Reviews

David B. Teplow

The Philosophy and Practice of Science

Cambridge UK: CUP 2023. 394 pp. hb. £47.51. ISBN 9781107044302

David Teplow, Professor of Neurology (Emeritus) at UCLA argues that 'excellence in scientific practice requires inculcation not only in its empirical form, but also in its historical development, philosophy and sociology…' (xx), at least so the true meaning of the degree of Doctor of Philosophy in science (PhD) requires (3). After his introduction in Chapter 1 he devotes Chapter 2 to defining science, which 'at its core, is an epistemological process applied to ostensible knowledge' (14.3). This is clarified by enumerating and excluding 'all intellectual exercises which are not science – for example, philosophy, religion, logic, mathematics, and engineering' (14.8). 'Demarcating truth from mere opinion' (15) is another important characteristic of science because its answers 'have factual bases' (16). The best example of this is given with the legal case in the US, adjudicating that 'creation science' is not science. The 'cannons of science in practice', according to the judge, rule that 1) It is guided by natural law; 2) It has to be explanatory by reference to natural law; 3) It is testable against the empirical world; 4) Its conclusions are tentative, i.e., not necessarily the final word; and 5) It is falsifiable' (16).

Since there is no consensus on the definition of science, in Chapter 3 Teplow is suggesting to learn science to find out what it is. In his view, learning is equated to preparing our mind for discovery and in that sense, it is part of the scientific process as a whole. Engaging philosophy and history of science and humanities (art, music, literature), is certainly part of that learning process. Examples are given with the boiling temperature of water (24) and the concept of time (25). I liked his thoughts on how important the person, their individual traits and the scientific intuition are for driving the scientific process (26-43), which not always depends on prescribed paths for experimentation and analysis. Examples with Max Delbruck and Lee Hood (the inventor of modern protein sequencers, DNA synthesisers and other machinery) are given, and they are very inspirational. Furthermore, the author underlines the importance of ignorance and the knowing of what we do not know. This is depicted with the diagram of 'true known knowns', 'known unknowns', 'unknown unknowns' (50). He suggests to learn to be ignorant (55) and the need for 'ignoramics' to be in curricula.

The core of the exposition is in Chapter 4, which tells the history of the scientific method and its practice. Contrary to apparent, long debated consensus, it is argued that indeed there is an overarching core scientific method and shared methodological practices across many fields of knowledge as illustrated by a Venn diagram (62). It is not a surprise to see the author abiding by the western stricter science classification with the widespread consensus on the three epistemological branches, of which only the natural (chemistry, physics and biology), investigating the physical world, are considered 'true science'. The behavioural ones (sociology, psychology. economics etc.) and the formal ones (logic, mathematics, theoretical computing science) are not. Yet even the naturalists use intangible aspects related to theory, logic etc. and this 'stricter' classification of the scientific method in a way contradicts the conclusion at the end of the chapter that 'philosophical accounts of methodology

not only are of value to working scientists but understanding them is obligatory if science is to be conducted optimally' (137.4). Naturally, the scientific method is presented as a collection of historically established methods with a timeline starting from a papyrus in ancient Egypt, going through Aristotle, William of Ockham and the titans of the scientific revolution of the 16-17th century (Bacon, Descartes, Galileo, Boyle, Newton, Leibniz and others) ending with the probabilistic and data driven science of the 20th and 21st century. Most methods are illustrated with diagrams and lots of interesting details about the prominent scientists behind them.

In Chapter 5 the author proposes a generic process of practicing science, aka project management methodology, 'into five sequential steps, choosing a project, experimentation, observation and interpretation, inference, and dissemination' (138). It is acknowledged that science can be practiced differently depending of the fields and disciplines concerned and the personalities that animate them. In that sense it is an idiosyncratic process. The style here is instructive, inspirational and entertaining the reader with lots of examples, like the creation of the powerful instrumentation for genetic engineering in Caltech on the turn of the millennium, which made the Human Genome project possible.

I found some controversies in Chapter 6 on sociology. The writer appears to fear 'the desire of some to introduce religious beliefs into an educational system, who's foundation is built upon facts' (305.2). The comparison of the scientific approach with that of 'faith' on fig. 6.2 (307) is shallow and misleading. The statements here are made on the sound of the atheists' mantra of Creationists against Evolutionists. It uses the scientism's reason as an antithesis of faith and is ignorant of ideas like Theistic Evolution and Evolutionary Creationism, which are fundamentally different from Intelligent Design. Also, the ethics of how science is funded appears to be judged, from purely agnostic world view, which of course always, even unintentionally, subverts Biblical teaching unjustifiably. The interpretation of Mathew 13:12 is misleading because a broader Biblical context is needed to see that the impetus of the verse is not on fairness of provision, but on gratitude and the effective use of the little that has already been provided. However, the author does well in provoking thinking, while the name of Jesus (323, 324) is mentioned. The chapter does engage the reader with important issues arising from the fact that science is a predominantly individualistic activity affected by multiple impediments on collaborative work: rivalry, the drive for priority and recognition and fame, even though modern science is rarely a solitary exercise and requires multidisciplinary approach.

Chapter 6 ends with the sociology of Robert Merton and is very instructive with different quotations, ranging from practical (what and how to cite publications, public engagements in conferences and social talks) to inspirational, like the self-sacrifice of the 'scholar [who] works for the only coin worth having- our own applause' (315-316). There are interesting thoughts on funding of the scientific enterprise, like who decides what to research. Science is required to be conducted in public interest, but decisions on institutional boards are taken by consensus. However, 'consensus is different from truth' (331). The rest of the chapter discusses the contest between four theories of scientific progress, namely Thomas Kuhn's 'shift in paradigms', Popper's idea of corroboration and falsification, Lakatos' replacement of scientific programs and Laudan's 'research traditions'.

In my view, the practice of science historically is a heuristic process that has

always been standing on faith more than on philosophical thinking, as suggested by the author. It is perhaps for that reason that the two appendices end the book on a pessimistic tone and reveal not only symptoms of science in crisis, but also a personal crisis for an otherwise brilliant agnostic thinker, Teplow, who oozes love for the most respected, trustful and valued human intellectual engagement- science.

On the positive side, the book presents brilliantly the scientific method and the gestalt of the scientific enterprise in historical plan. It is very entertaining and enjoyable. With its 391 pages in small font and 770 references (even though not in alphabetical order), it is a truly gigantic lifelong undertaking, very informative and instructive not only for undergraduates and postgraduates but also for leading authorities of scientific programs. Written in the spirit of true love for science, rich of tutorship, it is very useful for students with theoretical as well as experimental aptitudes.

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Andrew Linzey and Clair Linzey (eds.)

Animal Theologians

New York: Oxford University Press, 2023. 452 pp. pb. £23.91. ISBN 9780197655559

Andrew Linzey and Clair Linzey, directors of the Oxford Centre for Animal Ethics, curate a compelling anthology in Animal Theologians, which explores the theological reflection on animal worth through the ages. The book brings together twenty-four essays on influential figures who have integrated animals into their theological frameworks, challenging conventional anthropocentrism. Divided into three sections, the collection spans the sixteenth to the twenty-first centuries, following theological pioneers, proponents of social change, and contemporary thinkers. It presents a range of perspectives from various religious backgrounds, including Christian, Jewish, Muslim, and Hindu, to illustrate a developing ethos of empathy toward animals as integral to creation and, implicitly, worthy of moral and theological consideration.

The anthology begins with early figures like Michel de Montaigne and John Wesley, foundational thinkers who laid the groundwork for treating animals as part of a broader theological vision. Linzey and Linzey organize the essays thematically: Part I, "Prophets and Pioneers," introduces these historical voices; Part II, "Social Sensibility," examines animal ethics' alignment with societal progress in the nineteenth century; and Part III, "Deeper Probing," explores recent advancements in animal theology, culminating in Andrew Linzey's own contributions. Notably, in Part II, essays like Linda M. Johnson's on John Ruskin and Alice Crary's on Leo Tolstoy emphasize the impact of empathetic relationships with animals on shaping ethical human behavior. These essays showcase how thinkers like Tolstoy, who decried animal suffering, viewed animals as moral subjects that could invoke deeper human virtues, even suggesting their role in broader ethical reform, including vegetarianism.

While the volume successfully brings various voices into the discourse on animals' theological worth, it faces limitations. As Linzey and Linzey acknowledge, most essays focus on Christian and Euro-American figures, limiting the representation of other global perspectives, notably non-Abrahamic. This narrow scope, they argue, is partly due to the lack of sources aligning with traditional theological frameworks, yet it raises concerns about the book's inclusivity. For example, the editors note only one chapter each for Hindu and Muslim views, despite aiming

to present diverse perspectives. Thus, while it offers a valuable introduction to animal theology, it largely reflects a Euro-American and Christian-centric viewpoint. Additionally, the editors express a controversial aspiration for animal theology to join the theological mainstream, alongside Black, feminist, and ecological theologies. This outlook might appear reductive, as it suggests an assimilation of diverse theological movements rather than recognizing them as autonomous voices that challenge rather than conform to mainstream thought (21).

Another critique of the anthology could be its sustained anthropocentrism. Although the editors aim to break away from human-centered thinking, some of the 'animal-sensitive' perspectives included still position animals primarily as instruments for human moral betterment. For instance, while essays on figures like Thoreau and Ruskin describe their encounters with animals, these are framed in terms of human self-reflection rather than animals' intrinsic worth. Daniel Dombrowski's chapter on Charles Hartshorne offers a counterpoint by presenting animals as individuals with agency and significance beyond their interactions with humans. Kathleen Long's examination of Montaigne's idea that animals might have their own 'religions' independent of human understanding also stands out, challenging readers to envision a truly eco-centric theology (44, 377).

Animal Theologians contributes significantly to intellectual discussions on animal protection and rights by demonstrating that historical and religious perspectives on animals are not novel but rooted in centuries of ethical inquiry. The anthology underscores the potential of theological frameworks to inspire compassionate ethics toward animals in a time of ecological crisis. By compiling diverse perspectives, Linzey and Linzey highlight an often-overlooked area of theological reflection, encouraging readers to rethink animals' place in moral and spiritual life. For students and scholars of theology and ethics, this anthology serves as a foundational text, inviting further exploration of religious views on animals, though with the understanding that broader inclusivity may enhance future work.

This book will resonate with scholars in theology, animal ethics, and environmental studies. It is particularly suited for readers seeking to understand how religious thought intersects with animal welfare, as well as those interested in the ethical dimensions of human-animal relationships. The anthology's historical breadth and insightful analyses make it a valuable resource for both introductory and advanced studies in animal theology.

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Devan Stahl (ed)

Bioenhancement Technologies and the Vulnerable body: A Theological Engagement

Waco, TX: Baylor University Press, 2023. 244p. pb. £46.95. ISBN 9781481318273

This is a collection of ten thoughtful, mainly Protestant, theological responses to the fast-growing phenomenon of bioenhancement technologies, with a particular (and commendable) focus upon vulnerable communities, such as those living with serious disabilities, the poor, people of colour and those lacking cognitive capacity. Contributors repeatedly compare what they see as a Christian response with transhumanist responses, such as the clever, but, surely, deliberately

provocative, Nick Bostrom of Oxford University. Transhumanists, they claim with some justice, typically write for wealthy, autonomous individuals who are prepared to go to any lengths to extend their own lives and innate abilities and those of their children/grandchildren. It is good to have such a theological response, but it soon becomes evident that it has limitations and seldom matches the intellectual brilliance of Bostrom.

Two issues dominated the influential British Nuffield Council on Bioethics' 2017 report Cosmetic Procedures (which is free online): 1) how can we differentiate between therapeutic and non-therapeutic cosmetic procedures? 2) can/should we seek to make some non-therapeutic cosmetic procedures illegal? The generic problem here is obvious: are my spectacles restoring my vision to its original strength or are they making it better than it ever was, and, does this difference really matter legally/ethically/theologically? Obviously, it might, at least at a personal level, in the context of a live kidney transplant rather than spectacles: I would readily donate a kidney to a grandchild with a need arising from a genetic condition that I do not share (i.e. enhancement for her), but cannot envisage ever accepting one from a grandchild at my stage of life. Even then, few might wish to have laws that prevented grandparents from deciding otherwise.

Even Methuselah, taken literally, in the Bible is not particularly helpful for biblical Christians opposing transhumanist proposals to extend human existence vastly. Just imagine experiencing the degradations of extreme old age in the absence of modern medical science for so long. Yet Methuselah's extraordinary span is never bemoaned in the Bible. Even with modern medical science (as transhumanists propose), I find it difficult to contemplate 969 years of earthly existence with anything other than dread. Poor Methuselah and poor would-be ancient, ancient transhumanists!

The contributors to this theological response are well aware of the first issue, but seldom address the second, and, even if they are aware of the first, some still generalise about bioenhancement technologies and see them as a whole as opposed to Christian faith (note the two singulars). There are, though, welcome exceptions. I was much impressed by the nuanced articles of Brian Brock and John Swinton, both of Aberdeen and recognised experts in disability theology. The palliative care specialist Kimbell Kornu also recognises that 'suffering is not an intrinsic good' (127), yet his main purpose is to make a sharp contrast between transhumanist (largely speculative) proposals to eliminate suffering and a Christian understanding that untreatable suffering can be redemptive. Much here depends upon the word 'untreatable' and the invasiveness of the experimental interventions, especially on precognitive humans, needed to secure it.

The collection is in two parts: a largely theoretical part named 'Creaturely Ontology' and a more practical part named 'Transfiguring Vulnerability'. Both have merits, but I enjoyed the second more than the first. Perhaps it is too early to expect unified theoretical positions from, even relatively conservative, theologians working in this area. The Introduction boldly sets out twenty-five 'tentative propositions' that might guide this debate, but contributors seldom refer back to them and with no bibliographical list of sources that might at least have inspired the writing, and no index, it is difficult to anchor the analysis made.

Overall, this is still a thoughtful, focused contribution to an ongoing debate among and beyond Christianity about present and future possibilities related to human morbidity and mortality in a rapidly changing technological world, even

though one may find the price of the book prohibitive. If you have not thought about the issues covered, then it is worth reading as a starting point. However, there are other books published recently addressing the topics with more academic rigour on ethics (see Alexander Massmann and Keith R. Fox, Modifying our Genes (2021), which was reviewed in 34 (1), April 2022.

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Michael J. Paulus Jr.
Artificial Intelligence and the Apocalyptic Imagination: Artificial Agency and Human Hope
Eugene OR: Cascade Books, 2023. 154 pp., pb. £19. ISBN 9781666736397

The advent of Large Language Models (LLMs) and generative AI programs has brought our awareness of AI, its ubiquity, its power, and its potentiality to a new level. While in the past, computers have automated primarily routine tasks previously done by humans, generative AI seems to automate creativity, producing artwork, music, poetry, as well as human-like prose, advice, and, increasingly, companionship. Breathless tech developers suggest that an Artificial General Intelligence (AGI), that can do any intellectual task a human can, is right around the corner. If so, what is the role of human agency, or, as poet Wendell Berry once asked, 'What are people for?' (Wendell Berry, What Are People For?, Counterpoint Press, 1990).

For many, recent advances in AI conjure visions of a dystopian technological future in which human agency is outstripped and replaced by machines, visions typically labelled 'apocalyptic', a term commonly used in science fiction to connote the end to civilization as we know it, a time of doom and destruction. In Artificial Intelligence and the Apocalyptic Imagination, Michael Paulus calls, rather, for a return to the origins of the term apocalyptic in Biblical literature, where the apocalypse is a time in which God destroys the ruling powers of evil, inaugurating in their place a new creation, a kingdom of equality and righteousness. 'Apocalyptic literature can help us see a greater hope that's both realistic and radical. It's a unique way of looking at the world that emerged out of oppressed Jewish communities who said, 'This is not the way the world is supposed to be. There's a greater power than these empires.' (Interview with Michael Paulus, https://aiandfaith.org/insights/the-apocalyptic-imagination-ai-in-human-flourishing/ , May 26, 2022). Apocalypse in this sense, rather than removing human agency, restores it toward rightful ends.

Paulus notes that themes of apocalypse in literature have accompanied the advent of new technologies since the early 19th century: the industrial revolution sparked Mary Shelley's Frankenstein, the atom bomb, Miller's A Canticle for Leibowitz. AI has figured prominently in apocalyptic movies such as 2001: A Space Odyssey or The Matrix. Apocalyptic works such as these raise fundamental questions regarding our identity, agency, and destiny as a species. They rightly point to dangers inherent in untrammelled technological development.

However, Paulus believes the apocalyptic imagination need not merely conjure what could go wrong with AI technology, but also help us envision how AI can play a part in developing a renewed society in which 'we will live comfortable and secure lives, pursue love and self-actualization, and see fear, vanity, and greed decrease' (111). He uses stories from AI 2041: Ten Visions for Our Future (Chen and Lee) as a springboard to analyse how AI might rework our attention economy,

realize new efficiencies that make work more meaningful, and augment human knowledge. In sum, Paulus calls us to use the apocalyptic visions of our Biblical forebears as positive and generative resources for finding ways artificial agency can help us resist and reform unjust systems and push us toward 'constructive actions and collaborations for a better post digital world and future' (141).

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Arvin G. Gouw, Brian Patrick Green, and Ted Peters, eds.

Religious Transhumanism and Its Critics

Lanham, MD: Lexington Books, 2022.
408pp. hb £112.00. ISBN 9781498584135

This anthology strives to be relevant and prescient by bringing religious thought and progressive, critical theory to bear on rapid technological advances that challenge our very notion of humanity. Religious Transhumanism and Its Critics is part of a series that seeks not only an academic inquiry into the intersections of religion and science but also employs critical perspectives in academic discourse to call for justice and liberation for the marginalised—a message that resonates with core Christian concerns but also with progressive perspectives that may not be so familiar to evangelical readers of this journal.

The anthology opens with a preface and a first chapter that set out many of the main concerns that will appear later. These introductory sections effectively outline the central ideas: how Transhumanism, Human+ or H+ —a movement that seeks to use technology to overcome biological limitations—mirrors, yet radically departs from, traditional religious goals. In transhumanism, hopes for eternal life and transformed existence are pursued through science rather than supernatural power, echoing religious aspirations but with a secular twist. Here, terms like 'Radical Life Extension' (technologies aimed at halting or reversing ageing) and 'Whole Brain Emulation' (the digital preservation of human brain function) are introduced.

The book certainly assembles an interesting breadth and diversity of viewpoints, drawing together voices from a wide spectrum of religious traditions, Christianity, including Roman Catholic and Eastern Orthodox writers, Mormonism, Unitarianism, Judaism, Buddhism, and Confucianism. The inclusion of perspectives from critical theory—such as feminist, eco-theological, and queer viewpoints—broadens the conversation again, offering progressive perspectives on ethical issues like artificial intelligence, genetic engineering, and the possibility of uploading one's brain function to a computer. These approaches, while sometimes employing specialized jargon, underscore the anthology's commitment to engaging with contemporary debates in a language that is academically relevant and socially conscious.

Within this diversity, several essays make clear cases for and against transhumanism and there is some interesting clash of ideas. For instance, Lincoln Cannon's examination of Mormon views, which intriguingly connects the concept of theosis (divinisation) with modern programming, is enthusiastically in favour, while Brandon Gallaher rejects this view from an Eastern orthodox perspective. Hava Tirosh-Samuelson's critical Jewish perspective labels certain aspects of transhumanism as 'false messianism', suggesting that these futuristic promises may dangerously distort expectations about salvation. Several essays note that the promise of technology—while alluring—may also lead to hubris and the ne-

glect of embodied, communal values and the perspectives of the poor and those left behind by technological advances.

Yet, the anthology is not without its shortcomings. Although the preface and first two chapters offer helpful introductions, subsequent essays on such things as sex-bots and gender cyborgism are so diverse as to fragment the discussion. Readers will need to piece together a broader picture and may struggle to find a logical path through all the essays, though there is an index that might help trace various themes. The Epilogue's proposal for a 'new transhumanist theology' (Arvin Gouw) is necessarily speculative and preliminary.

Another possible drawback is inaccessibility. The discussion, replete with transhumanist terminology, diverse religious perspectives, and various academic critical theories, reflects the book's academic target audience, but may be challenging for those not already familiar with these fields.

In summary, Religious Transhumanism and Its Critics offers a valuable, if fragmented, insight into a complex and urgent field. While its challenging diversity and density demand expertise or effort, it offers foundational insights for scholars as well as religious leaders and thoughtful readers seeking to grapple critically with the crucial ethical and theological questions posed by humanity's increasing ability to shape its own nature.

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Christine Daigle & Matt Hayler

Posthumanism in Practice

Bloomsbury Academic, 2023. 264 pp. pb. £26.09. ISBN 9781350293809

What does it mean to be human? Implicitly or explicitly, this question has been asked for millennia, across all cultural and religious backgrounds. Philosophical attempts to answer this question can be traced back to ancient Greek philosophers. In the Middle Ages, a secular humanism emerged, a philosophical naturalism that embraced human reason and morality independent of theology, fostering a duty to engage in philanthropy. Since the late 20th century, posthumanism aims at 'connect[ing] critical responses to the overly simplistic or reductive conceptions of human life' (1) in order to challenge a subjective and anthropocentric worldview. Underlying this criticism is the perception that humanistic thinking and the emphasis on human exceptionalism have led to a number of costly legacies, such as the exploitation of nature and minorities, capitalism or colonialism. More implicit than explicit, this is often blended with the criticism that being human seems to mean being white, male, cis-gendered, heterosexual and able-bodied.

In Posthumanism in Practice, Christine Daigle and Matt Hayler have gathered voices ranging from science and technology to art and culture, as well as education, aiming to showcase the various attempts made to explore what posthumanist thinking might look like in practice. As diverse as the topics are, so are the ways in which posthumanist thinking is explored. Although the book does not aim at elaborating on the concept of posthumanism, it at least contains a solid introduction to the idea and terminology for those of us who are new to the topic.

It is beyond the scope of this review to summarise all the various experiments on posthumanism in practice. However, I want to at least name a few. Aaron Bradshaw reflects on the role of microbiota in Parkinson's disease research and uses it as an example of how the human body is more than just human physiology. It is a

symbiosis of human cells with microorganisms such as the gut microbiome and challenges our understanding of what it means to be human, even from the perspective of medical therapies. Madaleine Trigg explores what it means to interact with different bodies in contact improvisations with dough. In her kneading/being kneaded, she aims at a 'dialogic process of mutual affection', instead of an 'anthropocentric expectation of centering her body in the performed action' (109). In the section on education, Debra Harwood reflects on her 'unintentional' study on young children exploring a Canadian forest. She argues for a move away from solely being attuned to the child to 'paying attention to the collective human-more-than-human web of entanglements' (193).

Overall, the book is an interesting exploration of the expression of posthumanist thinking. It surprises in the vast differences between the different attempts to put posthumanism into practice. However, this breadth leaves the reader also questioning the definition of posthumanism, as at times the borders seem to blur with other religious or altruistic philosophical movements. In many instances, I was also left wondering if what is sold as posthumanism is, at its core, mainly an expression of critical thinking, self-reflection, or a more nuanced understanding of the natural sciences. More often, I felt that it isn't the specific experiment or attempt but the inner attitude that sold something as posthumanism. It was the awareness, rather than the action, that made a change.

One of the questions this book has to raise is whether posthumanism can really deliver the solution to end oppression and exploitation. Is human exceptionalism the root of the problem? Or could it be part of the solution? Could our unique human traits enable us to actually act on the understanding of our connectedness and participation in the creation as a whole? One could argue that in a subjective and egocentric world, human beings are in a unique position to actively and consciously act collaboratively. Not out of evolutionary necessity that enhances survival but out of altruistic and critical assessment of their role. This book furthermore raises questions about wordings and definitions. How different are the philosophical ideas of posthumanism and what Christianity often calls servant leadership? Both aim at relieving oppression and acting out of care for the other, restraining one's own needs. However, one emphasises the destructive force of human identity and seems to aim at blurring the lines to other species; the other embraces the potential and seems to strengthen human identity.

Overall, this book inspires a critical reflection on the breadth of the posthumanist movement and raises questions on how we can tackle real problems of human attitude towards other (human and non-human) beings and the rest of creation.

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Paul Louis Metzger

More Than Things: A Personalist Ethics for a Throwaway Culture

Downers Grove IL: IVP, 2023. 452 pp. pb. £22.29. ISBN 9780830850914

Many modern technologies, such as 'germline gene editing' (115), have such potential for good or evil beyond their present situation, that they cry out for wider ethical guidance. There are many bases on which such ethics might be developed, but the particular approach highlighted by this book is 'personalism'.

Right from his opening page, the author makes clear why this matters to him in

personal terms: '… January 21, 2021. My son Christopher, who is married with a small child, endured a catastrophic brain injury. He is now completely dependent on others in his minimally conscious state. Even so, he is a person, with all the dignity that personhood entails. That is why I take special note of whether caregivers talk to him and call him by name …' (3).

I imagine some ethicists might dislike such a subjective starting point, wanting to stress their ethics have some sort of objective, universal basis. Yet we are all shaped by our circumstances, and I welcomed an author who acknowledged this. Another note of honesty that I welcomed in this chapter was in Metzger's approach to Martin Luther King Jr. Although he greatly respects King's teaching, he acknowledges his moral failings, pointing in a footnote to where these are discussed.

Having been drawn in by the first chapter, I felt encouraged to read the second and longest chapter, 'More Faith, Hope, and Love: Metaphysical and Methodological Conditions for a Personalist Moral Vision' (15). Here, I found myself floundering as, alongside various Christian thinkers, the outlooks of the Buddha and Aristotle put in an appearance, and then 'oxytocin' (62-64). It was evident from context that this had something to do with mother/baby relations, but I had to look it up on the internet to grasp its significance.

Does allowing influences on his thought from beyond those that would claim to be Christian lead to possible confusion?

It is not that he cannot find insights of value from such 'conversation partners' (437), and he keeps 'Jesus of Nazareth … as the guiding light'. (438) For example, in chapter 3, looking at the start of life, the main insights come from Judaism and Islam, which share Christianity's background. These help remind us that there have always been differing Christian interpretations of when human life begins. (It is not just at conception, as too many evangelicals blithely assume.)

However, in chapter 6, he quotes the Hindu Upanisads, '"The world was just a single body (atman) shaped like a man" that split itself in two, forming a husband and a wife. The resulting man had sexual relations with the woman. As a result of "their union human beings were born." So, too, were the rest of creaturely pairs, albeit through the first couple's ongoing metamorphosis …' Then he says, 'Here it is worth pointing out a similarity with Islam. The Qur'an teaches that God created all humanity from "a single soul": "People, be mindful of your Lord, who created you from a single soul, and from it created its mate, and from the pair of them spread countless men and women far and wide."' (176, 177) [Sura 4:1, but Metzger just gives a page number in the translation he is using.]

Whereas the Qur'an is plainly from the same tradition as Genesis 2, the Upanisad is fundamentally different. The woman spontaneously derives from the man, she is not created from him, and other creatures are also derived from them, not created before them by God.

Is 'personalism' compatible with a world view in which the 'person' could be considered an illusion?

However, I found that the amazing breadth of issues covered compensated for the superficial understanding of other faiths.

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Marek Słomka

God's Action in the World: A New Philosophical Analysis

London/New York: Bloomsbury Academic, 2021. 227 pp. hb. £95.00. ISBN 9781350180383

God's Action in the World, a reworking of the author's 2018 Polish edition, is a philosophical analysis of the problem of divine action in the world. Słomka argues that modern advancement in our understanding of the natural world through the sciences necessitates a corresponding update in the language and concepts employed in theistic reflection.

Słomka's treatment involves the exploration of many specific issues, but throughout his discussion, he emphasizes God's immanence in creation, creation's openness and freedom (including human free will), and the evolving nature of creation. Insights from quantum physics are thus particularly important to his account of a contemporary understanding of the natural world, as are reconstructions of cosmological and biological evolution. Słomka appears especially sympathetic to the probabilistic theism of fellow Polish thinker Dariusz Łukasiewicz ('Wszechmoc Boga a teologia przypadku', FiloSofija (2015) 30.3, 143–53). Probabilistic theism imagines that, at the sub-atomic level, 'God might be able to affect the course of various physical and historical processes by "making use of opportunities" when alternative paths of development arise' (Słomka, 148), and that God potentially engages with creation in this way continuously. This allows for God's work in creation without violating the laws of nature, and without the sort of intervention imagined in classical theism.

Słomka's key contribution in this volume lies less in the presentation of new ideas and more in the sustained focus he gives to the specific question of the interaction between creator and creation. Throughout, his analysis is characterized by the explication of others' contributions, and although Słomka makes apparent that he is sympathetic to certain trends in theistic reflection over others, very little of the book directly articulates his position as such. As a result, this book will be valuable for readers seeking to become familiar with key scientific, philosophical, and theological concepts surrounding the topic of divine action in the world, but it may feel somewhat tedious to readers already well-versed in these areas.

Although Słomka is a Roman Catholic priest, this volume is more a reflection on theism in general than on Christian theology specifically. God is not discussed in Trinitarian terms, but rather as creator and sustainer of creation. Although Słomka frequently engages modern and pre-modern Christian thinkers, his analysis is distinctively Christian in character only insofar as it applies the metaphor of kenosis to God's self-limitation. One wonders how Słomka would endeavour to square his portrayal of God's continuous, non-interventionist action in the world with the incarnation and resurrection of Christ or the work of the Holy Spirit in and through the church, to say nothing of eschatological expectations. Put differently, the God discussed in this book does not sound much like the God of the Bible or of Christian theology. This may reflect a deliberate effort on Słomka's part to maintain laser-like focus on the specific question of the relationship between creator and creation, and/or to present theism in a manner that can be brought into discussions of the philosophy of science (cf. Mordarski, R. 'Probabilistic Theism and the Traditional Doctrine of Actus Purus', Roczniki Filozoficzne (2020) 68.3, 187–203).

For the most part, Słomka's prose is quite lucid, despite essentially being a translation. The philosophical sophistication of the book would be too advanced

for a general education course, and is certainly not for the casual reader, but would be a suitable text for students specializing in philosophy or systematic theology. Scholars who work at the intersection of science and Christian theology will likewise find much in this book that is worthy of careful consideration.

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Andrew Davison

Astrobiology and Christian Doctrine: Exploring the Implications of Life in the Universe

Cambridge: Cambridge University Press, 2023. 350 pp. hb. £30.00. ISBN 9781009303156

Andrew Davison was recently appointed Regius Professor of Divinity at the University of Oxford, before which he was Starbridge Associate Professor of Theology and Natural Sciences at the University of Cambridge. A biochemist by training and a prominent voice in the science-and-religion community, Davison has a particular interest in astrobiology and has been deeply involved with the Leverhulme Centre for Life in the Universe. This book is the culmination of his research into the theological consequences of life elsewhere in the universe.

Astrobiology and Christian Doctrine is divided into five parts, each of multiple chapters. The first three parts deal with fundamental doctrines such as Creation, the Image of God, and the nature of revelation, while Part IV focuses on the Incarnation and Part V tackles eschatology. Davison draws on historical theologians to push the boundaries of these doctrines while also reassessing them in light of our expanded view of the universe. Angels, for example, are raised as an interesting topic – sentient nonhumans who are not explicitly said to bear the Image of God. Davison argues persuasively that such historical examinations can be repurposed to make helpful contributions to current research questions.

Part IV is the most expansive section, dealing with the Incarnation of God the Son as the person of Christ. This is where the most interesting and controversial material lies. If aliens exist, would they be fallen? Could they be saved through the life, death, and resurrection of Jesus of Nazareth, or would they require their own Saviours? Or might they be sinless, like the people in Dostoevsky's Dream of a Ridiculous Man who live happily in a pre-Fall utopia? Would an unfallen people even need an Incarnation, or does Incarnation achieve more than just penal substitution? These and others like them are fascinating questions that force us to think deeply about the nature and mission of Christ. Across these chapters the idea of multiple Incarnations takes centre stage – the idea that, in the words of John Polkinghorne, 'if little green men on Mars need saving, then God will take little green flesh.' Davison weighs various arguments but concludes in favour of multiple Incarnations, not due to any necessity on the part of God but because they would, to his mind, be most fitting to the character and relations of God.

Most theologians throughout history have rejected multiple Incarnations, if they have engaged the topic at all, but the idea has grown in popularity in recent decades. Though I am undecided myself, I see that it is worth serious examination. C.S. Lewis is an interesting example of someone who denied multiple Incarnations ('I do not think it at all likely that there have been… many Incarnations to redeem many different kinds of creature') yet, as Davison notes, provided in

the character of Aslan an example of how other Incarnations might work in practice. Chapter 13 is devoted to a key aspect of this – the idea that multiple Incarnations need not mean multiple Christs, but rather multiple hypostatic unions of God the Son with other species. Many theologians have rightly objected to the idea that Christ might die multiple times, but is it therefore a problem for Aslan to die for the sins of Narnia? The very nature of Christ is at stake here, the possibility of alien life causing us to refine our notions of who and what Christ is.

For any student of historical theology, Astrobiology and Christian Doctrine is a great resource. Davison scours historical texts for discussions about alien life, providing a wealth of quotations and references. These historical sources tend to be brief and superficial, treating other worlds and strange peoples as interesting anecdotes at best or as straw men at worst. Davison therefore draws on other sources which, though not directly about aliens, can nonetheless contribute valuable perspectives on these issues. A particular focus is Thomas Aquinas; 'Of all authors,' writes Davison, 'I find Aquinas the most useful for fruitful theological consideration of the natural sciences.' It is from Aquinas that Davison draws deep insights into the nature of humanity, the effects of the Fall, and the purposes of the Incarnation.

Davison writes in a clear and accessible style, which is an immense help for any lay reader trying to understand the many esoteric concepts that fill the book. Being an overview of seemingly every possible way in which astrobiology might influence theology, the book is also of necessity very introductory. This is mostly a good thing, though it is a little frustrating when some interesting ideas receive comparatively superficial analyses. My biggest criticism, however, is that the book is filled with lengthy digressions and tangents that detract from the main thrust of argument. The first three parts are especially difficult to read due to their length and could be compressed into a more concise introduction. I can imagine some readers being discouraged before they reach the meaty discussions in Part IV. The latter parts are similarly wordy but deal with controversial topics that hold attention better.

Some readers might have the opinion that astrobiology is not a real science. It captures the public imagination but, without actual aliens to study, it never makes tangible scientific progress. Davison never addresses this concern, however, taking for granted that alien life is plausible and perhaps even common throughout the universe, but that is not really a problem for the book. This is not a book about aliens. It is mostly a book about Christology which uses aliens as a tool to pick apart theological doctrines in challenging and sometimes uncomfortable ways.

Reading this book has led me to appreciate that the mere possibility of alien life provides an occasion for reassessing our theologies. It has been said that stories are the experiments of philosophers – thought experiments that push ideas to breaking point. For me, astrobiology falls into this category. Not particularly scientific (at least, not yet), but valuable for thinking deeply about theology.

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Jeffrey P. Bishop, M. Therese Lysaught and Andrew A. Michel
Biopolitics After Neuroscience – Morality and the Economy of Virtue
London: Bloomsbury Academic, 2022. 288 pp. pb. ISBN 9781350288485.

In this wide-ranging academic overview, the three authors tackle the interesting question as to how the neurosciences have embraced a loss of humans as intentional free agents, replacing that idea with a reductionist narrative in which pro-social and anti-social behaviours compete in ways that can be measured and observed at the neurochemical and brain-scanning levels. 'Gone are rules and principles, obligations and practices, means and ends, and goods and evils' (198). Vice is no longer vice but antisocial personality disorder. As the authors comment: 'Our task in this book is to try to see how neurobiological things – genes, amygdala, prefrontal cortex – are correlated to socially scientifically constructed things – virtue, vice, morality, economy' (27). The neuroscience community creates a new thought community and it is their thoughts that stimulate the sociological, philosophical and historical investigation described in this book.

A short review is clearly unable to pick up on the many nuances, twist-and-turns of this narrative. In Part 1 of the book, both academic neuroscientists and populariser are cited, and mentioning just one of the more extreme populariser here – Paul Zak – gives some insight into what makes the present book so important. Zak has a PhD in economics and is the Director of the Center for Neuroeconomics Studies at Claremont Graduate University. Zak thinks he has found the source of all love in the 'moral molecule' oxytocin, suggesting that the molecule mediates the invisible hand of capitalist markets (93-97). Humans act on things they find pleasurable and neuroeconomics can help engineer such a society by revealing the neuroscientific roots of its operations. In the year 2024 there were 483 peer-reviewed science publications with 'oxytocin' in their title. The point that the present authors are trying to make is not that oxytocin lacks importance as a neurochemical correlate of different human behaviours (along with thousands of other correlates), but rather the ways in which such correlates can readily become identified with a complex behavioural trait (such as 'love' or 'economics') as if they were the same 'thing'.

A similar reductionist slope is provided by the scientific populariser Sam Harris who makes claims about the neuroscience of morality, claiming that the neuroscientific study of morality can be as certain as the study of physics. Therefore, moral truth is scientific truth (88).

'Economics' is a domain that did not exist in its own right prior to the early twentieth century. So how was it that economic frameworks for viewing the world became so embedded in the ways in which many neuroscientific findings are presented in the present day? Part 2 of the book aims to track back the philosophical and political developments that nurtured such a fusion between biology and politics, using the word 'biopolitics' to describe the fusion.

The authors find some early seeds of biopolitics in the Rev. Thomas Malthus (1766-1834) whose Essay on the Principle of Population (1798) was later to have such a critical influence on Charles Darwin, and who drew heavily in his writing from another cleric as well as medical doctor, the Rev. Joseph Townsend (1739-1816). Together with others, such as Jeremy Bentham (1748-1832), the authors track the ways in which these highly influential thinkers applied the 'laws of nature' to population balance, eventually differentiating between a 'deserving and non-deserving poor'. 'Their fingerprints were all over' the Poor Law Reform of

1834: 'if the poor remained poor, it was their own moral failing' (166).

Delving further, the authors find even deeper fingerprints in the empiricist thinking of David Hume (1711-1776) who located the only ground for knowledge in sense experiences, drawing on the Epicurean philosophy centred on pleasure and pain. For example, Bentham begins exactly where Hume begins, namely, in sense experience, in pleasure and pain, the 'moral senses"' (p. 168). In Humean thought, reason now becomes a slave of the passions, an 'inverted relationship...that reverberates in the modern moral psychology and social science of Jonathan Haidt, Sam Harris, and Paul Zak' (176). Francis Bacon (1561-1626) is also cited as nurturing Hume's scepticism about the possibility of knowing final causes, and other seeds of biopolitics are likewise rooted, claim the authors, in Baconian science. The end-result is that just as physics and chemistry emerge from natural philosophy, so psychology, sociology and economics emerge from moral and political philosophy, yet all still remaining deeply intertwined (201).

In conclusion the authors highlight the work of Ludwik Fleck who critiques the idea that cognition can be comprehended as a function merely of observer and object, instead pointing to the essential role of the community in creating the environment in which the interpretations of the observer are shaped and described. 'The neuroscientist does not discover the mind-independent nature of her nature, but she aesthetically and ethically must create it' (210). We must become more 'humble and unsure, lest we harm that which we think we have fully captured'.

There are many cogent arguments in this well-argued book, but scientists may find it hard-going in places, as the somewhat discursive and repetitive style of the humanities, at least in Part I, can hinder clarity. Having said that, the historical arguments that dominate Part II of the book are well laid out, and the relevant ideas of thinkers such as Hume, Bentham, Bacon, Mill, and others, are helpfully mapped out and summarised. This is a book that neuroscientists in particular may find helpful as a way of reflecting on the role of their own community in shaping how their findings are interpreted.

Denis Alexander is previous Editor of Science and Christian Belief and the author of Are We Slaves to Our Genes? (CUP, 2020).

Calum MacKellar and Trevor Stammers (Eds)

The Ethics of Generating Posthumans: Philosophical and Theological Reflections on Bringing New Persons into Existence

London: Bloomsbury, 2023. 234 pp. pb. £26.09. ISBN 9781350216587

Transhumanism is the philosophical movement concerned with changing human life with biomedical technologies, from gene editing to mind-uploading, to create posthuman persons – and is significant for Christian theologians because of the claims it makes about human nature. Most theological engagement with transhumanism consists either of theological critiques of specific biomedical technologies, or arguments concerning why transhumanism is contrary to - or in some cases consistent with - major Christian beliefs. This beguilingly slim book explores the specific issue of the ethics of creating posthuman persons, and therein lies its unique contribution. In the book, two related questions are addressed: 1) are posthumans persons? 2) is it ethical to generate them? In places, these questions are conflated, and some of the chapters - especially the philosophical ones - discuss the former question (from an ontological perspective) rather than the latter.

The introduction by McKellar and

Stammers provides some helpful definitions, and then the first section discusses the meaning of personhood, from classical thought to Locke, and how a posthuman person might resemble a human being (in terms of rationality, language etc). The single chapter of the second section, by Chris Willmot, provides a scientific account of the techniques that might feasibly be used to create a posthuman person – for example, gene editing and brain-computer interfaces. This is a welcome addition, since the relevant science is not usually considered in detail by transhumanism theorists.

The notion of the posthuman person is explored from various philosophical perspectives, drawing on Taylor, Kant, Bavinck and Heidegger. In these chapters, various important themes emerge - the posthuman person as a sociotechnical entity (and therefore not value-neutral), the link between transhumanism and humanism, the autonomy of the posthuman person, and the Heideggerian idea of technology as a form of being. However, some of these essays are more tenuous to the central argument of the book than others.

Three well-crafted essays present theological engagement with posthuman persons, from a Jewish, Christian and Islamic perspective. In terms of Christian thought, a key strand of thought that emerges in the book is whether posthuman persons are manufactured or procreated (although there is little overt debate on this question). Michael Wee discusses posthuman persons in respect of a Thomist view of parenthood; he notes how the absence of the notion of parenthood in the transhumanist discourse reflects transhumanism's aspiration to disembodiment and radical individualism, but he claims that 'parenthood is lurking in the background.' Wee argues that parenthood is a potential way of generating a posthuman person, and claims that the Rubicon has already been crossed in the separation of procreation from parenthood with reproductive technologies. In a subsequent chapter, MacKellar brings this issue firmly to the foreground, as he tests the posthuman person against five criteria for procreation, and finds them wanting on all five points. This approach is reprised in the Scottish Council on Human Bioethics recommendations on the generation of posthuman persons, presented as an appendix to the book, which recognises posthuman persons are persons, and the only ethical route to their generation is procreation (incorporating MacKellar's five criteria), and therefore posthumans should have rights in the same way as humans.

On this basis, a contemporary IVF baby could be classed as a posthuman, so this guidance may seem unimaginative to many transhumanism enthusiasts. Nevertheless, this approach frames the debate about the moral status of posthuman persons, a debate that will become more acute as enhancement technologies advance, and the book provides a range of valuable resources to all who will be engaged in the moral aspects of this debate.

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David Basinger

God and Human Genetic Engineering

Cambridge: CUP, 2023. 72 pp. pb £15.64.
ISBN 9781009269346

Basinger's God and Human Genetic Engineering is a concise overview of the recent advances in genetic engineering and of the ethical problems that such advances may present. This treatise does not endorse any particular moral position regarding human genetic engineering; its goal is to demonstrate how the

average reader can approach the controversy, analyse the arguments presented by various sides, and make their own moral judgment (54).

The author begins with stating how not to approach the issue. First, the ethical challenges in bioscience should not be understood in terms of a science-religion conflict—i.e. science says 'yes' to genetic engineering while religion says 'no'. There may be a real conflict alright, but this perspective overlooks the fact that there are common ethical principles shared by the religious and non-religious alike (2). Next, Basinger rejects comparative studies surveying the opinions of people with different religious affiliations (or none). This method seems intuitive, but it does not reveal the actual moral reasoning or religious belief underlying one's final position (4-6). Thus, the author decides to focus on the controversy and to explore diverse moral arguments (religious or non-religious) as they arise (6).

Basinger then introduces genetic engineering in some detail. To better understand the controversy, the author breaks it down into four categories: (a) non-human genetic engineering with significant impacts on humans (e.g. GMO for organ transplant) (9), (b) somatic human gene editing (e.g. gene therapy) (15), (c) use of genetics in human reproduction without direct editing (e.g. prenatal genetic testing) (23), and (d) germline human gene editing (e.g. inheritable enhancement) (27). Each category is further divided (e.g. healing vs. enhancement, cloning vs. editing); its ethical problems, legal status, and state of development (science or fiction) are introduced. Relevant scientific information is explained clearly and concisely (e.g. CRISPR).

The last part of the book addresses the main question: 'how ought we think about all this?' (34) Basinger introduces three approaches to ethical decision-making—consequentialism, deontology, and intuitionism (each broadly understood)—and applies them to human genetic engineering, identifying the strengths and weaknesses of the moral reasoning along the way. For example, when using rule-based decision-making, we must consider both 'sins of commission' and 'sins of omission': while tampering with God's creation may be wrong, not using bioscience to improve the quality of human life may also be wrong (47). Overall, the author does not affirm any particular ethical theory but is candid in pointing out the complications; he advocates critical engagement with diverse opinions to enable productive dialogue with others (54-7).

While I praise Basinger's introduction to genetic engineering, I am disappointed by his introduction to ethics in the latter part. My main concern is that religious ethics—the God part in the title—has not received sufficient attention. The setting of the book (Cambridge Elements: The Problems of God) and its opening chapter (intersection of Science and Religion) give me the impression that religious ethics will be the highlight. Alas, the section 'Where Is God in All This?' only appears at the very end, spanning two pages (57-8). Basinger remarks that 'the lines of reasoning containing a religious aspect don't differ significantly from lines of reasoning not containing a religious aspect… the complexities inherent in these three approaches to ethical decision-making apply to both religious and non-religious variants' (57). The difference is meta-ethical: religious arguments 'ground their ethical authority in divine truth' (e.g. religious texts) whereas non-religious positions 'have their ethical grounding in human reason and/or self-evidency' (57).

This is a rather hasty conclusion. I suspect that we are not seeing the substance of religious ethics simply because we have not looked closely enough.

Consequentialism, deontology, and intuitionism form a rather limited selection. Despite their popularity, these theories may not be what theologians regard as the best representatives of religious ethics. Virtue ethics, for instance, is entirely absent. Also absent is Thomistic natural law, where divine truth and human reason need not become rival sources of moral authority. (Basinger only mentions 'natural laws' once as 'self-evident ethical beliefs' within intuitionism [53].) Recent movements in ethics such as narrative theology (e.g. Stanley Hauerwas) are not represented either. While I acknowledge the demand of brevity, I do not find the author's selection 'on target' for a S&R series exploring problems related to God.

With similar drawbacks, Basinger names many religious beliefs, the most recognizable one being 'we should not play God' (10, 18, 22, etc.) Accepting humanity's creatureliness (theological anthropology) is essential to many religious thinkers, yet this matter did not receive special attention from the author. His most extensive discussion only serves to demonstrate the 'ambiguous meaning in religious principles' (48-9). In the end, an average reader—if not already informed in religion—still cannot understand 'we should not play God', let alone judge whether the principle carries weight. To an audience new to religious ethics, Basinger's introduction likely confuses more than it clarifies. A section of further reading (especially from religious authors) would have been helpful.

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Beth Singler

Religion and Artificial Intelligence: An Introduction

London & New York: Routledge, 2025. hb 218 pp, £119.11, ISBN 9781032187631

The theologian and Anglican priest Keith Ward was once asked if he would baptise a robot. His reply – 'If it asked properly' – raises profound questions about whether a machine could in principle possess a sufficiently human-like sense of agency, intentionality and relationality to be able to ask such a question 'properly'. It also, of course, raises fundamental questions about the relationship between religion and AI.

Beth Singler, Assistant Professor in Digital Religion(s) at the University of Zurich, tackles what she terms the 'entanglements' between religion and AI rigorously in her new book, exploring their interconnected dynamics from anthropological, ethnographic and philosophical perspectives.

The book is organised into two main sections. The first explores the intricate relationships between religion and artificial intelligence through the themes of 'rejection', 'adoption' and 'adaptation'. The second section builds upon this framework, offering a critical examination of transhumanism, new religious movements and posthumanism. The concluding chapter, entitled 'Entanglements, Imaginaries, and Futures', focuses on outlining possible avenues for further scholarly exploration. Each chapter – except the final one – opens with illuminating case studies.

We learn much about why some Christians reject AI: it is seen as a form of 'forbidden knowledge' – a consequence of original sin. Other believers, however, enthusiastically embrace such new technologies, making use of prayer apps, homilies produced by generative AI, and theomorphic robots. Many religions are

also increasingly 'adapting' to AI by, for example, transitioning religious worship to virtual spaces.

Singler also raises the important point that many secular humanists and 'new atheists' are committed to the success of human-like AI because it would, in the eyes of many, destroy the claim that Homo sapiens is created imago Dei. Indeed, for such thinkers, 'transhumanism' has the potential to liberate humankind from the biological constraints of the human condition. The uploading of the human mind into some digital afterlife, for instance, would succeed in abolishing death itself.

All this, of course, returns us to the philosophical and theological question: could a computer or robot ever possess a sufficiently human-like status to qualify it for baptism? Disappointingly, Singler never addresses such ontological questions in any depth. While this is perhaps understandable, given that her text is only an introductory exploration of religion and AI, such fundamental questions, related to human identity and AI cannot be set aside. It would be interesting to see an expansion of her survey of religion and AI to include this perspective.

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Nick Meader

Resurrection: Extraordinary Evidence for an Extraordinary Claim

Eugene, OR: Resource Publications, 2024. 286 pp. pb. £26.00. ISBN 9781666783056

Nick Meader is a principal research associate at Newcastle University with a background in medical statistics, psychology, and Bayesian modelling. In this book he brings Bayesian confirmation theory to bear on the evidence for Jesus' resurrection, a path followed in recent years by Timothy and Lydia McGrew, Richard Swinburne, and the present reviewer (Ramified Natural Theology in Science and Religion, Routledge 2021).

Meader begins with Carl Sagan's maxim that 'extraordinary claims require extraordinary evidence' and relates this back to David Hume's famous essay 'Of Miracles.' As Meader rightly says, Hume's argument means that, to warrant acceptance, the prior probability of a miracle, before the evidence of testimony is considered, must be greater than the probability of testimony if the miracle had not occurred. Hence, in the present case, it becomes important to establish the prior probability of the resurrection.

Meader sees that the prior probability of the resurrection depends on the assumed prior worldview. Following a chapter justifying the use of probability, he compares several worldviews, including both theistic and atheistic, and takes the triune God as his preferred starting point rather than generic theism. Like Swinburne, I prefer the latter as the more easily justified hypothesis and testimony to the resurrection as providing evidence for the incarnation. Meader concedes that unipersonal theism is simpler than Trinitarianism.

Meader argues that Trinitarianism is consistent with the Old Testament theme of humanity dwelling with God and that this theme begins at Eden. However, his table comparing Eden with the tabernacle (25-26) is confusing since verses cited from Genesis 1 and Psalm 104:2 refer, not to Eden, but to the creation as a whole.

The author compares how well the various worldviews explain the nature of reality. Citing George Ellis, he sees the evidence favouring a universe with a finite temporal past. He could have added, with Aquinas and Leibniz, that there is need for a creator even of a universe with an infinite temporal past. He cites Luke

Barnes on the incredibly low probability that any universe would be life-permitting given naturalism. Theism explains why the universe is ordered and intelligible, and thus open to scientific enquiry.

Meader's treatment of suffering and evil is more controversial. Whilst the logical problem of evil is easily dismissed, in treating the evidential problem he assigns the cause of suffering and evil to the fall, saying mistakenly, that even earthquakes and tsunamis postdate the fall (54, fn 8).

He correctly notes that Christianity has the advantage over unipersonal theism (Islam and Judaism) that Christ shared our suffering. I also agree with him that under naturalism it is nigh impossible to account for moral facts in the first place, citing here the well-known is/ought fallacy.

Meader goes on to consider the Messiah in Judaism. He argues that the Word of the Lord in the Hebrew Bible is a personal mediator between God and humans and that this is not just a Christian interpretation read back into it. Rather, the targums in early Judaism do the same, though official Rabbinic theology tried to suppress this supposed heresy. He argues that, despite widespread Jewish belief in a conquering Messiah, some Rabbinic Jews interpreted key passages, such as Zechariah 12:10, Psalm 22 and Isaiah 53, as portraying a suffering Messiah. Regarding Isaiah 53 Meader notes the 'collectivist' Jewish view that Israel is referred to, but in an appendix argues that this interpretation emerged quite late (after 1000 CE).

Again, while some modern Jews deny seeing resurrection expounded in the Hebrew Bible, this view is condemned as heretical in the Mishnah. Significant passages include Daniel 12, Isaiah 24-27, and Isaiah 53 with specific reference to the suffering servant. Meader also explores the exaltation of the Messiah, especially with reference to Daniel 7. He notes that Jesus fulfils these Messianic expectations to a remarkable degree and no one else in history comes close.

The author then moves on to the direct Biblical evidence for Jesus' resurrection. He begins with 1 Corinthians 15, rightly noting that the early creed therein (1 Cor 15:3-5) can probably be dated to within a mere two to three years after Jesus' death. Regarding the gospels, he notes the fundamentals common to them all. He avers that most of the apparent differences are trivial, for example which women were at Jesus' death, burial and empty tomb. As Wright says, such 'surface ambiguities' would be expected in early, unvarnished accounts. Mark's abrupt ending is explained by supposing that the true ending was lost. Matthew's reporting in Mt 28:17 that 'some doubted' is seen as an important sign of authenticity.

With Wright Meader sees Luke as having Mark to hand but using him freely, though without modifying very early tradition on what resurrection involved. Unique to Luke is the appearance on the road to Emmaus, which Wright sees as mirroring the prologue with its emphasis on Jesus as the Messiah.

John has some more differences and unique features. Mary Magdalene may not have been at the tomb alone since she tells Peter and John, 'We do not know where they have laid him.' As with the other gospels there is continuity and discontinuity in the body of the risen Christ. Contra sceptical scholars, bodily resurrection is affirmed throughout. Furthermore, the testimony of women to the empty tomb hugely favours authenticity over invention, given the first century context.

Alternative, naturalistic explanations, drawing on Andrew Loke's categories are examined. Stealing of Jesus' body by

the disciples, as suggested by the Jewish authorities, runs into the difficulty of the guards at Jesus' tomb. Meader notes (185) that the disciples would then hardly risk their lives proclaiming a story of resurrection that they had invented and knew to be false.

Next in the book, we come to visions or hallucinations. Hallucinations under normal circumstances are rare. Sensing the presence of the dead during bereavement is commoner, though most likely in a single modality, whether tactile, visual, auditory, or verbal. Such experiences are unlikely to lead to belief in a resurrection. Group hallucinations are extremely unlikely, requiring causal mechanisms in each person to generate similar experiences. Meader mentions a couple of Marian apparitions for which the best naturalistic explanation would be some rare meteorological phenomena. It is hard to see how such phenomena would lead 500 witnesses to believe that Jesus had risen from the dead. Noted sceptic Bart Ehrman's view that distorted memories are responsible for the disciples' accounts of the resurrection are considered. His position is superseded by more recent psychological research which shows memory to be much more reliable than previously thought.

Cognitive dissonance theory, which posits change of belief when things do not go as expected, is another mooted naturalistic explanation. A group which predicted the end of the world in 1844 adapted their beliefs when the end did not come. Meader points out, citing Wright again, that in the more appropriate context of early Messianic movements, groups did abandon their beliefs when their uprisings were crushed by the Romans. Overall, the naturalistic explanations are of very low probability, Meader argues.

Meader puts his rationally argued judgments of probability into a Bayesian model. He provides a useful translation of qualitative judgments of probability (likely, very likely etc) into numbers. In assigning probabilities, he aims to be generous to the hypothesis that the resurrection never happened. The analysis starts with estimated prior probabilities of worldviews based on simplicity, with a necessary physical universe ranked above unipersonal theism and well above Trinitarian theism, to which he assigns a probability of 0.07. He assigns probabilities of 0.5 to the triune God sending a Messiah and 0.6 to the Messiah being resurrected, so the prior probability of resurrection is 0.02. He suggests a likelihood of 0.6 that we would get the evidence we do given the resurrection occurred.

The author adopts Dale Allison's view of the best alternative hypothesis, namely tomb robbers to explain the empty tomb and hallucinations the appearances. He assigns a probability of 0.4 to tomb robbers and, based on data from hallucination studies, various probabilities to Paul, Peter and Mary suffering these and the 500 seeing something like images in the clouds (pareidolia). Multiplying these probabilities together yields a likelihood of 0.00001 for the data if Jesus were not raised. A simple application of Bayes's theorem then yields a posterior probability of 99.9% for the truth of the resurrection given the evidence. Evidence from natural theology added to that for Jesus' resurrection makes it extremely likely that the triune God exists compared to a very low probability for the alternatives. It is also extremely likely that Jesus is the Messiah. My preference is to include evidence from natural theology earlier on so as to enhance the probability of generic theism, and hence the prior probability of the incarnation, before considering the historical material.

Meader carries out some sensitivity studies which show the robustness of his model. Two appendices cover major Rab-

binic writings on Isaiah 52:13-53:12 and a summary of studies relevant to his bereavement hallucination estimates.

In conclusion, this book is a worthy addition to the literature, bringing together natural theology, historical evidence, Rabbinic literature, and, perhaps especially, the psychological and Bayesian modelling expertise of the author. I concur with his conclusion that evidence for Jesus' resurrection does indeed meet the formal criteria for extraordinary evidence as demanded by Sagan and Hume.

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