residence at the Georgetown University Center for Clinical Bioethics, writes from a Christian perspective that draws from a variety of disciplines, cultures, and faith traditions to address a wide range of issues in medical ethics and pastoral care in end-of-life decisions.

Evans begins by providing an overview of the current medical, ethical, theological, pastoral, and legal landscape as it concerns end-of-life issues. As she works her way through this terrain, the complexities involved in addressing the needs and concerns of the dying become evident. Early on she establishes her basic assumptions, which

include the sacredness and dignity of persons from conception to death. This dignity is rooted in the Divine, she argues, and it in turn gives rise to the sanctity of human life since each of us is made in God's image as an inviolate, unique person. She then turns her attention to the contemporary attitudes toward death in North America and shows how paradoxical these attitudes are. On one hand, we know death is inevitable and in certain circumstances, even welcome it, while on the other, we fear it and wish we could control it but know we cannot. Ultimately we have medicalized it, and thanks to improvements in modern technology and expertise, people today are dying more slowly than ever. However, even here our feelings are mixed because we also recognize the wonderful blessing modern medicine has been, how it has improved, enhanced, and even prolonged life. As an example of this, Evans notes the change in life expectancy in the United States: in 1950, it was 68.2 years; in 2006, 77.7 years.

She then moves into an area she describes as "negotiating death," a term she chooses to reflect the desire of people to retain control over their lives, including the choice of how and when to die. In this section, she sets out the difficult options many of us will face as death approaches. These include complex and expensive medical treatment, various types of euthanasia, heroic self-sacrifice, and physician-assisted suicide. A particular strength of this book is that Evans shows that decisions like these are not made in a vacuum. Rather, they need to be made within a framework of deeper questions, and here is where theology becomes important. It is the discipline that deals with ultimate meaning and purpose and thus can assist us in placing the end-of-life questions we face into perspective. When confronting these questions, we will be helped immeasurably by considering such deeper questions as the following: What is our view of death? How do we distinguish between the process of dying and the state of death? and How does death occur? These are meta-questions and Evans provides helpful explanations of a number of them. Here treatments include the views of such influential thinkers as Roman Catholic moral theologian Richard McCormick, ethicist Tristram Engelhardt, and Edmund D. Pellegrino.

Evans goes on to devote individual chapters to the issues of suicide (including physician-assisted suicide), organ donation, and specific legal questions. In each case she informs the reader of relevant background issues, actual cases, definitions of significant terms, statistics, and contending arguments. Her research is impressive and her knowledge of the discussion reflects a lifetime of immersing herself in these important concerns.

Perhaps the most welcome, albeit unusual, section of the book is section III entitled *The Experience of Dying*. Most books on this subject simply do not delve into the actual experience of dying, the pain, suffering, the knowledge of a terminal diagnosis, or the deep grief at the loss of a loved one. Here Evans' pastoral background becomes evident as she devotes three chapters to exploring this side of the question. They are both practical and informative and virtually all readers will find something there to inform their own journey. For example, she addresses the nature and sources of suffering, and argues that, whereas suffering can be a challenge to one's faith, God can use it

to accomplish good purposes. For example, there is such a thing as “good mourning.”

In the final section, Evans builds on this information by turning directly to the intensely practical issue of pastoral care for those facing difficult end-of-life decisions. The issues treated range all the way from a consideration of various types of funeral services to the task of finding ways of giving meaning and hope to the dying.

This book could function well as a university or college text for bioethics courses dealing with end-of-life issues, a manual for practitioners such as physicians, nurses, and clergy, or even as a source of information for families who find themselves in the midst of difficult and traumatic decisions concerning a loved one. Families will especially appreciate the testimonies of people traveling the difficult journey at the end of their lives.

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CHANGING HUMAN NATURE: Ecology, Ethics, Genes, and God by James Peterson. Grand Rapids, MI: Eerdmans, 2010. 259 pages. Paperback; \$18.00. ISBN: 9780802865496.

“The question before us is not whether we will shape nature and ourselves but whether we will be aware that we are doing so, and choose well how we do so and to what purpose” (p. 10). As James Peterson observes, we inevitably do shape nature and ourselves; *whether* to shape nature is not the question. Peterson wants us to be aware not only that we inevitably change nature but also that we are responsible to God for the changes we make. The first part of the book argues that God set human beings in the garden to “tend” it, to change it for the better. According to Peterson, human beings have the capacity and the calling to improve nature, including human nature, their bodies, and their genes. The rest of the book focuses on the question how we may “choose well”: how to use the new powers of genetic intervention into human nature and “to what purpose.” The book’s conclusion is that if “an instance of genetic intervention is safe, a genuine improvement, increases the choice of the recipients, and [is] the best use of our finite resources, that genetic intervention may be an expression of our love of God, one another, and the rest of creation entrusted to us” (p. 240).

Human genetic responsibility, according to Peterson, will not be well guided by any romantic suspicion of technology. Nor will it be well guided by prohibitions of “enhancement,” of “making children,” or of germ-line genetic interventions. It is the burden of the second part of the book to undercut these prohibitions even as it acknowledges that the common distinctions between cure and enhancement, between begetting children and making them, and between somatic gene interventions and germ-line gene interventions can provide helpful cautionary advice.

In the third part of his book, Peterson proposes instead the four guidelines captured in the book’s conclusion: (1) genetic interventions must be safe; (2) they must yield real improvement; (3) they must provide increased choice for the recipient; and (4) they must be the best use of finite resources. He acknowledges that these guidelines are not

always clear and that different people will see their meaning and application differently. They are, nevertheless, defended as consistent both with Micah 6:8 and with the “Georgetown mantra.” Micah’s admonition to “love kindness” is taken to entail the requirements of safety and genuine improvement; to “walk humbly” is taken to entail a concern to maximize the freedom of the recipients; and to “do justice” is taken to require the best use of finite resources. That seems to me to be a “thin” (and unlikely) account of Micah 6:8. It is a good deal easier to see the connection of Peterson’s four guidelines to the four principles of the Georgetown mantra, “nonmaleficence, beneficence, autonomy, and justice.” Along the way, Peterson suggests two other guidelines, namely, that changes wrought by genetic intervention be incremental and reversible. These may be entailed by safety and maximizing freedom, but they are important, and it is regrettable that they are not given the same prominence of the other four.

Because different people can and will interpret and apply these four standards differently, Peterson turns in the final part of the book to the question concerning whose interpretation and application should trump that of others. Peterson wants many people to have a voice in the conversation, but the choice, he insists, must finally belong to those who would receive the genetic intervention (or their parents) “within those limits so universally felt by society to be required” (p. 236).

There is much to ponder in this book. There is much that challenges not only commonplace distinctions but also influential theological positions. (Paul Ramsey, for example, is the most frequently cited author, and Peterson usually disagrees with him.) As an invitation to think again about genetic interventions—and to think about genetic interventions theologically—the book is a welcome addition to the literature. But there are, I think, some serious problems.

One problem Peterson himself identifies as the problem of “thin and thick” accounts of the moral life. Peterson acknowledges that the principles of the Georgetown mantra are “thin” (pp. 164, 225–26), that is, that they are abstract principles susceptible to quite different interpretations. And he declares his intention to provide a “thick” account of the moral life, indeed, a theologically “thick” account, a “theocentric” account. The problem is that he does not make good on that promise; it remains a “thin” account. The Georgetown mantra seems to control the argument.

A related problem is that Peterson gives a “thin” account of the cultural context for decisions about genetic intervention. So, for example, although he cites Gerald P. McKenny’s *To Relieve the Human Condition*, he does not attend to the influence that “the Baconian project” (as McKenny calls it) has on our cultural imagination. Indeed, Peterson seems to share that project’s confidence, that technology brings human flourishing in its train. Accompanying that enthusiasm for the technological mastery of nature, there seems to be an uncritical adoption of the project of liberal society with its confidence that “maximizing choice” provides the solution to moral diversity. The advocacy of “control” and “choice” is a commonplace of “thin” bioethics, of standard bioethics, but one might expect something more from a “thick” and theocentric account.

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One might also quarrel with some of the particular moral judgments defended by Peterson. For example, his discussion of preimplantation genetic diagnosis acknowledges that the moral status of the embryo is a “crucial but controversial point.” But his discussion of the status of the fetus is brief and not altogether persuasive. Perhaps that is why he hedges his conclusions here with hypotheticals: “If an embryo is not yet a fellow human being, it can be set aside without the loss of any existing person,” and “If an intervention occurs before a fellow human being is present and helps the person who later does come to be, then it is safe, and by that standard welcome” (pp. 167, 169, italics added). But when he returns to the question of preimplantation genetic diagnosis, it is parental “control” and “choice” that are celebrated (p. 183). He does, in this context, call attention to the moral importance of an “open future” for our children as a (or the) criterion for “improvement,” and he uses that criterion to question decisions to select for deafness. But that criterion, too, is pretty “thin,” allowing Peterson to conclude, “If genetic intervention and competition combined to bring forward surgeons with unusually precise and steady hands, that would bless them and their patients” (p. 189). One may wonder whether parents who made a child in order to be such a surgeon would really provide an “open future” for the child. And one may wonder as well what would prevent parents from the conclusion that a more “open future” might be secured for their child in their culture if they select for males.

To identify one other quarrel with his particular moral judgments, Peterson evidently regards the use of donor gametes in artificial reproductive technologies as a morally trivial matter. He defends this judgment by rendering the biological role of parent as itself a trivial matter, reducing that role to “gene sources” (p. 140) and insisting that the social role of parent is the only role that qualifies one as a “parent.” Leave aside the question of the “bad faith” of inviting a gamete donor (or vendor) to treat a biological relation as trivial for the sake of some biological relation to the child conceived by donor seed and the seed of either mother or father. This trivialization of the biological role of parent does not comport with his own recognition of, for example, paternity laws or the common recognition of other responsibilities of biological parents. Let this be a rule: we should not beget without an intention to care for the begotten. The deliberate sundering of the biological role and the social role of parent threatens to reduce the body to mere biology, subject to the control and manipulation of the “real” person with their capacities for rationality and choice. And when Peterson later calls for parental choice and control, if “parent” simply means the social role, he risks the commodification not only of the donor gametes and the embryo but also of the donor himself or herself.

To be sure, there are cautionary words in Peterson’s work, especially against genetic reductionism. And to be sure, there is much here to prompt and to reward reflection about genetic control. But it is, on my reading, a “thin” account in spite of its declared intention. It should be read in conversation with some of the literature with which it disagrees, not only Ramsey but also, for example, Oliver O’Donovan and Gil Meilaender.

Reviewed by Allen Verhey, Professor of Theological Ethics, Duke Divinity School, Durham, NC 27708.



THE DRUNKARD’S WALK: How Randomness Rules Our Lives by Leonard Mlodinow. New York: Vintage Books, 2009. 252 pages. Paperback; \$15.00. ISBN: 9780307275172.

Mlodinow begins in the prologue and first chapter by demonstrating several situations in which human intuition about probability can be misleading while hinting strongly at the conclusions he will make more explicitly at the end of the book. Having established a need for careful thinking about random events, the author uses several chapters to “present the tools needed to identify the footprints of chance” (p. xi).

While there is nothing new in this probability primer for anyone who has (correctly) learned basic probability, the discussion of the rules of probability is very well written. The style is casual, the stories are engaging. We are introduced to important historical figures, including Fermat, Descartes, Pascal, and Bayes, and to many contemporary situations involving probability: playing the casino, Marilyn vos Savant’s Monty Hall Problem, Roger Maris’s 61 home-run season, life insurance, and the O. J. Simpson trial, among many others. Furthermore, despite the casual approach, the explanation is precise and careful. The important assumption of independence is duly emphasized where needed, for example, and scenarios in which independence fails are also presented. (Unfortunately, Mlodinow relies on the reader’s intuition or previous understanding to know just what independence means—a small weakness in an otherwise masterful presentation.)

Having introduced the fundamentals of probability, Mlodinow turns his attention to statistics, which he views as the inverse problem to probability. Whereas probability quantifies the chances of various occurrences given the “rules of the game,” statistics seeks to infer the rules of the game from observed data. The treatment of statistics is briefer and less technical than the discussion of probability, but suffices for the purposes at hand. These include the discovery (by Quételet and others) that “the patterns of randomness are so reliable that ... their violation can be taken as evidence of wrongdoing” (p. 156) and that the importance of statistical reasoning will counterbalance our natural tendency for confirmation bias.

In the final chapter, which bears the same title as the book, Mlodinow argues “that in all but the simplest real-life endeavors, unforeseeable or unpredictable forces cannot be avoided, and moreover those random forces and our reactions to them account for much of what constitutes our particular path in life” (p. 195). This argument is supported by a number of historical anecdotes ranging from the events leading to the bombing of Pearl Harbor, to the rise in celebrity of Bruce Willis, to the wealth of Bill Gates, to stock market performance. More interestingly, the argument is supported by reference to several cognitive psychology experiments designed to reveal how humans behave in situations involving randomness. Mlodinow’s story is a cautionary tale, exhorting his readers not to overinterpret chance occurrences in their own

lives or in the lives of others, but to correct the natural biases humans have to equate success with ability and failure with inability, to infer rules from perceived patterns, to judge decisions by the particular result that occurred rather than by the spectrum of outcomes that might have resulted, to place more weight on expectations than on evidence, and to attempt to understand all situations in terms of cause and effect.

Mlodinow is a scientist writing for a popular audience, so those looking for a deep philosophical or theological treatment of randomness will need to look elsewhere. But no one should do so without a thorough understanding of the issues discussed in this book, which provides an accessible and enjoyable introduction that is technically sound. Furthermore, the ample references to the primary literature (16 pages worth) provide pointers to additional reading, and the well-constructed index assists in locating the numerous historical and contemporary vignettes.

Reviewed by Randall Pruim, Professor of Mathematics and Statistics, Calvin College, Grand Rapids, MI 49546.



ORIGINS & COSMOLOGY

SCIENCE, CREATION AND THE BIBLE: Reconciling Rival Theories of Origins by Richard F. Carlson and Tremper Longman III. Downers Grove, IL: InterVarsity Press Academic, 2010. 141 pages. Paperback; \$16.00. ISBN: 9780830838899.

Now and again I come across a book that strikes me for the strategy of its argument. The issue of evolution within evangelical circles continues to be a controversial issue, and physicist Richard Carlson and Old Testament scholar Tremper Longman offer a gentle and academically credible introduction to this volatile topic. This is a short book and does not engage all the topics in origins, but it offers just enough information to captivate evangelicals into reconsidering traditional readings of biblical creation accounts and also the possibility of evolution.

This book assumes the credibility of the modern evolutionary sciences and offers a brief outline of cosmic and biological origins (pp. 27–32). The core focuses on the hermeneutics of Genesis 1 and 2. The authors endorse a “high view” of Scripture as outlined in the 1978 Chicago Statement on Biblical Inerrancy (pp. 15, 35). Their main thesis argues,

The first two chapters of Genesis, which accurately present two accounts of creation in terms of ancient Hebrew scientific observations and their historical understanding, are neither historical nor scientific in the twenty-first-century literal sense. Instead, the underlying message of these chapters applies for all time and constitutes a complete statement of the worldview of the Hebrew people in the ancient Near East. (p. 14)

The notion that Genesis 1 and 2 include an “ancient Hebrew understanding of science and history” is a novel yet critical concept that assists Christians to step away from concordism and the evangelical tradition of looking for scientific and historical facts in Genesis (pp. 17, 59, 69, 122, 126, 130–1).

To defend their hermeneutical thesis, Carlson and Tremper begin by underlining the fact that truth can be delivered using nonliteral accounts. They offer a courageous and sensitive exposition of the literary genre of myth (pp. 59–61), followed by examples of well-known Christian storytellers; e.g., Tolkien. In addition, Carlson and Tremper appeal extensively to Peter Enns’ incarnational hermeneutic (pp. 69–72). Since Jesus is fully God and fully man, so too they argue that the opening chapters of Genesis are both divine and human. In other words, Scripture is accommodated to its ancient audience (pp. 16, 123). One of the best features of this book are the chapters dedicated to the concept of creation outside the Genesis accounts: Isaiah, Proverbs, Job, Psalms, and the New Testament. In these contexts, the emphasis is not on the details of how God created, but that the creation contributes to worship, encouragement, and Christology.

Though this book argues against concordism, it nevertheless slips in places. Carlson and Tremper contend that the creative events in Genesis 1 and 2 “have taken place in a definite historical order. These Genesis accounts depict real history and real science” (p. 120). This is simply not true. For example, the fossil record reveals that flowering plants (creation day 3) do not appear before animal life (days 5 and 6), nor do birds (day 5) precede land animals (day 6). In addition, the authors embrace the historicity of Adam (pp. 122–3) and the cosmic fall (pp. 100–1), failing to identify that Adam reflects an ancient understanding of origins (*de novo* creation) and the cosmic fall, the ancient motif of the lost idyllic age.

Despite these minor inconsistencies, I highly recommend this book, especially as an introduction to assist evangelicals in coming to terms with evolution and moving beyond concordist interpretations of the opening chapters of Scripture.

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RELIGION & SCIENCE

WHEN FAITH AND SCIENCE COLLIDE: A Biblical Approach to Evaluating Evolution and the Age of the Earth by G. R. Davidson. Oxford, MS: Malis Press, 2010. 288 pages, index, four standard translations of Gen. 1–2, footnotes. Paperback; \$12.50. ISBN: 9780982048603.

Davidson’s background as a geology professor and member in a conservative denomination provides the foundation of the book. He affirms a commitment to the inspiration and infallibility of the Bible, the reality of miracles, and the existence of a literal Adam and Eve in a garden until the advent of original sin. The book thus has a much better chance of getting a hearing with conservative audiences than arguments that reject any of those convictions.

He introduces three basic considerations in dealing with an apparent point of conflict between the Bible and science: Does the infallibility of Scripture rest on a literal interpretation of the passage? Does the science conflict with the intent of the passage? Is the science credible?

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The rest of the book sets out to address these questions, concluding that a rigidly literalistic scientific interpretation of passages is generally incorrect, that old earth and evolutionary science is not in conflict with the intent of the Bible, and that old earth and evolutionary science is credible, whereas arguments against an old earth or against evolution are generally not credible. Some harmonizing speculation is clearly identified as such. An opening scenario of an ineffective attempt at evangelizing a scientist is matched with a closing appeal not to be a stumbling block. The footnotes provide good documentation for a reader interested in digging further.

The text is well written, with explanations designed to make technical details accessible to a nonscientist. There are very few typos or similar errors, and with print on demand, they are quickly fixed, so a new copy should already correct the few that I spotted. The illustrations are of good quality and illustrate the concepts well. Overall, the book is well suited for a theologically conservative, nonscientist audience.

Reviewed by David Campbell, Paleontological Research Institute, Ithaca, NY 14850.

DARWIN'S PIOUS IDEA: Why the Ultra-Darwinists and Creationists Both Get It Wrong by Conor Cunningham. Grand Rapids, MI: Eerdmans, 2010. 543 pages, notes, index. Hardcover; \$34.99. ISBN: 0802848389.

Richard Lewontin once wrote that “a great deal of the body of biological research and knowledge consists of narrative statements.”¹ Conor Cunningham, in his new masterpiece, sets out to expose the tacit narratives and the ideological commitments of two great camps in the science and religion dialogue: the ultra-Darwinists and the creationists.

In the first chapter, “Introducing Darwinism—the Received View: Disenchantment,” Cunningham outlines Darwin’s theory of evolution through a historical and philosophical lens. He recounts the oft-told story of how Darwin completed the supposed loss of human dignity begun with the discoveries of Copernicus and Newton, and then he traces how the disenchantment of nature became entrenched in biological orthodoxy. Outlining the ideological twists and turns of Darwin’s theory, the author introduces the reader to several of the main themes that run throughout the book: the problems of essentialism, gnosticism, and reductive materialism. All of these have wound their way into the heart of our essential understanding of the world. Cunningham then challenges these assumptions, asking, “who told you that you were *merely* material or, more importantly, that *matter was mere*?” (p. 23). If the received view from biology is that the world is disenchanted, Cunningham brings the reader on a journey to rediscover just how enchanted, or supernatural, the world really is.

The second chapter, “Units of Resurrection,” immerses the reader in the debate of nominalism vs. realism. If natural selection directs evolution, at what level does it select—at the level of genes, of individuals, of groups, or something else entirely? The author shows how the ultra-Darwinists seek to reduce people down to basic dualisms (replicator/vehicle or genotype/phenotype),

thereby divesting humanity of any sense of self or personhood. The result is a total ontological nihilism that consumes all meaning in the world. Instead, Cunningham argues that we ought to embrace models of evolution which center around the fundamental reciprocity found in nature. Altruistic models are able to give meaning to higher levels of biological emergence and explain realities that are simply not reducible to genes.

The conclusion of nonreducibility leads straight into chapter three, “Unnatural Selection,” in which Cunningham seeks to slay another sacred cow of biological orthodoxy: the primacy of natural selection. While selection (at whatever level) is certainly active in evolution, Cunningham criticizes the ideological commitment that sees natural selection as “all-powerful” in evolutionary development. Natural selection, he argues, cannot account for the formation of traits, and standing alone, it is insufficient to explain the generation of novelties. To do this, we must widen our scope and allow other phenomena, such as occurrences of homology, convergence, and modes of extragenetic inheritance, to shape our understanding of natural selection’s role. Indeed, he states that “we must no longer think of natural selection as creative. Rather, it is merely a matter of sorting, much like an editor instead of an author” (p. 105). The compulsion that biologists feel to point at a phenomenon and say, “Natural selection did it” is compared to the creationist who explains the world by saying, “God did it.” Both are scientifically vacuous. It is high time, says Cunningham, for biologists to leave behind their ideological commitment to reductionism (driven by physics envy) and admit that natural selection as *the* primary shaper of the natural world is simply insufficient for the complexities of modern biology.

The fourth chapter asks if evolution can make sense of teleology. Cunningham insists that progress is not scientific heresy, but instead, that life is “written into the fabric of the universe” (p. 146). It is only those with ideological hobby horses who attempt to reduce the emergent properties of nature, such as mind and consciousness, and thereby discredit them from value. If life is intrinsic to matter, then meaning returns to the process of evolution. Cunningham shows how a view of rational nature is coherent only within a truly Christian understanding of the cosmos—a view that also leaves humans as distinct from the animal realm through emergence. By reorienting our perspective of creation, God becomes the perfectly natural one, and all creation is derivatively supernatural.

“Matter over Mind,” chapter five, unpacks sociology and evolutionary psychology which try to make Darwinism a “theory of everything.” In Ultra-Darwinism, all morality is relativized, and therefore becomes non-existent. Cunningham alternately proposes that accepting irreducible emergence allows for the embrace of morality and ethics. A world that rejects dualism and gnosticism is the only worldview in which freewill, and a self to exercise that freewill, actually exist! Instead, human nature is an emergent property that cannot be explained by evolutionary psychology. It is, according to Cunningham, a transubstantiation of being that cannot be reduced.

Chapter six, “Naturalizing Naturalism,” wages an all-out war on reductive materialist views. Interestingly, Cunningham includes a short but brilliant critique of

intelligent design here, demonstrating how the movement actually buys into the very reductive philosophies it claims to oppose, and limits the God it seeks to uphold. This longest chapter continues with discussions of many different topics, but argues throughout that any science that claims sole metaphysical veracity will eventually self-destruct. Instead, notions of truth must be expanded to include elements like trust and love. Quoting Gregorious, Cunningham says, “divorced from love and wisdom, science/technology becomes an enemy of humanity” (p. 301).

In the final chapter, “Another Life,” Cunningham sets out a theological argument for seeing Christ as the cornerstone of creation. Drawing on various ideas, from the Patristics and Mystics (Gregory of Nyssa, Origen, Irenaeus, Meister Eckhart) right up to the advocates of *Nouvelle Théologie* (de Lubac and Balthasar), he shows how Christ is the fulfillment of the creation narratives. A Christological reading of Genesis, he claims, releases us from reading the creation narrative as a literal, historical event and challenges our traditional views of original sin, death, and salvation. Christ becomes the only Adam, leaving the question of evolutionary origins open and restoring the lost enchantment to the world through a sacramental understanding of the cosmos.

Cunningham’s writing is fresh and provocative. He draws on an impressive range of sources, from Monty Python and Shakespeare to the most eminent biologists. The book is massively well researched and represents the cutting edge of discussion in various fields, ranging from psychology to genetics to theology, yet the scholarship does not stiffen the book. While the book is science-heavy, it is accessible to the careful layperson: the writing is rife with similes and engaging examples that help make difficult concepts clear. His analysis of Dawkins’ philosophy of science is searing, and his portrayal of modernist ideology in both the ultra-Darwinist camp and the creationist camp is incisive.

Darwin’s Pious Idea is already being hailed as one of the most important books of the year by Christopher Benson in *First Things*, and it has received high acclaim from top academics in various fields, such as Holmes Rolston III, Ian Tattersall, David Livingstone, and David Bentley Hart. It will take longer, though, to see if Cunningham’s ideas — his biological and theological narratives — will fly or fail in the testing ground of time. For now, however, this book is a must read.

Note

¹Richard Lewontin, “Facts and the Fictitious in Natural Sciences,” *Critical Inquiry* 18, no. 1 (1991): 143.

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THE CONSTANT FIRE: Beyond the Science vs. Religion Debate by Adam Frank. Los Angeles, CA: University of California Press, 2009. 267 pages, notes, index. Paperback; \$17.95. ISBN: 9780520265868.

Drawing heavily on the classic William James book, *The Varieties of Religious Experience*, Adam Frank, professor of astrophysics at the University of Rochester, explores the shared properties of science and his word for religion, “human spiritual endeavor” (p. 5). Frank describes him-

self as a “believer” and what he deeply believes in is “the path and practice of science” (p. 3). In short, Frank is an atheist who is also a spiritual person. A better word to describe him is “nontheist,” as the word “atheist” now carries too much baggage.

Given Frank’s different worldview from ASA members, is there reason to read this book? The answer is “yes,” on two counts. First, it acquaints the Christian reader with a person with whom one can have a profound disagreement and yet respect. Second, it exposes one to an honest nontheist who honestly considered the many stories told by people who have had personal spiritual experiences. Frank points out that these simply cannot be glossed over as coincidences or hallucinations, but must be taken seriously as a part of a body of evidence of something. He writes, “There is ... some truth discovered, that is more than simple neurochemistry gone amok” (p. 7). He asserts that he, himself, has had such experiences, some closely connected to his life as a scientist.

Frank’s book is most interesting; it is an easy read for those not annoyed by a clash of philosophies. Frank chooses to describe spiritual experiences, both religious and scientific, as “heirophanies,” a word first coined by Eliade (p. 81). This allows him to account for reports of religious experiences without having to think of a divine person. This is, of course, a classical “nothing buttery” argument and is unlikely to impress a person who has had a genuine theophany. In my opinion, however, Frank is blowing his dusty horn in a closed room, unaware of a world beyond his vision.

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C. S. LEWIS ON THE FINAL FRONTIER: Science and the Supernatural in the Space Trilogy by Sanford Schwartz. New York: Oxford University Press, 2009. xvi + 240 pages, appendix, notes, bibliography, index. Hardcover; \$27.95. ISBN: 9780195374728.

In *C. S. Lewis on the Final Frontier*, Sanford Schwartz has proposed a bold alternative interpretation of Lewis’s three science fiction novels. Rather than interpreting the Ransom trilogy as a clash between religious and naturalistic points of view, Schwartz argues that the stories should be read as a much more complex clash “between ‘archetype’ and distorted ‘copy’” (p. 17). Schwartz also argues that even though the Ransom trilogy may have commenced without a master plan, it concludes as an integrated and systematically arranged series. Schwartz sees in the novels the use by Lewis of a literary device Northrop Frye described as an Augustinian strategy to accuse one’s opposition of derivative doubling that merely bears a close resemblance or imitation of the real thing. Through his interpretation, Schwartz seeks to make the case that Lewis sought a critical engagement of philosophical interpretations of modern science rather than an antithetical conflict between religion and naturalism.

His argument depends upon three premises that he discusses throughout the book. First, the three novels share a common structure. Second, they describe a developmental paradigm for the modern evolutionary model that

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moves “from the ‘materialist’ assumptions of the first story to the presumably higher ‘organic’ or ‘vitalist’ level of the sequel, and then mutates once again into a ‘spiritual’ principle in the finale” (p. 7). Third, the “providentially governed communities” associated with Ransom represent a “transfiguration” of the phase of the evolutionary model that they oppose.

In his discussion of *Out of the Silent Planet*, Schwartz attempts to demonstrate that Lewis has points of common agreement with the opposing ideas in his novels. Though Lewis critiques the materialistic vision of H. G. Wells, Schwartz argues that Lewis had appropriated much of Wells, including Wells’ critique of Western imperialism, racism, nationalism, and disregard for other species. He suggests that the ritual hunt between the *hrossa* and the *hmakra* suggests the common ancestry of the two species and a shared instinct for “mutual challenge” (p. 39). He also finds symbolism to support his thesis such as his suggestion that the Fixed Land of *Perelandra* represents a “surrogate eternity” that offers the Green Lady an escape from “the disappointment and terror of an uncertain world” (p. 72). Actually, the Fixed Lands only represent Fixed Lands. The Green Lady faced no disappointment and terrors of an uncertain world. The floating islands eventually take her to the one Fixed Land where she would find her husband.

In his treatment of *Perelandra*, Schwartz argues that Lewis does not really present a stark contrast between “Christianity and the evolutionary or ‘developmental’ tendencies of modern thought” (p. 53). Instead, he has built a world whose primary features are based upon a philosophy of continuous flux and perpetual development. Schwartz claims that “Lewis envisions a world in which Becoming is the originary principle and the Creator, who ‘never repeated Himself’ ... has endowed the creation with the potential for perpetually new and spontaneous development” (p. 54). This interpretation sounds much too Aristotelian for Lewis who abhorred “the philosopher of divisions.” Schwartz discusses at length Henri Bergson’s theory of the *élan vital* found in *Creative Evolution*, which provides a middle position between religious and naturalistic points of view. Schwartz makes the case that because the young C. S. Lewis appreciated Bergson’s ideas of energy and fertility in his youth before becoming a Christian, then *Perelandra* represents Lewis’s acceptance of Bergson’s vision. Schwartz calls this appropriation a “transfiguration” that involves a redemption of Bergson’s position (pp. 63–4). Schwartz’s approach appears to be more a case of reader response in which he sees what Lewis did not include in the narrative.

Schwartz’s strongest argument against a clear-cut distinction between the religious view and the naturalistic view comes with the third Ransom book, *That Hideous Strength*, in which N.I.C.E. seeks to combine science and the occult. The popular literary device of “doubling” marks much of Schwartz’s commentary with doubles formed by Merlin and the tramp, the experiences of Mark with N.I.C.E., and Jane with St. Anne’s, Ransom and Wither, and so forth. To advance his thesis, however, Schwartz refers to Ransom’s headquarters at St. Anne’s as “original” in relationship to the headquarters of N.I.C.E. at Belbury which is merely “the monstrous distortion” (p. 121).

While Schwartz presents an intriguing theory, he fails to take note of the sources for much of Lewis’s material. Schwartz does not seem to appreciate that Lewis was a medievalist who did not use modern cosmology or philosophy as his frame of reference. All three books in the Ransom series borrow the medieval conception of the relationship between matter and spirit that made sacramental theology possible. Schwartz attributes Lewis’s interest in time and change to Bergson without seeming to realize the extent of the medieval debate over the positions of Plato and Aristotle on these issues. Lewis cannot be understood apart from his first great scholarly work, *The Allegory of Love*, in which the battle between opposing forces lies at the heart of the matter. Schwartz betrays his unfamiliarity with the conceptual world of Lewis on page four with a reference to the cover of *Time* magazine, where Lewis appears with a “pitch-forked tempter” while the “protective wing of a dove” intrudes from the side. The unseen figure that fits medieval allegory is an angel, not a dove. This failure to recognize actual doubles runs throughout the book beginning with the title, for the book is not about “science and the supernatural.” Lewis never confused science with philosophy.

Reviewed by Harry Lee Poe, Charles Colson Professor of Faith and Culture, Union University, Jackson, TN 38305.

RECONCILING THE BIBLE AND SCIENCE: A Primer on the Two Books of God by Lynn Mitchell and Kirk Blackard. Charleston, SC: BookSurge Publishing, 2009. 266 pages. Paperback; \$18.99. ISBN: 9781439240090.

This book intends to address the presumed controversy between God’s two books, the book of Scripture and the book of nature, the Bible and science. The authors claim that while the current debate is real, the conflict is only apparent, for faith in God and an acceptance of science are compatible. They write, “Christianity and modern science can co-exist” (p. 13), “if we avoid unwisely mingling or confounding the Bible and science” (p. 145). Thus, the authors’ purpose is to reconcile them without confusing them, lest Christians become “de-facto agnostics” or fail to appreciate all that science contributes to our understanding of the universe and its inhabitants. To reconcile the Bible and science is to employ them for different ends. Mitchell and Blackard stress that science can explain how the universe and life developed, but not what life means. The Bible explores the meaning of life sustained by a creator God, but it was never intended to be a science book. It is a book of theology, a collection of documents, each comprising various genres that must be read in the “context of the times and purpose for which it was written” (p. 14).

The statement that “the Bible is not a science book” has become a mantra for me since I recognized that the Bible was not intended to address issues that specifically concern people with worldviews shaped by technology. *Reconciling the Bible and Science* is an effort to stimulate this sort of recognition in its readers by tracing the history of scientific discoveries and the too often lamentable conflict that has been triggered with some Christians. This conflict is based on the literalistic view that the Bible presents accurate science and history at every point. When science reveals something different about the world from how

these Christians interpret a particular text, they perceive science as anti-Scripture and anti-God.

In contrast, *Reconciling the Bible and Science* provides a context for how both books of God should be embraced by believers. It reveals how the philosophical contributions of Plato, Aristotle, Augustine, and Aquinas underpin modern science as well as religious concerns among current creationists, the intelligent design movement (ID), and theistic evolutionists (chaps. 1-2). The book then traces the history of modern astronomy through Copernicus, Galileo, and Newton (chap. 3) before focusing on Charles Darwin and his successors in the field of biological evolution, who have verified, corrected, and expanded upon many aspects of his theory (chaps. 4-6).

The book proceeds to identify the roots of the current debate between those fearful of science because of their faith and those disdainful of religion on account of science, effectively defining important terms such as "falsifiable," "theory," and "myth." The authors then trace the more recent history of the controversy through the court cases involving attempts by ID to place its curriculum in public schools. While the authors agree that God is the intelligent designer behind the universe, its great age, expansion, and the evolution of its inhabitants, they are not convinced that ID is science (p. 248). The authors treat fairly both scientific creationists and ID with whom they disagree, showing how some within those camps have a nuanced acceptance of scientific discoveries, such as the age of the universe, while still attempting to find science in the Bible and to build upon it (chaps. 9-10).

Mitchell and Blackard reveal early on their stand with theistic evolutionists, and then demonstrate why in Part II (chaps. 11-14). Although they are sympathetic to Stephen Jay Gould's "non-overlapping magisteria," they prefer theistic evolution's recognition of God as the creator who works through evolution (p. 145). They believe the latter involves more dialogue between "scriptural revelation and the testimony of the created universe" (p. 149). They boldly assert that biblical literalism "turns attention away from the central religious concerns of the Bible's authors. Much religious language was not intended to be read literally ..." (p. 172). Indeed, to expect the ancient Scriptures to reveal or to be concordant with modern science is a cheerless failure of the imagination.

Knowing when, where, and how the perceived science-theology conflict arose and mutated is crucial to realizing that the conflict does not have to be. Nonetheless, some readers may find tedious the sheer length of material leading to the discussion of biblical interpretation in chapters 12-14. The material in chapter 12, which includes the section "Reading the Bible for what it is," could have come much earlier in the book.

Also, the authors may have feared that further citations would have made *Reconciling the Bible and Science* less accessible, but readers would benefit by more of them, as well as a short list of resources for further study at the end of each chapter. For example, what is the textual evidence for their claim that, at the beginning of the seventeenth century, people began to see the Bible as an infallible source of information about science, and that the Bible had been "dictated" by God? (p. 49).

I have a few other quibbles. The authors repeat that the purpose of the biblical creation stories is to oppose polytheism (p. 25), but the accounts have other functions. They are etiological; they explain the world as we see it—farming, marriage, shame and modesty, the trials of parenting, and adversarial relationships between spouses and between brothers. Regarding the order of the Hebrew Bible, the authors assume that Malachi is the last book and that between Malachi and Matthew were "silent years" (p. 23). Actually, Chronicles is the last book in the Hebrew Bible and 400 BC to 0 were anything but silent in terms of Jewish literature. Daniel was, in fact, written during these years, and seemed for a time to reside in the prophetic division. In addition, regarding the New Testament canon, Mitchell and Blackard claim that "Marcion began the process," but this gives him too much credit. Scholars of the New Testament canon know that Marcion created a canonical list around AD 140, but most of the books of the New Testament were already being transmitted as authoritative at that time, or else Marcion would have had no books to excise from his list, even though, as they note, a list identical to the present New Testament is not found until the late fourth century.

All in all, I recommend this book to all who cannot ignore the wonder of God's universe as revealed through science; who are convinced that Scripture permits us to hear how our ancestors in the faith met God; and who recognize that it is the means by which our walk with God is illuminated.

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Letters

Humans: The Supernatural in Nature

Michael L. Peterson, "C. S. Lewis on Evolution and Intelligent Design," (*PSCF* 62, no. 4 [2010]: 253) presents a comprehensive study of C. S. Lewis on the theory of evolution, the argument from intelligent design, and how Lewis would distinguish the philosophical arguments for a Transcendent Mind from the current claims of the intelligent design (ID) movement.

The central issue in all arguments and discussions regarding the scope of science is based on the distinction between the notions of methodological naturalism in science from those of philosophical naturalism. Methodological naturalism is the scientific approach of restricting the explanation of *natural phenomena* to *natural causes*. Philosophical naturalism, on the other hand, is the metaphysical view that nature alone is real, that the supernatural does not exist. However, it is not often clear what one means by "natural phenomena" and "natural causes." For instance, is human reasoning a natural phenomenon based on natural causes? Lewis considers human reasoning to be supernatural.¹ Therefore, it seems that methodological naturalism presupposes physicalism, which can only deal with the physical aspect of human beings, and so can never give a complete description of what a human being is.