Reviews

Nicholas Spencer
Magisteria

London: One World, 2023. 476 pp. hb. £25.
ISBN 978-0-86154-461-5

Nicholas Spencer's new survey of the tangled history of science and religion is an enjoyable and commodious introduction to the field. He relates the stories of the seminal events well, based on recent scholarship and with footnotes referring to the primary sources. Rarely has the tragedy of Annie Darwin's death at the age of ten been more poignantly told, or so well contextualised within Charles Darwin's wider theological struggle. Elsewhere, Galileo's tribulations with the inquisition, the Wilberforce/Huxley debate and the Scopes Monkey Trial are all carefully picked apart to identify the issues actually at stake. Readers of Science and Christian Belief are doubtless familiar with much of this, but should still admire Spencer's lucid analysis as well as finding his retelling of the key events a useful orientation for students.

There's plenty more that's valuable: for example, a fine explanation of Newton's theology, an exposé of phrenology, and an entertaining discussion of the Soviet Union's institutional atheism. That said, while the scope of the book is certainly wide, it remains largely Eurocentric. There is a chapter about Islam near the start and a look at modern Islamic creationism, as well as a nod towards China when the Jesuits turn up, but precious little about Buddhism or Hinduism. Through most of the book, 'religion' means Christianity and 'science' means the modern western variety. I expect that Spencer would have liked to include more global coverage but was chaffing against the word limit set by his publishers. It is disappointing that space constraints prevented the inclusion of a comprehensive bibliography.

Spencer is inspired by the complexity thesis of John Hedley Brooke, to whom the book is dedicated. *Magisteria* demonstrates the validity of this thesis many times, showing that science and religion have enjoyed periods of concord and conflict, and more often a kind of creative tension. The conflict myth is efficiently disposed of in the introduction, while the rest of the book provides numerous demonstrations of how contingent the interactions between science and religion have been. Spencer shows that it has been almost as dangerous for religion to rope itself to scientific theories that happen to be current at the time as it has been to exert its authority to oppose them. The title of the book is obviously a nod towards Stephen Jay Gould's non-overlapping magisteria, the inadequacy of which Spencer also notes.

Spencer suggests that the two occasions when matters can get especially fraught are when there is a dispute over who has authority to adjudicate between science and religion and when the debate concerns what it means to be a human being. These sound like sensible sign posts, and they could have been invoked more often in the text that follows. For example, Spencer notes the sad case of Ota Benga, a Congolese pygmy caged with apes in New York's zoo in 1906. This could have been explicitly examined through both the lenses - what is a man and who gets to decide? These were difficult questions in the nineteenth century, with disputes on the question of common descent within the religious and scientific magisteria, as well as between them. Nor can we say such matters are of historical interest only. The row currently in the news - what is a woman and who gets to decide? - would have seemed as incomprehensible to a Victorian as phrenology seems to us.

Many fine scholars have followed the path beaten by John Hedley Brooke in the early 1990s and a considerable body of work has appeared in the intervening 30 years on the historical relationship between science and religion. Nicholas Spencer is to be congratulated for wrestling this material into a coherent account with wisdom and compassion. His book becomes the best introduction to the field, ideal for students and general readers, while even academic professionals will find much food for thought.

James Hannam is the author of The Globe: How the Earth Became Round (Reaktion, 2023)

Andrew Ter Ern Loke

The Origin of Humanity and Evolution: Science and Scripture in Conversation

London: t&tclark, 2022.189 pp. hb. £76.50.
ISBN 978-0-567-70635-5

One might hope that a new book on evolution and theology will contribute to an emerging scholarly Christian consensus. Loke, a theologian at Hong Kong Baptist University, covers a wealth of literature on evolution and theology—although he omits the consensus document of Lucas and co-authors [*S&CB* 28 (2016): 74]—and is a prolific author. He argues that there is no incompatibility between human evolution and the Bible, but (to my mind) not in a way that will advance consensus.

Loke rejects *concordism*, the attempt to dovetail scientific and biblical accounts of reality. He prefers a model of *conversation* between science and theology (15). But his efforts to allow that 'Adam' *could be* placed into physical anthropological schemes evinces essentially concordist presuppositions. Loke has sympathies with the postulate of *biblical inerrancy* in addressing the issues of human origins, leading him to deny that the Bible presupposes the science of the day (26-28). He acknowledges that we must be wary of the errancy of our interpretations (27), and that all reading involves interpretation (14). But is scriptural inerrancy meaningful when we always approach scripture via 'exegetical errancy'?

Regarding the interpretation of Genesis 1 (such as the seven 'days'), Loke argues rightly that the concern of the biblical authors was the revelatory and salvific acts of God, not scientific details (42). But he criticises Daniel Harlow for stating that the authors of Genesis adapted 'sequences, themes and motifs from pagan myths … to craft new stories with a decidedly different theology' (44). Gordon Wenham concurs with Harlow: these texts provide a 'major *theological* interpretation of traditional origin stories' (Wenham, *Exploring the OT: The Pentateuch*, 15). It is Israel's *theology*, revealed in sharp relief to that of Mesopotamia, that liberates humanity.

Turning to science, Loke defends the consensus age of the universe, against those who propound 'young earth' ideas or assert that the world could be created with the appearance of age (36). He summarises several notions of, and evidences for, biological evolution. He affirms the compatibility of evolution and creation (70-72)—with the proviso that we allow for God's 'interference' at key points (69). But how can God 'interfere' if God is the continual source of existence, order and fruitfulness? The core of the book considers human evolution and the question of Adam. The author appropriately emphasises new findings, a rapidly changing field, and uncertainties in hominin evolution.

Loke postulates a dualism of body and immaterial soul (107-110)—a surprise for those schooled by Donald Mackay and Malcolm Jeeves. He suggests that souls are transmitted through the gametes, which have 'soulish potentialities' (110). He describes the image of God (*imago*

Dei) as the unique *role* to which humans are called and the unique *capacities* underlying that role (98-99). Loke proposes that the first person to possess the *imago Dei* was Adam, created as such from creatures that were products of evolution (106). Adam's parents were anatomically *Homo sapiens* but not fully human (121). After the Fall, the *imago Dei* was transmitted through Adam's descendants by mating with *Homo sapiens* individuals that did not possess the *imago Dei*. This initially generated separate populations of image-bearing and non-imaging-bearing *Homo* (128, 150). The localised Flood destroyed the *imago Dei*-bearing group, except for Noah's offspring, who mated with non-*imago Dei* survivors of the flood to repopulate the earth (17-18, 130). As a result, all humans today possess the *imago Dei* and could have a common ancestor (Adam, Noah) even though they descended from a large population of anatomical *Homo* as indicated by population genetics (17, 95, 111-113; 155).

As we attend closely to the inspired Hebrew writers, should we not recognise that they had no concern for physical anthropology. They saw the humanity of their age as called to represent and serve God—without being concerned (*contra* Loke) as to when or how in history God ordained humans as the *imago Dei*. Whether Neanderthals share the *imago Dei* is known only to God, the One whose summons both defines that image and commissions image-bearers to compassionate care for anyone who is marginalised.

Loke's acceptance of mainstream evolutionary science is a welcome corrective to the apologetic catastrophe of evolution-denial. His close attention to Scripture is admirable, but I found the tone of this book to be relentlessly polemical. The author engages with creationists using their biblicist strategies, which do not take the reader closer to the glory of Israel's God. I am not convinced by his speculative thesis that, despite our evolutionary origins, we are all descended from a historical pair, Adam and Eve (who must have lived before Australia was peopled 50,000 years ago) from whom we inherited the *imago Dei*. Nevertheless, this book could have mediating roles to play in polarised (American?) contexts.

Graeme Finlay, Honorary Academic, University of Auckland, has authored *Genes, Genealogies and Phylogenies* (2013, paperback 2022), *Evolution and Eschatology* (2021) and *God's Gift of Science* (2022).

D. Gareth Jones

At The Margins: A Life in Biomedical Science, Faith, and Ethical Dilemmas

Eugene, Oregon: Resource Publications, 2022. 198 pp. pb. £21. ISBN 978-1666744712

The name of Gareth Jones will be well-known to many readers of this journal. He has had a distinguished academic career as Professor of Anatomy and Director of the Bioethics Centre at the University of Otago, New Zealand. At the same time he is a highly regarded author and commentator on controversial ethical issues at the interface of biomedical science and thoughtful Christian faith, playing this role for more than 40 years. He is a prolific writer with tens of books to his credit and numerous articles published in international scientific journals, including several in *Science and Christian Belief.*

His latest book, subtitled *A Life in Biomedical Science, Faith and Ethical Dilemmas*, provides a series of thoughtful reflections looking back over more than 40 years of ethical engagement. The book has chapters addressing the ethical dilemmas raised by the use of 'unclaimed bodies' for scientific research, and the skeletal remains of indigenous popula-

tions, the Covid pandemic and scientific disinformation perpetrated by various Christian groups, and issues raised by IVF and research on the human embryo. A recurring theme throughout this book is the painful reality that many of Gareth Jones' most strident critics have not been his secular colleagues in New Zealand but Christians from a conservative Evangelical background. He recounts a bruising episode concerning his book *Brave New People,* published in 1984, which led to a flow of critical letters and boycott threats aimed at the American publishers IVP. The book was withdrawn by the publisher although subsequently republished by another house. Many scientifically trained readers will resonate with Gareth Jones' understandable frustration at the level of scientific ignorance and simplistic ethical thinking which seems common amongst some evangelical groups.

Of all the controversial areas in which Gareth Jones has taken a public stance it is the theological and ethical status of the human embryo which is the most contested. He argues that the conservative theological position that 'life begins at conception' becomes in effect a 'faith versus science' issue, since it makes unacceptable all scientific research into normal and abnormal embryonic development, as well as the extremely common clinical procedures of IVF and pre-implantation genetic diagnosis. The author makes a clear distinction between the embryo (up to 8 weeks gestation) and the fetus (beyond 8 weeks). We should treat the embryo 'with respect' but destructive research is appropriate if it has a worthwhile scientific or humanitarian purpose. He argues that large quantities of spare embryos are being created in IVF procedures around the world and it is good Christian stewardship to use them for the good of humankind. On the other hand, the more mature fetus should only be aborted in unusual and severe cases.

Speaking personally, I have great respect for Gareth's costly integrity, courage and persistence in promoting and defending ethical positions that, whilst thoughtful and scientifically informed, are currently deeply unpopular in conservative Christian circles. Although I find myself in disagreement with his conclusions about embryo research, there is much to learn in this volume about Gareth's principled refusal to shy away from difficult questions and his preparedness to occupy some of the uncomfortable borderlands between biomedical science and biblical faith. The painful reality is that there is a deep fault-line between thoughtful and well-informed biblical Christian believers when it comes to the philosophical and theological status of the human embryo and developing human. Over the period of 40 years that this book covers, the fault-line appears, if anything, to have widened. So there is a continuing need for genuine dialogue and careful 'double-listening' in this area between scientific and theological specialists. If this book has the effect of encouraging that dialogue it will have made a valuable contribution.

John Wyatt is Emeritus Professor of Neonatal Paediatrics at University College London and a researcher and writer on topics in biomedical ethics, digital technologies and artificial intelligence.

Michael Ruse. Alister E. McGrath, Bruce L. Gordon

Three Views on Christianity and Science

Grand Rapids, Michigan: Zondervan Academic, 2021. 214 pp. pb. $18.99. ISBN 978-0-310-59854-1

This book has a logical structure characteristic of the Zondervan Counterpoints series on the Bible and Theology: each of the three protagonists is given the opportunity to lay out his view of the relation-

ship between science and Christianity, to which the other two provide responses, and then the original protagonist writes a rejoinder. The book has an introduction by Christopher Reese and a conclusion by Paul Copan, making a total of fourteen sections, which is certainly a thorough way to make sure each writer has their say. However, including the expression of three views, rather than two, means that it is not clear what conclusions should be drawn, and whether any one view is vindicated over the others.

The three views expounded are the Independence view, by Michael Ruse, who is not a Christian believer and considers belief to be a matter of faith rather than reason, but is positive about the contribution Christianity makes to society; the Dialogue view, by Alister McGrath, who holds that the two books of nature and scripture have equal importance but different concerns and can critique each other; and a Constrained Integration view, by Bruce Gordon, who is a proponent of Intelligent Design and considers that science should include concepts of divine design in its methodology and nomenclature, and that scientific law is dependent on divine action.

Readers of *Science and Christian Belief* may consider they would identify most closely with McGrath's view, and it was somewhat bemusing to be told by an unbeliever that Christian faith could have no basis in reason. McGrath employs academic terms; Gordon uses Cartesian philosophy to argue for the necessity of the existence of a God and quantum mechanics to argue that regular mechanical "law-like" laws are divine in origin. Ruse's style is the most informal and engaging: he expresses appreciation for McGrath's considered and intellectual approach, while professing himself unable to take the step of faith. While Ruse is emphatic in his rejection of Gordon's arguments for the necessary existence of God, he does not engage with those arguments in any detail, but simply states that he does not feel compelled to believe in God on the philosophical grounds Gordon provides.

In the introduction and conclusion, the editors adopt a conciliatory tone in relation to the debate between the protagonists and pose some interesting questions. They do not attempt to reach a reasoned conclusion, however, nor do they comment on how divine design could be studied scientifically; and the implications for the kingdom of God of defining Christian faith as purely irrational are not explored. Rather, it seems that the purpose of presenting these views is to show that the Christian church contains differing views of science and Christianity which can sit amicably alongside each other, without reaching a conclusion as to which view is preferable, or exploring the consequences of each view for science or Christianity.

This topic is undoubtedly of continued interest, and a future study could seek views from scientists who share the Dialogue view but differ as to how scriptural authority and scientific authority might interact with each other, for instance in relation to ethics, apologetics, or personal and political morality. It would also be good to hear more from female voices and perspectives from non-Western cultures.

Christina Biggs is a Daphne Jackson Research Fellow at the Energy Safety Research Institute, Swansea University, working on green hydrogen, and a former local group leader for CiS Bristol

Alisha N Mack and Charles C Camosy

Bioethics for Nurses: A Christian Moral Vision

Grand Rapids, Michigan: William B Eerdmans, 2022. 242 pp. pb. US$ 21.99. ISBN 978-0-8028-7892-2

The authors set out to accomplish exactly what is indicated by the title – a book on bioethical issues for Christian nurses. Any reader, who is not a nurse, will gain valuable insights into the roles, contributions and frustrations of nurses, particularly those who are Christians. Both authors have strong backgrounds in nursing as well as in bioethics. Alisha Mack describes herself as an evangelical Protestant while Charles Camosy is described as a Catholic Christian. Initially I found the preponderance of references to Roman Catholic authorities unnerving, especially when Roman Catholic tradition is slated as one of the grounds of a Christian vision. The authors acknowledge there are differences in some of their approaches, although these do not distract from the dominant biblically based messages that come through.

Since both authors are American, there is a distinct American flavour to the book, especially when touching (briefly) on medical political issues and the health service. Nevertheless, there is a great deal of wisdom and helpful insights to be gleaned for those practising far away from an American context. A very helpful feature of the book is the generous use of case studies, some of which pose profoundly disturbing ethical dilemmas. The authors make no attempt to present spuriously simplistic answers, grounding their bioethical analyses in real (nursing) life.

The chapter on 'A Christian vision for nursing bioethics' is an exemplar in how to use Scripture to determine theologically based principles for nurses working with patients. The end-result is a set of seven key principles, with the reiterated reminder that, like the Good Samaritan, we are to put aside our selfish interests. Rather, we are 'to see the profound, inestimable value of human life, even when it is injured, sick, fragile, or weak,' and are to totally reject the throwaway culture that surrounds us (65). One manifestation of this is what the authors term 'accompaniment.' Christian nurses are to 'bind up the wounds of patients, and in the spirit of mercy to be physically close to patients in their illness, keeping vigil so they do not suffer loneliness in their final days and hours' (63). The conservative stance of the authors emerges in their emphasis on never being involved in killing at any stage of the life cycle. The challenges raised by such a stance are never downplayed.

The seven principles are returned to in subsequent chapters, touching on being made equal in the divine image; from fertilization to natural death; accepting death and never killing; and a superb chapter on Matthew 25 and human-created distinctions. Some of these chapters cover familiar territory, and yet they remain grounded in real life by the case studies around which they are structured. The authors are prepared to accept that compromise may sometimes be inevitable especially when resources are lacking. They reject an ableist vision as being radically opposed to a Christian vision with its favouring fundamental human dignity and equality even in the face of physical and mental 'deficiencies.'

In dealing with early development, their discussion becomes more theoretical, and it is very clear where their protectionist sympathies lie. And yet they strive to be consistent and practical, even though there are instances where the contribution of nurses will be limited in practice. Similar tensions show through when arguing against killing in a clinical setting. Here the authors use a thoroughly challenging case, that of Dr William Husel. A nurse challenged him over the high levels of Fentanyl he was giving to a patient in an ICU. Its repercussions for her and others were far-reaching, revolving around the doctor's intentions – to sedate or kill. Many other clinical decisions have similar reverberations, as do many

outside bioethics, such as in warfare. The authors merely touch on these, a wise decision since they extend beyond the core concerns of the nursing environment.

What shines through is that authentic Christian life is counter-cultural, resisting consumerism and ableism, nationalism that privileges citizens over non-citizens, classism that privileges the successful over the 'takers' and those who have been incarcerated. The relevance of this thinking is then applied to nursing and the availability of resources and medical technology, medical prestige, and above all to being oriented toward serving the least and non-citizens. They also decry our individualism and the longing to be radically free agents, since these are inconsistent with 'a Christian vision of the inherent relationality at the heart of human nature' (141). This leads them to comment that 'nurses care for actual people in the fullness of their human reality . . . . this summonses nurses out of themselves and into a relationship with their (often very vulnerable) patients' (142).

In returning to general themes, the authors touch on the place of conscientious protection for nurses within the broad framework of freedom of speech, and nurses rightful place in health-care teams. It is impossible to completely get away from COVID-19 and the authors face some of the horrific situations encountered by nurses as they attempted to uphold the full humanity of dying patients in situations characterized by pressures well beyond anything for which they had been prepared.

The major value of this book is that it espouses Christian bioethical approaches that, by facing up to the dilemmas of real life, go beyond the theoretical.

Gareth Jones, Emeritus Professor, Department of Anatomy, University of Otago, Dunedin, New Zealand. His latest book is: At the Margins: A Life in Biomedical Science, Faith, and Ethical Dilemmas, Wipf and Stock, 2022.

David W. Opderbeck

The End of the Law? Law, Theology, and Neuroscience

Eugene, OR: Cascade Books, 2021. 248 pp. pb. £23.38. ISBN 978-1498223898

Being neither a lawyer nor a neuroscientist I approach this review from the perspective of an interested non-expert. Opderbeck addresses the intersection of law and neuroscience, so-called neurolaw, a new and developing area of the legal thinking. Essentially, the issue is whether the developments in neuroscience should change how people are treated with respect to the law. For example, could a fMRI brain scan be used to determine whether someone is lying in court? The controversial aspect of neurolaw is with respect to the area of responsibility: *mens rea* (Latin: guilty mind) the intention or knowledge of wrongdoing that is part of the crime committed. Can neuroscience, through fMRI brain scans, determine whether someone should be held accountable, and so punished, for the crime they committed, or in some way absolve them of criminal responsibility because their brains are wired that way. The latter is a deterministic perspective popular these days where free will is seen an illusion. This goes beyond the standard questions of diminished responsibility or insanity with regard to guilt for a criminal act as it sees all of us as having no choice with regard to our actions.

Opderbeck's book covers a lot of ground, not only law and neuroscience, but the links between theology and science, anthropology and paleo-law, philosophy and theology, and it is not possible to adequately cover all these aspects in this review. The book began life as a doctoral thesis, and this shows to some extent in the style of writing.

The longest chapter is that on Method in Theology and Science (Ch. 5) and I do wonder whether this discussion is necessary in this book. It covers familiar ground for those interested in science and Christian faith issues, but I am not sure what it adds to Opderbeck's arguments regarding the inadequacy of the neurolaw approach to the law, other than point out the limitations of reductive approaches in science generally, and so in neuroscience specifically.

The two most interesting chapters are Towards a Philosophical Critique of Neurolaw (Ch. 6) and Mind, Law, Theology (Ch. 7). Chapter 6 considers various critiques of neurobiological determinism, such as those by Stephen Morse a law professor at the University of Pennsylvania (unfortunately the references to his work seem to have been omitted from the bibliography). Opderbeck ends up with the classical conclusion that, 'If consciousness is an illusion, then nothing at all is right or wrong, and anything goes.' (154) This, of course, undermines any attempt to seek justice in society, and to live by the rule of law.

In Chapter 7 Opderpeck argues for a neo-Aristotelian account of human persons and this, together with a discussion of the work of four contemporary philosophical theologians in Chapter 8 (The Soul of the Law), allows him to move towards a synthesis of neo-Aristotelianism and theology with regard to understanding the basis for law. He concludes that, 'our neurobiology *enables*, but does not *determine* human actions.' (202) This preserves the idea we are responsible for our actions in the eyes of the law (and, of course, in the eyes of God too).

I enjoyed reading the book while finding some of it quite challenging being, as noted above, neither an expert in law nor in neuroscience. Nevertheless, I did learn much about this topic from the book and found it fascinating. One thing that I had not considered before is that only humans among all Earth's creatures formulate laws (5) and this, in part, is what makes us distinctively human. The main thing that I took away from the book is that western society and its laws, which were largely based on a belief in a transcendent God, are moving away from that basis and towards a view of people which sees them as possessing no free will and therefore having no responsibilities for their actions. It is difficult to see what justice means in such a setting, and this is clearly at odds with the Christian view that God is a god of justice who hold us responsible for our actions.

Meric Srokosz is an oceanographer at the National Oceanography Centre, Southampton, a former associate director of the Faraday Institute, Cambridge, and the author with Rebecca Watson of *Blue Planet, Blue God: the Bible and the Sea*.

April Maskiewicz Cordero, Douglas Estes, Telford Work

What About Evolution? A biologist, pastor, and theologian answer your questions

Eugene, Oregon: Cascade Books, 2022. 106 pp. pb. £18. ISBN 978-1-6667-1294-0

This three-chapter volume is truly collaborative and, as far as I am aware, unique in its approach. Each author's contribution contains footnotes where the other two authors make comments, including clarifications, caveats and diverging views. I found this format extremely helpful in seeing the dialogue between the disciplines of biology, biblical studies and theology, as well as exposing levels of nuance that are usually hidden in other multi author volumes. This topic in particular lends itself to this approach, as it exposes the breadth and diversity of views that are held by Christians – even those from very similar traditions.

This is an ideal book to give to conservative evangelicals who have concerns or questions about creation and evolution. The writing style is very accessible, but with a reasonable level of academic detail. The authors are all Professors at US-based Christian colleges (Point Loma Nazarene University, Tabor College and Westmont College, respectively). They are clearly very experienced in taking undergraduate students through the process of encountering evolutionary biology and discovering how it can integrate with deeply held Christian faith.

The authors clearly communicate their high regard for both Scripture and the fundamental doctrines of the Church. They also do the important work of sharing their own faith and struggles on this topic. Cordero also shares her own, and her students', experience of the wonder of science and how it helps faith to grow. The questions covered are ones that in my experience are often asked by this audience, and are fundamentally important for both science and Christian faith. The explanations are clearly well rehearsed, with practical examples, figures and analogies. There are of course a couple of points where I disagree with the authors, but that is unavoidable on this topic, and not enough (in my humble opinion) to spoil an excellent book.

I particularly appreciated Estes' distinction between science (as practiced by scientists) and 'science' (an ideological, scientistic, position), and likewise evolution and 'evolution', Bible and 'Bible'. Like all the authors in this volume, he affirms traditional Christian faith while also calling for us to engage in the daunting task of unlearning things we know incorrectly.

I was impressed at the combination of sensitivity and authority that each writer shows. They do not try to convert the reader to their own view, but instead make a good case for it, encouraging further honest and open exploration. This approach is ideal for the target audience, and particularly for young people. The one point all the authors express very strongly is that people should not feel they have to choose between Christian faith and evolutionary biology. My main complaint is that this short book is so expensive. It would be ideal for students, or to sell at church-based events, and hopefully will be available at a more reasonable price in future.

Ruth M. Bancewicz is Church Engagement Director at The Faraday Institute for Science and Religion.

Justin L. Barrett with Pamela Ebstyne King

Thriving with Stone Age Minds: Evolutionary Psychology, Christian Faith, and the Quest for Human Flourishing

Downers Grove, IL: IVP Academic, 2021. 160 pp. pb. $20.00. ISBN 978-0-8308-5293-2

The topic of human thriving has received attention recently in the context of positive psychology's search for the conditions that promote well-being and flourishing, particularly in a contemporary North American setting. This book explores human thriving from a dual perspective: evolutionary psychology—focusing on the commonalities of human experience across time and across cultures, and Christian theology—focusing on character, virtue, and purpose in life.

The authors are well-suited for this task, with both having a long-standing interest in the science-faith relationship and the conditions for human flourishing. Barrett brings special expertise in cognitive science of religion and evolutionary psychology, while King has a background in human development. Although the book's ideas and narrative text flow from a collaboration between the two authors (with input from several additional col-

leagues), Barrett as the primary author frequently uses first-person singular pronouns—a style that I found distracting.

The main audience for the book appears to be educated Christians who are uncomfortable with (and perhaps skeptical of) the idea of human evolution. For this audience, the book serves as an introduction to evolutionary psychology and evolutionary explanations for the behavior of contemporary humans. As described in the Introduction, the goal of the book is to demonstrate that 'evolutionary psychology and neighboring scientific disciplines can serve as useful tools in analyzing the challenges to human thriving' while still affirming that 'the Bible, properly interpreted, reveals critical truths about human nature and purpose and what it means to live a life worth living.' (x)

The book attempts to provide a framework in which 'Christian theology and scientific inquiry concerning human thriving can be brought together.' (xii) Ideally, the benefits from this dialogue should flow in both directions, thus strengthening the explanatory power of evolutionary theory by infusing it with theological insights about human purpose and what it means to live a good life. In practice, the bulk of the book's content points in the other direction, 'placing evolutionary psychology in the service of theology.' (10) Only in the final section (Chapters 7 and 8) does the book delve deep into relevant insights from theological anthropology, including the implications of humans as *imago Dei* (created in God's image) and the concept of *telos* as the purpose toward which a meaningful life should be directed. For readers who are already familiar with evolutionary theory, this portion of book may well prove the most useful.

Other readers may find the central portion of the book (Chapters 3–6) more interesting. This section first lays out a Christian understanding of evolution, namely that 'God created a cosmos with living things that gradually change over time to suit the demands of their environments,' and then defines human thriving from an evolutionary perspective as 'fine-tuning our natural capacities to fit our particular niche'—the specific environmental conditions or context in which we live. (26–27) This leads to the basic premise of the book (reflected in the title): Human thriving is threatened by a 'nature–niche gap'— that is, our physical and social environment (our 'niche') has changed so quickly and so dramatically that our 'stone-age mind' (our 'nature' formed during many thousands of years in hunter-gatherer societies) has not been able to keep up. (47)

In general, the physical and social environments for other animals such as squirrels and sparrows have changed less dramatically. In trying to understand the unique challenges for human flourishing, the book devotes considerable attention to human distinctiveness and the evolutionary development of three distinctive human capacities: an intense focus on social relationships, a deep desire to gather and use information, and conscious, intentional self-control. Apparently, human thriving requires each of us to move toward our individualized *telos* in a way that both employs and satisfies these three characteristics.

Although the evidence for these three distinctive human capacities is derived from research in evolutionary psychology, the book ties them to *imago Dei* and the generalized *telos* common to all humans: 'These three groups of features make humans the only animals alive today that can image God by exercising His reign over the rest of creation and, most importantly, the only animals that can truly and deeply love God and love each other.' (8) This is a good example of why, in my opinion, the book is successful in

arguing that evolutionary psychology is not necessarily incompatible with Christianity, but instead holds insights that may enrich a Christian understanding of human nature and human flourishing.

The last section of the book is a brief chapter-by-chapter study guide containing questions for individual reflection or group discussion, which will be helpful if the book is used in a college class or a book discussion group.

Thomas Ludwig is Emeritus Professor of Psychology at Hope College and author (with Malcolm Jeeves) of *Psychological Science and Christian Faith* (Templeton 2018).

Calvin Mercer and Tracy J Trothen

Religion and the Technological Future: An Introduction to Biohacking, Artificial Intelligence and Transhumanism

Cham, Switzerland: Palgrave MacMillan/ Springer, 2021. 266 pp. pb. US$ 44.99.
ISBN 978-3-030-62358-6

The aim of this book, described throughout as a textbook, is to assess and analyse the immense possibilities opened up by major technological developments for the future of the human body. What makes it stand apart from many other such books is that the authors bring a religious perspective to bear on the topic, repeatedly asking how religious insights can and should influence thinking and how religious traditions will probably be transformed.

The subject matter of the book is nothing if not daunting. The overall framework is that of transhumanism and radical human bioenhancement, with the focus placed on superlongevity, cognitive and moral bioenhancement, and even spiritual enhancement. Special topics touch on cryonics, mind uploading and digital immortality, and superintelligence. These topics will undoubtedly sound arcane to those with little background or interest in the extravagances of transhumanism. And yet the authors unpack them with skill and a deep understanding of the issues at stake. While appearing to have sympathy with many of the developments under consideration, their realism shines through as they repeatedly question whether the science will work out as suggested, and as they point to the way humans all-too-often abuse technological advances.

These cautions stem from the religious standpoints of the authors, Calvin Mercer being a professor of religion, and Tracy Trothen a professor of ethics. Both are heavily involved in study of human enhancement, transhumanism, and artificial intelligence. From this basis, their aim is to inform people at large about the nature of the changes that are occurring and how these changes will, in their view, intersect with religion. Although they have all religions in mind, their emphasis is on Christianity since the bulk of the writing undertaken to date has been by those within a Christian milieu.

They commence the book with a drastic statement: 'The religions of the world will come to an end, or thrive, depending on how they respond to the topic of this book' (3). They want their readers to appreciate that there is a new world coming, and that it is coming much quicker than most people realize. This is undoubtedly true, and their presupposition is that this will be brought about by 'biohacking', that is, the radical enhancement of human beings with therapies and technologies currently available or shortly to become so.

The authors are not neutral observers of the debate, although they strive to set out the issues as fairly as they can. Towards the end of the book, they state their position, namely, 'that religions can thrive, but only if they skilfully and creatively respond to the impending biohacked world . . . and contribute power-

fully and positively to humanity's general response to enhancement, making sure the technologies develop on the side of justice, freedom, religious integrity and community' (216-217). In other words, this is a call for theologians to take these technologies seriously, a call that I appreciate. A problem I foresee is that some of the claims being made by advocates of transhumanism are, for most people, extreme and intensely speculative. This becomes even more pressing when reference is made to TechPlus Theology, where theology is viewed through the lens of enhancement technology.

The authors take religious approaches to bioenhancement very seriously, and always seek to discern how those with a conservative stance or with a liberal stance will respond. At first sight this division appears simplistic, and yet it works out more productively than I had thought. The authors have a very good knowledge of the thinking of these groupings within the church, and their aim is to see how they are likely to respond to forms of radical bioenhancement. In practice, it seems there may be substantial overlap between the respective responses.

When assessing each example of enhancement, the authors first give a description of the nature of the enhancement before turning to religious issues and finally ethical issues. For instance, when dealing with cognitive and moral bio enhancement, their description includes smart drugs, brain biohacking, and the likelihood of morality being delivered in a pill. The religious issues include assessment of the relevance of the Tower of Babel motif, while ethical issues include consideration of the therapy-enhancement continuum, the place of choice and the role of justice. The authors are helpfully prepared to guide readers as to where they come down in these debates.

The textbook description is apt, since the book covers a great deal of ground, and there is much to be learned from it. Not all the procedures are extreme, even if they are set within an extreme paradigm. Several of them are already in existence, and readers are gently reminded that many of us are cyborgs in the sense that we walk around with artificial joints and pacemakers. It also comes as a challenge to those on the conservative side of theology to ascertain how much they are prepared for their traditional interpretations to be extended. The book is extensively referenced, and the authors are very well versed in Christian theological stances.

The more general value of the book is to stimulate Christians and others to reflect theologically and ethically on technological developments, most of which are far less threatening than the ones discussed in this book, and yet with profound consequences for thinking about God and his relationship to the world.

Gareth Jones, Emeritus Professor, Department of Anatomy, University of Otago, Dunedin, New Zealand. His latest book is: At the Margins: A Life in Biomedical Science, Faith, and Ethical Dilemmas, Wipf and Stock, 2022.

John Wyatt and Stephen N. Williams (Editors), Justin Welby (Forward)

The Robot Will See You Now: Artificial Intelligence and The Christian Faith

SPCK, 2021, 251 pp, pb £12.70, ISBN 978-0-281-08435-7

'Artificial intelligence (AI) is in the air that we breathe.', so say editors John Wyatt and Stephen N. Williams in the opening sentence of their Editorial Introduction. They are quite right. We are living in unprecedented times where AI in some form is found almost ubiquitously wherever one looks. At a time when we all need to play 'catch-up' with wherever

technology is seemingly heading, this work shines as a much-needed social, ethical, and theological Christian perspective on robotics and AI.

In fact, this book arrives at an extraordinarily well-timed moment, when AI has, yet again, become the focus of popular debate and discussion in the media, some of it informed, but much of it less so. This collection of 14 articles arose from a recent international research study based at the Faraday Institute in Cambridge, co-led by one of the editors, John Wyatt. Written by the participants, the articles deal with a whole host of broadly social, ethical and theological issues, opening as it does with a perceptive forward from the Archbishop of Canterbury, Justin Welby. Despite the study's academic roots, the editors have clearly taken great care to curate a collection of articles which are both well-written and accessible for a general, non-expert, lay audience.

Although published in 2021, well before the likes of OpenAI's ChatGPT and Google's Bard emerged from the lab, Wyatt and Williams have wisely steered well clear of expecting readers to have any specific knowledge or indeed, any experience of this fast-changing technology stream. The technology-agnostic approach adopted herein ensures that readers need not be overly distracted by technology concerns as such. All that readers need to take away is that AI is real, it exists and will surely impact how we live, whoever we are.

For readers who need further reassurance about what AI is about, there is a short, non-technical introductory article supplying sufficient reference and context to grasp the essentials of what AI technology is (and is not) about. Additionally, this also briefly outlines some of the relevant history and some of the broader concerns, including the following: 'AI is simply the display by a machine of any cognitive process that we would expect to be done by a person.'

Each of the 14 articles is grouped under one of three parts; the first of which is called **What is going on? Cultural and Historical Analysis**. The articles there explore how our culture has *already* responded to the AI question, certainly in the form of popular science-fiction films and novels, as well as in general philosophical terms, discussing notions such as simulacra and simulation. The second part is called **Theological Frameworks And Responses**, dealing with issues of a more foundational philosophical and theological concern such as the nature of personhood, of human flourishing and exploring how the emergence of AI challenges the nature of what humanity is. The third part is called **Ethical and Social Issues**, and addresses many of the contact points of AI with modern society - how will AI affect human well-being, the nature of work, the impact of AI on health and social care, and artistic creation in music and painting. The final chapter talks about AI and 'surveillance capitalism', the very active 'data mining' of our behaviour for the benefit of corporations and governments.

From a Christian point of view, the content is positioned in an ecumenically neutral manner, admirably eschewing doctrinal biases as far as I could see – it is conceivably accessible and useful for even a non-Christian, secular audience. It also focuses on issues of what AI is, compared to humanity, confronting head-on what it means to be human. Emphasis is commonly placed on AIs *simulating* behaviour that might normally be ascribed to people. Modern AIs are determined by their training regime and are therefore incapable of acting with an independent *conscience*, neither morally nor immorally – judgement is clinical. AIs behave *neutrally* in a chillingly amoral manner; given any goal, an AI pursues it relent-

lessly, whatever it is.

Overall, this collection offers many valuable, timely insights into the social, ethical and theological issues concerning AI and is essential reading for thoughtful Christian engagement with AI.

Brian Monahan is a (retired) mathematician, computer scientist and software developer living near Bristol.

Sandra J. Godde

Reaching for Immortality: Can science cheat death?

Eugene, Oregon: Wipf and Stock, 2022, 81pp. pb £14.40 ISBN 978-1-6667-3674-8

Godde's brief but broad book, addressing the growing phenomenon of transhumanist thinking, seeks to equip 'Christians to examine and respond to the transhuman agenda regarding death and immortality, considering technological advances and biblical visions of the future' (xii). Her attempt at this is noble. The scope of transhumanism's appeal and outreach to the world in popular culture, academia and public debate has grown exponentially in the past decade as scientific development has stepped closer to science fiction. The need for a book like this is timely and well met.

Godde has divided her work successfully into short, easily digestible chapters which are highly accessible to the lay person and succinctly set out the challenges to the Christian faith. She contrasts the transhumanist vision with 'God's dream for humanity: for us to be immortalized in Him' (xiv). She allows this contrast to be demonstrated in each chapter. The table is set early on for each, differing focus given to the challenge of transhumanism when she notes that 'While the posthuman agenda seeks to immortalise the mind by cheating death, the gospel offers something more than a promise of future, embodied immortality' (7) The book continues by setting each challenge in turn and comparing it to the Christian promise.

Drawing on technological developments in AI (such as Neuralink) and biotechnology (CRISPR-Cas9) she emphasises that 'our future entails possibilities where technology will blur the distinction between our individual persons and machines' (4) which will raise serious ethical challenges. I commend Godde's ability to lay out the environment so well in such a short book, but for those whose appetite is whet, every chapter would need a much deeper dive to explore the issues raised. Only a surface introduction can be given, but this book does a brilliant job at doing so.

The book flows from an examination of pop-culture to technology and academic voices, but throughout successfully keeps the voices of the key players in transhumanism heard. For a brief introduction, it succeeds in familiarising the lay person with the drivers of the movement, both past and present. Godde asks whether 'technology of this scope, scale…potentially be another nail in the coffin of true, embodied humanity?' (18) before going on to argue from Christian tradition that the body 'should be dignified, not sought to be eradicated or superseded' (19)

She explains that 'Transhumanism is a philosophical orientation towards 'technological solutionism' and is generally undergirded by a belief that radical technological progress will eventually disrupt society and redefine the very definition of the human being' (20) She helps us by introducing terms like *singularity* and *omega point theory*, mapping out the three prongs of biological, bionic, and virtual immortality clearly for anyone to grasp. When you follow the book, you can draw easy parallels to where you may have seen or heard these ideas in everyday life. As the creeds and doctrines of transhumanism are laid out, so is the un-

derlying philosophy that 'this cybernetic evolution of our species depends upon the premise that life is identified with information alone.' (23) Here we find many more broadly familiar ideas from reductionism and materialism married to their technological outworking. In a vein not far removed from New Atheism, we see Daniel Dennett's ideas that humans are essentially minds, which are fundamentally information, therefore people are essentially algorithms and digital patterns. No free will exists, we are genetically determined, and equal rights are a Christian myth. Here religion is the enemy because it is unscientific, blind, offering comfort and acceptance of death.

Godde succeeds in exposing the transhumanist's blind belief in progress as both inevitable and good, without accounting for human freedom or moral character. She writes that 'human nature cannot be changed by the augmentation of intelligence' (39) and I was reminded of Richard Feyman's signoff to the Space Shuttle Challenger disaster report that ultimately nature cannot be fooled.

I did question whether all Christians would agree on perhaps transhumanism's more noble ambitions to improve the human condition of health and strength against disease and debilitation. Godde explains that to transhumanists 'our body is the main problem, imposing…intolerable restrictions' (32) and their vision that 'We must wage a technological and medical war against aging and death' (31) which is 'a moral responsibility.' (32) However, as a geneticist well familiar with CRISPR-Cas9, I was reminded of how Nobel laureate Jennifer Doudna has been very candid in explaining how her mind changed on the ethical possibilities of CRISPR. She raised repeatedly the question of when it is more ethical to act rather than not, when the power to alleviate suffering is in your hands. What if Christians end up being the voice of opposition to the practical healing potential of CRISPR, especially when it has already been successfully applied to sickle cell disease?

The book concludes with a concise outline of where the gospel succeeds at the pitfalls of transhumanism: 'An anthropology where the physical body is seen as inherently flawed does not add to a vision of future flourishing.' (66) The Gospel's glorious vision of hope in God's transformation of us is far grander than anything transhumanism has to offer, with its foreshadowing in Christ's resurrection a greater historical example than what science fiction can dream of.

With its strong introduction to the topic, this book is recommended for a lay person as well as for a philosopher. I encourage those interested and disinterested to read it.

Sam McKee is a PhD student in Philosophy of Science at Manchester Metropolitan University. He studied Theology at Chester University and Genetics at Cambridge University, as well as an MSc in Molecular Biology from Birkbeck.

Simon Conway Morris

From Extraterrestrials to Animal Minds: Six myths of evolution

Templeton Press, 2022. 432 pp. hb. £28.37.
ISBN 978-1599475288

Simon Conway Morris' latest book is a collection of six inter-related essays on topics ranging from the emergence of evolutionary complexity to the Fermi Paradox. As expected, it is buttressed by an massive bibliography. I promised myself not to look at the bibliography at first, but found myself turning to it over and over again as one astonishing fact after another tumbled across the pages. I should add, as a sort of disclaimer, that I was a PhD student of Simon's, and even

back in that antediluvian era he was famous for poring endlessly over the literature, spending Saturday mornings in the quaintly-named Scientific Periodicals Library and seemingly transferring most of it into a vast card index. Thus, the text moves casually from the Great Molasses Flood to Yorkshire Terriers to Dyson Spheres, and the reader, almost helplessly, is drawn along as if lashed to a bamboo raft heading for some particularly dicey-looking rapids.

Despite the breadth of topics, some overarching themes emerge. The first is that evolution is simultaneously both more messy and yet more law-like than popularly imagined. It is messy in that it doesn't proceed along straight lines of 'missing links' leading straight from say, *Archaeopteryx* to pigeons but rather, some groups tend to repeatedly produce the raw materials of such transitions. Within the theropod dinosaurs, for example, bird-*like* groups evolved on multiple occasions, so that one is left with a sense that a bird as we would recognise it today was somehow bound eventually to appear. This incidentally touches on two live scientific topics, the idea of so-called 'deep homology', whereby a shared genetic apparatus can lead to the parallel appearance of similar morphological features in different lineages; and the whole problem of detecting convergence. Indeed, as Simon concedes, our ability to detect the patterns of evolution is clouded by our basic inability to know when particular features do and do not indicate common descent.

Another theme taken up is about evolutionary limits – have we reached them, or will evolution in the future simply meander away indefinitely? Simon argues that there are physical limits to functionality and that many have already been reached. His compelling discussion of sensory systems here is one of the most absorbing of the whole work, and this deep appreciation of the extraordinary outcomes of evolution (as exhibited in a previous work) was what led Richard Dawkins to astonish the internet by tweeting appreciatively about it. Of course, the limits we know of are set by conditions on Earth and here I perceive the distant influence of a wonderful book that Simon urged me to read when I was a student – *Life's Devices* by Steven Vogel (Princeton, 1988). What about on other planets then? In his final chapter, Simon turns to the Fermi Paradox – why no aliens? And if there *are* aliens, what are they like? Simon's answer to this is the obvious but (to many) unpalatable one.

The animal minds chapter runs strongly against the modern *Zeitgeist* that animals are basically just like humans, but without the worries of parking tickets or copy deadlines. Simon, following a rather Kantian or Wittgensteinian line (see e.g. §28 in *Kant's Analytic* by Jonathan Bennett (CUP, 1966)), argues that to be human is to possess a sort of complex framework of intellectual and conceptual abilities that make the question 'I wonder what it would be like to be an aardvark' a meaningless one: if one *were* such an organism, that sort of self-reflective thought would not be possible even in principle. I think this is right, and further reflection along these lines tends to thoroughly support Simon's contention about the vast and unbridgeable gap between our world and that of all other (known) life. One more example: at one point (240), Simon mentions how listening to *The Lark Ascending* instantly transports him to an ancient burial mound on the Dorset chalk highlands. Ah, I know exactly what he means, I thought as I read this – but no, my transport was to the West Kennett long barrow in *Wiltshire*, with its haunting history of a thousand years of reverence followed by sudden abandonment (for reasons why, Mann's *Avebury Cosmos* (Moon Books, 2011) offers some tantalising hints). It is exactly this human ability to depart from one emotive and suggestive point

to another, with their almost unbearably rich associations of history, place, culture and religion that must be entirely lacking in animals. Simon then hints about what might be the meaning of this new space humans have entered, and here one is quite clearly in the world of the Prologue to St John's gospel, entirely orthogonal to the ever-hopeful materialist insistence on 'emergence' from complex arrangements of matter. How many of the likely readership of this book will agree with him however remains, I think, to be seen.

Graham Budd is professor of Evolutionary Palaeobiology in Uppsala University, Sweden, with interests in the origin of animals and other major patterns of evolution.

A. J. B. Hampton and D. Hedley editors

The Cambridge Companion to Christianity and the Environment

Cambridge UK: Cambridge University Press, 2022. 300 pp. hb. £69.99. ISBN 978-1108495011

This book is not quite what it says on the cover! The title suggests yet another compilation of essays on Christianity and the environment. There are plenty of those already, many written by a growing group of specialist eco-theologians (myself included I suppose), but this is quite different. Rather, it is a serious academic volume with a specific aim: to give a philosophical, historical and cultural analysis of the relationship between western Christianity and the natural world. It accepts the core proposition that our current ecological crisis arises largely from Western worldviews deeply influenced by Christianity. However, it problematises and complicates Lynn White's simplistic narrative (White, *Science*, 1967) that Western Christianity is entirely to blame, by demonstrating diverse and dissenting traditions and influences within Western Christianity.

The book is divided into three broad sections: 'Concepts', 'Histories' and 'Engagements'. 'Concepts' looks at issues around naturalism and supernaturalism from ancient to contemporary thinking, including an intriguing suggestion that Teilhard de Chardin's evolutionary approach to science and faith was prefigured in the Epicurean philosopher-poet, Lucretius. Charles Taliaferro, examining the possibility of nonhuman animals possessing souls or even consciousness, makes a crucial distinction between the *scientific naturalism* which leaves no room for explanations beyond the natural sciences and '*broad naturalism'* (49) which allows for insights from social science and spirituality. Robin Attfield's chapter on 'Anthropocentrism, Biocentrism, Stewardship and Co-creation' gives an excellent synopsis of critiques of the term 'stewardship' and follows Southgate in advocating a role for humans as 'co-creators and co-redeemers' (71-77).

The 'Histories' section has chapters examining environmental philosophies from Ancient Greece, the Mediaeval and Early Modern eras, the Protestant Reformation, Romanticism, and contemporary religious ecology. This demonstrates a more complex history within western environmental thinking than often surmised. For example, Greek philosophy was not simplistically dualist in separating spiritual and material, but also contained seeds of panpsychism and deep ecology in attributing 'soul' to all created entities. The later Christian Neoplatonism of the medieval era so idealised and personified nature as a source of divine wonders and lessons, that the later scientific revolution in seeking evidence-based knowledge swung the pendulum towards a total desacralization of nature. Bacon's and Descartes' mechanistic understanding of nature stood in stark contrast to discerning God's hand at work

although some, like John Ray, integrated scientific and theological understandings. Mark Stoll's chapter on 'Protestantism, Environmentalism and Limits to Growth' argues that whilst Protestantism may (*pace* Weber) have given impetus to early capitalism, it is largely Protestant cultures that underlie contemporary environmentalism. Puritan ideas of responsibility and modesty birthed later concepts of sustainable use of natural resources, and the environmentalism of Aldo Leopold and Rachel Carson owes no small debt to Christian understandings of nature as a community of which we are part (reflected today in the writings of Richard Bauckham and the Papal encyclical *Laudado Si'*.

The final section on 'Engagements' is very diverse, ranging from reflections on 'the sublime and wonder' as concepts encouraging humility before nature, to a detailed plea from Michael Northcott for 'conservation approaches which draw on indigenous and religious knowledge as well as natural science' (244), and a chapter by Jame Schaeffer on sacramental approaches to nature as providing a moral orientation fostering earth-care.

Overall, a brief review cannot do justice to a complex and important book such as this. Its one major weakness is that (with the exception of Northcott's chapter) it largely ignores insights from beyond Europe and North America. It is clear about that limitation, but if Christians are to recover approaches to nature that offer hope for a sustainable future, we need a wider and deeper debate including wisdom from the global Church.

Dave Bookless is Director of Theology at A Rocha International

Christopher Knight

Eastern Orthodoxy and the Science-Theology Dialogue

Cambridge University Press: Cambridge UK, 2022. 82 pp. pb. £15. ISBN 978-1009107761

In the background of a vast literature on science-theology dialogue, Christopher Knight, an astrophysicist and Orthodox priest, attempts to outline the ways in which Eastern Orthodox theology can contribute to such a dialogue. The book is not easy to read because it requires a substantial insight into Orthodox theology, as well as good knowledge of hot scientific issues, which challenge traditional theology.

Knight, in spite of claiming a distinctive specificity of Orthodoxy in its relationship to the sciences, positions discussion in the context which was historically set up outside the Orthodox tradition. He uses the classification of the relationship between science and theology, suggested by Ian Barbour, in terms of *conflict, independence, dialogue and integration*. After reading the book one is left with an impression that Orthodox theology cannot follow any of these options. The only option is to treat science and theology as two mutually *complimentary* modi of humanity's activities. Then, one agrees with Knight that the Orthodox tradition offers some 'alternative' pan-Christian vision of the dialogue with the sciences 'providing ways of looking at particular issues that may offer new and important insights' (5).

The author starts with the topic of natural theology. He comes to the point that Orthodox theology with its patristic scope can propose not to build a systematic natural theology, but to bypass it through introducing into its scope a *noetic*, non-descriptive element. Indeed, one can contemplate nature and God's presence on a personal or inter-personal level. Yet, such a contemplation lies outside the scope of the scientific approach to nature. It can contribute to some non-descriptive hermeneutics of nature, but not to the assessment of modern sciences

as prescriptive for the physical existence.

In the next issue related to the languages used in science and theology, the author compares the use of critical realism in science and theology (17-19). Knight appeals to the Orthodox distinction between apophatic and cataphatic ways of theologising in order to compare the former with critical realism. However, such a comparison seems to be overstretched because critical realism in science deals with the phenomenality of objects whereas theology deals with the inaugural events which are initiated 'from beyond space and time.' A conclusion is possible that the languages of science and theology are different but complementary as originating in one and the same man.

Then section 3, devoted to the 'Mind-Body problem' can be qualified as anthropological dealing with the problem of consciousness. Modern neuroscience, research in artificial intelligence, cognitive psychology, all struggle with a fundamental problem of consciousness as specific phenomena, which correlate with the physical states of the brain. The nature of this correlation remains unclear. Theology can only provide its empirical interpretation. In no way it is capable of advancing any specific description of the psychosomatic unity of man apart from referring to a special act of creation. It seems then that no specific Orthodox insight on the issue, understood scientifically, can be drawn.

The next section 4 discusses the issue of panentheism, that is, the stance on the presence of God in the world as well as of the world's 'place' in God. Knight lists several theological writers on panentheism. Then he considers examples of the seemingly teleological tendencies in modern sciences which 'confirm' panentheism. However, such a move is not convincing because the inference to the philosophical creator must be supplemented by the Christological element. Another problem is that any teleology manifests a propensity of the human intelligence to imply purposiveness of everything in order to know it. If Knight justifies panentheism through a teleological insight, this panentheism turns out to be anthropologically inherent.

The next section 5 on *Divine Action* develops a point on how to articulate the Divine presence in specific terms. Knight invokes Maximus the Confessor, as well as other thinkers along the lines of what he calls 'evolutionary Christology' (46). Then he makes a smooth transition to the section *Naturalism and the 'Miraculous'*, where the Divine action is considered through the distinction between laws of nature and 'paranormal' or miraculous phenomena. This distinction necessitates a phenomenological stratification of encounters with the Divine actions which is abundant in patristic sources. Since natural laws and miraculous events manifest themselves in different phenomenalities, no straightforward hierarchy of them is possible.

And finally comes section 7 *An Eschatologically Focused and Trinitarian Understanding* starting its discussion from how to understand nature in the perspective of the Biblically understood Fall. Orthodoxy insists that the Fall has consequences not only to human nature, but to nature at large. However, the prelapsarian, paradise-like state of humanity and nature can hardly be conceived in terms of the sciences functioning in the post-lapsarian condition. If one promotes an idea that the whole universe was in a non-physical state before the Fall, one comes to the contradiction with the Incarnation of God in the post-lapsarian flesh of Jesus of Nazareth whose possibility is linked to the evolution of the universe. Here one agrees with Knight, who refers to Maximus the Confessor, that the Fall accompanies creation of the world,

so that any actual prelapsarian existence is hypothetical and the Fall-narrative points to a spiritual nostalgia for the intellectually invoked Paradise (55). Indeed, such an Orthodox stance on the Fall is distinctive and logically consistent with the modern scientific view of reality.

In conclusion, the book generates many questions. Scientific advance challenges theology by showing that some of its concepts must be updated in modern terms in order to be comprehensible and existentially relevant. This was not the objective of this book, but this is the conclusion after reading it. Unfortunately, the book omits the theology of John Zizioulas, who was the only one able not only to advance Orthodox theology but also to criticise it in the light of scientific developments. One also notes that the choice of particular philosophical means of mediation (analytic philosophy, for example) between science and theology is not justified and not appraised in the background of other existing approaches in the continental thought.

Alexei Nesteruk, holds PhD in physics and mathematics, as well as DSc in philosophy, and is currently a visiting lecturer at the University of Portsmouth. His main areas of expertise are the philosophy of cosmology, Orthodox theology and the sciences.

Lamoureux Denis O.

Beyond the Evolution vs. Science Debate

McGahan 2021. 130 pp. pb. £10.4.9 ISBN 978-1-951252-11-3

Professor Lamoureux has written a book that is very accessible for a teenage audience while at the same time covering all his points in a serious way. The main theme is that there are not only the two options normally assumed on origins – i.e. evolution or creation. While he sides very clearly with the evolutionary creation view, he makes it clear that this is entirely up to each reader to decide for themselves and that there are good serious Christians holding any of the three options he cites – (1) young earth creation, (2) progressive creation and (3) evolutionary creation as well as combinations of these. He deals with deistic evolution and atheistic evolution as well, stressing that these are not options for a Christian belief. Lamoureux spends considerable time speaking about intelligent design and presents this in a loose way – i.e. that God has specific purpose in His creation and while it may have taken billions of years, He designed it to work as a self-assembling enterprise. He does not deal with the 'Intelligent Design' lobby that would agree that God designed everything but with a tendency to reject evolution as being part of that design as they regard it as anti-creationist. His book contains considerable detail on cosmology and biology demonstrating that none of the current scientific theories (and I am glad he defined what a theory really is rather than the commonly assumed definition of it as an unproved hypothesis) are contrary to a biblical account. He includes many helpful diagrams to illustrate his points, pointing out very clearly that the science in the Bible is ancient science that would have been meaningful to an audience of the time, rather than modern science. He stresses that this is how God communicates with His people and that the Bible is not about providing answers to modern scientific questions.

I found myself agreeing with him on virtually every point even though the processes he went through to reach his present position are somewhat different to my own. I am not sure that I entirely agree with him that the 'days' of Genesis 1 were originally understood as 24-hour days, but he may well be right. He still points out that it was dealing with ancient understandings of creation and that the purpose of the passage is to stress that God is responsible for the whole of

creation; not to inform us about scientific processes. He shows that the chapter is poetic in its nature, and, to me, poetry is often not meant to be taken literally, but I may not properly understand ancient poetry!

My assessment is that this is a very useful book to use for teenagers who are keen to understand these issues and, in my experience as a science teacher, a large number of teenagers really want to know and understand more about this perceived debate. I would have no hesitation in recommending it for use in schools and for any young person struggling in any way to make sense of how God relates to the creation and modern science.

Neil Laing is a retired secondary science teacher and author of *'Is God Really Legit?'*

Joseph R. Laracy

Theology and Science in the Thought of Ian Barbour: A Thomistic Evaluation for the Catholic Doctrine of Creation

New York: Peter Lang, 2021. 326 pp. £58.52. ISBN 9781433190056

Professor Joseph R. Laracy offers an in-depth and insightful contribution to the relationship between faith and science in this ecumenical work. His research, likely to be of interest to many evangelical Christians, provides an analysis on how Ian Barbour's thought can contribute to and enrich the Catholic understanding of the interaction between natural science and the doctrine of creation. Laracy's book elucidates the seminal contributions of Ian Barbour, a gifted physicist and Protestant theologian. Laracy examines what Catholic theology can learn from Barbour's approach, which has also appropriated certain aspects of process philosophy.

This book is divided into five chapters that develop from Barbour's life and works to various approaches for the interaction of theology and science. In the end, Laracy proposes paths of integration for the doctrine of creation and natural science. Throughout these chapters, he touches upon apposite topics such as various typologies of interaction for theology and science, origins of the critique of knowledge, Barbour's implementation of Whiteheadian philosophical principles, Thomistic realism and metaphysics, natural theology, and more.

Laracy analyses the personal, philosophical, and theological influences that played a substantial role in the development of Barbour's approach. He highlights Barbour's dissatisfaction regarding the prevailing opinion that the only modality of interaction between Christian theology and the natural sciences was one of conflict. For Barbour, the highest degree of interaction between theology and science is possible when a systematic synthesis is achieved through an inclusive metaphysical system.

The book considers similarities and differences between theology and science according to Barbour from the perspective of scientific materialism, fundamentalism, neo-orthodoxy, existentialist philosophy, and linguistic analysis. In his process perspective, Barbour emphasizes the primacy of time, the interconnection of events, reality as an organic process, and the self-creation of every entity. Barbour believes that 'becoming' is more significant than 'being' because 'transition and activity are more fundamental than permanence and substance' (101). Barbour's study of science and theology acknowledges the importance of communities and their paradigms.

Laracy carefully examines Barbour's epistemological, metaphysical, and theological principles. We see the points of contact as well as discontinuity between Barbour's and Stanley L. Jaki's thought.

In addition, Laracy explores where and how Barbour's approach can facilitate dialogue and integration between Biblical revelation and the natural sciences. He utilizes Barbour's dialogue typology to explore presuppositions and limit questions in science related to the intelligibility of the universe, its contingent existence, its boundary conditions, the contingency of laws, and the contingency of events. Laracy also investigates methodological and conceptual parallels between theology and science. The book concludes with a discussion about how natural theology, a theology of nature, and a systematic philosophical synthesis of the two fields can realize Barbour's typology of integration.

Laracy's book left me wondering how Barbour's Barthian approach to the analogy of being aligns with his attempt to take a non-reductionistic perspective. On the positive side, despite the fact that Barbour tries to create a novel notion of continuous creation without creation from nothing as traditionally understood, Christians can appreciate Barbour's efforts trying to build his theology of nature upon the doctrines of creation, Divine providence, and human nature. Laracy's account of Barbour's thought is helpful and enlightening as he succinctly captures both his most important contributions and aspects that may still need further evaluation. Laracy underscores Barbour's positive view on the interaction between theology and science, based on methodological parallels, as well as Barbour's principles which are congruent with the Thomistic notions of form and the hierarchy of being.

Importantly, Laracy also points to Barbour's disagreements with traditional Christian theology. He critically engages Barbour when Barbour allows his process metaphysics to 'overwhelm' Biblical revelation. The book is substantial contribution to furthering the interaction of theology and science. It makes clear how creation is utterly dependent on God and all beings participate in God's infinite *esse*. This monograph will certainly be of interest to students and researchers in the theology-science field, evangelical and Catholic alike.

Ricardo Lozano Cruz is a seminarian of the Diocese of Camden, New Jersey, USA.

Peter J. Bellini

The Cerulean Soul: A relational theology of depression

Baylor University Press, 2021. 212pp. hb. £39.50. ISBN 978-1-4813-1093-2

As Bellini's book identifies, depression is the leading cause of disability worldwide in terms of total years lost due to disability and therefore seems a very worthy topic for thorough academic discussion. Science has never located a biological agent directly causing depression. To quote Bellini, 'The various theories of depression – biochemical, psychological, cultural often reflect one's philosophical anthropology. How one defines the human person is telling in how one defines mental disorder'.

This very deep and profound book argues that if we understand the triune God to be essentially relational at the core of His heart then this will shape our understanding of what it is to be human and therefore underpin the relational nature of depression as we understand ourselves to be theological spiritual creatures, made in the image of God for relationship with Him. Bellini explains that 'despondency serves as a biosocial and spiritual marker for our human weakness, brokenness, and spiritual struggle for meaning and wholeness. Further it is a call to grow, to be restored' and this through 'redemption and transformation, given freely in Christ through the healing and sanctifying power of the Holy Spirit'.

He also emphasizes that union with the risen Christ should not be misconstrued as oppressively reinforcing of ableism, and that salvation 'gives new form to all persons, whether "abled" or "disabled".

This very dense book, which reads more like a research thesis, could I think be fairly described as a highly scholarly work which intentionally belongs to the world of serious academia, with an inherent beauty and coherent gravitas that I warmed to as I was making progress through it. It is, however, a work which, in its current format, is probably just not accessible to most people as a sufficiently digestible book to be able simply to pick up and read through. I read through the first third of this book whilst on a one-way five and a half hours plane journey, and I went on to regret not having the freedom then at high altitude to look up words (as, to be honest, even with my reasonably good breadth of English vocabulary, and me being a qualified medical doctor with an undergraduate degree from Oxford University to my name!) I was somewhat floundering with the vocabulary being beyond my comprehension several times a page, particularly with Bellini's assumption that his readership would be comfortably conversant with Greek and Latin. Very extensively referenced, readers would benefit from a summary of the key findings alongside this publication.

Bellini's theological understanding is typically aligned with my own and therefore the theology was for me reassuringly very familiar, coherent, and understood; a rich theology that clearly came across as consistent with the reformed protestant biblically faithful tradition. It goes into such depth as a study of the nature of God including God's capacity for deep suffering and compassion that there is then a natural flow towards studying the nature of depression as part of human life experience. Mental illness can be more broadly inferred from this book to be the result of the breakdown of relationships either with ourselves, with others, with Creation, or with the Creator. An alienation and estrangement from God's blessing, mixed with our own depravity, can only predispose us to melancholia. The dizzy uncertainties of apparent freedom when there is unlimited choice without God's boundaries upon our psyche, can only predispose us as human beings to feel overwhelmed and anxious. As Bellini goes on to say, 'God's peace transcends the temporal relief we seek from depressive symptoms', stabilizing and consoling us amidst chaos and calamity with the Christian community's promised blessings of a cultural worldview understanding the need for forgiveness, radical hospitality, and justice. Rather than simply cure, Christianity points towards the Christ-centered shalom of healing and wholeness. As the Lord promises to ultimately bring meaning from suffering, to bring good from our brokenness, He promises to abide with His people forever, 'I will never leave you nor forsake you' (Hebrews 13:5).

Angharad Gray works as an NHS community psychiatrist in England and she volunteers as both the CMF Psychiatry Link person and a pastoral care worker for the Christian Medical Fellowship (CMF).